



EXTENDED DAY-AHEAD MARKET TECHNICAL WORKSHOP

Resource Sufficiency, Transmission Provision, and Congestion Rents

Comments Submitted by	Organization	Date Submitted
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The Public Generating Pool (PGP¹) appreciates the opportunity to comment on the Extended Day-Ahead Market (EDAM) technical workshop held on February 11 – 12, 2020 focused on the Resource Sufficiency Evaluation, Transmission Provision, and Distribution of Congestion Rents. PGP recognizes all of the work and effort that was put into the proposals presented at the workshop by CAISO and the EIM Entities on these challenging topics. PGP commends the CAISO for providing stakeholders a platform for presenting their proposed solutions and perspectives on issues. EDAM, if implemented, will have a significant impact on the entire Western region and will only succeed with solutions driven through partnership between CAISO and stakeholders.

PGP is generally supportive of the high-level frameworks proposed by the EIM Entities for the resource sufficiency evaluation and provision of transmission for EDAM. There are a lot of details yet to be figured out that will require careful consideration and a balance of multiple interests and objectives. Yet PGP believes the EIM Entities have provided a solid preliminary structure of proposed ideas that can be built upon.

Regarding the distribution of congestion rents, PGP generally agrees with the proposed principles, however we believe more discussion is needed to come to agreement on what issues need to be resolved and what the right solution is.

PGP's comments focus on elements of the various proposals we support or oppose and areas where we have questions or believe more information or clarity is needed.

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.

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RESOURCE SUFFICIENCY EVALUATION

I. Objectives and Principles

The core objectives and key principles of the EIM Entities for the resource sufficiency evaluation² are generally aligned with the NW Public Power Market Design Interests³ provided in response to the EDAM Issue Paper on November 22, 2019.

	EIM Entities	NW Public Power
Promotes reliability	<ul style="list-style-type: none"> Ensures sufficient capacity, energy and flexibility under a variety of real-time conditions Ensures EDAM transfers can be relied upon to serve load Provides confidence in market results 	<ul style="list-style-type: none"> 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
Maintains BA, RA, and planning functions	<ul style="list-style-type: none"> RS does not modify local control over RA or replace BAA obligations Complements long-term planning 	<ul style="list-style-type: none"> RS requirements do not supplant local regulatory decision authority for resource procurement
Ensures fairness	<ul style="list-style-type: none"> Protects against leaning Avoids holding entities to a higher or lower standard than necessary for reliability 	<ul style="list-style-type: none"> Effectively prevents entities from leaning on the market for energy, capacity, and flexibility needs
Accuracy and consistency	<ul style="list-style-type: none"> Test must be accurate and applied consistently to all participants Qualifying supply that is real and capable of performing No double-counting 	<ul style="list-style-type: none"> Counting rules appropriately account for the capacity, energy, and flexibility that different resources contribute towards meeting requirements Counting rules are applied consistently to all entities subject to the test and avoid double-counting of transactions
Preventative Enforcement	<ul style="list-style-type: none"> Prevents entities that fail RS from leaning on EDAM 	<ul style="list-style-type: none"> Enforcement measures do not allow RS compliance to be a discretionary economic alternative
Ongoing review	<ul style="list-style-type: none"> Full transparency and on-going review 	<ul style="list-style-type: none"> Mechanisms are in place to signal when the resource sufficiency framework is not functioning properly
Deliverability	<ul style="list-style-type: none"> Transmission to deliver energy from external resources and reliably meet load in any major constrained zones within a given BAA 	<ul style="list-style-type: none"> Requirements assure resources are deliverable to load
Compatible with bilateral market	<ul style="list-style-type: none"> Compatibility with bilateral trading timelines 	<ul style="list-style-type: none"> Timelines allow continued participation in bilateral markets

² See [EIM Entities Presentation on Resource Sufficiency Evaluation for EDAM Design](#)

³ See [NW Public Power Day-Ahead Market Interests](#)

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II. Elements PGP Supports

PGP is either supportive of or finds reasonable the following components of the EIM Entities' proposed resource sufficiency evaluation framework:

- The first objective should be to determine the acceptable level of reliability of the EDAM footprint as a whole, which will require consideration of the broader footprint and how each BA operates today (slide 8).
- It appears reasonable to have the timing of the RS test be performed at approximately 9am with the ability to address/cure any RS-related issues prior to 10am (slide 11).
- The proposed test structure should include the following four components (slide 12):
 - Energy to meet load with a high degree of confidence for all hours of the operating day from portfolio resources.
 - Capacity to meet upward and downward load and reserves with a high degree of confidence.
 - Flexibility to ramp within a single hour and across multiple hours.
 - Transmission to deliver energy from external resources and to reliably meet load in any major constrained zones within a given BAA.
- The hourly RS capacity requirement should include at least the following three components - hourly net load forecast, contingency reserves and regulation, upward/downward uncertainty (slide 18). PGP would like to better understand the specifics of the replacement reserve product.
- The RS flexibility requirements connected to the proposed day-ahead imbalance reserves should explicitly differentiate between the day-ahead uncertainty that could be met by deploying slower resources in advance of the hour versus the amount of day-ahead uncertainty that materializes within an hour (slide 19).
- Calculating RS requirements should reflect anticipated system conditions and determine appropriate relationships between the different components of uncertainty (e.g., load, VER output, and forced unit outages). (slide 20)
- The establishment of a comprehensive process that annually assesses whether the methodology is achieving desired goals and make changes as needed is critical (slide 20).
 - PGP agrees that RS is critically necessary to the success of EDAM and achieving regional benefits.
 - There must be a mechanism in place that provides clear feedback on how the test is functioning in comparison to how it was intended to function.
 - Any future changes that are needed to ensure an accurate and meaningful day-ahead RS test that is fairly applied to all BAAs must be prioritized and addressed in a timely manner.
 - As noted in the NW Public Power Interests for a Day-Ahead Market, PGP believes this annual assessment should be done by an independent market expert.
- Qualifying internal resources must be capable of performing when dispatched and should be deliverable to major load zones (slide 22).

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- CAISO will need to work with each BAA individually to determine if zonal RS tests are needed.
- Qualifying external resources must be real, identifiable, non-recallable, supported by highly reliable transmission, and ensure no double-counting between BAAs (slide 23).
 - PGP would like to better understand what methods are available to verify these requirements both for imports into the CAISO BAA and for imports into an EDAM Entity BAA, given the timing of the RS test.
- Enforcement should be preventative. PGP would like to further explore the pros and cons of not allowing an EIM Entity to receive imports/exports for the hours in which they failed (slide 28).
- The RS requirements apply at the BA level and provide autonomy to the BA to sub-allocate RS requirements to parties within its BAA (slide 32).

III. Elements that require additional discussion

PGP requests more information on the following RS evaluation components:

- If the RS test occurs at 9am on a day-ahead basis but e-Tags for firm energy transactions are not required until 3pm day-ahead, what would happen if an e-Tag is not submitted by the 3pm deadline or if it is retracted/denied (slide 11)?
- If a real-time RS test is not applied for EDAM participants, how would changing conditions (e.g., outages, new obligations, new resource constraints, etc.) be accounted for and incorporated into resource sufficiency? What are the concerns of applying a real-time RS test (slide 16)?
- What are the pros and cons of incorporating a replacement reserve product as a component of the hourly RS capacity requirement? Would this be applied only to certain BAAs or to all BAAs? What would the requirements for this new product be (i.e., bidding rules, eligibility, obligations, etc.)? (slide 18)
- Will the deliverability assessment for internal resources be binding or advisory as it is in the EIM (slide 22)?
- How will deliverability of internal resources be assessed? Will each BA assess deliverability within its respective BAA differently or will a standard deliverability test be applied (slide 22)?
- Is transmission priority the only consideration for deliverability of external resources (slide 23)?
- Will resources not located within an EDAM Entity BAA (i.e. external resources) be enabled to provide imbalance reserves to an EDAM entity (slide 26)?
 - PGP understands a framework for enabling resources not located in an EDAM entity BAA to provide imbalance reserves will be considered in Bundle #3 topics of the EDAM stakeholder initiative.
 - PGP reiterates the following benefits of allowing resources not located within an EDAM Entity BAA to participate in EDAM:

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- Increases bilateral trading opportunities for an EDAM Entity and enhances its ability to be resource sufficient.
 - Allows those entities who are not able to join EDAM as part of the initial onboarding to continue to trade with EDAM counterparties, serving as an important bridge to full EDAM participation.
 - Increases liquidity and results in more efficient and effective dispatch, reducing self-schedules.
 - Reduces market power concerns.
- Is the ability to trade bid range limited to merchant resources of a BA (slide 26)? Or can it be provided by a 3rd party participating resource in another BAA? For example, can Deseret (a 3rd party in PacifiCorp’s BAA) provide bid range to another EDAM BAA? If so, what are the requirements and what arrangements would need to be made with the host BA? Would the 3rd party resource need to be located in an EDAM Entity BAA, or could it be located in a non-EDAM Entity BAA?

TRANSMISSION PROVISION

IV. Objectives and Principles

There is also general alignment between the core objectives and key principles of the EIM Entities for transmission provision⁴ and the NW Public Power Market Design Interests⁵, although the EIM Entities’ principles and objectives are more expansive.

	EIM Entities	NW Public Power
Transmission compensation	<ul style="list-style-type: none"> • Sufficient revenue recovery for Transmission Service Provider (TSP) 	<ul style="list-style-type: none"> • TSP receives sufficient compensation to cover costs and costs are assigned to users based on cost causation
No material cost shifts	<ul style="list-style-type: none"> • Balance transmission costs/benefits including recovery of transmission costs and compensation for transmission utilization 	<ul style="list-style-type: none"> • Minimize cost shifts to load and results in no adverse impacts to existing transmission rights
Open access and reservation priority	<ul style="list-style-type: none"> • Respect OATT right holders • Compatible with TSP’s OATTs and practices • Consistent with FERC open access policies 	<ul style="list-style-type: none"> • Open access and reservation priority are upheld
Congestion Rent Revenues	<ul style="list-style-type: none"> • Transmission customers contributing transmission should receive proportionate congestion rents 	<ul style="list-style-type: none"> • Transmission rights holders are ensured congestion/financial rights to mitigated congestion costs

⁴ See [EIM Entities Presentation on Transmission Elements of Transmission Design](#)

⁵ See [NW Public Power Day-Ahead Market Interests](#)

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PGP also supports the EIM Entities' other key principles:

- Planning and operational controls remain unchanged, including OATT administration, transmission and BA operations, and transmission planning and siting.
- Transmission should facilitate market activity; the transmission charge hurdle rate imposed should not impede EDAM efficiency.
 - PGP supports this principle although believes it needs to be balanced with the principle that there should be no material cost shifts to load and existing transmission rights. Given the diverse set of transmission service providers outside of California and their unique revenue recovery requirements and cost allocation structures, it will be important to strike the right balance between a hurdle rate that does not impede EDAM efficiency, yet is also fair and equitable in providing the same level of service (i.e., firm transmission) at a comparable rate.
- Transmission provision should be reasonably compatible with existing market transactions, including bi-lateral purchases and sales, reserve sharing groups, and respecting long-term transmission ownership/rights.
- Transmission availability should be maximized through a voluntary design framework.
 - PGP emphasizes that transmission provision must remain voluntary.

V. Elements PGP Supports

PGP believes the basic concept for sources of EDAM transmission proposed by the EIM Entities appears to be a reasonable starting point for a transmission provision solution that is compatible with the existing OATT framework. PGP supports the following proposed elements of the proposal:

- The concept of contributing the underlying transmission of resources used to demonstrate a day-ahead resource sufficiency to EDAM (slide 18).
- Allowing transmission customers to contribute their transmission rights to EDAM on a voluntary basis (slide 18).
- A framework that allows a transmission service provider to contribute unreserved transmission to EDAM for a usage fee (slide 18).
- Fair allocation of congestion rents to transmission customers/providers that voluntarily provided transmission to EDAM.
- Transmission contributed to EDAM must be highly reliable (slide 17).
- The use of Bucket 1 and Bucket 2 transmission to enable transfers first (at no hurdle). (slide 25)
- Applying the hurdle rate for Bucket 3 transmission only to EDAM exports from a particular Balancing Authority Area (slide 26).

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VI. Elements that require additional discussion

PGP requests further discussion on the following elements:

- At the technical workshop on transmission provision held on February 12th, PGP asked which of the Buckets of EDAM transmission would *voluntarily* be contributed to EDAM versus which ones would be *required* to be contributed to EDAM. PGP received mixed responses from the EIM Entities and CAISO and requests further clarity on this point and requests this design feature be explicitly addressed in the Straw Proposal.
 - Is all of Bucket 1 transmission that is demonstrated to support resource sufficiency prior to the EDAM made available to EDAM on a voluntary basis? Or if a resource sufficiency resource economically bids into EDAM, is the transmission underlying that economic bid *required* to be made available to EDAM?
 - It appears clear that Bucket 2 transmission is contributed by a transmission customer on a *voluntary* basis.
 - Once an entity joins EDAM, does the transmission service provider have the option of whether or not it will make Bucket 3 transmission available to EDAM? Or is the transmission service provider required to contribute its ATC to EDAM (based on its own determination of ATC)?
- PGP does not support any proposal in which the transmission service provider exclusively contributes transmission to the market without also making that transmission available for purchase by transmission customers. The EIM Entities suggest there may be potential exceptions to a transmission service provider contributing unsold ATC (e.g. network service that a BA has information that it will not be scheduled, Capacity Benefit Margin and Transmission Reliability Margin). (slide 22)
 - First, it is PGP's understanding these transmission margins are currently released as non-firm transmission today. It is unclear based on the NERC ATC Standards whether these margins of transmission can be released as anything but non-firm.
 - Secondly, if it is possible to release these margins of transmission as firm transmission, the transmission service provider should be agnostic to who purchases the transmission. The transmission should be made available on a non-discriminatory basis to all transmission customers.
 - To make that transmission available to the market exclusively would not only be discriminatory but would also inhibit a transmission customer's ability to purchase that transmission and contribute it to EDAM as Bucket 2 transmission in return for their allocation of congestion rents.
- PGP strongly agrees with the need for compensation of Bucket 3 transmission and appreciates the EIM Entities' providing potential approaches to transmission charges. PGP would like to better understand each approach and their respective pros and cons.

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CONGESTION REVENUE

I. Congestion Rent Allocation Principles

PGP agrees that achieving a fair allocation of congestion rents is necessary to provide incentive to make transmission available to EDAM. PGP supports the EIM Entities Congestion Rent Allocation Principles:

- EDAM market design must include mechanisms to fairly allocate congestion rents that arise from EDAM transactions across the broader footprint, including intra-BAA congestion and include EDAM transfers between BAAs.
- The congestion rent allocation approach should result in a fair allocation of congestion rents to the entities that contribute transmission to EDAM, allowing for allocation to both transmission rights holders providing Bucket 1 or 2 transmission and transmission service providers for incremental sales of Bucket 3 transmission.

II. Elements that require further discussion

The EIM Entities provided two potential complexities with the allocation of congestion rents in EDAM⁶: (1) transfers between two BAAs using mismatching transmission buckets and (2) transfers between two BAAs with mismatching transfer capability. PGP provides the following comments on each issue:

1. Transfers between two BAAs using mismatching transmission buckets

PGP understands the issue raised by the EIM Entities but believes more discussion is needed to better assess whether the first \$X of congestion rents paid to the transmission service provider that imposes a hurdle rate on Bucket 3 transmission is appropriate and equitable or whether it is an issue that needs to be resolved. Are congestion rents the best method of compensating the transmission service provider for the hurdle rate or are there other options? It will be important to understand the interplay between the transmission charge for Bucket 3 transmission, how it gets included into the market optimization, and how it affects congestion rents. As a starting point, PGP believes more discussion is needed to determine what the right compensation mechanism for Bucket 3 transmission is and what the impacts on congestion rents and market outcomes are of the different alternative compensation frameworks.

2. Transfers between two BAAs with mismatching transfer capability

PGP would like to further explore the proposal by the EIM Entities to seek an equitable allocation solution for EIM/EDAM interties that have mismatching transfer capabilities and are currently allocated congestion rents via an “all or nothing” approach. PGP agrees that systemically allocating congestion rents to one side of the transmission path would reduce the incentive for entities to contribute transmission to enable EDAM transfers on such paths. PGP

⁶ See [EIM Entities Presentation on Congestion Rents for EDAM Design](#)

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requests more discussion on the potential alternatives to address this issue and what the corresponding impacts are to making changes from what is being done today for the EIM.

CONCLUSION

PGP believes the presentations provided by the EIM Entities at the February 11-12 workshop provided a reasonable starting point on critical EDAM issues – Resource Sufficiency and Transmission Provision. While there remain many details to work through, PGP acknowledges and commends the hard work done to date and looks forward to further discussion as the proposals continue to evolve.

One important area that has yet to be discussed in greater depth is how all of these key market design features of EDAM (i.e., resource sufficiency and transmission provision) impact the bilateral markets and what seams may be created for those entities who are not able to join EDAM on the first day of go-live. As this stakeholder process progresses, PGP requests more consideration be given to the interplay between EDAM and the current day-ahead bilateral markets, impacts and seams that may be created as a result of EDAM market design decisions, and how these impacts and seams might be addressed.

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