

**Comments of Powerex Corp. on  
Extended Day-Ahead Market  
Straw Proposal**

<b>Submitted by</b>	<b>Company</b>	<b>Date Submitted</b>
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Powerex appreciates the opportunity to provide comments on the CAISO’s April 28, 2022 Extended Day-Ahead Market (“EDAM”) Straw Proposal and the stakeholder meetings on May 25-26 (“Straw Proposal”).

In summary, Powerex believes the EDAM Straw Proposal has material shortcomings that:

1. Would socialize the reliability risk of the CAISO BAA to other EDAM entities and their customers, as the CAISO would be able to use the resource adequacy supply of others to “shore-up” the supply deficiencies in its own BAA through EDAM, with all entities expected to curtail their own loads pro-rata if there is insufficient aggregate supply;
2. Undermine the incentives for continued third party investments in OATT transmission service, as the benefits of longer term OATT transmission investment would be unwound through several proposed EDAM design elements; and
3. Impede the region’s continued efforts to reduce GHG emissions, through the proposed expansion of a highly inaccurate approach to applying state-level GHG-pricing programs.

Powerex believes the key challenge in achieving a more workable EDAM Straw Proposal for the broader western region is that the CAISO is not a neutral positioned entity in this process. Rather, CAISO has a clear and direct interest in *how* its markets are designed, given its roles as the balancing authority (“BA”) for one of the largest areas in the west and as one of the key transmission service providers (“TSP”) in the region. The EDAM development process is one in which the lead market design architect is also an interested party, with circumstances and interests that often differ from the circumstances and interests of other potential EDAM participants.

Powerex appreciates that at the May stakeholder workshops, CAISO staff appeared to indicate a willingness to reconsider some of the design choices in the EDAM Straw Proposal. Powerex hopes its comments below help foster greater understanding of the importance of these issues, and how they may be workably resolved in the next iteration of the proposal.

However, Powerex remains concerned that a process in which all key design choices continue to be made by the CAISO staff, with no decision-making role for stakeholders, may continue to be an impediment to developing a day-ahead market option that is workable and attractive for a critical mass of entities outside the CAISO BAA. Powerex therefore continues to urge CAISO to make a new, detailed decision-making framework an integral part of the EDAM proposal. Such a new decision-making framework should include at least one stakeholder committee with voting rights and meaningful decision-making authority, with the CAISO transitioning to a role of facilitator and subject matter expert.

## The EDAM Straw Proposal Appears To Deprive Participants Of Priority Access To Their Procured Resources

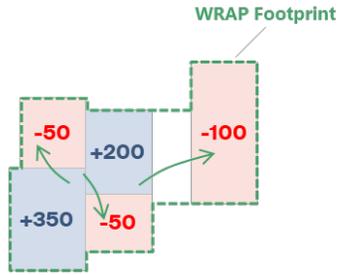
All entities seek to ensure reliable service to their loads, and take important steps to ensure they will have access to the physical supply and associated delivery arrangements necessary to achieve this critical objective. Entities across the west take a range of actions to ensure reliable service to their load, including building and operating their own fleet of generation resources, entering into forward supply contracts, and securing high priority OATT transmission service. A number of potential EDAM participants are also engaged in the development of the Western Power Pool's Western Resource Adequacy Program ("WRAP").

Entities invest in supply and priority transmission service with the expectation that they will have a "first right" to access that supply in the operational timeframe if and when there is not enough supply to maintain reliability throughout the western grid. Without this assurance of priority access, the benefit of investing in supply and priority transmission service for resource adequacy purposes would be eliminated. Yet this appears to be exactly what would occur under the EDAM Straw Proposal, since the CAISO has specifically proposed that:

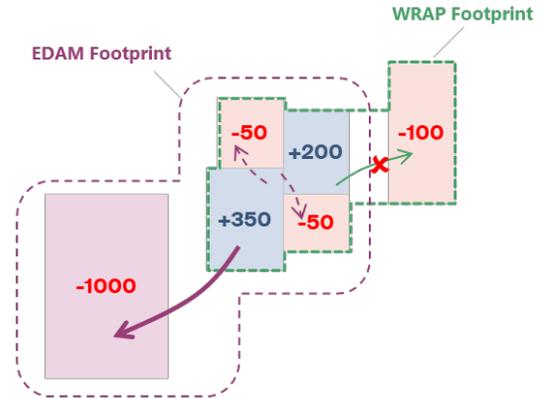
- EDAM entities must participate in EDAM with all of their supply;
- There is no clear requirement for each EDAM entity (including the CAISO BAA)—or the EDAM footprint in aggregate—to bring sufficient, real, identifiable and deliverable supply to meet all EDAM load; and
- In the event of insufficient aggregate supply in the entire EDAM footprint, load within an EDAM entity is required to be curtailed *pro rata* with curtailment of transfers (*i.e.*, exports) to other EDAM entities (including to the CAISO BAA).

The result of this proposed design is that an entity that comes into the EDAM with sufficient real, identifiable, and deliverable supply resources to fully meet its own needs may nevertheless experience reliability challenges, because its supply will be "pooled" with and depleted by other entities that come into the EDAM with a large resource deficit.

The EDAM Straw Proposal presents additional complications for a regional resource adequacy program, such as WRAP. Just like the concerns raised above for individual BAAs, it appears that under the EDAM Straw Proposal, WRAP members in EDAM may lose priority access to their supply, which will be made equally accessible to all EDAM participants, including those that are not members of WRAP (through the EDAM's pooling proposal with a requirement to pro-rata curtail load with EDAM export transfers to other EDAM entities). But it also appears that the EDAM Straw Proposal has not proposed any specific mechanisms to ensure that WRAP members *outside* of EDAM are able to receive access to WRAP supply from members that do participate in EDAM (particularly during circumstances when the EDAM may be deficient of supply, and EDAM entities are expected to curtail their load pro-rata with all EDAM transfers to other EDAM entities).



- WRAP footprint is **fully** resource adequate:
  - Supply (550 MW) exceeds deficit (200 MW)
- All WRAP members with deficit receive WRAP supply, and reliably serve load



- EDAM footprint is **not** resource adequate:
  - Supply (550 MW) is less than deficit (1,100 MW)
- WRAP members in EDAM with deficit **share** WRAP supply with non-WRAP member, no longer able to serve load
- WRAP members in EDAM with supply **curtail** own load *pro rata* with transfers to other EDAM entities
- WRAP member outside EDAM **loses all access** to WRAP supply

The fundamental resource sufficiency flaw in the EDAM Straw Proposal is that it provides undifferentiated access to all supply of all EDAM entities in the operational timeframe without ensuring that all entities bring their fair share of real, identifiable and deliverable supply to the market. Notably, Powerex is not aware of any other day-ahead organized market that does not require participants to also meet a common resource adequacy requirement.

The greatest concern is with the CAISO BAA, which has a well-documented history of capacity procurement shortfalls during critical hours due largely to well-documented deficiencies in the California Resource Adequacy Program. Extensive changes to California’s Resource Adequacy Program would be required in order for the CAISO BAA to meet a robust resource adequacy standard comparable to that being developed in the WRAP, but such changes have persistently been opposed, and the CPUC has not expressed an interest in exploring either joining WRAP or meeting a similar standard.

The EDAM Straw Proposal does include a Resource Sufficiency Evaluation (“RSE”), but this will not result in all EDAM entities being on an “equal footing” going into the day-ahead timeframe. Experience with the Western EIM’s real-time RSE has demonstrated the unworkability of attempting to solve a forward-procurement challenge in the operational timeframe, when it is clearly too late to meaningfully address the issue. And the specific proposal for the EDAM RSE permits the CAISO BAA to pass the RSE by including two large categories of CAISO supply that have no identified physical generation or transmission to enable delivery when needed:

- California Import Resource Adequacy contracts, where the CPUC has declined to tighten requirements to prevent such contracts from being entered into by marketers without committing any real, identifiable supply or external transmission service; and

- CAISO inertia offers that are not associated with Resource Adequacy contracts, and that often include offers from marketers that only seek to procure physical supply if they receive a CAISO day-ahead or real-time market award.

***These two categories can add thousands of megawatts of notional “supply” for the CAISO BAA that does not reflect real physical supply that has been procured and is deliverable.***

And because both categories are unique to the CAISO BAA, this design will have the practical effect of holding the CAISO BAA to a much lower resource sufficiency requirement than all other EDAM entities. Moreover, entities that fail the EDAM RSE would continue to receive full and equal access to all EDAM supply. As proposed, the EDAM RSE does nothing to ensure that all EDAM participants contribute an equitable share of the supply necessary to reliably serve load in the market footprint.

Powerex believes it is fundamentally unworkable for any day-ahead market footprint to include entities under very different resource adequacy frameworks without explicit provisions to recognize and respect priority access to the supply procured by each entity, and to respect the priority of each entity’s supply commitments to other members of their respective RA program(s). There was strong stakeholder support for proposals to achieve this goal, including through the development of EDAM base schedules, through which each EDAM entity would identify—and EDAM would respect—the physical supply and priority transmission service arrangements they rely upon to ensure reliable service to their loads (and to other members of their RA program). Under this proposed approach, participants would have the option for these base schedules to be optimized in the EDAM. However, in the event that a feasible market solution could not be achieved (*i.e.*, if all load could not be met after exhausting all economic offers) then the base scheduled supply and the NERC priority of base scheduled transmission service would determine which entities receive supply (which may include entities outside EDAM) and which do not. This framework would preserve the critical link between the ratepayers that fund investments and participation in forward supply arrangements and access to that supply in the operational timeframe. Without such a framework, it is not clear how participation in EDAM would be workable for any external entity concerned with ensuring its customers have priority access to the resource adequacy supply, and associated priority transmission service, they have funded. It is also not clear how the EDAM would be at all compatible with the WRAP, absent such a framework.

### **The Straw Proposal Largely Renders OATT Transmission Service Irrelevant**

Since its inception, the CAISO and stakeholders have recognized that EDAM is strictly a day-ahead market, and will not entail consolidation of transmission service or tariffs (among other functions). While the future evolution of the wholesale electric industry in the west may include some entities joining an ISO or RTO and transitioning their transmission service from the existing OATT framework, any such changes are far beyond what is contemplated at the present time. ***That is, any regional day-ahead and real-time market platform must be designed to be fully consistent with the OATT framework for funding transmission facilities, as it exists today.***

Broadly speaking, the OATT framework recovers the revenue requirement of each transmission service provider from both network customers (who pay for transmission to meet their own load) and from point-to-point customers (who pay for transmission to export or to wheel through the TSP footprint). Powerex estimates that over a billion dollars per year of western transmission providers’ revenue requirements are recovered through the sale of point-to-point transmission

service to third parties. Transmission customers invest in point-to-point service in order to receive several types of benefits, including:

1. **Scheduling priority during critical grid conditions**, enabling an entity's deliveries to flow to its load ahead of other transmission customers with lower priority, which is particularly important during critical periods when such deliveries are needed to help protect an entity's individual reliability;
2. **Collect the value of congestion** by delivering electricity from a lower-price location to a higher-price location; and
3. **Deliver clean and renewable supply** to locations with an environmental policy program that provides premium compensation for electricity from low- and non-emitting resources.

Ensuring that these three different types of benefits accrue to transmission customers that invest in long-term firm (and conditional firm) transmission service is not only of critical importance to those transmission customers, it is essential to ensuring continued third party investment in external transmission service and thus preventing inequitable cost shifts onto the native load of external transmission service providers.

Unfortunately, the CAISO has historically made very specific market design choices that have had the effect of largely negating the need for, and value of, investments in firm OATT transmission service from other transmission service providers, including:

- No requirement for any CAISO import RA arrangements, or CAISO intertie bids more generally, to demonstrate that external transmission service has been secured to deliver supply to the CAISO boundary, prior to displacing intertie bids (including wheel-through bids) that *have* secured external transmission service;
- No requirement for CAISO day-ahead market awards to submit a day-ahead e-Tag, which is contrary to industry practice in the west outside of the CAISO BAA and which has numerous harmful effects to external transmission service, including disproportionately shifting the congestion value on multi-segment paths away from external transmission customers to CAISO transmission customers;
- During critical grid conditions, CAISO using its role as market operator to determine which entities flow on multi-segment transmission paths, allowing imports into the CAISO with lower-priority "as available" external transmission service to flow ahead of CAISO wheel-through schedules with procured high-priority transmission service on external segments. In effect, CAISO uses its market operator role to elevate the importance of priority transmission service on *its* transmission system, while negating the importance of priority transmission service on external transmission systems.

These and other CAISO market design choices have been contentious at times, but are perhaps understandable in the context of the CAISO's numerous roles. The EDAM requires a different approach, however, as the success of the EDAM requires a framework that is both workable and equitable for the entities that the CAISO seeks to attract to join EDAM. Unfortunately, the EDAM Straw Proposal includes multiple design choices that continue to minimize the role, value, and importance, of external firm transmission service provided under the OATT framework, including:

- No support for base schedules, and no alternative framework for communicating the NERC scheduling priority of deliveries arranged outside of EDAM to the CAISO, which

should be used for determining which deliveries flow and which ones are curtailed in the event that all needs could not be met through the market optimization;

- Requiring participants to make all internal transmission capability available to EDAM, including service that has been sold to other transmission customers and where those customers have not voluntarily made that transmission available to EDAM (*i.e.*, as Bucket 2 EDAM transmission);
- No requirement for day-ahead market awards or RSE supply to submit a day-ahead e-Tag;
- A proposal that the congestion value on interties with the CAISO would *not* be allocated 50/50, contrary to the allocation proposal on interties between EDAM entities other than the CAISO, but rather would be allocated 100% to whichever side of the intertie CAISO software determines constrains first; and
- The use of an algorithm for specified external resources to be “deemed” delivered to CAISO load, and their specific GHG emissions used for reporting and compliance under California’s GHG pricing program, without any showing of any external transmission rights (and thus of any external transmission funding contribution) to deliver such supply.

Each of these EDAM Straw Proposal elements can be expected to undermine the existing incentives for investment in longer-term point-to-point service on external transmission systems.

Put simply, under the EDAM Straw Proposal, the EDAM:

1. Will not respect the intended priority of external OATT transmission service in determining which entities get to flow when some load must be curtailed due to a binding transmission constraint during critical grid conditions;
2. Will not ensure external OATT transmission customers receive an equitable distribution of congestion rent, particularly on the large and highly congested Pacific AC and Pacific DC Interties; and
3. Will no longer require entities delivering external clean supply to California in the day-ahead timeframe (in order to earn clean premiums) to arrange for (and contribute to the funding of) the external transmission facilities that enable those deliveries (*i.e.*, in the source BAA of the clean resource and in any intermediary BAAs).

The end result for external transmission service providers can be expected to be a material erosion in third party point-to-point transmission revenues (particularly on, but not limited to, transmission paths to California), which can, in turn, be expected to result in a corresponding increase in the revenue that must be recovered from their native load customers.

At the May stakeholder workshops, CAISO staff discussed the potential for a small access charge to be assessed on all EDAM load, with the funds used to make transmission service providers whole for reductions in short-term OATT revenue. As an initial matter, Powerex notes that the key concern it is raising is how EDAM will affect incentives to continue to invest in *long-term* point-to-point OATT transmission service, which is a much larger revenue source than the third party revenue collected from short-term service. Ensuring that EDAM does not undermine incentives to continue to invest in long-term OATT transmission service requires a market design that leverages and maintains, rather than erodes, the benefits that have supported investment in long-

term OATT rights across the west for decades. The following changes to the EDAM Straw Proposal would help support such an objective:

- Enable a base schedule framework that respects the priorities of OATT transmission service, particularly during critical conditions, while enabling participants to allow EDAM to optimize this use (this includes on multi-segment paths that also use CAISO transmission service);
- Require RSE supply to submit day-ahead base schedules, including day-ahead e-Tags, where applicable;
- Institute an explicit 50/50 sharing of congestion rent on all coordinated interties, including those that involve the CAISO BAA (and including the Pacific AC and Pacific DC Interties); and
- Require OATT transmission service to be demonstrated for deliveries of specified resources to specified loads, including for specified-source imports under GHG-pricing programs.

### **The Straw Proposal Perpetuates The Fiction Of “Deemed Deliveries” For Determining The Source And Quantity Of GHG Emissions Associated With Imports**

The accurate determination and reporting of GHG emissions for electricity imports into a GHG pricing program jurisdiction is critical to reducing GHG emissions and achieving the environmental policy objectives of multiple western states. The EDAM Straw Proposal would extend the “deeming” approach used in the Western EIM, in which the market algorithm determines which external resources are assigned as the source of imports into California. This approach has been highly problematic, and there is extensive data now indicating that the Western EIM regularly:

- Systemically dispatches coal and natural gas generation outside California during the hours that the CAISO BAA is receiving EIM imports; but
- Deems those imports to be primarily from hydro and other non-emitting external resources that are either not increasing their production in the EIM, or are not deliverable to the CAISO BAA.

The inaccurate “deeming” of imports to clean resources has numerous consequences that are contrary to the core objectives of GHG-pricing programs, including:

- The costs of GHG emissions associated with deliveries to the CAISO BAA are understated, inefficiently suppressing CAISO real-time market prices (and by extension CAISO day-ahead and forward market prices);
- The EIM routinely dispatching, and increasing the use of, high-emitting external coal and older natural gas generation to displace in-state lower-emitting gas generation, thereby increasing the GHG emissions associated with serving California load;
- The EIM inappropriately compensating clean resources that are not producing or delivering clean supply to California; and

- The EIM failing to pay clean resources that are dispatched and delivered to California an accurate clean supply premium, which in turn fails to encourage clean resources to be built, to be available, and to produce and deliver electricity to California.

The harm associated with applying this “deeming” approach in the Western EIM is limited by the relatively small volume of transactions that occur in that market. However, extending this approach to EDAM, where transaction volumes will be far greater, will magnify the consequences of its inherent inaccuracy, and may lead to a material increase in GHG emissions in the west.

The stakeholder working groups reflected strong support for exploring and further developing different approaches for GHG accounting in EDAM. These approaches included a potential “zonal approach” that would:

- Enable imports from unspecified sources; and
- Provide a framework for sellers to communicate through base schedules the delivery of output from a specific source to an identified import location, which would support accurate specified-source imports.

Despite broad stakeholder concern regarding the inaccuracy of the Western EIM’s current “deeming” approach, and despite stakeholder support for developing more accurate alternative frameworks, the CAISO selected the “deeming” approach as the basis for the EDAM Straw Proposal.