

## Background:

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

Please submit your comments using this template to [ISOStakeholderAffairs@caiso.com](mailto:ISOStakeholderAffairs@caiso.com) by end of day March 15<sup>th</sup>, 2022.

## Question:

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

## General Comments of Powerex:

The EDAM is intended to create opportunities for beneficial day-ahead transactions between EDAM Entities. Considering that multiple resource adequacy (“RA”) programs are expected to exist in the west in the years ahead, it is likely that EDAM transfers will span EDAM Entities that participate in different RA programs or resource planning constructs, specifically transfers between:

- The CAISO balancing authority area (“BAA”), where forward resource procurement occurs under California’s RA program, according to requirements established by the California Public Utilities Commission (“CPUC”);
- EDAM BAAs where forward resource procurement is expected to occur predominantly under the requirements of the Western Power Pool’s Western Resource Adequacy Program (“WRAP”); and/or

- EDAM BAAs that undertake their own forward resource planning activity, but do not participate in any regional RA program.

There are likely to be very significant differences between California’s RA program, the emerging WRAP program, and the individual resource planning approaches taken by other entities. These differences may exist both in the amount of capacity that will need to be procured on a forward basis, as well as the criteria that will need to be satisfied for capacity to qualify resources towards meeting that requirement. These differences can be expected to result in one RA program or entity meeting a comparatively stronger reliability standard—*i.e.*, leading to procurement of more supply relative to their anticipated needs—than others. Consequently, a single day-ahead organized market that includes entities belonging to very different RA programs will effectively co-mingle entities that have borne the cost of procuring supply to meet a more stringent level of reliability with those entities that have met a lower level of reliability and incurred lower forward procurement costs. In the operational timeframe of EDAM, however, *all* supply will be used to meet *all* load in the footprint. This creates a challenge, as the amount of forward supply procured by each RA program will be calculated to reliably serve the peak needs *of that program’s footprint*; it will not be calculated to meet those needs *plus* curing capacity deficiencies of entities outside of that RA program.<sup>1</sup>

This raises significant economic and reliability concerns for BAAs that procure resources to meet a comparatively stronger reliability standard, unless and until specific measures are developed for EDAM that protects such entities from being leaned on in the EDAM. These concerns include the potential that:

- **BAAs in a comparatively strong RA program may face increased reliability risk**—EDAM transfers from the footprint of a stronger RA program to help supply deficiencies in BAAs under a weaker RA framework could deplete the supply relied upon by the former group to serve their load in critical hours; and,
- **BAAs in a comparatively strong RA program may face increased risk of price spikes**—when a BAA experiences high prices due to supply deficiencies within its BAA, those high prices could propagate across all locations in the EDAM footprint, including to BAAs that procured sufficient resources to reliably serve their own load (and that are not isolated due to transmission congestion).

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<sup>1</sup> This is similar to a pot-luck dinner, which can work very well when each guest brings a dish of sufficient size and quality, but unravels if a guest brings a bag of potato chips but takes a double helping of prime rib.

Perhaps due to these types of challenges, other organized markets in the nation generally comprise a single RA and market footprint where all entities are generally subject to a common forward supply procurement framework and standard. That is, other organized markets arrange for efficient day-ahead and real-time trade ***between and among entities that are already required to “bring their fair share” of supply*** into that market. Exports from that footprint are given lower priority, and are only available from residual supply (except to the extent there is a registered RA export from a specific resource).

At least for the next few years, it is unrealistic to expect the emergence of a multi-state RA program that includes all EDAM participants, including the CAISO BAA. It is likewise unlikely that the CPUC and CAISO will fully implement the reforms necessary for California’s RA program to ensure the CAISO BAA is fully resource sufficient during critical hours, given the contentious nature of the issues and limited progress over the past few years. This leaves the EDAM Resource Sufficiency Evaluation (“RSE”) as the critical element needed in order to enable EDAM to maximize efficient trade, while providing all members confidence that participating in EDAM will not negate forward procurement investments or expose them to heightened reliability risk or price spikes.

*EDAM RSE Must Strongly Encourage Resource Sufficiency Without Compromising Reliability*

As Powerex has stated elsewhere, it does not believe that the RSE should be designed to require any entity to experience reliability challenges when there is sufficient aggregate supply to reliably meet the needs of the entire market footprint. Forcing an entity to experience otherwise avoidable reliability challenges is not an appropriate enforcement tool for RSE compliance.

But Powerex believes it is equally important that no EDAM Entity come to rely on the availability of supply in the EDAM to backstop its choice to limit its procurement of supply prior to the EDAM timeframe to a level that results in leaning. That is, EDAM cannot become the relied upon insurance policy that bails out entities that choose to knowingly procure a lower level of committed supply than needed to meet their needs under capacity critical conditions. A toothless RSE will result in inequitable free-riding by resource-deficient entities on the supply procurement funded by resource sufficient entities; and will ultimately undermine reliability across the EDAM footprint.

In Powerex’s view, the critical elements of a workable EDAM RSE are to:

- Ensure that entities that fail the RSE have lower-priority access to available EDAM supply than entities that pass the RSE. This is critical to ensuring that entities retain a “first right” to use the supply they have procured to reliably serve their own load, before making it available to assist deficient entities.
- Provide the strongest possible financial incentives for entities to take actions to avoid failing the RSE. This is most effectively achieved through the use of a very high penalty price (*i.e.*, \$2,000/MWh) to enable EDAM imports into an entity that has failed the RSE. Failing entities would have access to available EDAM supply—thus avoiding reliability challenges to the extent possible—while failing entities that require EDAM imports to maintain reliability face appropriately high market clearing prices that reflect this shortage.

Powerex has provided further discussion of this type of approach in its recent comments on the EIM RSE enhancements, and incorporates that discussion here. Powerex believes an approach that incorporates BAA net import limits, BAA power balance constraints, and penalty prices for relaxing these constraints represents a potentially effective RSE framework that can feasibly be achieved using currently-accepted spot market design functions. Powerex notes that this approach is focused on ensuring reliability and preventing free-riding during days and hours where supply conditions may be tight, as this is where the economic incentive for some entities to “go short” will be most acute. Powerex is open to further exploration of reduced failure consequences during periods and under conditions without any capacity or flexibility tightness and where there can be confidence that any RSE failures are the result of error or other causes, and not the result of an entity choosing to reduce its resource procurement below what is needed to reliably serve its load.

*EDAM RSE Must Be Accurate, And Only Include Identified Physical Supply That Will Be Delivered On High-Quality Transmission*

The design of the consequences of RSE failure will be nullified if the RSE is not accurate. Experience in the EIM demonstrates that the design and administration of the RSE can enable a BAA that is frequently and significantly short of the resources needed to reliably serve its load to nevertheless “pass” the RSE and improperly gain access to EIM supply comparable to entities that genuinely are resource sufficient. This experience cannot be repeated in EDAM.

In Powerex’s view, the single greatest source of systemic inaccuracy in the RSE has been the inclusion of supply that does not represent physical generation that is committed and deliverable to the BAA including that supply in its RSE. It would be inappropriate, for example, for the CAISO BAA to include imports that do not specify the physical resource or

require delivery on high-quality (*i.e.*, Firm) transmission service to the CAISO boundary. Any import supply included in the RSE of any entity *must* be from a known physical source; this means only including imports that submit a day-ahead e-Tag identifying the physical resource and the full delivery path, which in turn requires each transmission service provider and BA associated with that delivery to review and accept the e-Tag prior to being implemented. Powerex recognizes that the RSE must occur several hours before the end of the preschedule window (when day-ahead e-Tags would be due), but this does not pose an obstacle to a day-ahead e-Tag requirement. More specifically, each EDAM entity should be required to show a day-ahead e-Tag for all imports that were included in its EDAM RSE. Failure to appropriately e-Tag RSE imports should result in appropriate consequences, such as an increase in the amount of supply that will need to be shown in order to pass the RSE for some defined period going forward.

The CAISO has historically refused to require day-ahead market awards to submit a day-ahead e-Tag, citing concerns that doing so might reduce “liquidity”. But this “liquidity” is in the form of inflating supply beyond what can actually be delivered to a given intertie scheduling point. Treating supply that may or may not deliver as if it was fully “firm” exposes the CAISO BAA (and by extension the EDAM footprint) to reliability risks when that supply does not show up—particularly since the CAISO will not become aware of this non-delivery until very close to real-time. It is for this reason that other organized markets, as well as bilateral market transactions, require entities that enter into day-ahead sales to submit a day-ahead e-Tag.

The CAISO had previously indicated a willingness to consider a day-ahead e-Tag requirement in the context of EDAM, but now appears to be backtracking from that earlier position. Powerex finds it very concerning that the CAISO appears unable to move forward and commit to the industry standard mechanism for demonstrating that the supply it is relying on (in the RSE) is real, identified and deliverable. This resistance clearly reflects the continued disproportionate influence of certain stakeholders in the CAISO BAA who have repeatedly made it clear in other forums that they do not want to be required to contract for supply that is identifiable, and also do not want to arrange for the external transmission service required to reliably deliver that supply. Powerex believes that an accurate EDAM RSE must be based on identified physical capacity that can meet the load of the BAA being evaluated; for imports to be included as RSE supply, a day-ahead e-Tag must be required.

## Responses to Specific Questions:

1. Please share your organizations perspective on the need for, and value of, a month ahead (45-day) advisory submission of a general resource plan by the EDAM Entity to provide some level of confidence in meeting day-ahead resource sufficiency throughout the month. (discussed 1.5 & 1.10)

*Powerex sees limited value in an advisory showing of supply, which entities are neither required to meet nor assures other entities of the ultimate availability of the shown supply. It is unclear how an advisory showing would lead to better decisions or actions in the EDAM.*

2. Please share your organizations perspective on the nature of the consequences for failing to pass the Day Ahead resource sufficiency evaluation. Should the consequence be physical freezing of transfers, or a form of financial consequence? (discussed 2.23)

*See comments, above. Generally, entities that do not show sufficient identified physical supply (and, where applicable, high-quality transmission service to deliver that supply) cannot be considered resource sufficient, and any level of EDAM imports necessarily reflects capacity leaning as opposed to economic displacement. It is therefore appropriate that entities that fail the EDAM RSE should have their net imports constrained to 0 MW, but to allow this constraint to be relaxed with a high penalty price (e.g., \$2,000/MWh) to enable access to EDAM supply if necessary to address reliability challenges. To the extent there is insufficient aggregate supply in EDAM to meet all load, then entities that pass the RSE must have priority access to EDAM supply ahead of entities that fail the RSE.*

3. Please share your organizations perspective on whether there is merit to creating platform to facilitate intra-day, before the day-ahead market is run, trading of bid range and imbalance reserve capacity with between EDAM BAAs. (discussed 2.23)

*Powerex generally supports the ability for entities with surplus supply to be able to transfer some of that surplus to entities with supply deficits, such that both entities can pass the EDAM RSE. Powerex places a low priority on “creating a platform to facilitate” such trades, however, as Powerex believes such transfers can be efficiently executed on a bilateral basis provided there is clarity regarding the attributes that must be specified in such a transaction.*

4. Please share your organizations perspective on whether a penalty structure needs to be developed to incent performance of firm energy contracts supporting imports (i.e., WSPP Schedule C arrangements) utilized to demonstrate resource sufficiency and sources from non-EDAM BAAs. (discussed 2.23)

*Powerex believes EDAM should clearly delineate the responsibilities and consequences, including penalties, for EDAM Entities that include in their RSE supply that is not real, identifiable supply that is deliverable, and/or does not perform as required. This will be sufficient to ensure that EDAM entities procure supply under arrangements that ensure this level of performance, but that may take different forms. Powerex does not believe it would be necessary or appropriate for EDAM to reach beyond the EDAM Entity and seek to directly apply penalties to individual supply arrangements.*

5. Please share your organizations perspective on the Residual Unit Commitment (RUC) as an integral component of the EDAM framework based on the working group discussions to date. Should RUC be part of the EDAM? (discussed 2.25, 2.28)

*Powerex believes that RUC is an outdated and inefficient mechanism used to compensate for an Integrated Forward Market (IFM) solution that fails to procure the physical supply needed by the CAISO to ensure reliable service to load. Ensuring reliable service to load requires the commitment of dependable physical supply, and yet the IFM fails to distinguish between physical supply that can be relied upon to serve load in real-time, and supply that is less certain (e.g., intermittent resources such as wind and solar), speculative (e.g., intertie bids with no identified supply or transmission) or expressly not physical (i.e., virtual bids). The RUC process is used to patch these “blind spots” in the IFM (in addition to under-scheduling of load by CAISO LSEs). The result is a set of market-clearing prices established in the IFM that are depressed due to chronic understating of demand for physical supply.*

*If RUC is part of the EDAM design, it will mean that western entities’ day-ahead transactions will shift from a bilateral market that fully reflects the value of firm physical supply, to an EDAM where the value of firm physical supply will be the same as that of non-firm or virtual supply. Powerex believes this will severely alter the net benefits of participation in EDAM for many western entities.*

*A far more efficient solution—and the approach most appropriate for a multi-state day-ahead organized market—would be to modernize the IFM to incorporate the reliability constraints into a single optimized solution along with clearing bid-in demand. Earlier in the DAM Enhancements stakeholder process, the CAISO developed a very promising proposal that would have achieved this objective. That proposal was largely opposed by CAISO load-serving entities and by CPUC staff, and the CAISO subsequently abandoned the idea of integrating RUC and IFM. CAISO committed to consider a fully integrated day-ahead market optimization in this EDAM stakeholder process. Powerex looks forward to that dialog.*

6. Please share your organizations perspectives on convergence bidding (virtual bidding) as a feature of the EDAM based on the working group discussions to date. Should convergence bidding be a feature of the market, Day 1, at the start of EDAM? (discussed 2.25, 2.28)

*Powerex recognizes the value of convergence bidding in organized markets, particularly as an important counterweight to incentives for load under-scheduling. But while convergence bidding adds appropriate liquidity to financial positions, they do not contribute physical supply that can serve load in real-time; virtual bids do not keep the lights on. For this reason, any EDAM design must ensure that the ability of virtual bids to displace physical supply does not lead to a day-ahead market solution that is incapable of reliably serving expected load, and hence requires additional physical supply to be procured outside the market.*

7. Please share your organizations perspective on the topic of dependability of EDAM transfers. What is the level of confidence and/or priority that should be afforded to EDAM transfers relative to other transactions? (discussed in upcoming 3.9 meeting)

*The key benefit of EDAM over EIM is that it will operate in the day-ahead timeframe, providing additional lead time to more fully optimize unit commitment decisions. To realize these additional cost savings, it is vital that EDAM transfers be at least as reliable as the local units whose commitment these transfers will replace. If this is not the case, and EDAM transfers are not viewed as reliable, then the receiving entity can be expected to lack the confidence to de-commit local supply, and the potential savings from optimized unit commitment will not be realized.*