Comments of Powerex Corp. on FERC Order No. 831 Import Bidding and Market Parameters Revised Straw Proposal

Submitted by	Company	Date Submitted
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Powerex appreciates the opportunity to submit comments on CAISO's November 26, 2019 Federal Energy Regulatory Commission ("FERC") Order No. 831 – Import Bidding and Market Parameters Revised Straw Proposal. Powerex recognizes that the application of Order No. 831 to the CAISO market raises critical issues and Powerex appreciates the significant time that CAISO is investing in discussions with stakeholders and California state agencies to develop a balanced approach that takes into account the views and interests of a broad array of stakeholders.

In Order No. 831, FERC directed each RTO to increase their offer caps to $2,000/MWh out of concern that the existing $1,000/MWh offer caps used by RTOs were preventing resources from recovering their costs and acting as a disincentive for resources to offer their supply into the market.[1] FERC also required each RTO to verify that any incremental energy offers submitted by internal generation resources that exceed $1,000/MWh reasonably reflect the resource's actual or expected costs.[2] In the case of external resources, FERC explained that it would not require RTOs to verify the costs of import offers, as (i) it may not be feasible to accurately quantify external resources import offers, and (ii) it is difficult for external suppliers to exercise market power in an importing market.[3] In recognition that FERC's decision to require RTOs to increase the offer cap could impact other market design elements, such as scarcity pricing, the Commission also stated that RTOs could propose modifications to shortage prices or other market rules.[4]

Powerex appreciates the desire of some stakeholders to apply the same verification framework in place for internal resources to import offers. If it were possible to accurately determine the actual marginal costs of external resources, Powerex agrees that it may be appropriate to apply the same verification framework to internal and external resources. As both CAISO and the FERC have recognized, however, the nature of the marginal costs of external resources makes verification of the costs of external suppliers unachievable. Unlike internal resources, the marginal costs of external resources are not limited to the variable costs of producing electricity, but are also driven by the supplier's expectations regarding the opportunity costs associated with foregoing other commercial sales opportunities in favor of offering supply in the CAISO markets. In the case of energy-limited hydroelectric storage resources that are most prevalent in the Northwest region, these costs are even more difficult to determine, as they also reflect the opportunity costs associated with producing electricity in future time periods. As a result, external supplier costs are highly uncertain, subjective, and subject to rapid change.

[1] *Offer Caps in Markets Operated by Regional Transmission Organizations and Independent System Operators,* Order No. 831, 157 FERC ¶ 61,115 at PP 77-78 (2016).
[2] *Id.*
[3] *Id.* at P 195.
[4] *Id.* at P 213.

The fact that it is not practicable to accurately quantify the marginal costs of external resources does not mean, however, that all external suppliers should be permitted to submit offers in excess of $1,000/MWh without any sort of limit. But it is important to recognize that any attempt to precisely calculate the opportunity costs of external resources will be inaccurate, and that special care must be taken in evaluating the scope and application of any offer price limitation, mitigation, or verification requirements to external resources.

It also is important to recognize that subjecting external resources to inaccurate price limits, mitigation, or verification processes has the potential to harm buyers, sellers, and ultimately ratepayers in importing regions. Ultimately, the commercial and regulatory risks associated with inaccurate price limits, mitigation, or verification requirements are likely to discourage external suppliers from making their energy available to the CAISO during peak periods – precisely the time in which additional supply is most needed. The result would be that CAISO would have fewer resources available to meet system needs, leaving CAISO to dispatch more expensive resources or applying penalty prices when there is insufficient supply available through the market. This, in turn, would result in higher prices for wholesale market purchasers, and ultimately California ratepayers. Thus, it is in the interest of both wholesale market net sellers and net purchasers that CAISO adopt a framework through this proceeding that takes into account the difficulty associated with quantifying the costs of external suppliers and is tailored in a manner that avoids deterring the voluntary supply that can play a critical role in efficiently and cost-effectively meeting California's needs.

Powerex initially was of the view that any attempt to cap, mitigate, or verify import offers that exceed $1,000/MWh would be counterproductive and exacerbate the existing supply challenges facing California. Upon further reflection, however, Powerex believes that a carefully crafted ex-ante price cap applied to the offers associated with import RA contracts - based on a formulaic approach that reflects prevailing day ahead bilateral prices at key trading hubs in the west - may be a workable and appropriate framework that has the potential to provide additional protection for wholesale market net purchasers.

Powerex believes that there are several reasons why the application of an ex-ante offer price cap to the offers associated with import RA contracts is appropriate and will not otherwise reduce supply:

- First, Powerex believes that external RA resources should be treated in a manner comparable to internal RA resources to the extent practicable. While it is important that the requirements applied to external resources take into account the differences between internal and external resources, and avoid erecting barriers to participation, establishing an ex-ante offer cap that appropriately takes into account an estimate of the opportunity costs of external resources would help ensure that external suppliers that commit their capacity to serve California load are held to the same standards as internal resources to the extent practicable.

- Second, import RA suppliers are subject to a must-offer obligation that requires them to offer their supply into the CAISO markets and are expected to have the physical capacity and transmission necessary to support their offers into the market. Thus, even if the applicable ex-ante offer price cap in a given hour is below a supplier's estimate of its opportunity costs, the supplier will still have an obligation to offer its supply into the market consistent with its commitment to California.

For the foregoing reasons, Powerex supports capping the offers of import RA suppliers that exceed $1,000/MWh based on a well-designed formulaic approach that reflects prevailing day ahead bilateral market prices in the west. Powerex emphasizes, however, that applying an overly aggressive and inaccurate offer cap to import RA resources could, in some circumstances, reduce the willingness of external suppliers to sell RA in the first place and/or increase the price at which they are willing to sell import RA. However, Powerex believes that an approach that applies an ex-ante offer price cap based on a carefully crafted formulaic approach that reflects prevailing day ahead bilateral market prices in the west, together with a reasonable buffer, could sufficiently limit the risk that suppliers will frequently be required to sell energy at a level that is well below their estimates of opportunity costs. While a supplier still will face some risk that the ex-ante offer price cap will be below its estimates of its opportunity costs in some hours, an RA supplier can take into account this residual risk when determining the price at which to provide RA.

Powerex emphasizes, however, that applying a cap to the offers of non-RA suppliers—who do not have any obligation to offer their supply into the market or the same ability to "price in" (*i.e* through an RA contract) the commercial or regulatory risks associated with inaccurate verification requirements—is likely to reduce voluntary participation in the CAISO markets to the detriment of both purchasers and suppliers. It may be for this reason that other RTOs have generally declined to apply verification requirements to the offers of external suppliers.

In the following sections, Powerex offers additional suggestions regarding discrete aspects of the proposals set out in the Revised Straw Proposal. Specifically:

- Powerex encourages CAISO to establish a cap on import RA offers equal to the higher of $1,000/MWh or a maximum import bid price that reflects bilateral prices in the West. While Powerex appreciates CAISO's attempt to take into account the various factors that can affect the opportunity cost of external resources by incorporating gas prices and long-term opportunity costs into the calculation of the cap, Powerex believes that an hourly cap based on prevailing prices at key electric pricing hubs should give import RA resources sufficient flexibility to reflect their opportunity costs in their bids in the vast majority of hours.

- Powerex recommends that CAISO consider shaping bilateral prices on the relationship between CAISO market prices during various applicable hours rather than on the shape of load within the day.

- Powerex believes that CAISO should continue to set the power balance constraint relaxation penalty price equal to the hard energy bid cap of $2,000/MWh. Powerex encourages CAISO to move forward with efforts to adopt graduated penalty prices that would reduce the potential for small infeasibilities to result in sudden large increases in price.

I. CAISO Should Consider Streamlining The Calculation Of The Maximum Import Bid Price

Powerex supports the CAISO's conceptual proposal to establish an ex-ante "safe harbor" for import bids equal to the higher of $1,000/MWh and a calculated hourly maximum import bid price calculated using day-ahead market prices at key electric trading hubs throughout the west. Powerex believes that calculating and posting an ex-ante maximum import bid price at 9 a.m., prior to the day-ahead market, would give import RA sellers sufficient flexibility to reflect bids in excess of $1,000/MWh when warranted by external market conditions.

Powerex appreciates CAISO's initial suggestion to take into account several of the myriad factors that have the potential to affect the marginal costs of external resources by proposing to calculate the maximum import bid price in a manner that takes into account short-term prevailing market prices, natural gas costs, and the long-term opportunity cost of external resources.

Powerex agrees that taking into account such factors is necessary and appropriate in some circumstances, such as when calculating the default energy bids of energy-limited resources located outside of the CAISO balancing authority area. However, Powerex also recognizes that it is unlikely that including a long-term component and/or gas price in the calculation of a maximum import bid price is needed given that such a bid cap is only likely to be relevant during those periods in which the day-ahead bilateral energy prices are elevated.

Powerex believes that the objective of giving external suppliers sufficient flexibility to reflect their opportunity costs in their bids can be achieved by calculating a simple but carefully-crafted maximum import bid price based solely on short-term bilateral energy prices in the west (*i.e.*, without a gas or long-term component). However, this approach requires that CAISO adopt critical improvements to its shaping proposal as discussed further below.

II. CAISO Should Shape Multi-Hour Bilateral Prices Based On Market Prices

In the Revised Straw Proposal, CAISO explains that it is proposing to shape published daily bilateral prices for peak and off-peak periods into hourly prices based on the CAISO load shape within the day. In particular, CAISO states that it plans to adjust the electric hub price in each hour by multiplying the daily price by the ratio of each hour's load forecast to the average load forecast over the day.

Powerex supports the CAISO's objective of shaping index prices to convert on-peak and off-peak prices into a set of hourly prices that would be used to establish the relevant ex-ante maximum import bid price for each hour. However, Powerex believes that shaping the bilateral index prices based on non-price factors, such as CAISO load, will not adequately reflect the actual variation in hourly prices within the applicable period.

Instead, Powerex believes that the CAISO should shape the bilateral index prices based on the relationship between the CAISO's system marginal energy cost ("SMEC") during a given hour relative to the average SMEC during the relevant on-peak or off-peak period.[5] Such a calculation could be performed based on historical days with similar price levels or, alternatively, could be calculated on a rolling 7-day basis to ensure that the ratio reflects more recent price trends. Powerex encourages further analysis and stakeholder discussion to determine an appropriate range of historical days to include in the shaping calculation.

Powerex believes that shaping bilateral index prices using the SMEC is a critical enhancement to the proposal that is necessary to ensure that the resulting hourly price shape reflects a realistic estimate of the variation in market prices from hour to hour.

[5] For instance, in order to calculate the electric hub price for hour ending 10 on a given day, CAISO would calculate a ratio reflecting the historical relationship between the average SMEC in HE 10 and the average SMEC in HE 7-22; CAISO would then multiple the daily index price by this ratio in order to determine the hourly electric hub price for HE 10.

III. CAISO Should Retain The Use Of A Penalty Price Parameter Equal To The Hard Bid Cap

In the Revised Straw Proposal, CAISO seeks comments on whether it should modify its existing approach to setting market prices when there is a power balance infeasibility. CAISO notes that it has proposed to continue to apply penalty prices equal to the hard offer cap, which will be set equal to $2,000/MWh upon acceptance of CAISO's Order No. 831 compliance filing. CAISO explains, however, that it is considering whether penalty prices should only be set equal to the hard cap to the extent that there are cost-justified energy bids greater than $1,000/MWh in the CAISO market. CAISO explains that adopting this alternative would reduce the potential that small infeasibilities may result in dramatic increases in price.

Powerex appreciates the desire of some stakeholders to ensure that small infeasibilities do not result in extreme changes in price. Indeed, Powerex agrees that there is little rationale for allowing a small change in demand to drive unexpected and extreme increases in market clearing prices from otherwise typical levels.

Powerex believes that it is critically important, however, that scarcity be appropriately reflected in market prices. More specifically, where CAISO is required to reduce reserve requirements to meet system demand, prices should increase above the variable cost of the highest cost unit to reflect the increased reliability risks during such periods. Shortage pricing mechanisms play a critical role in ensuring that scarcity is appropriately reflected in market prices, thereby encouraging resources to voluntarily make their supply available when and where they are most needed.

Powerex is concerned that limiting the application of shortage pricing to periods in which there is a cost-verified offer in excess of $1,000/MWh will undermine the application of shortage pricing. As an initial matter, there does not appear to be any justification for limiting the application of penalty pricing merely because there is not a cost-verified bid within the CAISO. During periods when there is legitimate scarcity, prices in the market should be set at the hard bid cap to ensure that system conditions are accurately reflected in market prices and to create incentives for resources to voluntarily make their supply available to the market. The fact that there is not a cost-justified bid exceeding $1,000/MWh does not provide a basis for failing to apply shortage pricing during such periods.

Powerex emphasizes that limiting the application of shortage pricing will harm both buyers and sellers by creating disincentives for the voluntary participation of resources in the CAISO markets. Like the application of inaccurate verification measures, limiting the application of shortage pricing during periods of scarcity will increase costs and reliability risks by limiting voluntary participation. When grid conditions in California and the rest of the west are tight, it is critical that prices be permitted to increase to allow California to compete to obtain the capacity and flexibility necessary to meet system needs. To the extent that shortage pricing is arbitrarily limited during such periods, the result will be to reduce the incentive for external suppliers to make their capacity and flexibility available to California. The result will be to decrease the supply available to the CAISO, potentially increase the frequency and duration of shortages, and increasing costs for consumers.

While Powerex does not support CAISO's proposal to limit shortage pricing to periods in which there is a cost-verified internal bid, Powerex does believe that the existing shortage pricing mechanism should be modified. Powerex strongly encourages CAISO to take steps to adopt graduated penalty prices that would allow prices to rise gradually as reserve shortfalls increase. Adopting graduated penalty prices would ensure that scarcity is appropriate reflected in market

prices while avoiding the extreme changes in price that can occur under the existing shortage pricing framework.