

Extended Day-Ahead Market (EDAM)

Common Design Principles & Concepts

A small group was convened of current EIM Entities and California Participating Transmission Owners, facilitated by the CAISO, to discuss certain design concepts for the potential Extension of the Day-Ahead Markets (EDAM) to the EIM Entities. The objective of the workgroup was to facilitate the restart of the general EDAM stakeholder process by reflecting areas of common agreement and understanding among the parties. This document identifies the progress to date regarding EDAM concepts and/or principles in critical areas of policy design. These common EDAM design principles and concepts represent the consensus of the working group participants¹ at this stage and commitment to further design, but not a commitment to participate or join EDAM.

Common areas of agreement on key EDAM design elements

| EDAM Design Area | Common Agreement |
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| Participation Commitment, Voluntary Participation | <p>Objective: Continue with the concepts of voluntary entry, Balancing Authority Area-wide application of the program, and no-penalty exit that have worked extremely well for the EIM.</p> <p>EDAM is considered an incremental step to the EIM. Consistent with the voluntary nature of the EIM, a determination by an EIM Entity also to participate in EDAM would be voluntary. An EIM Entity may continue to only participate in the EIM, but would not be able to participate in the EDAM without also remaining in the EIM. EDAM would apply to all load in the Balancing Authority Area either by means of self-schedules or by providing bids and letting the market optimize the load's day-ahead dispatch.</p> <p>The determination to participate comes with obligations. Among these, as with the EIM, all load in the EDAM Entities' Balancing Authority Area would be subject to the day-ahead resource sufficiency and scheduling requirements. Further, participation is not a day-by day decision. An EIM Entity enabling EDAM must commit to a minimum period. The minimum commitment timeframe is under consideration. For reference, the minimum commitment for the EIM is six months.</p> <p>There would not be a penalty or other additional charges to exit other than settlement of previously incurred market obligations. The</p> |

¹ The following organizations participated in the workgroup discussions and development of this document: Arizona Public Service Company, Balancing Authority of Northern California, NV Energy, Idaho Power Company, PacifiCorp, Salt River Project, Pacific Gas & Electric, Seattle City Light, Southern California Edison, and San Diego Gas & Electric.

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| | <p>objective is a balance between commitment to EDAM and sufficient off-ramps and paths forward that would provide EDAM participants ability to either revert or evolve to other participation models.</p> |
| <p>Transmission Commitment</p> | <p>Objective: Maximize the amount of transmission (firm, or otherwise high priority) made available to EDAM, while respecting the existing OATT framework and contractual commitments.</p> <p>To support this goal, EIM Entities enabling EDAM would be committed to providing transmission made available through its resource sufficiency evaluation, as well as any unsold Available Transfer Capability (ATC) to the EDAM optimization. In addition, there would be certain general requirements reflected in the CAISO Tariff as well as implementing provisions in the EIM Entities’ respective Open Access Transmission Tariffs (OATTs). Transmission would be made available in accordance with three “buckets.”</p> <ul style="list-style-type: none"> • Bucket 1 consists of network and point-to-point transmission service used to meet load service and resource sufficiency obligations. It must be firm, conditional firm, or otherwise highly reliable. As this transmission has been procured from the transmission provider(s) prior to submittal to EDAM, there would be no additional usage fee. Bucket 1 transmission would be optimized by the market at no cost. The policy design process should further delineate under what circumstances transmission in Bucket 1 may not be made available for optimization to strive toward consistent market participation. No additional direct compensation for Bucket 1 transmission would be provided by EDAM. • Bucket 2 consists of firm, conditional firm, or otherwise highly reliable point-to-point transmission that has been previously reserved by different parties (LSEs, generator owners, marketers) that is not otherwise made available in Bucket 1. The original Bucket 2 concept was that the OATT customer would have a choice: (1) schedule all or part of their point-to-point reservation; (2) provide all or part of their reservation to the EDAM for optimization, or (3) do nothing. If provided to EDAM, the customer could not recall the reservation for use the next day. To encourage OATT customers who would not be using their reserved capacity to make it available to the market, there would |

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| | <p>be compensation. The exact form is still under consideration, but could consist of an allocated share of congestion payments.²</p> <p>In further support of the transmission maximization principle, also under consideration is whether it would be feasible to permit the market to optimize Bucket 2 transmission that was not scheduled or otherwise provided by the OATT customer. If the OATT customer submitted an intra-day schedule, the market would redispatch to accommodate the change.</p> <ul style="list-style-type: none"> • Bucket 3 consists of firm Available Transfer Capability (ATC). This previously unsold capacity would be made available to EDAM and compensated at a usage rate. This could be a previously approved posted rate or a discounted rate at the discretion of the Transmission Provider. The OATT would be amended to provide a period for the CAISO to determine the amount of Bucket 3 transmission utilized by the day-ahead market. Any transmission not optimized by the market would be released back to Transmission Provider. |
| Supply Commitment | <p>Objective: To provide greater certainty to the EDAM market participants, including the CAISO LSEs as to amount of participating load and resources.</p> <p>Consistent with the “prevention-of-leaning” concept supported by the existing EIM resource sufficiency test, the EDAM would have robust resource sufficiency requirements. This test would be developed and applicable to all participating entities in order to qualify for EDAM market participation each day.</p> <p>Similar to the CAISO’s existing resource adequacy showings, there would be a general advisory showing of capacity sufficiency by each EDAM Entity in a parallel timeframe – 45 days in advance. The advisory showing is intended to provide an indication of the progress of the entity toward establishing resource sufficiency in the month-ahead timeframe.</p> <p>The purpose of the resource sufficiency evaluation is to ensure that EDAM entities come into the DA market with adequate supply to cover forecasted load plus reserves and consequently do not lean on other EDAM entities to meet their reliability needs. The EDAM resource sufficiency evaluation is not a substitute for an EDAM entity’s resource planning or resource adequacy requirements.</p> |

² Recognition that pre-existing legacy arrangements and terms of those legacy arrangements have to be honored.

The principles identified below are intended to guide the EDAM resource sufficiency evaluation policy design.

EDAM Resource Sufficiency Evaluation (RSE) – Principles

- The RSE should ensure that entering the Day-Ahead Market, EDAM entities can meet their individual capacity and other balancing authority area obligations based on conditions expected in the Day Ahead timeframe in order to prevent leaning on other EDAM entities.
- Participation in the EDAM, including meeting the EDAM RSE, should not modify state or local control over long-term RA planning and integrated resource planning, or any other aspect of state or local generation planning and certification.
- The RSE recognizes the different resource planning and resource adequacy programs of EDAM entities and resources complying with those programs count toward meeting the RSE.
- Transparent and equitable application of the RSE across all EDAM entities.
- Failure to meet EDAM RSE should carry incentive-based consequences for the failing EDAM entity to ensure confidence of EDAM transfers and prevent leaning among EDAM entities.

Key concepts supporting RSE principles:

- EDAM entities will make advisory resource sufficiency or equivalent showings in the month-ahead timeframe.
- Power purchase agreements used to support the EDAM RSE test must be “firm” in nature. This concept is consistent with the overall principle of EDAM that transfers/transactions must be reliable and dependable. A firm power contract (whether for energy or capacity) is one where the seller can fail to perform only for reliability reasons. This concept does not dictate the type of transmission priority supporting the delivery of a “firm” power contract.
- The EDAM RSE design should strive to harmonize with the emerging and prevailing resource adequacy and resource planning programs. These programs should not drive EDAM design, but as programs evolve the RSE should strive to harmonize with those changes as much as possible and appropriate, and consistent with the RSE principles.
- Consequences for failure to pass the EDAM RSE should strive to strike a balance between incentivizing coming resource sufficient into the DA market while not being punitive to undermine the benefits of EDAM. The consequence structure should also not make compliance with the EDAM RSE so onerous as to undermine the benefits of EDAM participation.

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| <p>Congestion Rent Allocation (Between BAAs)</p> | <p>Objective: To hold transmission customers harmless without creating new uplifts.</p> <p>With regard to allocation of congestion rents associated with transfers between EDAM Entities and between an EDAM Entity and the CAISO, the group has explored a number of possibilities:</p> <ul style="list-style-type: none"> • Congestion rents associated with EDAM transfers between EDAM Entities areas are generally split 50/50 between these areas to reflect that transfer is a result of the two voluntary offerings from EDAM Entity’s BAAs meeting in the middle. If the transmission made available for EDAM transfers extends all the way into the sinking balancing area rather than stopping at the midpoint of balancing areas, the general 50/50 approach may not necessarily apply. Rather, 100% to sending balancing authority area may apply. • CAISO retains 100% of congestion rents associated with intertie schedule constraints (ITC) at the boundary of the CAISO. • EDAM Entity BAA retains 100% of transfers on interface with CAISO. <p>While no final determination as to an approach has been made, the group has reached agreement as to the objective – (1) hold OATT customers harmless from exercising their existing intra-day scheduling rights, without causing uplift charges that would be assessed to the other OATT customers; (2) allocate incremental congestion created by EDAM and not modify current congestion processes. In other words, permit the scheduling change rights as exist today while trying to retain the pricing certainty reflected in the existing OATT rates. If there are excess congestion rents after these customers are held harmless, the dollars would be allocated back to transmission customers and not retained by the Transmission Provider.</p> |
| <p>Congestion Rent Allocation (Distribution to LSEs and Transmission Customers)</p> | <p>Objective: Facilitate the Congestion rent allocation priorities in the prior section in an equitable and implementable manner.</p> <p>To ensure equal treatment among OATT customers, the CAISO would allocate the appropriate congestion rents to each EDAM Entity. Each EDAM Entity as the OATT Transmission Provider would sub-allocate the appropriate portion of these rents in accordance with the hold-harmless principle discussed above, to their customers, per the terms of their OATT.</p> |

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| <p>Level of Confidence in EDAM Transfers</p> | <p>Objective: In order to encourage EDAM participation, EDAM Entities must have confidence that the Day-Ahead award transfer is firm and can be relied upon.</p> <p>To incent EDAM Entities to fully commit resources to the EDAM and thereby achieve maximum efficiencies for customers, EDAM transfers must be considered firm transfers serving load and afforded protections associated with firm service including reserve deployment and management. As a result, the ultimate objective is that the DA market design adequately tests sufficiency to ensure load and uncertainty are covered such that EDAM transfers are firm energy transfers.</p> <p>Principle: Transfers identified through EDAM are considered firm energy transfers and can be relied upon under different conditions.</p> |
| <p>GHG Accounting</p> | <p>Objective: Account for GHG costs of EDAM transfers equitably, consistent with state policies of different participating entities.</p> <p>The GHG framework should strive to meet the following principles:</p> <ol style="list-style-type: none"> 1. To the maximum extent possible, market design should fairly reflect and be consistent with state policy objectives. 2. Jurisdictions that have not adopted a GHG or renewable procurement policy should not be improperly affected, directly or indirectly, by policies adopted by other jurisdictions. 3. The entity responsible for the output of a resource, as defined by a jurisdiction’s policy, should receive the full greenhouse gas or renewable benefit and bear the full greenhouse gas cost of that resource. 4. The market design should allocate costs and benefits consistent with the applicable (i.e., state) greenhouse gas regulation policies. 5. Renewable and non-emitting resources outside of jurisdictions with greenhouse gas policies should not be unfairly disadvantaged compared to renewable and non-emitting resources inside jurisdictions with greenhouse gas programs. <p>GHG design objectives to achieve the GHG policy framework principles:</p> <ul style="list-style-type: none"> • No inappropriate or unacceptable GHG impact in non-GHG zone. • Leakage should be minimized. • Enable resources in non-GHG zone to compete on a level playing field with resources inside GHG zone. • Do not inadvertently undermine RPS policies. • Allow for market efficiency. • Technically feasible. |

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| <p>Price Formation</p> | <p>Objective: Consider the price formation concepts of extended locational marginal pricing mechanism, scarcity pricing and market power mitigation mechanism as general market design initiative.</p> <p>Price formation, in the context organized markets fast start pricing and scarcity pricing, are important topics that have been debated at FERC for several years as a means to reduce uplift costs.</p> <p>Outside of the organized market and in the context of EDAM, price formation has also been identified as a market design element to reconcile when compared to bilateral pricing practices. As such, the bilateral market considers a different way of pricing these transactions that may be different from the pricing of transactions in the Day-Ahead organized market.</p> <p>The topic of price formation has a broader scope and application than EDAM and this topic should therefore be considered outside of the EDAM initiative but nevertheless recognizing the implications for the EDAM framework. It is recommended that that the broader topics of price formation design be taken up ahead of, or in parallel with, EDAM design work.</p> <p>Price formation principles in context of EDAM:</p> <ol style="list-style-type: none"> 1. Price formation practices should result in just, reasonable, and equitable price signals across the footprint. 2. Price formation practices should consider the impacts and incentive signals for the evolving sources of supply. |
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