

Background:

This document provides an opportunity for interested stakeholders to submit informal comments and perspectives on various topics discussed during the working group process. There is recognition that additional details are needed on these topics that will be developed throughout the initiative, and stakeholders will have opportunities to provide more comprehensive and formalized comments on these topics to the extent these become part of a formal proposal. Please be brief in any written responses to facilitate review, recognizing these represent informal reactions at this early stage.

Please submit your comments using this template to ISOStakeholderAffairs@caiso.com by end of day March 14, 2022.

Question:

For each question please identify whether you “generally support”, are “neutral” or “generally oppose” the concepts based on the information discussed in the working groups to date, recognizing that additional detail will be provided through the straw that will allow you to consider the concepts in a more complete light. If desired, please provide additional context and/or identify additional aspects for consideration.

General Comments of Powerex:

The benefits realized by EDAM hinge on developing a proposal that is both (i) attractive for a critical mass of western entities to join, and (ii) contains sufficient incentives for those participants to voluntarily make transmission capability available to EDAM.

Powerex is concerned that the CAISO’s positions on EDAM design are increasingly diverging from the core principles developed by the EIM Entities more than two years ago. Departing from these core principles risks making it unattractive for western entities to join an EDAM, while also limiting the transmission capability that participating entities choose to make available to EDAM each day or hour. Importantly, the external entities that are most likely most affected by EDAM transmission design are also the entities with the greatest amount of transmission capability.

EDAM has long been intended to offer a platform for voluntary day-ahead electricity transactions in the west, with the provision of transmission service also being provided on a voluntary basis - both by transmission customers and transmission providers themselves. This means that it is not only expected that transmission service providers will continue to determine their own OATT revenue requirements and to set their own transmission rates, but transmission providers will also expect to continue to be able to (i) protect the rights of their transmission customers, and (ii) maintain the incentives for third parties to continue to invest in their transmission service, so as to be able to recover their revenue requirements from an appropriate balance of native load and third-party customers.

Powerex believes that transmission providers and transmission customers will find it untenable for EDAM to be designed in manner that either (i) undermines OATT transmission rights and/or OATT transmission investment incentives, or (ii) in a manner that seeks to largely replace the OATT framework for procuring transmission service and scheduling in the day-ahead (and subsequent real-time) timeframe with some other model for making transmission service available. This is because such a replacement approach would require external transmission customers and TSPs to have very high confidence that EDAM would be designed, administered, and evolve in a manner that does not undermine the value of investing in OATT transmission, or otherwise result in large cost shifts between or among external transmission customers.

Given this context, it was recognized at the outset that the EDAM would need to encourage—rather than compel—transmission capability to be voluntarily made available. In order to maximize the transmission capability in EDAM—which is key to realizing its potential benefits—it would need to include a cohesive set of incentives to encourage transmission customers and TSPs to voluntarily make those rights available. The contrast between a EDAM’s voluntary transmission participation and an “all in” model is shown below:

Workable Frameworks For OATT Transmission In A Day-Ahead Organized Market

Voluntary Participation

Both OATT activity and organized market activity take place in operational timeframe

- Organized market only uses transmission that is voluntarily made available
 - No restrictions on existing OATT functionality
 - No requirement to donate unscheduled or unsold transmission
- TSPs and Transmission Customers have confidence they can avoid adverse effects of organized market (by limiting transmission capability they made available)
- To succeed, organized market must make it attractive for TSPs and Transmission Customers to participate with transmission:
 - Equitable sharing of congestion value
 - Organized market contributes to revenue requirement for use of unsold TSP rights

“All In”

OATT activity stops at defined time; further transmission use occurs only through organized market

- TSPs (and Transmission Customers) agree to limit scope of OATT activity
- To succeed, TSPs and Transmission Customers must have great confidence that organized market will not undermine (or will mitigate) incentives to invest in OATT transmission
 - Uphold need for OATT transmission for arrangements between specific resources and specific loads (e.g., RA, preference customers, clean resources)
 - Robust governance (no disproportionate influence by one entity or sub-region)
 - Equitable sharing of congestion value
 - Appropriate access charge, if necessary
 - Sound market design

Powerex is concerned that, in working group discussions, the CAISO appears to be veering away from (or clearly opposing) a truly voluntary framework for EDAM transmission availability, and/or from design elements necessary for the EDAM’s voluntary framework to be effective. This is likely to have the greatest impact on the very entities that are most critical to EDAM’s success in maximizing transmission participation, however. Stated simply, there will likely be negligible EDAM net benefits in the Northwest region unless Bonneville participates, since without Bonneville, there will be very

limited transmission connectivity among Northwest BAAs, and between those BAAs and the CAISO or Southwest BAAs. Moreover, what limited transmission connectivity exists is largely already being efficiently utilized in the EIM. If EDAM is to unlock *additional* benefits, it will require *additional* transmission capability to participate; and in the Northwest, achieving that additional transmission largely comes down to whether or not Bonneville participates in the EDAM. However, it is difficult to see how Bonneville will have the support of its ratepayers and stakeholders to join EDAM unless the design of EDAM meets the needs of Bonneville and its preference customers. As discussed more fully below, several of the CAISO's current leanings regarding EDAM transmission appear directly contrary to those needs.

Powerex believes there are various options for EDAM to attract substantial voluntary participation of transmission capability, enabling efficient and reliable unit commitment and dispatch while minimizing or eliminating transmission hurdle rates. However, Powerex believes that for EDAM to succeed in this effort, the CAISO's position on the following working group issues need to be re-visited and aligned with the core principles of a voluntary approach:

- 1. EDAM must enable physical base scheduling of OATT rights** - the CAISO has opposed enabling OATT rights-holders from physically scheduling on these rights prior to the EDAM timeframe, advocating instead for an approach where the transmission capability must be donated to EDAM, and with any physical schedules automatically "converted" to price-taker financial positions settled through the EDAM. This is unworkable. Many transmission customers use their OATT rights to deliver their own resources to load, including to satisfy longstanding legislative obligations or to deliver the output of identified clean and renewable resources to customers in jurisdictions with GHG programs. This functionality is one of the key motivations for transmission customers to invest in OATT transmission service, and a continued ability to use OATT transmission for this purpose is central to any approach adopted for EDAM.

CAISO has generally been able to develop procedures in the EIM to respect physical base schedules. In addition, Powerex and other stakeholders have put forward proposals that would allow physical base scheduling while also allowing those base schedules to voluntarily elect to be optimized in the EDAM. CAISO has not articulated any compelling reason for terminating the ability to physically base schedule OATT rights in EDAM.

- 2. Unscheduled Firm PTP cannot support EDAM schedules**—A second departure from the commitment to voluntary transmission participation is the suggestion that TSPs would be required to make *unscheduled* (Firm) PTP reservations available to EDAM. To be clear, there is already a proposal for unscheduled Firm PTP capability to be made available to EDAM: by the transmission customer that holds those Firm rights voluntarily choosing to donate those rights. The *compelled* participation of all unscheduled Firm PTP would therefore implicitly include transmission capability that a transmission customer elected *not* to donate.

This proposal also opens the door to the possibility that the same transmission capability will be relied upon both by EDAM schedules and by schedules subsequently submitted by the transmission rights-holder after EDAM's market processes. When this occurs, the EDAM solution may become infeasible, requiring real-time re-dispatch (which may or may not be possible). This prospect is particularly concerning since it undermines the reliability of EDAM transfers between EDAM Entities, as resource commitment decisions will have been made on the basis of those EDAM transfers actually flowing in real-time. This proposal therefore also raises concerns that the subsequent schedule submitted on Firm PTP rights will not, in fact, be respected, and will either be physically curtailed, and/or the transmission customer will be subject to congestion charges for the use of their rights; both outcomes are entirely contrary to OATT principles, and will severely undermine incentives to invest in Firm PTP service.

- 3. Transmission Available In EDAM Must Receive An Equitable Share Of The Realized Value Of Transmission**—A key motivation for transmission customers to invest in Firm PTP rights is to receive the economic value of transmission, as reflected in the price differences between the point of receipt and the point of delivery. In order to encourage transmission customers to donate Firm PTP rights to EDAM—rather than to support their own transactions outside of EDAM—it is vital for congestion value realized under EDAM to also be returned to the transmission customers that make the valuable transmission capability available. The EDAM principles are aligned with creating this important incentive by (1) providing the congestion rents associated with internal transmission constraints fully to the EDAM Entity where the constrained facilities are located; and (2) providing for a 50/50 split of congestion revenues in the case of constraints on transfers between two EDAM Entities.

But the CAISO continues to insist on different rules for the allocation of congestion revenues on interties that include the CAISO as a TSP. Rather than agreeing to the same 50/50 split that it proposes to apply elsewhere (*i.e.*, when it is two EDAM entities involved), the CAISO has advocated for special rules when the CAISO is one of the TSPs—rules in which 100% of the revenues would be collected by the “side” of the interface that constrains first in the CAISO’s market software. When pushed, it appears these special rules are intended to perpetuate the CAISO’s existing approach to determining congestion charges at its BAA boundary, and delivering that congestion rent to its transmission customers (through its Congestion Revenue Rights mechanism).

This is especially problematic when the CAISO’s historical approach to congestion on interties has been to develop clever market rules and processes that enable the CAISO to capture a disproportionate share of the congestion value of coordinated regional transmission paths—paths where the CAISO transmission system is only one segment of the facilities needed to deliver energy to load, particularly on the Pacific AC and Pacific DC Interties. The key CAISO market rule behind this outcome is that sellers at CAISO interties are not required to demonstrate the ability to deliver to the CAISO BAA boundary, except at the very last minute. The CAISO achieves this by being the only market in the west, and possibly the nation, that does not require a day-ahead e-Tag for day-ahead physical market awards, effectively enabling the CAISO market to by-pass transmission limits on external transmission systems. This has the result of inflating the quantity of supply that is seen in the market software as capable of reaching the CAISO BAA boundary (*i.e.*, at COB or NOB), making it appear that the limiting “choke point” on a coordinated path is CAISO transmission capability from the CAISO border. It is clearly not consistent with physical reality to assert that congestion is “located” at the mid-point of a high-voltage DC line; the real limitation is on the use of the *entire* path (*e.g.*, injecting at the northern terminal of the Pacific DC Intertie, which is located in Oregon). But the CAISO’s clever market rules and processes allow it to drive the economic value of the Pacific DC Intertie primarily to the CAISO “side”—with congestion predominantly collected on behalf of CAISO’s customers (through suppressed LMPs at the CAISO boundary when it is importing). Under the CAISO’s existing approach to determining congestion, an average of \$160 million per year in congestion charges were collected on the Pacific AC and Pacific DC Interties from 2018 to 2020, and returned to CAISO load-serving entities.¹

¹ CAISO Department of Market Monitoring, *2020 Annual Report On Market Issues and Performance* (August 2021) at 211 and Tbl. 7.4

In the absence of a coordinated multilateral framework to explicitly provide for an equitable 50/50 allocation of the value of these transmission paths, external transmission providers have had to implement their own measures to prevent the further erosion of the value of transmission service on their systems. For instance, in 2017 there was an extensive process by Bonneville Power Administration to address seams issues with the CAISO on the Southern Intertie facilities, leading to substantive changes to its rates.

The consideration of seams issues between the Pacific Northwest and California in relation to the rates for hourly transmission service on the Southern Intertie has a lengthy history.²

Due to the seams issues between the Pacific Northwest and the CAISO's day-ahead market, a generator or marketer without long-term firm transmission service on BPA's system can bid energy into the CAISO day-ahead market and then procure hourly transmission service later from BPA if the CAISO accepts its bid. This creates a disincentive to reserve long-term firm service on BPA's system because long-term firm service is unnecessary to participate in the day-ahead market, and BPA sells unused long-term capacity as hourly non-firm transmission at a relatively low transmission rate.³

BPA is taking action with respect to the rates for hourly service on the Southern Intertie in large part because seams issues between the Pacific Northwest and California have created concerns about recovering the costs of the Southern Intertie.⁴

It is inappropriate for the CAISO to seek to use the EDAM to perpetuate its collection of a disproportionate and inequitable share of the economic value of regional transmission facilities.

4. EDAM must not be designed to circumvent the need to procure and pay for external transmission service—A successful voluntary framework also requires that EDAM not enable transmission customers that

² Bonneville Power Administration, *Administrator's Final Record of Decision*, BP-18 Rate Proceeding (July 2017), at 129.

³ *Id.* at 131 (internal citations omitted)

⁴ *Id.* at 118.

otherwise would be required to procure and pay for transmission service to avoid doing so by participating in EDAM instead. To the greatest extent possible, EDAM needs to seek to preserve external transmission service as both necessary and beneficial for entities engaging in electricity trade across different parts of the EDAM footprint. One example is the current need, under rules promulgated by CARB, for imports that are reported as being from a specified source (*e.g.*, from a clean resource outside of California) to demonstrate actual delivery of electricity from that resource to California, through submission of an e-Tag showing the transmission delivery path. This rule requires participants arranging for California load to be served by clean resources to procure transmission service on external TSP systems; and in so doing, to help fund the revenue requirement of the facilities that enable this delivery.

Under the current EDAM proposals for GHG, this requirement would be eliminated, as the EDAM could simply “deem” California load to be met by a clean resources outside California, without any procurement of external transmission service. Such an approach would be harmful to external transmission customers and TSPs—as it renders transmission service on those systems irrelevant for making clean deliveries to California—but it is highly beneficial to California interests (*i.e.*, it eliminates external transmission costs from being either directly or indirectly paid by the California load being served by external clean resources).

Powerex believes that any EDAM design elements that circumvent or weaken the relevance of procuring transmission service on external systems will materially increase the risk of EDAM participation by western entities, and thus limit the prospects of EDAM being attractive to a critical mass of western entities, their ratepayers, and their regulators.

Responses to Specific Questions:

1. Please share your perspective on the transmission “buckets” framework for supporting EDAM transfers.

- Generally support
 Neutral
 Generally oppose

Comments:

Powerex believes the “bucket” framework continues to be a useful approach for recognizing the different ways in which OATT transmission service can interact with EDAM. The buckets reflect two key aspects of OATT service: (1) has the service been paid for by a transmission customer (Bucket 1 and 2), or is it unsold inventory of the TSP (Bucket 3); and (2) for transmission service that has been paid for by a transmission customer, has that customer already dedicated the transmission rights to activity related to the EDAM (Bucket 1) or does the transmission customer have other intended uses of its rights? As discussed in the general comments, above, EDAM benefits depend on participation of transmission, and creating incentives for that participation requires crafting measures that address the three distinct circumstances reflected by the “buckets” framework.

2. Please share your perspective on whether Bucket 2 transmission should, aside from the voluntary nature of it, include use of unscheduled point-to-point transmission to maximize transmission available to EDAM for optimization of transfers.

- Generally support
 Neutral
 Generally oppose

Comments:

Powerex strongly opposes the inclusion in EDAM of unscheduled PTP transmission service. EDAM’s use of unscheduled PTP rights would be the equivalent of scheduling on secondary non-firm rights. This would open the door to the possibility that the same transmission capability will be relied upon both by EDAM schedules and by schedules subsequently submitted by the transmission rights-holder. Such overschedule would result in either (1) EDAM schedules being infeasible, creating potential reliability challenges if they cannot be resolved through re-dispatch in the real-time market; or (2) the transmission customer that reserved and paid for the transmission rights being directly or indirectly prevented from scheduling on them, contrary to its rights

under the OATT framework, undermining the value of its investment in those rights, and weakening incentives for customers to continue to invest in PTP rights.

Powerex reiterates that EDAM transfers must be reliable, since these transfers enable the unit de-commitment decisions that are key to a substantial portion of EDAM's potential production cost benefits. For EDAM transfers to be reliable, they must be supported by primary transmission service, meaning either Firm rights committed or voluntarily made available to EDAM by transmission customers that hold those rights, or by the sale of new Firm rights by the transmission service provider from unsold inventory.

CAISO is well aware that these buckets were carefully crafted by the EIM Entities to ensure this outcome, with unscheduled rights only made available to EDAM if the applicable customer chose to do so.

3. Please share your perspective on the concept of the CAISO providing hurdle free transmission in the export direction reciprocal to the amount of hurdle free transmission provided by the adjoining EDAM BAA across the interface to support EDAM transfers and derive mutual benefit.

- Generally support
 Neutral
 Generally oppose

Comments:

Powerex generally supports coordination of transfer capability made available to EDAM on both sides of an interface. However, Powerex believes such coordination is a separate and distinct issue from the manner in which such transfer capability is compensated. Powerex believes it is necessary for transmission made available to EDAM to be equitably compensated, both in terms of congestion value and, in the case of unsold inventory, through equitable contribution to the revenue requirement of the TSP providing that capability. Powerex is hopeful that a framework for providing this equitable compensation can be developed that minimizes or eliminates hurdle rates, but this should not be a precondition for the availability of transfer capability by the CAISO BAA.

Powerex also believes the concept underlying this question should be resolved and applied uniformly for all EDAM Entities, and sees no justification for confining this discussion only to transmission provided by the CAISO, in the export direction, and only to adjoining BAAs.

4. Please share your perspective on the overall transmission compensation framework under the transmission buckets and the associated transfer revenue and congestion rent allocation method discussed:

A. Congestion rents is associated with internal transmission within the EDAM Entity that is a component of the Locational Marginal Price. Transfer revenue, includes the congestion rent, and is the LMP difference between the import and export transfer. Transfer revenue may also include the hurdle rate depending upon the product.

- Generally support
- Neutral
- Generally oppose

Comments:

Powerex generally agrees with this high-level description of congestion rent, and how it relates to locational price differences. Powerex notes that transfer revenue may also include the value of GHG for imports into a jurisdiction with a GHG program.

B. Transfer revenue associated with EDAM transfers between EDAM BAAs are generally divided 50/50 between these BAAs.

- Generally support
- Neutral
- Generally oppose

Comments:

EDAM transfer revenues reflect the value of moving electricity from one EDAM Entity to another. As such, this value is the product of transmission capability in the exporting BAA and also of transmission capability in the receiving BAA. It is equitable and appropriate for the transfer revenue arising in the EDAM to be allocated 50/50 between the BAAs, consistent with this mutual contribution to the value that is realized.

- C. Transfer revenue associated with EDAM Transfers across an Intertie Constraint (ITC) at the boundary with the CAISO are allocated 100% to the CAISO or adjoining EDAM BAA depending upon the location of the congestion (if on the CAISO side or the adjoining EDAM BAA side).

- Generally support
 Neutral
 Generally oppose

Comments:

Powerex believes the principles governing the equitable allocation of transfer value between EDAM Entities should not be set aside in favor of special rules that apply only to the CAISO BAA. Transmission interfaces at the CAISO boundary are not inherently different than transmission interfaces at the boundaries of any other EDAM Entity BAA. The fact that the CAISO has historically designed its market to collect a disproportionate share of transfer value at its interties is not a compelling reason for designing the EDAM in a similarly inequitable manner.

5. Please share your perspective on intertie bidding:

- A. Self-schedules should continue to be permitted at the interfaces with the EDAM footprint

- Generally support
 Neutral
 Generally oppose

Comments:

A decision by a TSP to participate in EDAM will not relieve it of its obligation to provide transmission service on an open access and non-discriminatory basis. All TSPs participating in EDAM will therefore need to continue to provide transmission service into, out of, and through their transmission service areas under the existing OATT framework.

Powerex notes that the use of the term “self-schedule” may have different interpretations, and clarifies that its support is for the continued ability of transmission customers to submit physical transmission delivery schedules as currently occurs under the OATT framework. Powerex does not support—and strongly opposes—efforts to replace physical scheduling

functionality under the existing OATT framework with a pair of financial positions settled through the EDAM.

- B. Economic bidding is not permitted at interties on the boundary of the EDAM footprint, except at CAISO interties with non-EDAM BAAs.

- Generally support
 Neutral
 Generally oppose

Comments:

Powerex believes that an EDAM entity should neither be required nor prohibited from enabling economic bidding at its boundaries, either at EDAM start-up or in the future. In the case of the CAISO BAA, where intertie bidding has been supported for over 20 years, intertie bidding will need to be maintained at all intertie scheduling points, including at boundary points with other EDAM Entity BAAs. The elimination of intertie bidding would mean that non-EDAM entities in the west would only be able to submit economic bids into the CAISO-operated markets at select CAISO boundary locations that are not adjacent to an EDAM entity.