Comments on Extended Day-Ahead Market - Bundle 1 Straw Proposal

Initiative: Extended day-ahead market

Comment period

Aug 10, 2020, 10:00 am - Nov 12, 2020, 05:00 pm

Submitting organizations

- Joint EIM Entities

Joint EIM Entities

Submitted on 11/12/2020, 12:20 pm

Submitted on behalf of

Arizona Public Service Company ("APS"), Avista Corporation ("AVA"), Balancing Authority of Northern California ("BANC"), Bonneville Power Administration ("BPA"), Idaho Power Company ("Idaho Power"), The City of Los Angeles, Department of Water and Power ("LADWP"), NV Energy ("NV Energy"); PacifiCorp, Portland General Electric Company ("PGE"); Powerex Corp. ("Powerex"), Public Service Company of New Mexico ("PNM"), Public Service Company of Colorado ("PSCo"), Puget Sound Energy, Inc. ("PSE"), Salt River Project ("SRP"),The City of Seattle, acting by and through its City Light Department ("Seattle City Light"), The City of Tacoma, Department of Public Utilities, Light Division ("Tacoma Power"), Tucson Electric Power ("TEP"), Turlock Irrigation District ("TID"); and NorthWestern Corporation d/b/a NorthWestern Energy ("NWE").

1. Please provide your organization's overall position on the EDAM bundle 1 straw proposal:

The EIM Entities are pleased to have the opportunity to comment on the EDAM Bundle 1 Straw Proposal. The EIM Entities joining these comments include: Arizona Public Service Company ("APS"), Avista Corporation ("AVA"), Balancing Authority of Northern California ("BANC"), Bonneville Power Administration ("BPA"), Idaho Power Company ("Idaho Power"), The City of Los Angeles, Department of Water and Power ("LADWP"), NV Energy ("NV Energy"); PacifiCorp, Portland General Electric Company ("PGE"); Powerex Corp. ("Powerex"), Public Service Company of New Mexico ("PNM"), Public Service Company of Colorado ("PSCo"), Puget Sound Energy, Inc. ("PSE"), Salt River Project ("SRP"),The City of Seattle, acting by and through its City Light Department ("Seattle City Light"), The City of Tacoma, Department of Public Utilities, Light Division ("Tacoma Power"), Tucson Electric Power ("TEP"), Turlock Irrigation District ("TID"); and NorthWestern Corporation d/b/a NorthWestern Energy ("NWE"). Some EIM Entities may not have yet formulated their own specific positions on all issues addressed within this document. Therefore, while these comments represent a general consensus position of the group as a whole, these comments may not necessarily represent the views on every specific issue by each individual EIM Entity. Note: for purposes of these comments, the EIM Entities refer to their collective group as the "EIM Entities," even for future EDAM scenarios when the collective group could also be referred to as "EDAM

Entities."

Quite a bit of time has elapsed since the kick-off of the Extended Day Ahead Market (EDAM) stakeholder process. The reasons for this delay are evident and reasonable, including the challenges imposed by the pandemic, pendency of other key market design elements, the complexity of EDAM issues, and August/September heat wave grid events that have not only rightly demanded attention, but also are causing a reassessment of certain underlying market design elements.

Because of the temporal gap from kick-off to these initial comments, the EIM Entities would like to take this opportunity to re-emphasize our commitment to this process as well as go back to the core principles for an EDAM that the EIM Entities put forward for consideration in September, 2019, and which we link here ("Principles") {EDAM Principles and Elements of the EIM Entities}. We continue to be focused on achieving the goals contained in the Principles and Elements in a collaborative manner. The goals include:

- Ensuring a voluntary market design. This reflects the desire to build off the success of the Energy Imbalance Market (EIM) and to pursue additional economic and environmental benefits for market participants and their respective customers in regions across the West. The EIM Entities recognize that developing a workable and equitable EDAM will be a challenge. EDAM is not a full RTO, and does not have all the elements of the Day Two market currently administered within the CAISO Balancing Authority Area, and finding a design that bridges the gap between the CAISO's market and bilateral/OATT markets outside of California is hard. However, given the need to expand regional market coordination, and the barriers to alternative solutions, we continue to view an incremental EDAM as the next logical and achievable step in the evolution of Western wholesale markets.
- Ensuring equity and "no leaning" by the development of a robust Resource Sufficiency (RS) test that ensures that the central unit commitment process is achieved over the resource fleet that can meet reliability obligations of the participating Balancing Authority Areas. This is critical so that EDAM participants can confidently rely on the market and achieve the diversity that is a key factor to achieve benefits. As it is developed, an RS test should measure whether each entity has taken sufficient steps ahead of the day-ahead market timeframe to ensure it has access to sufficient resources to serve its demand and balance its system, and be consistently applied to all participants.
- Be consistent with existing Open Access Transmission Tariff (OATT) obligations. Outside of CAISO, transmission customers generally take service under a *pro forma* OATT at rates that are developed based on Federal Energy Regulatory Commission (FERC) policies. The EDAM transmission framework must be compatible with existing practices and FERC requirements, which is a challenging task. It must respect existing uses, minimize cost shifts, and also enable enough transmission contribution to make the market work well.

Below the EIM Entities have set forth more detailed proposals and comments on several issues in Bundle 1 of this Stakeholder Process for consideration by the CAISO and stakeholders. As indicated in our prior comments, we intend to work with the CAISO and stakeholders to find a comprehensive design for an EDAM that brings broad-based benefits to all participants, those within CAISO and those Balancing Authority Areas that voluntarily elect to participate, and to the region.

2. Provide summary of your organization's comments on this proposal:

Based on EIM Entities' review of the straw proposal, there are an encouraging number of principles and structural components that are shared or similar with the EIM Entities' Principles. There are a

number of areas where dialogue and design efforts must continue to realize the collective goal of a regional day-ahead market that is effective in its ambitious objectives to produce widespread customer benefits, enhance regional reliability, reduce carbon emissions, and remain enticing to market participants.

The EIM Entities note that these comments are preliminary and may need to be revised as market events that occurred in August and September 2020 are analyzed and better understood. The EIM Entities may supplement or revise these comments as more conclusions are reached in either the root cause analysis being performed by CAISO or the review being conducted by the EIM Entities.

Also, these comments do not address the impacts of the CAISO's recent update provided on its DAME proposal, specifically with regards to the continued use of a sequential integrated forward market (IFM) and residual unit commitment (RUC) for the CAISO BAA. Achieving a reliable and efficient commitment of physical generating units utilizing available transmission to meet load from a single optimization has been a foundational element for how the EIM Entities have viewed EDAM. The CAISO, EIM Entities, and stakeholders will need to thoroughly examine the full set of implications of the CAISO's new DAME proposal on EDAM market design and identify what future enhancements may be necessary to enable a reliable and efficient multi-BAA optimization. The EIM Entities request that the integration of IFM and RUC be explicitly included in an early EDAM stakeholder initiative bundle as its own topic.

3. Provide detailed comments including examples on the Resource Sufficiency Evaluation topic:

The EIM Entities fully support the CAISO's identified RS principles of ensuring no leaning, supporting reliability, and sharing diversity benefits. The EIM Entities are committed to achieving these high-level objectives and emphasize that it is critical to EDAM's success that a day-ahead RS test is accurate, transparent, and includes explicit requirements that are consistently applied. Most critical is that RS supports grid reliability and does so in an equitable manner.

Considering recent heat wave events, the EIM Entities believe that an examination of the existing EIM RS framework is needed to assist in RS design for EDAM. Specifically, the EIM Entities request an evaluation of the EIM RS test results during recent events and a comparison of those results to the actual operating conditions across the entire EIM area. This analysis should inform what near-term enhancements might be necessary to ensure the EIM RS test is functioning in a manner that is consistent with the CAISO's identified principles. The EIM Entities believe this review will benefit EDAM by helping to inform what design elements should be included (or modified or avoided) in developing an accurate day-ahead RS test. In the meantime, as articulated in these comments, the EIM Entities re-iterate the fundamental principles we believe should support a successful EDAM.

1. EDAM Resource Sufficiency requires explicit rules to ensure it is accurate and applied consistently to all participants

The CAISO's straw proposal did not define any specific criteria to validate supply counted toward RS. It appears that under the CAISO's proposal, the only condition for supply to be counted towards meeting RS is agreement that EDAM transfers will be curtailed pro-rata with load. As previously identified by the EIM Entities in written comments and during the workshops, it is crucial to ensure accurate results by requiring that each resource's contribution to RS is consistent with its true capability to perform when needed, and that external supply used for RS reflects real, identifiable resources and is supported by a day-ahead e-Tag. The EIM Entities request that CAISO include these requirements in the next proposal.

2. The RS test design must be straightforward with timely information and clear requirements

As the details of RS are developed, CAISO must ensure the test design is straightforward and allows entities to clearly understand the requirements. For example, final requirements must be provided early enough (i.e., no later than 5 am during the preschedule timeframe) to ensure compatibility with day-ahead bilateral trading timelines. In addition, market participants must have access to software tools (e.g., a spreadsheet interface) and supporting information as needed to confidently meet EDAM RS obligations.

3. Effective failure consequences are needed to prevent leaning

The EIM Entities appreciate the CAISO's initial proposal to apply an EDAM transfer limit to entities that fail the day-ahead RS test, but believe that more consideration of this topic is needed to ensure that outcomes are consistent with the objectives of the RS test. For example, the existing EIM RS test's failure consequence results in a "capping" of EIM imports at the previous hour's value, allowing a failing Balancing Authority Area (BAA) to continue to rely on EIM imports even during conditions in which it did not have sufficient supply to meet its reliability needs on a stand-alone basis. As stated above, the EIM Entities believe appropriate consequences for failing a day-ahead RS test are necessary to properly ensure no leaning and to provide sufficient incentives to contract for sufficient energy, capacity and flexibility in advance of EDAM (through bilateral transactions or other forward commercial activities). The EIM Entities also believe that CAISO and stakeholders should carefully consider multiple options to ensure these RS objectives are achieved.

4. The design and application of RS must be subject to on-going independent monitoring and review

With respect to RS, independent external review is important given the many roles that CAISO plays in the RS evaluation - CAISO as one of the EDAM BAs that is in the RS test, the entity responsible to ensure it is accurately designed and applied to the CAISO BAA and others, and also the entity that compiles and provides metrics on the test results and performance (e.g., through the Market Performance and Planning Forum). The EIM Entities reiterate the need for independent, transparent and objective review and assessment of both EDAM design and ongoing performance as experience is gained with EDAM RS.

4. Provide detailed comments including examples on the Transmission Provision topic:

The EIM Entities agree with the CAISO that the "firmness" of transmission is an important element of making EDAM work and providing confidence to each Balancing Authority (BA) and Load Serving Entity (LSE) that their BAA reliability requirements will be met. The EIM Entities have previously identified that transmission provision design for EDAM must recognize that EIM Entities will be relying on these transfers to avoid committing units and to serve load, and that all transmission in the EDAM must therefore be of "high quality" and not subject to curtailment in all but the rarest of circumstances.

The CAISO has defined this level of firmness as the same "curtailment priority as internal load" in each BA. In an OATT framework, the level of firmness for transmission is defined for each BA, depending on the type of service that is procured and according to the Transmission Service Provider's (TSP) OATT structure. Importantly, firmness is not related to the length of the product term (annual, monthly, weekly, daily, hourly), but rather the type of product (Network Integration Transmission Service (NITS) or Firm point-to-point (PTP), Conditional Firm PTP service, Secondary NITS and Non-Firm PTP), which defines its North American Electric Reliability Corporation curtailment priority.

While the most straightforward requirement would be to require that all OATT transmission associated with EDAM be strictly "Firm", the EIM Entities believe such a requirement could result in challenges for some EIM Entities that occasionally serve load with Non-Firm transmission or may need to purchase Non-Firm transmission in the rare instance that Firm is unavailable. The EIM Entities believe that EDAM requirements must be consistent with the objective of ensuring that EDAM transmission is highly reliable, but also balance those requirements with the need to ensure that EIM Entities can continue to reliably serve load in a manner that is similar to existing practices.

The EIM Entities believe that appropriate requirements can be developed by separating the EDAM transmission requirements into two categories. The first category addresses transmission used to meet an EIM Entity BAA's RS requirement. The second category is applicable to transmission that is made available to EDAM for market optimization. The EIM Entities' proposed approach for each category is described below.

1. Resource Sufficiency Transmission Requirements

Importantly, the transmission used to meet an EIM Entity's RS requirements will not be limited to EDAM market transactions. It will also include transmission service associated with each BAA's activities that occur in advance of EDAM (e.g., forward contracts and/or day-ahead bilateral transactions). The EIM Entities believe a reasonable approach for defining transmission requirements for RS supply is to:

a. Allow each EIM Entity to maintain discretion over the transmission service it is willing to rely on to self-schedule resources to meet its own load, provided that the EIM Entity believes the transmission identified in its RS plan is consistent with the objective of ensuring that RS supply is truly deliverable and not at a material risk of curtailment, and that the transmission is identified on a day-ahead e-Tag.

b. Include a monitoring and penalty structure that would hold EIM Entities accountable for curtailments to any Non-Firm point-to-point (PTP) transmission that is used to deliver self-scheduled RS supply. This may include an increase to uncertainty requirements for repeat and/or large curtailments to Non-Firm PTP transmission products (and potentially a restriction of the use of Non-Firm transmission on certain paths that are identified as particularly problematic).

2. EDAM Optimizable Transmission Requirements

The second category is the transmission that is directly made available to EDAM for market optimization. This transmission has generally been categorized into three "buckets":

- **Bucket 1**: Transmission that is identified in an EIM Entity's RS plan as being available for market optimization;
- **Bucket 2:** Additional Firm PTP transmission voluntarily provided to the market by transmission customers (beyond RS requirements); and
- **Bucket 3:** Unsold (or unreserved) Firm Available Transfer Capability (ATC) on the EDAM pathways (interconnection points) may be offered to the market by the TSP. It is anticipated that any unsold and/or unreserved Firm ATC would be made available to the EDAM under pre-determined conditions that would ensure the TSP cannot arbitrarily withhold ATC. Any Firm ATC the EDAM does not elect to optimize during the market run will be made available by the TSP for additional OATT bilateral business opportunities.

Furthermore, curtailments to market transfers can result in disruptions to the market solution, adding new costs and/or reliability risks on market participants. To avoid these potentially harmful outcomes,

the EIM Entities believe that EDAM transmission that is used to enable market optimization should be limited to Firm PTP and NITS (7-F, 7-FN), Conditional Firm (6-CF), and Secondary NITS (6-NN) transmission products. These products are generally deemed by the EIM Entities to be highly reliable and consistent with the objectives of providing a robust market solution.

5.1 Principles

In general, the EIM Entities believe that the CAISO's proposed principles are in alignment with the principles provided by the EIM Entities throughout this stakeholder initiative. The CAISO's straw proposal does a good job of recognizing some of the unique challenges of attempting to schedule an OATT-based transmission network within the construct of an organized market wherein all transmission is traditionally available to the market (i.e., placed under the operational control of the market operator by a participating transmission owner (PTO) in return for a guaranteed recovery by the PTO of its revenue requirement). The CAISO's first principle of maintaining fair and open access while maximizing the transmission system usage and respecting scheduling rights and other contractual arrangements is an excellent example of the alignment of the EIM Entities' goals in the provisioning of transmission in the EDAM. The one caveat is that, as described in its first principle, the CAISO's reliance on "long-term" scheduling rights is misplaced. As was clarified in the February workshop, it is important that all Firm transmission rights holders are respected, including customers that have purchased hourly, daily, weekly, or monthly transmission reservations. This is a fundamental aspect of how the OATT framework functions, and an EDAM design that does not respect all Firm transmission rights holders is less likely to be approved by the Federal Energy Regulatory Commission (FERC). In other words, "Firm is Firm" regardless of the duration of the transmission reservation timeframe.

5.2 Internal transmission limits

The EIM has been an evolving market with the multitude of participants and systems that have required the CAISO to be flexible and creative in the way its model optimizes each of the unique EIM Entities' BAA. The CAISO created new tools, such as automated matching of import/export schedules, automated mirror system resources at CAISO intertie scheduling points, and, more recently, accommodating separate scheduling and settlement procedures under the Public Service Company of Colorado EIM Entity to facilitate internal sub-entity relationships. Similarly, the EIM Entities believe that the CAISO's approach to internal transmission will require it to work separately with each BA to model its internal system as needed to accommodate internal EDAM transfers.

The CAISO acknowledges that in its own history it had experience with existing transmission customers whose rights were held out from market optimization. Similarly, in EDAM, there will be transmission providers or transmission customers that may not choose to allow their transmission capacity to be included in the EDAM optimization for a variety of reasons. While perhaps not the most efficient for the EDAM market overall, there is precedent for this voluntary approach to transmission utilization. Failure to permit this election by the transmission provider may be a barrier to participation and therefore lower overall transmission market availability. Simply stated, it is a reality that will need to be accommodated. However, the EIM Entities expect that over time there could be a transition as market benefits provide incentives for EIM Entity transmission customers to participate in EDAM (thereby enhancing the transmission available for optimization rather than self-schedules). Furthermore, with time and experience, the EIM Entities expect that the CAISO's market model will have the capability to manage more accurately some of the unique complexities and challenges that each BA may have.

The approach that the CAISO proposed, self-scheduling of PTP transmission in the day-ahead market to represent use after the day-ahead market, is not a feasible approach for several EIM Entity BAAs given the multitude of third party customers and the ability of these customers to exercise their rights beyond simply specific paths or PTP designations. While the EIM Entities believe that there is

a path forward to make as much internal transmission available as feasible through individual coordination with the CAISO, it must be done with consideration of the scheduling flexibility of third-party transmission customers and associated financial impacts. Any changes to existing rights or practices of TSPs and transmission customers must be justified to FERC as just and reasonable. The EIM Entities are concerned that the approach proposed by CAISO may be seen as impacting the existing rights of third-party entities without sufficient justification.

5.3 Transmission to enable EDAM transfers

The EIM Entities support the CAISO's proposal relative to the three buckets of transmission identified by the CAISO to enable EDAM transfers.

Bucket 1:

With regard to Bucket 1 transmission, or RS transmission, the CAISO has correctly identified that this transmission is required in order to count an external resource towards a BA's day-ahead RS evaluation and as well for bilateral transactions or bid range transactions.

For clarification, the transmission that is procured from the source BAA to the sink BAA may have been reserved by multiple transmission customers. In addition, these reservations may be on multiple TSP systems across multiple BAAs. It is this scenario that will likely add additional complexity to a model that is designed more for a flow-based model versus a scheduling model that is the current OATT construct used in much of the Western interconnection. Also there may be path-specific Bucket 1 transmission that relates to designated paths across an Energy Transfer System Resource (ETSR), which will require more complexity in the modeling of those intertie resources to take into account the multitude of sources and sinks within a BA that correspond with the underlying transmission rights.

Bucket 2:

Bucket 2 transmission, or non-resource sufficiency evaluation transmission, is either Firm PTP (7-F) or Conditional Firm PTP (6-CF) transmission service previously-reserved by a transmission customer (Conditional Firm Transmission Service is a type of Long-Term Firm transmission service for which there is a specified Number of Hours per year or specified System Condition in which the TSP can curtail the reservation prior to curtailing other Long-Term Firm service.), which is not needed to pass the RS evaluation, or otherwise scheduled, and can be made available to the EDAM in return for what CAISO is calling "transfer revenues". The CAISO proposed that the transfer revenue will be received under the appropriate CAISO or TSP OATT rules from which it has purchased the transmission. This will require further discussion with the CAISO.

Bucket 3:

The definition CAISO provided for Bucket 3 transmission as TSPs making incremental *export* unsold transmission available to support EDAM transfers requires additional clarification. To be clear, the proposal is only to provide a charge for Bucket 3 utilization in the export direction. Consistent with the prior discussion of internal transmission, the expectation is that Firm import ATC can be made available for optimization, as both import and export transmission is necessary for market connectivity. While a usage fee is only being proposed for export Bucket 3 transmission, a usage fee may also need to be considered for import Bucket 3 transmission. Some transmission customers use PTP transmission to bring imports into the BA and may be incented to no longer purchase that PTP transmission and instead rely on Bucket 3 transmission and the EDAM to import that energy into the BA. If there is no usage fee for import Bucket 3 transmission, there may be inappropriate cost-shifting among transmission customers inconsistent with traditional cost causation principles and a free-rider issue may be created. This topic may need additional discussion and

analysis by individual TSPs.

The CAISO's proposal relative to the usage charge stated that the usage fee will be set by each BA according to its OATT. For clarification, the usage fee may be TSP specific within each BA as appropriate. Also, for purposes of transparency, the EIM Entities recommend establishing a specific charge code or pricing element relative to the usage fee rather than combining it with the transfer revenue. Having this pricing element as a separate charge will aid in the distribution of the revenue to the appropriate TSP within a given BAA and provide greater transparency into the revenue collected for the Bucket 3 transmission, as opposed to revenue for other reasons included in the transfer revenue charge code.

Lastly, the CAISO has stated that the TSP will receive any transfer revenue associated with the transmission it makes available, which may exceed the usage fee. To be clear and for consistency, the EIM Entities are recommending that incremental transfer revenue that is above the usage fee should be split 50/50 with the adjacent BAA, similar to Bucket 1 and Bucket 2 transmission. This proposal is further clarified in the Transfer and Congestion Revenue Distribution section of these comments.

5.6 Regional transmission charge

The CAISO has proposed to address a "regional transmission charge" for spot imports and exports with external BAAs as part of the EDAM Bundle 3 topics. The EIM Entities agree and will be prepared to discuss this at that time.

5.7 EIM Wheeling Charge

The CAISO proposed that the usage charge for Bucket 3 transmission could potentially be used in the EIM in the form of an EIM wheeling charge. During the workshop, the CAISO clarified that there was a concern that without a commensurate wheeling fee in the real-time market there may be changes in energy schedules due simply to the absence of a usage fee. However, given that Bucket 3 transmission is unsold (or unreserved) Firm (7-F) ATC, the amount of Bucket 3 transmission that is available in the day-ahead market is relatively small compared to the amount of EIM transmission (Non-Firm, 0-NX transmission) that may be available due to counter-flow scheduling, Non-Firm ATC, unscheduled transmission capacity that was unavailable day-ahead, etc. Moreover, the RS test and long-term resource adequacy requirements should counteract any "waiting" for the EIM.

With this being the case, a concern of the EIM Entities is that implementing a hurdle rate in the EIM may result in reduced EIM benefits and transfers, as well as increased prices. Therefore, the EIM Entities respectfully request that the CAISO remove this topic from Bundle 1 and address it in Bundle 3 to allow time for further analysis to be conducted on the impacts.

3. Additional transmission topics for discussion

a. **Intra-Day Schedule Changes from Existing Transmission Customer**s

Today, Transmission Customers under the OATTs of EIM Entities must provide balanced schedules at T-57 that become financially binding in the EIM, with additional schedule changes being permitted down to T-20. In the next proposal, the EIM Entities request that the CAISO explain how the scheduling rights of customers with Firm transmission service, both participating and non-participating, will be respected for the following examples:

1.

i. A non-participating NITS customer submits a day-ahead schedule of 100 MW from an internal Designated Network Resource to Network Load. If the customer increases its balanced schedule to 110 MW at T-57, today, there would be no additional

transmission-related charges for this modified balanced schedule going into the EIM.

ii. A non-participating NITS customer submits day-ahead schedule of 100 MW from an external Designated Network Resources to Network Load. If the customer increases its balanced schedule to 110 MW at T-57, today, there would be no additional transmission-related charge for this modified balanced schedule going into the EIM.

iii. For the same two scenarios above but with the schedule change occurring at T-20, today, this would create an EIM settlement.

iv. A non-participating customer with 120 MW of PTP export rights submits a day-ahead schedule of 100 MW. The customer increases the schedule to 110 MW at T-57. Today, there would be no additional transmission-related charge for this modified balanced schedule going into the EIM.

v. A non-participating customer with 120 MW of grandfathered PTP rights submits a day-ahead schedule of 100 MW. The customer increases the schedule to 110 MW at T-20. Today, there would be no additional transmission-related charge for this modified balanced schedule going into the EIM.

a. **Losses**

The EIM Entities' OATTs utilize fixed average system losses. Transmission customers have relied on this approach in establishing their commercial arrangements. In the next proposal, the EIM Entities request CAISO articulate how losses will be handled in EDAM and what, if any, changes would be required of the EIM Entities' OATTs.

5. Provide detailed comments including examples on the Transfer and Congestion Revenue Distribution topic:

The EIM Entities' Proposed Principles

The EIM Entities have developed a set of high-level, foundational principles that they believe should guide the development of market rules regarding congestion rents in the EDAM. These principles include:

A. All transmission (Buckets 1-3) made available to EDAM should be eligible for congestion and/or transfer revenues. This includes transmission internal to an EIM Entity BAA or at interchanges (seams).

B. EDAM congestion and transfer payments should go from the CAISO as the market operator to the EIM Entity and then be sub-allocated to transmission customers. The exception to this principle is congestion revenue rights (CRR), which will be settled directly between the CAISO and the CRR holder.

C. EDAM design should preserve the rights of non-participating OATT transmission right holders in regard to congestion and transfer rents charged through market mechanisms. EDAM design should instead allow each Transmission Service Provider to maintain its authority, through its tariff and business practices, to determine the appropriate approach to allocate any applicable EDAM congestion costs and revenues to its transmission customers.

D. The allocation of congestion and transfer revenues associated with BAA transfers, including the CAISO BAA, should be fairly and equitably shared between the exporting and importing areas. For Bucket 3 transmission, any hurdle rate should go 100% to the exporting BAA, and all incremental revenues above the hurdle rate should be equitably allocated between the importing and exporting BAAs.

The CAISO's Proposed Principles

The EIM Entities generally *support with caveats* the CAISO's proposed principles regarding transfer

and congestion revenue distribution. The EIM Entities suggest the following regarding the principles.

A. References to "long-term" rights in Principle Nos. 1 and 4 should be removed. The EDAM should respect all OATT-based firm transmission rights, regardless of duration. Both long- and short-term firm rights pay the costs of the transmission system. Since the current EDAM market design can utilize both long- and short-term firm rights for the market optimization, both types should be eligible for the allocation of transfer and congestion revenues.
B. In the absence of an explanation in the proposal, the EIM Entities are unclear as to how or why the distribution of transfer and congestion revenues would incent long-term forward procurement of transmission for the resource sufficiency evaluation as set forth in Principle No. 3. As discussed in subsection (a) above, the EIM Entities believe that the distribution of transfer and congestion revenues should apply to both long- and short-term transmission.
C. Similarly, the meaning of the word "respect" in Principle No. 4 requires some definition. The EIM Entities' understand it to mean a transmission customer's ability to utilize its OATT rights (reserve, schedule, redirect, reassign, designate/undesignate resources, acquire secondary resources, etc., depending on the type of customer) as well as hold the OATT customer financially harmless for the use of those rights to the maximum extent practicable. In future proposals and discussions, the CAISO should elaborate on the meaning and application of these principles.

Transfer Revenues

At this time, the EIM Entities *take no position* on the CAISO's proposal regarding the concept of transfer revenues. Today, in the EIM, when an Energy Transfer System Resource (ETSR) binds, the associated "congestion" is reflected in the marginal congestion cost component of the source (exporting) BAA's locational marginal price. The EIM Entities' interpretation of the CAISO's proposal is that it would "reclassify" this congestion as transfer revenue and reflect it as a change to the marginal energy component instead of the congestion component of the locational marginal price (LMP). What is not clear in the CAISO's proposal is whether using the marginal energy component as proposed has any other consequences in the market. For example, does changing the energy component of the LMP within a BAA also impact how the GHG shadow price is included in the LMP for that area? Likewise, would marginal losses be calculated with reference to each BAA's energy price? If transfer revenues are separated from congestion revenues, are there mechanisms to ensure that sufficient revenues are collected and allocated for both? This aspect of the CAISO's proposal needs more examples, analysis, and discussions before the EIM Entities can fully support the proposal.

Allocation of Transfer Revenues

The EIM Entities *support in part and oppose in part* the CAISO's proposal regarding the allocation of transfer revenues. The EIM Entities support the CAISO's proposal to split transfer revenues 50/50 between the importing and exporting BAAs for EDAM transmission Buckets 1 and 2. The EIM Entities believe this split is consistent with the current approach in the EIM and generally represents an equitable and predictable outcome that provides the proper incentive to customers to donate both import and export transmission.

The proposal to allocate 100% of the transfer revenues to the exporting BAA for transmission Bucket 3 appears inconsistent with the rationale and reasoning of the CAISO's proposal regarding transfer revenues associated with transmission Buckets 1 and 2. Rather, the EIM Entities believe it would only be appropriate for 100% of the transfer revenues associated with Bucket 3 to be allocated to the exporting BAA to pay the usage fee. Once the export usage fee has been paid, then the importing and exporting BAAs should equitably split any transfer revenue above the usage fee. The EIM Entities believe more work is necessary to consider the interaction between a usage fee and the resulting transfer revenues before a specific split ratio (*e.g.*, 50/50) is determined. For example, one

of the EIM Entities' concerns is that the inclusion of a relatively high hurdle rate for Bucket 3 export transmission could result in less transfer revenue being available for any Bucket 1 or Bucket 2 transmission made available on the importing side of the transfer path. This could result in a disincentive for transmission customers to make that import transmission available.

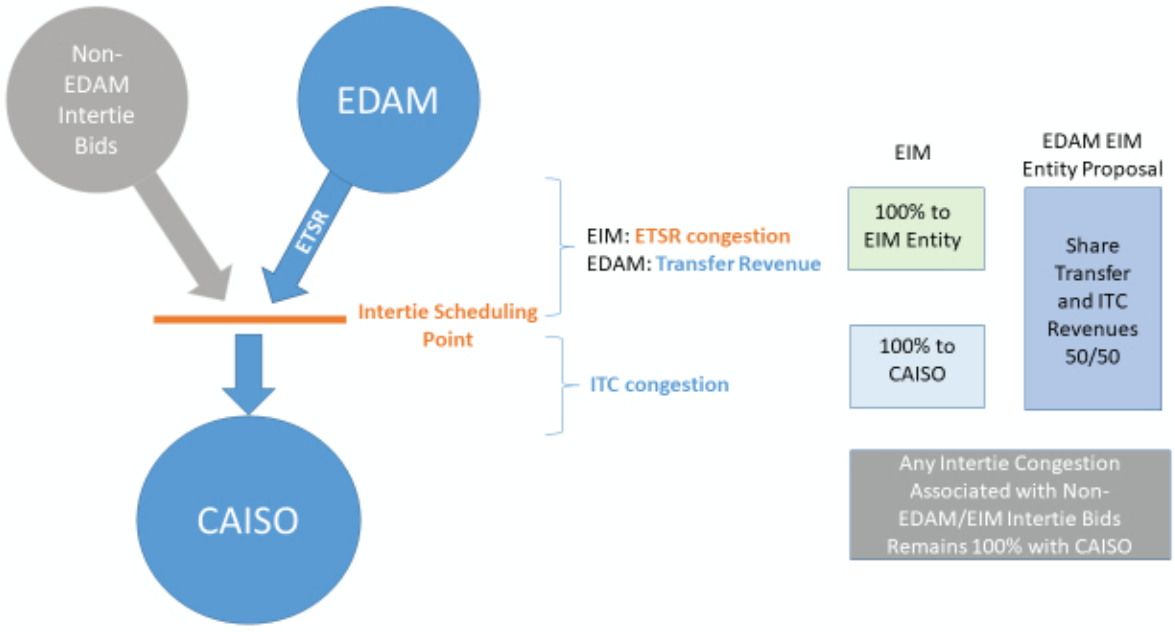
Allocation of Transfer Revenues and Intertie Congestion Revenues

The method to allocate congestion rents created by transfers between an EIM Entity BAA and the CAISO BAA is fundamental to the EDAM design, particularly as it relates to the Pacific AC and Pacific DC interties that connect the Northwest to California. These major pathways are heavily used, often congested, and present significant drivers of potential EDAM benefits. While these major transmission lines enable close to 8,000 MW of transfer capability to deliver energy between the Northwest and California, they are also exposed to significant risk of "seams" issues: both the AC and DC interties are effectively split horizontally (and sometimes vertically), with different Transmission Service Providers (TSPs) offering service to different rights holders on the upstream/northern and downstream/southern segments of the transfer paths.

This complexity means that a well-designed EDAM provides a significant opportunity to ensure that the entities that fund these facilities (both in the Northwest and California) are able to receive an equitable share of the significant economic value of inter-regional trade that these facilities can enable in EDAM. However, the reverse is also true: a poor design can increase the risk of seams issues, creating the potential for inequitable outcomes that will discourage entities from making their intertie transmission available to EDAM.

The EIM Entities believe that it is important that an equitable approach for congestion rent allocation on these paths (and others in which rights are split between upstream and downstream segments) is developed and agreed upon in advance, thereby ensuring a durable and predictable allocation of the economic value of transmission through EDAM.

It is important to clearly articulate and understand how and when transfer and congestion revenues would apply in the EDAM. The following graphic generally illustrates how the CAISO manages and allocates congestion at CAISO interties in the EIM and contrasts that to the EIM Entities' proposal for EDAM:



In the EIM, if an ETSR connected to the CAISO BAA becomes fully scheduled and thus "binds" first, the congestion is classified as ETSR congestion (or "transfer revenue" under CAISO's EDAM proposal) and allocated 100% to the EIM Entity BAA. If the CAISO's intertie scheduling point binds first, the congestion is instead classified as intertie congestion (ITC) and allocated 100% to the CAISO BAA. This means that whichever side "fills first" can often recover 100% of the economic value in a particular hour, and the other segment may not receive any of the economic benefits associated with the transmission it made available to support the transfer.

The EIM Entities have concerns that the CAISO's current intertie congestion allocation construct may be unworkable for the EDAM for several reasons:

A. *Inequitable*: An allocation paradigm in which only a subset of rights holders on a particular EDAM transfer path are entitled to 100% of the congestion value appears inequitable to the EIM Entities, as it does not recognize the contribution of the other transmission segments that are necessary to enable the transfer.

B. *Unpredictable:* The allocation results would be unpredictable from one hour to the next, with no way to anticipate whether a rights holder on a particular segment of a transfer path would recover any congestion value at all. As such, customers seeking to donate transmission would have to conjecture regarding the value of their potential transmission donation. This unpredictability will likely discourage entities from making transmission available if they believe that the economic value of those rights will not be fairly recovered. A preliminary review of the results from the recent heat wave events supports the EIM Entities' view that the current approach for calculating congestion on the major pathways can result in highly unpredictable outcomes and that a more predictable solution is necessary for EDAM.

C. *Lacks durability:* The outcomes associated with using the CAISO's current congestion rent allocation approach would depend heavily on Entity-specific business practices and operating procedures on either side of an interface and cause shifts in revenue that are not related to basic drivers of congestion on a particular path. This concern could be related to both CAISO and other path operator practices. This exposes the resulting congestion rent

allocation to seams issues and the potential for unintended consequences as the specific mechanics and procedures used for scheduling EDAM transfers evolve over time.

The EIM Entities believe that a potential simple and effective approach to address these concerns is to split the congestion revenue collected across the entire EDAM transfer path (i.e., the sum of the Transfer Revenues and ITC congestion) equally between the importing and exporting BAAs (including the CAISO BAA). A 50/50 split appears reasonable and ensures a stable and equitable outcome where the contributions to the transmission needed to enable the transfer are appropriately recognized, ensuring all entities contributing transmission to enable EDAM benefits are able to recover a fair, predictable, and durable allocation of EDAM benefits. This, in turn, may incentivize transmission customers to donate more transmission to the market for transfers, which is one of the foundational principles to market design that the CAISO should be focused on. The EIM Entities look forward to further dialogue on the proposed allocation approach.

It is also important to clarify that the EIM Entities are not proposing to share congestion value associated with non-EDAM transactions (e.g., congestion resulting from intertie bidding). Congestion associated with (or attributable to) non-EDAM bids through the intertie bidding framework would remain 100% with the CAISO BAA, as would transmission paths entirely within the CAISO BAA (e.g., to internal hubs such as NP-15).

Congestion Revenue Rights

The EIM Entities *support with caveats* the CAISO's proposal regarding monthly congestion revenue rights. The EIM Entities support the optionality of using congestion revenue rights but not making them a mandatory market requirement. The EIM Entities also support the concept of a monthly plan for load service in their respective BAAs upon which congestion revenue rights are allocated, if they determine to utilize that approach.

However, the EIM Entities seek clarification regarding how certain classes of OATT transmission customers would be treated for purposes of congestion revenue rights. While the proposal is generally clear regarding how load serving entities and external entities serving load in a BAA would be treated, the treatment of wheeling transmission customers or independent power producers using transmission to export energy is not clear. The EIM Entities seek clarity from the CAISO regarding these types of customers. Conceptually, it would seem that any transmission customer that has rights of a month or longer should be eligible for CRRs, as they have paid for the transmission for that time period. Certainly, all transmission customers that have made long-term investments in a transmission system should be eligible for CRRs.

Transfer and Congestion Revenue Settlements

The CAISO seeks input on how transfer and congestion revenues should be settled. The EIM Entities *support* settlements between the CAISO and EIM Entities. The EIM Entities would then sub-allocate those revenues to the appropriate customer(s). This ensures a proper and reasonable continuity between the CAISO as the market operator, an EIM Entity, and the EIM Entity's transmission customers.

A multi-party settlement paradigm that involves the CAISO, EIM Entities, and transmission customers would add unnecessary complexity and potential uncertainty to an already complex settlement process. Moreover, any settlements directly between the CAISO and transmission customers would require additional contracts and would convolute the contractual relationships between the CAISO, EIM Entity, and EIM Entity transmission customers.

6. Additional comments on the bundle 1 straw proposal or EDAM initiative:

EDAM must be voluntary to participate

The EIM Entities continue to believe that to gain broad support, the EDAM must be voluntary in policy and in practice. This can only be achieved by extending the voluntary approach that has been successful in attracting EIM participation, and by implementing a flexible EDAM design that can co-exist with existing market frameworks and the open-access transmission tariff (OATT) framework that is broadly used outside of the CAISO BAA. The EIM Entities recognize that participating in EDAM will include a commitment to certain obligations (such as meeting upfront day-ahead Resource Sufficiency requirements and ensuring sufficient supply is available in real-time to support day-ahead market awards) and are supportive of more discussion to further define such obligations. The EIM Entities emphasize, however, that ensuring that EDAM participation is voluntary on an on-going basis is vital to support the continued autonomy of utilities outside of California to maintain reliability of their BAAs, to maintain operational control of their resources and transmission systems, and to continue to rely on existing market frameworks to achieve reliable operation and economic efficiencies for their customers.

The Interaction of an EDAM and Other Market Opportunities Requires Greater Discussion

The EIM Entities believe that CAISO should reconsider its proposal to eliminate entities within an EDAM BAA's ability to participate in the CAISO's existing intertie bidding framework and should instead seek tailored solutions to address its concerns. Some EIM Entities view such a restriction on access to the CAISO's existing intertie bidding framework as inconsistent with the voluntary principle of EDAM, and believe it will also lead to harmful consequences for OATT transmission customers and other non-participating third parties that have resources and loads within an EDAM BAA. The EIM Entities are fully supportive of modelling enhancements, appropriate market rules, and other improvements as needed to ensure the two frameworks (EDAM and intertie bidding) can co-exist accurately and efficiently. The EIM Entities look forward to further discussion to understand the CAISO's concerns and to find solutions that can allow CAISO-operated markets to function efficiently while supporting continued participation in EDAM and the CAISO's intertie bidding framework.

Decisional Framework

The EIM Entities support the proposed decisional framework whereby EDAM would proceed under a "joint authority" model in which formal approval would be required of both the EIM Governing Board and the CAISO Board of Governors prior to moving forward with tariff amendments to support the market design. Moreover, given the complexity of the EDAM, it may be prudent for management to return to the format of seeking conceptual approval of the design from EIM Governing Board and the CAISO Board of Governors before embarking on detailed tariff development.

Fuel Limited Resources (Natural Gas, Hydro, etc.)

As presented at the February EDAM workshop, the EIM Entities believe that the EDAM solution must respect fuel limited resources (natural gas, hydro, etc.) when solving for unit commitment and unit dispatch based on limitations submitted by the EIM Entity. Including fuel limitations as part of the expectation under a broader resource sufficiency standard may reasonably work in a real-time voluntary market like EIM, but it presents significant challenges when attempting to solve for a day-ahead plan if it is modeled similarly to EIM. Specifically, the day ahead market optimization may profoundly change the overall dispatch of a specific resource, building dependencies across balancing areas and unintentionally creating reliability risks if a resource is ultimately unable to dispatch consistent with fuel limitations. Ideally, these limitations would be configurable across a portfolio of similar resources (that may be as small as a single generator, or as large as an EIM Entity's resource fleet) in order to provide for as much dispatch flexibility as possible that may result through market optimization, while limiting unintended reliability and economic impacts to participating entities.

Such limitations will need to be considered as part of the market run in order to ensure a reliable, physically deliverable solution for EDAM. As previously commented, market rules today allow for this to occur for emissions limited resources but need to be revised in order to address fuel limitations. The EIM Entities request that CAISO include an indication that fuel limited resources will be an entity configurable restriction of the market solution.