

Extended Day Ahead Market (EDAM) Initiative

Stakeholder comment themes across proposal iterations and ISO responses that informed the Final Proposal

January 2023

| 1. Participation framework: WEIM entity and resource participation in the EDAM. | |
|---|--|
| Stakeholder Comment Theme | ISO Response |
| <p>Stakeholders broadly supported a voluntary participation model, similar to the WEIM, which does not bind participants to lengthy participation timeframes and otherwise provides for ease of exit if necessary.</p> | <p>Management continues to propose a voluntary participation framework under which WEIM entities can elect whether to extend their participation to the EDAM or continue to participate in the WEIM only. The design provides for a 6-month notice period to exit the EDAM, with no application of exit fees. These are the same exit terms as in the WEIM. This participation design provides for ease of entry and ease of exit from the EDAM allowing participating entities to evaluate their benefits, and if these are not consistent with expectations, allowing them to readily pursue and evaluate other programs.</p> <p>The voluntarily participation framework is further discussed in the EDAM final proposal starting on page 9.</p> |
| <p>Stakeholders sought and broadly supported inclusion and extension of transitional protective measures to the EDAM that allow entities to manage participation risk to the extent there are unexpected operational, reliability, or financial impacts of participation.</p> | <p>Management’s proposal extends a number of WEIM measures that are intended to protect the participating entities as they transition to the WEIM; similarly these would be extended to the EDAM. These measures include: the ability to change the participation date to the extent the entity has not met readiness criteria or is otherwise not ready; allowing for temporary suspension of EDAM participation as a result of unexpected systems or operational issues; and transitional pricing measures including extension of price correction timeframes. These and other measures are discussed in the EDAM final proposal starting on page 11.</p> <p>As the EDAM becomes operational, Management is committed to expedite technology fixes to the extent that issues arise and expedite entity and stakeholder engagement to the extent that there are impacts to the market design. In addition, close monitoring of different aspects of the design will inform future enhancements and evolution of the EDAM.</p> |

| | |
|---|--|
| <p>Some stakeholders sought the ability to continue to base schedule generation in the EDAM, similar to the WEIM, and otherwise sought clarification on whether the EDAM will support base scheduling.</p> | <p>In the WEIM, resources can be participating or non-participating WEIM resources. Resources that are not participating submit base schedules that identify their expected or intended operation levels, and these are not fully settled in the market. In the EDAM, all resources that are located in an EDAM balancing area and are operational will need to submit bids (economic bids or self-schedules) into the market and will be settled through the market in day-ahead and real time.</p> <p>This aspect is further discussed in the EDAM final proposal starting on page 15.</p> |
| <p>Some WEIM entities and load serving entities sought the need to ensure that PURPA and other resources under contract are able to participate in the EDAM, without the need to modify these contracts as a result of transitioning to EDAM.</p> | <p>To the extent a load serving entity, for example, wants to continue paying the same contract price for supply it paid prior to EDAM and not be subject to fluctuations in price driven by market efficiency, the market provides avenues to do that without the need for contractual modifications. If the entity holding the supply contract is also the scheduling coordinator and the entity serving load with the supply/resource, the ISO will settle with the scheduling coordinator any energy payments from the market. This should allow for participation, along with self-scheduling of the generation, to avoid changes to existing supply contracts.</p> <p>This element is further discussed in the EDAM final proposal on page 16.</p> |
| <p>WEIM entity transmission providers sought to ensure that resources in an EDAM balancing area continue to reserve transmission and contribute to the costs of the transmission system once the area joins the EDAM. This would reduce or avoid cost shifts between transmission customers paying for the transmission system costs.</p> | <p>Management proposes a design under which resources located in an EDAM balancing area will be assessed transmission charges to the extent they have not reserved sufficient transmission to support their real-time dispatch by the market. Resources can meet the transmission requirement in the EDAM by being a designated network resource under the terms of the OATT, or otherwise have reserved firm point to point transmission service or hold a legacy transmission contract. To the extent sufficient transmission is not reserved to support real-time market dispatch volumes, the transmission provider will assess an additional transmission charge. This design continues to support the administration of OATT transmission service by EDAM transmission providers, while also contributing to the costs of the transmission system and limiting or avoiding cost shifts between transmission customers.</p> <p>This design element is further described and discussed in the EDAM final proposal starting on page 16.</p> |

2. Day-Ahead Resource Sufficiency Evaluation (RSE): design components of the evaluation.

| Stakeholder Comment Theme | ISO Response |
|--|--|
| <p>Stakeholder opinions differed on whether or not to include transmission constraints within the EDAM RSE application as a means to ensure deliverability of the supply being shown to pass the EDAM RSE.</p> | <p>Management proposes to not include transmission constraints in the EDAM RSE application at the onset of the EDAM. This was a tradeoff to ensure that the application can be available for “on-demand” advisory runs by participating EDAM BAA’s. Management acknowledges that the potential for undeliverable supply to be shown for purposes of passing the EDAM RSE. As the supply bids utilized by the EDAM RSE application will be the same bid-set as used by the market, Management believes existing rules governing a bid’s intent to deliver partially mitigates against the potential for factitious supply being shown for purposes of passing the EDAM RSE. Management proposes the ISO will also monitor for a lack of deliverability of supply due to impacts of multi-BAA networked flows and should analysis indicate issues, modifications in the design can be considered with information on the frequency and magnitude of the issue.</p> <p>This element is further discussed in the EDAM final proposal starting on page 61.</p> |
| <p>Stakeholders sought to ensure that variable energy resources are considered in the EDAM RSE based on their forecasted next day output.</p> | <p>Management proposes to utilize the output forecast for variable energy resources in the EDAM RSE as well as the RUC process since reliability capacity up bids are required up to the variable energy resource forecast. The IFM, as a financial market, will not require bids for variable energy resources. To the extent the EDAM balancing area does not support convergence bidding within their area, there will be limitations on the amount of load that can be scheduled by each balancing area in the IFM such that it does not exceed the supply made available to the market by that balancing area.</p> <p>This treatment is appropriate as it ensures that the financial participation of a balancing area in the EDAM market isn’t inappropriately constrained due to variable energy resource supply offers, while also ensuring a balancing authority area’s supply offers are sufficient to not inappropriately propagate regional scarcity.</p> <p>This element is further discussed in the EDAM final proposal starting on page 65.</p> |

| | |
|---|---|
| <p>Stakeholders in their comments expressed differences in opinion on the day-ahead electronic tagging requirements for non-resource specific supply shown for purposes of passing the EDAM RSE or otherwise awarded by the market.</p> | <p>Management proposes a requirement for the submission of day-ahead e-tags within three hours after the publication of EDAM results (1 p.m.) for non-resource specific supply that was shown for purposes of passing the EDAM RSE or was cleared by the market. If the supply is not tagged by the timeline above, there is a limited secondary period to tag prior to the start of the Short Term Unit Commitment (STUC) horizon in the real-time market. If the supply is not tagged, or the entity does not replace this untagged amount, it can result in the EDAM balancing area being removed from the pool of entities being evaluated jointly for the WEIM RSE (and the entity will be evaluated on its own). Some stakeholders expressed concern about the ability to tag within three hours of the EDAM results publication because of challenges in accessing transmission by that initial time. To address this issue, the proposal provides for a secondary timeframe to tag by the STUC horizon to account for transmission released at later times in certain areas of the West. However, this secondary timeframe should be used infrequently and is not necessary to align with the most prevalent tagging timelines.</p> <p>Management proposes the ISO monitor tagging practices to determine if any design revisions are required.</p> <p>This design element is further described and discussed in the EDAM final proposal starting on page 66.</p> |
| <p>Stakeholders in their comments expressed different opinions on whether economic intertie bids, made at the border or and EDAM balancing authority, should count as eligible supply for purposes of passing the EDAM RSE.</p> | <p>Management proposes that intertie bids and imports that are not under contract do not count for the RSE. The purpose of the EDAM RSE is to ensure that each balancing area has sufficient supply to meet its next day obligations for reliable operation, prior to running the day-ahead market. While economic supply offers can be used to displace otherwise forward contracted supply, counting these offers for any balancing area in lieu of forward contract supply creates an inequity regarding reliability and availability of the supply being shown to pass the EDAM RSE. Should economic supply offers not receive day-ahead awards, they would have no obligation to participate in the real-time market and would also be unavailable for intra-day dispatch to meet reliability objectives, similar to forward contracted of physical supply located internal to an EDAM balancing authority.</p> <p>This design element is further described and discussed in the EDAM final proposal starting on page 68.</p> |

| | |
|--|--|
| <p>Some stakeholders in their comments expressed a desire for physical consequences to limit transfers as a consequence for failure of the EDAM RSE, or to limit the volume of transfers into an EDAM balancing authority that has failed the EDAM RSE as a function of the size of the insufficiency.</p> | <p>Management's proposal focuses on the application of financial consequences for failing to pass the EDAM RSE. These consequences, in the form of a financial surcharge, recognize de minimis failures and do not apply a surcharge, but larger failures in magnitude have different escalating levels of exposure to the surcharge. Moreover, persistent failures also could expose the failing entity to increasing surcharges.</p> <p>The financial consequence framework was a result of lengthy and iterative stakeholder discussions, which did consider physical consequences primarily limiting transfers to the failing EDAM balancing area. The first straw proposal included a proposal for limiting transfers. However, as the initiative evolved and other design elements became defined, it was largely recognized that physical limitations to transfers may do more harm than incentivizing forward sufficiency, particularly if an entity was anticipating stressed conditions and the day-ahead market further limiting transfers as opposed to helping find a pathway to position the balancing area to better manage expected stressed conditions. More practically, to the extent an EDAM balancing area failed the RSE and its transfers were limited, it may have to take its transmission capability with it, including across EDAM interfaces, to help support finding additional supply that could be delivered. This would reduce the transmission available to the market to optimize transfers and have consequences for the wider footprint. As such, as a starting point for the EDAM, the financial consequences were seen as a more effective starting point in the design to incent sufficiency. Management proposes the ISO monitor the effectiveness of the financial consequence structure in setting the intended incentives and may consider introduction of physical limitations in the future or further refinements to the financial consequences.</p> <p>This design element is further described and discussed in the EDAM final proposal starting on page 77.</p> |
|--|--|

Some stakeholders have advocated for an EDAM BAA to be tested on an individual basis in the WEIM, or as an individual BAA following the failure of the EDAM pool.

The diversity benefit available from EDAM participation is realized through a reduction in BAA level imbalance reserves; as drivers of uncertainty between the day-ahead and real-time markets offset across a broad geographic footprint. Translating this benefit into the real-time market requires the geographic footprint that it was allocated under in the day-ahead time frame, to also be considered in the real-time WEIM RSE.

While testing the EDAM footprint in a pool has broadly been supported through comments, opinions have diverged as to the appropriate treatment when the EDAM pool fails. The proposal does not test balancing authorities individually following the failure of the pool. Testing on an individual BAA's basis creates the potential for individual BAAs to fail the WEIM RSE to the extent uncertainty materializes above their reduced procurement that was part of the broader, footprint wide, level of procurement. Consider the following example:

| | IRU Requirement (No Diversity Benefit) | IRU Requirement (Diversity Benefit) | Uncertainty Materialized | Result |
|------------|--|-------------------------------------|--------------------------|--------|
| EDAM BAA 1 | 100 MW | 60 MW | 10 MW | Pass |
| EDAM BAA 2 | 100 MW | 60 MW | 65 MW | Fail |
| EDAM BAA 3 | 100 MW | 60 MW | 105 MW | Fail |

In this example BAA 2 would fail the WEIM RSE due to uncertainty materializing above what was procured assuming a diversity benefit only due to an outsized amount of uncertainty materializing in BAA3. A failure for EDAM BAA2 in this example undermines the confidence that a BAA has in participating in the EDAM and receiving a diversity benefit in the day-ahead timeframe.

| | |
|---|--|
| <p>California load serving entities, in particular, with the support of other stakeholders as well, sought the ability to manage the amount of internal supply, particularly resource adequacy supply that is exported to support EDAM transfers especially in stressed system conditions to ensure there is supply within the balancing area that can help manage grid conditions.</p> | <p>Management proposes that each EDAM entity be required to offer into the market sufficient supply to meet its next day obligations, and then this supply is optimally committed and supports transfers between EDAM balancing areas. EDAM entities have the ability to manage supply in excess of that needed to meet the RSE and retain it to help support more stressed system conditions, but otherwise the supply would be expected to be offered into the market.</p> <p>In contrast, under the California resource adequacy program, supply contracted by ISO load serving entities for resource adequacy purposes must be offered and bid into the market, both day-ahead and real-time. As such, all the resource adequacy supply is bid into the market and internal resources under a resource adequacy contract may be exported in stressed system conditions without the ability to otherwise manage and retain some amount of the supply in the balancing area to manage potentially stressed system conditions.</p> <p>Management proposes to introduce a net EDAM export transfer constraint that would be enforced in the Integrated Forward Market (IFM) which allows a balancing area to manage and define, particularly in stressed system conditions, the amount of supply that can support net export transfers out of the balancing area as a factor of how much supply is available and how much is in excess of the resource sufficiency evaluation. This net EDAM export transfer constraint is proposed as optional for each EDAM balancing area since each balancing area may have different tools, resources and impacts to consider of the constraint.</p> <p>Management expects that each EDAM balancing area that elects to adopt use of the net EDAM export transfer constraint will use it as a tool based upon defined parameters in their tariff to manage discrete reliability concerns during stressed system conditions rather than as a mechanism to artificially constraint supply.</p> <p>This element is further discussed in the EDAM final proposal starting on page 78.</p> |
|---|--|

| 3. Transmission Availability in EDAM: how transmission is made available and is utilized in the EDAM, and historical transmission revenue recovery framework design. | |
|--|---|
| Stakeholder Comment Theme | ISO Response |
| <p>Stakeholders generally favored the concept that transmission supporting the delivery of resources across interfaces between EDAM balancing areas, to meet the day-ahead resource sufficiency evaluation, be made available to the market to optimize and derive</p> | <p>To the extent an EDAM entity depends upon import resources that are delivered across interfaces between EDAM balancing areas to meet the day-ahead resource sufficiency evaluation, and to the extent the transmission rights are not explicitly exercised through a self-schedule and the resource is economically bid, the accompanying transmission (firm or conditional firm) is made available to the day-ahead market to support optimized energy transfers between balancing areas. This approach allows for the transmission to be made available to derive mutually beneficial transfers, and to the extent the scheduling limit at the</p> |

| | |
|--|---|
| <p>efficient energy transfers across the EDAM footprint.</p> | <p>interfaces is binding, there could be accrual of transmission revenues that are settled with the EDAM entity.</p> <p>This element is further discussed in the EDAM final proposal starting on page 36.</p> |
| <p>Stakeholders supported a design to maximize transmission availability in EDAM, including the design of unused or unscheduled firm transmission being automatically made available to the EDAM to optimize transfers and derive the benefits of optimized commitment through the day-ahead market.</p> | <p>Management’s proposal seeks to maximize the amount of high quality transmission that is made available to the EDAM by transmission customers and the transmission provider across interfaces between EDAM balancing areas to in turn maximize economic transfers between EDAM balancing areas and deriving sizable benefits. The design also seeks to ensure, as much as feasible, that OATT transmission rights are respected. Under the design, transmission customers holding firm or conditional firm transmission rights can:</p> <ol style="list-style-type: none"> (1) Exercise their transmission rights through the day head market; (2) Release the transmission rights to the market to optimize, and receive the benefit of direct transfer revenue settlement; or (3) Leave transmission rights unscheduled in day-ahead market, which the market would seek to optimize. But the transmission customer can later, after the day-ahead market any time exercise those previously unscheduled transmission rights and the market would seek to re-dispatch generation to accommodate the exercise of those rights. <p>The transmission provider can also make unsold firm transmission available to the day-ahead market to optimize at interfaces between EDAM balancing areas. The ISO will publish a report, after the day-ahead market run, to identify the amount of transmission that was utilized to support transfers so that the transmission provider can continue to sell the unused transmission as firm or non-firm transmission based on its OATT terms.</p> <p>This element is further discussed in the EDAM final proposal starting on page 34.</p> |
| <p>Some stakeholders, primarily transmission customers holding OATT firm or conditional firm transmission rights, sought a design under which they could elect whether to make their transmission rights available to the market or withhold them from the market and identify a hurdle rate at which to make the transmission available to the EDAM to optimize transfers across interfaces between EDAM balancing areas.</p> | <p>In the stakeholder process, various options for transmission customers making transmission available to the EDAM were considered, particularly during the initial stakeholder working groups. One of those approaches was a voluntary framework for making transmission available under which transmission customers could withhold transmission from the market at interfaces between EDAM balancing areas or make the transmission available at a defined hurdle rate that would compensate the transmission customer if the transmission was used by the market. Through the different iterations of the proposals, significant concerns were raised with such an approach would stifle market efficiency by limiting the transmission available or exacting sizable hurdle charges across different balancing area interfaces that would have to be considered in the market, increasing costs and limiting EDAM transfers. Moreover, such an approach can create artificial congestion and further impact prices stifling efficiency.</p> <p>Management’s proposed design provides a framework without explicit transmission hurdles, allowing the market to optimize transfers without the constraints of transmission hurdles particularly across a large footprint. Such a design maximizes the benefits for all participating balancing areas.</p> <p>This element is further discussed in the EDAM final proposal starting on page 37.</p> |

| | |
|--|--|
| <p>A number of stakeholders, transmission customers holding firm OATT transmission rights, sought further comparability to the OATT treatment in the EDAM. In particular, they sought that if a transmission customer exercises previously unscheduled firm transmission rights that may have been optimized by the EDAM, that if these are exercised later by the transmission customer they not be directly assigned additional costs for the exercise of their transmission rights.</p> | <p>Management proposes that transmission customers that do not exercise their transmission rights through the day-ahead market (10 a.m. day-ahead), that do not elect to release these to the market in exchange for direct settlement of transfer revenues, can elect to leave their transmission rights unscheduled in the day-ahead market and have the ability to exercise these rights later through real time.</p> <p>To the extent the transmission rights are unscheduled by the time of the day-ahead market run, the market will seek to optimize use of these rights to optimize transfers and derive benefits. The transmission customer can exercise these transmission rights later through the submission of a self-schedule in the real-time market associated with the transmission rights and the market may need to redispatch generation to accommodate the use depending on the conditions. The market is constantly redispatching generation to account for changed conditions whether that is changes in load, changes in topology due to outages, changes in generation availability and other factors.</p> <p>Management does not propose to assign direct costs of redispatch to the transmission customers, or attempt to discern the different redispatch actions that occur in the market. Rather, Management proposes a common principle that the EDAM entity will not directly assign costs of redispatch that may have been settled with the entity among all the different redispatch actions. The ISO will settle any transfer revenues that may have accrued in day-ahead due to the optimization of unscheduled firm transmission rights, and the EDAM entity would pool all its transfer and congestion revenues to hold the specific transmission customer harmless of these costs and offset any costs through the pooled transfer and congestion revenues accrued. The EDAM entity would then allocate any surpluses or shortfalls to metered load or another mechanism that they may employ today in the WEIM. This approach thus establishes comparability with the OATT since the transmission customer exercising their transmission rights is not directly charged for associated redispatch needed to accommodate exercise of those rights.</p> <p>This element is further discussed in the EDAM final proposal starting on page 41.</p> |
| <p>Stakeholders largely supported not introducing or establishing transmission hurdle rates for transmission that is made available to the EDAM in an effort to reduce rate pancaking and improve market efficiency.</p> | <p>The proposed EDAM design sought to not introduce transmission hurdle rates into the market optimization since, as the footprint grows, application of hurdles at each interface could create significant pancaking of rates that could severely limit the efficiency of the market. Hurdle rates were originally considered and discussed within the stakeholder working groups in the context of unsold, uncompensated, firm transmission by the transmission provider across interfaces between two EDAM balancing areas. However, following the discussion with stakeholders it was apparent that hurdle rates could stifle competition and the proposal was to move away from hurdle rates.</p> <p>Management does not propose to include hurdle rates for transmission made available to the EDAM, including for transmission made available for which the transmission provider had not collected revenues as it remained unsold when made available to the market. However, Management proposes a mechanism for historical transmission revenue recovery by transmission providers in the EDAM. Through this mechanism, the EDAM would seek to keep transmission providers whole as to its historical transmission sales related to short-term transmission products to the extent based on continued OATT sales they recover less than they historically have, which would have the effect of indirectly ensuring that unsold</p> |

| | |
|---|--|
| | <p>transmission made available to the EDAM by the transmission provider is otherwise compensated.</p> <p>This element is further discussed in the EDAM final proposal starting on page 44.</p> |
| <p>Some stakeholders sought to be settled with directly for transfer revenues that may accrue as a result of their transmission rights being made available to the EDAM, as opposed to being settled with the EDAM entity who then defines under their OATT how those revenues are allocated.</p> | <p>As transmission rights are made available to the market across interfaces between EDAM balancing areas, to the extent that transfer limits bind (reached scheduling limit), transfer revenue may accrue associated with the transmission capacity made available at that interface. This occurs in the WEIM today, and the resulting accrued revenues are settled with the WEIM entity who under its OATT derives processes for distributing the revenues or costs that may accrue.</p> <p>Management’s proposal seeks to leverage the existing WEIM structure as much as practical, as a starting point for operationalization of the EDAM. And thus, as a general rule transfer revenues accruing across an interface between EDAM balancing areas would be settled with the EDAM entity to apply or distribute under the terms of its OATT. This is in part also due to the fact that individual transmission customers may not have a direct relationship with the ISO, but work through the EDAM entity. Under the proposed design, transfer revenues accrued at interfaces would be settled with the EDAM entity who in part would utilize those to offset congestion costs that may have been accrued as a result of the later exercise of transmission rights by transmission customers who left their transmission rights previously unscheduled and optimized by the market.</p> <p>The one exception to the general rule above is that a transmission customer that take avails itself of “pathway 2” and releases their transmission rights to the EDAM for the particular day, without the ability to exercise these in real time (akin to a resale to the market), will directly receive any accrued transfer revenues from the ISO as opposed to settling these with the EDAM entity.</p> <p>This element is further discussed in the EDAM final proposal starting on page 39.</p> |
| <p>Some stakeholders sought the ability to potentially carve their transmission rights out of the market to the extent these were transmission rights that exported from or wheeled through an EDAM balancing area to a non-EDAM balancing area to meet resource adequacy or other obligations.</p> | <p>Management’s proposal provides the ability of entities to exercise their existing OATT transmission rights through the market, regardless of whether these are internal or across an EDAM or non-EDAM balancing area interface. To do so, entities would submit a self-schedule associated with firm OATT transmission rights registered in the ISO master file or otherwise made known to the market through other mechanisms that may be developed. These self-schedules would be honored and respected by the market in the optimization to ensure that these can flow, absent any changes in conditions. This design recognizes the need of parties to export from or wheel through an EDAM balancing area to serve load and meet reliability needs.</p> <p>The design also provides that to the extent the transmission customer (the firm OATT rights holder) does not want to exercise those in the day-ahead timeframe through the market, but wants to reserve the ability exercise these later across the internal network and an interface with a non-EDAM balancing area, they would need to provide an indication to the market by 9</p> |

| | |
|---|---|
| | <p>a.m. of the day-ahead that they intend to exercise and schedule those rights. To the extent this indication is provided and the transmission rights are exercised, the market will seek to re-dispatch generation, if necessary, to accommodate the use of those transmission rights. In the event of an infeasibility, the exercise of those rights after the day-ahead market run would have equal priority to cleared day-ahead schedules. This provides a high degree of confidence that those transactions can flow, on par with cleared day-ahead schedules including EDAM transfers.</p> <p>Further, Management recognizes that it is possible that once EDAM is operational certain transmission rights across particular paths may be frequently utilized. Management proposes that if there is a high level of frequent use and exercise of particular transmission rights across discrete and specific internal paths or flowgates, or otherwise unintended impacts on the market (i.e., frequent redispatch), the ISO would consider potential adjustments in design such as carving out the transmission right from the market and making changes in modeling of internal transmission that would have to be recognized by the market. The design seeks to avoid carve outs of transmission rights or paths from the market model as these are very difficult to implement and for the market to administer. Nevertheless, with operational experience and working together, Management proposes the ISO will engage closely with the affected entities to potentially consider alternative solutions.</p> <p>This element is further discussed in the EDAM final proposal starting on page 45.</p> |
| <p>Stakeholders, particularly WEIM entities and transmission providers, sought the ability to ensure historical transmission revenues are recovered associated with sales of particular transmission products. With the implementation of EDAM, the impact on continued OATT transmission sales would be unclear, so it was important to ensure that historical revenues are recoverable.</p> | <p>As noted above, Management proposes a mechanism through which transmission providers can recover their historical transmission revenues through the EDAM. EDAM entities would be able to recover the estimated shortfall in historical transmission sales to third-parties of the monthly, weekly, daily, and hourly firm and non-firm transmission products. Since each EDAM entity continues to administer their OATT and sales of transmission under its terms, what would be recoverable in the EDAM is any actual shortfall in transmission revenues compared to historical after considering the OATT sales. For the ISO, this historical revenue recovery is based on the historical wheeling access charge revenues and the reduction in these revenues as a result of the EDAM.</p> <p>Management proposes close monitoring and consideration of impacts after the design is operationalized, and potential consideration down the line of additional reductions in revenues being considered, particularly associated with long term firm transmission service, or adjustments to the overall historical revenue recovery process.</p> <p>This element is further discussed in the EDAM final proposal starting on page 47.</p> |

4. Extension of the Integrated Forward Market (IFM) and Residual Unit Commitment (RUC) Framework in EDAM.

| Stakeholder Comment Theme | ISO Response |
|---|--|
| <p>Stakeholders largely supported the role and function of the Integrated Forward Market (IFM) and the Residual Unit Commitment (RUC), and the extension of the existing structure of these market functions to the EDAM across the larger footprint.</p> | <p>The IFM balances supply and demand, produces hourly unit commitments and energy schedules, and identifies economic energy transfers among other functions. With the introduction of the Day Ahead Market Enhancements (DAME) initiative, the IFM will also procure imbalance reserves. The RUC is a subsequent process that runs after the IFM and procures additional upward or downward capacity based on the amount of energy that clears the IFM to meet forecasted load. These are current processes in the ISO market, and the ISO sees them as critical complementary components that produce feasible market results, unit commitments, and efficient energy transfers across the footprint.</p> <p>Throughout the stakeholder working groups and the first iteration of the proposal, the ISO and stakeholders discussed the roles and functions of each of these processes and how those may function in the wider footprint. Following multiple trainings and discussions on these, the stakeholders expressed support for the retention of these functions in their current forms.</p> <p>This element is further discussed in the EDAM final proposal starting on page 82.</p> |

5. Market Power Mitigation (MPM) design in the EDAM.

| Stakeholder Comment Theme | ISO Response |
|---|---|
| <p>In applying market power mitigation in the EDAM, stakeholders generally supported the extension of the WEIM MPM framework to EDAM as a starting point.</p> | <p>Market power mitigation is a standard element of energy market design. The existing MPM design that is applicable in the WEIM has been in place for a number of years and entities are familiar with its design and application. Throughout the design, Management sought to leverage and extend aspects of WEIM design which entities are familiar with, to the extent feasible and compatible.</p> <p>Management proposes the ISO will monitor this design and continuing to evaluate broader potential MPM design changes to evolve the MPM structure.</p> <p>This element is further discussed in the EDAM final proposal starting on page 86.</p> |

| | |
|---|---|
| <p>Some stakeholders sought the opportunity to consider broader MPM design changes applicable in the day-ahead market, which would by extension extend to the EDAM.</p> | <p>As also reflected in the various iterations of the proposals, including the final proposal, Management commits to evaluating the current MPM design through and whether it needs to evolve in the context of the day-ahead market the <i>Price Formation Enhancements</i> initiative. To the extent the separate, but parallel, initiative identifies enhancements and adopts a different MPM design than exists today it would also be extended to EDAM.</p> <p>This element is further discussed in the EDAM final proposal starting on page 86.</p> |
|---|---|

6. Convergence Bidding, known as Virtual Bidding, design within the EDAM.

| Stakeholder Comment Theme | ISO Response |
|---|--|
| <p>Throughout the initiative, some stakeholders expressed the desire for the optionality to implement convergence bidding for their balancing area while others sought a design that does not mandate convergence bidding and recognizes the desire of entities to gain experience in the market before considering introduction of convergence bidding for their balancing area.</p> | <p>Management recognizes that a day-ahead market in the West is a new endeavor that is different from how entities may serve their load today. As such, some EDAM entities may want to develop experience and confidence in the market before introducing different components in to the market, particularly convergence bidding (also known as virtual bidding).</p> <p>To that end, Management proposes that EDAM entities have the option to elect whether to enable convergence bidding in their balancing area at the onset of their EDAM participation. The EDAM entity can elect not to introduce convergence bidding at the start of their participation. Management proposes that in the lead-up to the two-year anniversary of EDAM operation, the ISO will conduct a stakeholder process to derive a more permanent EDAM convergence bidding policy informed by operational experience and stakeholder input.</p> <p>Management proposes that EDAM entities that are more ready to implement convergence bidding within their balancing area are allowed to do so. The two year period between evaluating on a more permanent basis the policy on convergence bidding allows EDAM entities that did not elect to implement convergence bidding at the onset to gain experience and confidence in the market. It also allows the ISO to monitor operations of the market and together with stakeholders, informed by this monitoring, to evaluate a more permanent convergence bidding design.</p> <p>This element is further discussed in the EDAM final proposal starting on page 87.</p> |

| | |
|---|---|
| <p>Some stakeholders expressed concern of whether there may be unintended impacts of some EDAM balancing areas having convergence bidding within their balancing areas while others do not.</p> | <p>Management proposes that in coordination with the department of market monitoring (DMM) the ISO will continue to monitor and evaluate the market's performance with some balancing areas enabling convergence bidding while others not. This monitoring will help inform the evolution in the design leading up to that second year of EDAM operation as well as help promptly address any unintended consequences of this optional convergence bidding approach. Management does not propose to make any changes to convergence bidding in the ISO balancing area.</p> <p>This element is further discussed in the EDAM final proposal starting on page 87.</p> |
|---|---|

7. External resource participation (resources external to the EDAM footprint) in the EDAM.

| Stakeholder Comment Theme | ISO Response |
|---|--|
| <p>Existing WEIM entities sought extension of the current WEIM framework that limits economic intertie bidding at their interties from unknown resources due to reliability concerns.</p> | <p>External resource participation refers to the ability of resources outside of the EDAM footprint to participate in the market. The proposal extends the current WEIM framework, with limited enhancements, to the EDAM regarding external resource participation. Under this approach, resources located outside of the EDAM footprint can self-schedule at the EDAM entity interties, subject to having a contract to serve load in the EDAM balancing area, but cannot economically bid at that intertie unless this is a pseudo tied or dynamically scheduled resource which under the terms of the OATTs and related processes has very specific requirements to meet. The primary concern from WEIM entities, who would consider extending participation to the EDAM, continues to be an operational one where non-source specific, potentially undeliverable resources, if economically bid at their intertie could displace physical internal resources, particularly long-start resources, and if these economically bid imports do not perform, it may place the reliability of the balancing area at risk and the long-start resources in particular may not be able to start timely to help manage reliability. It also places uncertainty and cost on reserve procurement, not having a high level of confidence these unknown imports will perform. Management proposes ISO and stakeholders will monitor and consider changes as necessary as we gain experience with EDAM after it becomes operational.</p> <p>The design does provide an enhancement where external resources that are designated under the terms of the EDAM entity OATT to serve load in the EDAM balancing area, if these are modeled in ISO master file as specific resources (including specific system generation), can economically bid at the EDAM entity intertie where the load is located and more economically serve their obligations. This enhancement provides for greater certainty since the generation is designated under the terms of the OATT which imposes deliverability requirements, but also the resource would have to be specific enough to be modeled in the ISO master file coming from a WEIM balancing area.</p> <p>This element is further discussed in the EDAM final proposal starting on page 89.</p> |

| | |
|--|--|
| <p>Some stakeholders sought more flexibility in being able to economically bid their resources at the EDAM entity intertie to the extent these are contracted and designated to serve load and are source specific, which allows the ability to potentially more economically meet their load obligations.</p> | <p>As noted in the response above, Management’s proposal includes the ability for external resources to bid economically at the EDAM entity intertie to the extent the resource is specified and modeled in the ISO master file and is designated as a network resource under the terms of the OATT in an EDAM balancing area. In that case, the resource can be economically bid at the intertie of the EDAM balancing area where the load is located for which the resource is designated under the terms of the OATT.</p> <p>This element is further discussed in the EDAM final proposal starting on page 89.</p> |
| <p>Stakeholders sought clarification that the ISO will continue to retain full intertie bidding as today, where specific and non-source specific supply can continue to be economically bid at the ISO interties with non-EDAM balancing areas.</p> | <p>Intertie bidding has been a long standing feature of the ISO market with the ISO implementing a number of measures to manage risk of non-source specific supply not performing, including co-optimization of energy and ancillary services, as well as exposure to penalties for non-performance. External entities have also historically depended on the ability to economically bid their surplus supply at the ISO interties and provide both benefits to the ISO and the suppliers. To that end, Management does not propose changes to intertie bidding at ISO interties.</p> <p>Management proposes that the ISO work closely with EDAM entities as they gain operational experience to consider enabling further economic bidding across the EDAM footprint at a future point.</p> <p>This element is further discussed in the EDAM final proposal starting on page 92.</p> |

8. Greenhouse Gas (GHG) accounting design in the EDAM.

| Stakeholder Comment Theme | ISO Response |
|--|--|
| <p>Some stakeholders expressed that the GHG counterfactual should exclude transfers between non-GHG balancing areas.</p> | <p>Secondary dispatch occurs when relatively more emissions intensive resources must be dispatched to serve load outside of a GHG regulation area as a result of cleaner resources dispatching to serve the GHG regulation area. The GHG counterfactual is used to limit the potential for secondary dispatch by serving as a baseline of what would have been dispatched if not for GHG transfers. The optimized counterfactual in EDAM most closely approximates the concept of base schedules, and is expected to significantly reduce the potential for secondary dispatch.</p> <p>Optimizing at the balancing area level alone fails to account for incremental dispatch and economic displacement that occurs between non-GHG balancing areas. This is the incorrect counterfactual for identifying the impact of GHG policy on dispatch in the EDAM footprint, and would result in a greater potential for secondary dispatch.</p> <p>This element is further discussed in the EDAM final proposal starting on page 93.</p> |

| | |
|--|---|
| <p>Some stakeholders sought a limitation on GHG attribution to a resource's incremental dispatch above the GHG counterfactual.</p> | <p>Limiting attribution to above a resource's GHG counterfactual would undermine least cost dispatch, increase costs to serve demand outside of GHG regulation areas, and result in market outcomes that are inconsistent with resource's economic bids. The constraint also poses implementation challenges that would create performance burdens on the market optimization.</p> <p>This element is further discussed in the EDAM final proposal starting on page 93.</p> |
| <p>Stakeholders sought clarification on treatment of non-RA resources contracted with LSEs in GHG regulation areas.</p> | <p>References to treatment of ISO RA resources in the Final Proposal represent the ISO's existing visibility on sufficient information to accommodate these resources, but does not preclude the same treatment of other resources contracted to GHG regulation areas. The logic should equally extend to all resources outside of a GHG regulation area to which LSEs within a GHG regulation area have entitlements, given that the market can identify that supply for purposes of the GHG counterfactual.</p> <p>This element is further discussed in the EDAM final proposal starting on page 102.</p> |
| <p>Stakeholders expressed different opinions on the GHG net export constraint, citing concerns over efficiency and reliability trade-offs.</p> | <p>Management agrees that it is prudent to ensure there are no reliability impacts resulting from an attempt to limit secondary dispatch. The GHG net export constraint only applies to balancing areas that do not overlap with the GHG regulation area. When a balancing area that does overlap with the GHG regulation area fails the RSE, the constraint is deactivated for all balancing areas in the EDAM for that hour.</p> <p>The Final Proposal provides implementation flexibility for both a static and dynamic design, and will continue to evaluate implementation to balance efficiency with accounting for secondary dispatch.</p> <p>This element is further discussed in the EDAM final proposal starting on page 102.</p> |
| <p>Stakeholders expressed the need to evaluate alternative approaches to GHG accounting aside from the resource-specific approach.</p> | <p>Building off the current WEIM design, the resource specific approach proposed for the EDAM is the most defined, tested, and familiar to market participants. Because it aligns with current regulations, this approach requires fewer regulatory and implementation changes. Throughout the initiative, and different proposal iterations, the design considered multiple different design options including a zonal approach to GHG accounting. These other approaches to GHG accounting, while providing merit in different aspects, would require sizable changes or redesign of regulatory structures.</p> <p>The resource-specific approach in EDAM is a day one design, and the ISO is committed to continuing to evaluate alternative approaches as regulations evolve throughout the West. The underlying GHG accounting framework, which supports bid adders and modeling for multiple GHG regulation areas, is flexible enough to accommodate a range of regulatory structures.</p> <p>This element is further discussed in the EDAM final proposal starting on page 93.</p> |

9. Establishing confidence in day-ahead market transfers design.

| Stakeholder Comment Theme | ISO Response |
|--|--|
| <p>Stakeholders sought to ensure that EDAM transfers can be relied and depended upon under various conditions, including corner case stressed conditions, and instill a high level of confidence that these will be delivered.</p> | <p>Once in the EDAM, participating balancing areas and the associated load serving entities will depend upon efficient unit commitment and efficient energy transfers between these areas to serve load. As a result, it was important an important design component to ensure that the EDAM transfers coming out of the IFM have a high degree of confidence that the sending balancing area will honor the transfer even if itself is facing stressed system conditions.</p> <p>Various elements of the design contribute to confidence in transfers, including a robust resource sufficiency evaluation that provides strong incentives for entities to make supply available to the market to meet that evaluation. Other market features include an imbalance reserve product that procures flexible capacity to respond to uncertainty that may materialize, as well as inclusion of a market constraint that in certain limited instances would preclude the propagation of a supply shortfall to other balancing areas.</p> <p>In stressed conditions for a particular EDAM balancing area, when the market has done all it can to ameliorate a condition, the EDAM balancing area will need to rely on its operational tool to further maintain reliability. These tools may vary across balancing areas but they include emergency assistance, emergency supply, demand response, or other tools at their disposal. If the exercise of those tools still does not resolve the reliability condition and load shed is at risk, the proposal puts forward that EDAM balancing areas will afford market transfers equal priority to load such that these would be curtailed proportionally (pro-rata) based on the relief needed, subject to operational discretion and coordination. This approach provides confidence that EDAM balancing areas will support transfers to each other even in corner case conditions when load shed is at risk.</p> <p>This element is further discussed in the EDAM final proposal starting on page 20.</p> |

| | |
|--|---|
| <p>During the design discussions, some stakeholders expressed that transfers to EDAM entities that failed the resource sufficiency evaluation should have a lower priority than load in corner case scenarios.</p> | <p>The concept of lower priority was considered and at one time, in an earlier iteration of the proposal, it was actually proposed that lower priority be afforded in the operational timeframe when in situations where transfers were at risk of curtailment with load. However, after further consideration and as stakeholders and particularly WEIM entities transmission operations functions considered this design, it became clear that such a requirement may actually hamper operations and be complex to implement. If operators, among other actions, during those corner conditions would also have to evaluate and know which transactions are flowing to a balancing area that failed the RSE as compared to one that passed, it would make it very challenging to respond to the stressed conditions.</p> <p>Additionally, a number of stakeholders noted, once other aspects of the design were more defined, that it may not be appropriate to further put at risk transfers to an EDAM area that failed the RSE at the same time that they are facing extreme stressed conditions and also face the other set of consequences for failing the resource sufficiency evaluation. As a result of these considerations noted above, the proposal moved away from the concept of differentiating priorities of transfers in corner case conditions.</p> <p>This element is further discussed in the EDAM final proposal starting on page 31.</p> |
|--|---|

| 10. Allocation of transfer revenue associated with transfers between EDAM balancing areas and allocation of congestion revenue accrued on internal transmission system paths. | |
|--|---|
| Stakeholder Comment Theme | ISO Response |
| <p>Some stakeholders sought an equitable distribution of transfer revenues between two EDAM balancing areas to be shared 50:50 rather than in some instances remaining fully with one EDAM entity.</p> | <p>Transmission is made available, by transmission customers and transmission providers, across interfaces between EDAM balancing areas for the market to optimize and support robust transfers. To the extent that the transfer limit is reached based on the amount of transmission made available and the scheduled transactions, transfer revenue accrues represented as the difference in the energy component of the locational marginal price (LMP) between the two EDAM areas.</p> <p>Through the different iterations of the proposal stakeholders sought an equitable allocation, 50:50, in accrued transfer revenues at a transfer point between two EDAM balancing areas as opposed to, in some instances, a full allocation to one of the balancing areas. The proposal adopted the equitable 50:50 default share of transfer revenues between the two areas at a transfer point recognizing that both areas are bringing transmission to the interface to be optimized to support robust transfers. The proposal acknowledges that the two areas can mutually agree to a different share allocation than 50:50 for transfer revenues.</p> <p>This element is further discussed in the EDAM final proposal starting on page 111.</p> |

Some stakeholders sought that congestion revenues that accrue as a result of an internal transmission constraint that arises as a result of intertie scheduling limits binding should not be allocated fully to the EDAM entity where the internal constraint is located.

Congestion revenue accrues when internal transmission constraints or limits are reached (bind). In those instances, the marginal cost of congestion component of the LMP accrues as congestion revenue. In the WEIM today, this revenue is fully allocated to the EDAM entity where the internal transmission constraint is binding.

In the EDAM context, the proposal is to continue to allocate those congestion revenues to the EDAM entity where the internal constraint is binding. In the EDAM, and even absent the EDAM, the balancing area where the constraint is located is responsible for resolving that constraint whether through re-dispatch or otherwise and thus it is reasonable to ensure that these revenues remain with the EDAM entity where the internal transmission constraint materialized.

This same rationale extends regardless of the condition that triggered the internal constraint, whether purely internal congestion or if simultaneous volumes of imports across multiple interties may create internal transmission constraints. This is a common condition – simultaneous import flow conditions and internal path interactions – across balancing areas and the host balancing area is responsible for responding to the condition and should also receive the congestion revenue. This is consistent with the current practice in the WEIM.

This element is further discussed in the EDAM final proposal starting on page 111.