

**Comments of Powerex Corp. on  
FERC Order No. 831 Import Bidding and Market Parameters  
Draft Final Proposal**

<b>Submitted by</b>	<b>Company</b>	<b>Date Submitted</b>
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Powerex appreciates the opportunity to submit comments on CAISO’s April 23, 2020 *FERC Order No. 831 – Import Bidding and Market Parameters Draft Final Proposal* (“Draft Final Proposal”).

The Draft Final Proposal aims to enact the requirements of FERC Order No. 831 without further delay. Powerex is generally supportive of several elements of the Draft Final Proposal as workable approaches to achieving that objective, including:

- Applying a \$2,000/MWh offer price cap under specific, defined circumstances, but applying the current \$1,000/MWh offer price cap when those circumstances are not present;
- Defining a “maximum import price” based on day-ahead price indices in external western bilateral markets, shaped to hourly granularity based on historical SMEC values;
- Permitting voluntary (*i.e.*, non-RA) imports to submit energy offers at any price up to the applicable offer price cap; and
- Limiting RA import offer prices to the maximum of verified resource costs or the CAISO-calculated maximum import price.

Further clarification would be beneficial regarding the Draft Final Proposal’s reference to “resource-specific” RA imports, as this term is used in multiple different contexts.

Powerex believes that the elements of the Draft Final Proposal related to the application of penalty price parameters when determining market-clearing prices require modification, however. As proposed, CAISO market prices may never reflect the \$2,000/MWh penalty price of the power balance constraint. Graduated penalty pricing, along with robust scarcity pricing, would significantly improve price formation in the CAISO markets during tight conditions, and Powerex continues to encourage the CAISO to pursue such enhancements through a stakeholder process. In the immediate context of the CAISO’ Order No. 831 compliance filing, Powerex recommends applying the Draft Final Proposal’s pricing logic for a defined and limited quantity of infeasibility (*e.g.*, 100 MW), but setting price based on the full value of the penalty prices for infeasibilities that exceed this threshold.

**I. Powerex Is Generally Supportive Of Several Elements Of The Draft Final Proposal**

FERC Order No. 831 raised the “hard offer cap” to \$2,000/MWh, and permitted—but did not require—ISOs and RTOs to propose cost-verification procedures for energy imports. Powerex believes the Draft Final Proposal sets out a workable approach to implementing the offer price cap requirements of FERC’s order without further delay.

**A. Powerex believes raising the offer cap under defined conditions is a workable approach to promptly implementing Order No. 831**

The Draft Final Proposal appropriately recognizes that cost verification of external import offers is unworkable where offers are not tied to underlying resources, as is the case for the majority of “system resource” offers under CAISO’s intertie bidding framework.<sup>1</sup> The Draft Final Proposal therefore does not include a “soft offer cap” or other cost verification requirements for energy imports (except for RA imports, discussed below). But the Draft Final Proposal also does not permit energy import offers above \$1,000/MWh in all instances. Rather, the Draft Final Proposal defines specific criteria which, if present, would trigger use of a \$2,000/MWh offer price cap; absent one of the defined criteria, the current \$1,000/MWh offer price cap would apply.

In this manner, the Draft Final Proposal generally balances the requirements of FERC Order No. 831 to raise the offer price cap to \$2,000/MWh with the objective of doing so only when objective information indicates that resource energy costs (including opportunity costs) may exceed \$1,000/MWh.

The specific circumstances that would trigger the higher offer price cap under the Draft Final Proposal are:

- Submission of energy offers from resources with verified costs greater than \$1,000/MWh; or
- The CAISO’s calculation of a “maximum import price” greater than \$1,000/MWh.<sup>2</sup>

The first criterion reflects the verified cost of resources in the CAISO BAA (or, in the case of RA imports, resources committed to the CAISO BAA). The second criterion reflects the value of energy in competitive markets outside of the CAISO BAA.

More specifically, the maximum import price is proposed to be calculated from published index prices of day-ahead on-peak energy at either Mid-Columbia (for import offers submitted at northwest CAISO intertie points) or Palo Verde (for import offers submitted at southwest CAISO intertie points). These index prices correspond to 16-hour products commonly traded in the external bilateral markets, and are therefore an objective representation of prevailing competitive prices outside of the CAISO grid in the day-ahead timeframe. The Draft Final Proposal would “shape” the price of 16-hour energy blocks into hourly prices for each hour of the day based on the intra-day shape of historical system marginal energy cost values. Powerex believes this is a reasonable approach for incorporating external market price information into the CAISO determination of the applicable level of offer price caps in its markets.

**B. Powerex support allowing voluntary (non-RA) imports to submit prices up to the offer cap**

Regardless of whether the offer price cap is set at \$1,000/MWh or at \$2,000/MWh, the CAISO proposes to accept voluntary import offers at any price up to the applicable offer cap. Powerex supports this approach, for at least two reasons. First, it is the same approach that applies today; the increase in the value of the offer cap under certain conditions does not, on its own, necessitate a change to the manner in which offer price caps are applied. Second, as recognized in the Draft

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<sup>1</sup> Draft Final Proposal at 19.

<sup>2</sup> Draft Final Proposal at 13.

Final Proposal, the CAISO markets must be able to compete to attract supply from voluntary external sources. Limiting the offer prices of voluntary supply at levels below the market offer price cap carries a material risk of making the CAISO markets uncompetitive with other opportunities in external markets. The effect of more restrictive offer price limits will not be to reduce the price of supply offered to the CAISO markets, but rather to reduce the supply that is offered at all.

### **C. Powerex supports the general approach for RA imports**

The Draft Final Proposal does further restrict offer prices from imports under an RA obligation to the CAISO BAA. RA imports represent a forward commitment to submit energy offers into the CAISO day-ahead markets. Therefore, the application of price limits to RA imports does not raise the same concerns as price restrictions on voluntary import supply. The Draft Final Proposal includes provisions that would effectively incorporate a workable cost-verification scheme for RA imports.

The Draft Final Proposal explains that:

*The CAISO market will reduce resource adequacy import bids priced higher than \$1,000/MWh and higher than the CAISO-calculated maximum import bid price to the CAISO-calculated maximum import price. When it does this, it will not reduce a bid to a price below \$1,000.<sup>3</sup>*

In this manner, the Draft Final Proposal would apply the CAISO's maximum import price as a form of cost verification for external supply that is necessary to meet the CAISO's load responsibility (i.e., resource adequacy resources). To the extent the CAISO's calculation of the maximum import price is expected to limit RA import offers to less than the seller's own marginal cost (including opportunity cost) this risk can be incorporated into the price of RA contracts.

With certain clarifications, discussed further below, Powerex supports this approach.

### **D. Clarification is necessary regarding "resource specific" imports and application to non-RA imports**

The Draft Final Proposal contains references to whether or not an import is a "resource-specific resource." For instance, the Draft Final Proposal states that:

*The CAISO market will reduce resource adequacy non-resource specific import bids priced higher than \$1,000/MWh to the greater of the CAISO-calculated maximum import bid price or \$1,000/MWh.<sup>4</sup>*

If the price limitations based on the maximum import bid price apply only to "non-resource specific" RA imports, it would appear to necessitate greater discussion of the provisions that are proposed for "resource-specific" RA imports.

Powerex also notes that the "resource-specific" terminology is not limited only to discussion of the treatment of RA imports. For instance, the Draft Final Proposal states:

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<sup>3</sup> Draft Final Proposal at 18.

<sup>4</sup> Draft Final Proposal at 5, emphasis added.

*The CAISO market will not reduce the price of **non-resource adequacy non-resource specific import bids** higher than \$1,000/MWh. [...] When either of these conditions exist, the market will accept **non-resource adequacy non-resource specific import bids** up to \$2,000/MWh.<sup>5</sup>*

The above passage may be construed as implying that an import that is “resource specific” may be subject to an offer price below the applicable price cap *even if it is not a resource adequacy resource*. Powerex does not believe this is what CAISO intends, since it would raise the same risks of discouraging voluntary supply that the Draft Final Proposal articulates.

Finally, the Draft Final Proposal appears to suggest that the determination of whether or not a resource is “resource-specific” or “non-resource specific” turns on the “generation design characteristics registered in the Master File and modeled as either as [sic] a generating unit or a system resource.”<sup>6</sup> For purposes of the CAISO’s implementation of FERC Order No. 831, however, the relevant attribute would appear to be the ability of the CAISO to verify costs, not the manner in which the import is modeled or how the contract is treated by the CPUC under California’s RA program.

Powerex requests that the CAISO provide greater clarity regarding how different aspects of the Draft Final Proposal are applied as between resource-specific and non-resource-specific imports, and also the criteria for determining whether an import is resource-specific. In particular, Powerex requests that the CAISO provide the following clarifications:

1. The CAISO will not reduce the offer price of **any** non-RA import, regardless of whether the import is otherwise classified as resource-specific or non resource-specific. The reason for not reducing offer prices of non-RA imports is to ensure the CAISO is able to compete to attract voluntary external supply, and this reason applies equally to all voluntary imports.
2. For RA imports, the designation as resource-specific should provide an **additional** opportunity for cost verification. That is, a resource-specific RA import should be able to submit offer prices up to the greater of the CAISO maximum import price and the resource-specific verified cost.
3. RA imports with a DEB registered in the Master File should be able to rely on the DEB as its “verified cost” for purposes of the offer cap.
4. Whether or not an RA import is “resource specific” should depend not only on whether there is an identified physical resource or group of resources supporting the RA import,<sup>7</sup> but also on whether the marginal cost (including opportunity costs) of those identified resources can reasonably be verified by the CAISO. There may be instances in which an RA import contract identifies a group of real physical resources committed on a forward basis, but these resources are sufficiently diverse that their costs cannot be represented by a single number. Such RA imports, despite being backed by identified physical resources, may nevertheless be unable to provide cost verification for their offers, and hence may have their offers reduced to the CAISO-calculated maximum import price.

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<sup>5</sup> Draft Final Proposal at 5, emphasis added.

<sup>6</sup> Draft Final Proposal at n. 12.

<sup>7</sup> In proceedings before the CPUC, Powerex has repeatedly supported a requirement that all resource adequacy contracts identify the real physical resource or group of resources committed on a forward basis to support the contract.

## II. The Proposed Penalty Pricing Design Needs Further Modification

The Draft Final Proposal would also introduce new pricing logic that applies when the applicable offer cap is \$2,000/MWh. Specifically, the Draft Final Proposal would scale the penalty prices based on the \$2,000/MWh level, and apply these penalty prices in the scheduling run to determine the dispatch of resources. In the pricing run, however, ***the penalty prices would not apply***. Notably, penalty prices would not apply *even* if supply offers are entirely exhausted and the power balance constraint cannot be satisfied. Instead, the Draft Final Proposal explains that:

*...the CAISO proposes that the market would **set energy prices in the pricing run using the highest-priced cleared economic bid** when the power balance constraint relaxation penalty price is set to \$2,000/MWh.<sup>8</sup>*

This aspect of the proposal raises numerous concerns, many of which were discussed in detail at the May 8 meeting of the Market Surveillance Committee. First, the proposed pricing logic is a clear departure from the manner in which penalty prices will continue to be applied when scaled to the \$1,000/MWh offer cap, without any clear justification for this departure. Second, the proposed pricing logic negates the purpose of having penalty prices in the pricing run altogether, by failing to reflect in market clearing prices the fact that supply was insufficient to meet demand.

The Draft Final Proposal describes the pricing logic as “similar to the ‘price discovery mechanism’ in the EIM[.]”<sup>9</sup> But the reliance on the EIM is misplaced. The EIM’s “available balancing capacity” mechanism exists precisely because there is known to be a quantity of additional resources that are available to an EIM entity, even though those resources do not participate in the EIM. When these known additional resources are exhausted, however, penalty prices set the market clearing price. In contrast, the proposed pricing logic would apply even when all resources are known to be exhausted; it is not based on the availability of any additional sources of supply.<sup>10</sup>

The proposed pricing logic can also lead to highly counterintuitive outcomes in which prices may be lower when the offer cap is \$2,000/MWh than when the offer cap is \$1,000/MWh. For instance, consider two scenarios in which the maximum price of all submitted economic offers is \$700/MWh:

**Scenario A:** CAISO calculates a maximum import price of \$800/MWh based on published prices in external bilateral markets.

- The applicable offer price cap is \$1,000/MWh;
- If the power balance constraint must be relaxed, the market clearing price in the pricing run will reflect the \$1,000/MWh power balance constraint penalty price.

**Scenario B:** CAISO calculates a maximum import price of \$1,200/MWh based on published prices in external bilateral markets.

- The applicable offer price cap is \$2,000;
- If the power balance constraint must be relaxed, the market clearing price in the pricing run will be based on the last economic offer dispatched, which will be \$700/MWh.

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<sup>8</sup> Draft Final Proposal at 13, emphasis added.

<sup>9</sup> Draft Final Proposal at 13.

<sup>10</sup> The proposed pricing logic will also be permanent, and hence is distinct from the temporary use of the EIM pricing logic during the first six months of EIM implementation by a new EIM entity.

To be clear, Powerex opposes a pricing logic that would prevent the power balance constraint penalty price from setting the market clearing price of energy even when there are large shortages of supply, but Powerex appreciates that it may not be appropriate or necessary for prices to rise to \$2,000/MWh instantly when power balance infeasibilities are very small. Indeed, other parties have expressed concern that the market software may identify relatively small infeasibilities as a result of data or modeling issues – power balance infeasibilities that do not reflect a genuine shortage condition. Powerex is supportive of exploring measures to avoid exacerbating the effects of such data or modeling challenges through the imposition of higher penalty prices.

Powerex continues to believe that significant improvements in price formation can be achieved through application of graduated penalty pricing and robust scarcity pricing, as has been implemented in other organized markets. Powerex encourages CAISO to pursue such enhancements through a subsequent stakeholder process dedicated to that topic. Such comprehensive enhancements are likely beyond the scope of implementing the requirements of FERC Order No. 831, however. For purposes of this stakeholder process, Powerex suggests that CAISO limit the application of its proposed pricing logic to small power balance infeasibilities. For instance, the proposed logic could be used when power balance infeasibilities are 100 MW or less; but infeasibilities in excess of 100 MW must apply the full penalty price in the pricing run, consistent with FERC policy, industry best practices, and the approach most commonly applied in other ISOs/RTOs. This would avoid the suppression of appropriate price signals during periods of substantive supply shortages, and would ensure consistency in the manner that penalty prices are used regardless of whether penalty prices are scaled to \$1,000/MWh or to \$2,000/MWh.