

**Comments of Powerex Corp. on
Frequency Response December 14, 2015 Working Group Meeting**

Submitted by	Company	Date Submitted
Mike Benn 604.891.6074	Powerex Corp.	January 4, 2016

Powerex appreciates being given the opportunity to make a formal presentation at CAISO's December 14, 2015 Working Group meeting on Primary Frequency Response. Powerex welcomes the opportunity to work collaboratively with CAISO and other stakeholders to identify and develop short-term and long-term measures necessary to ensure that CAISO is able to comply with Reliability Standard BAL-003-1 (Frequency Response and Frequency Bias Setting).

CAISO Should Hold A Competitive Solicitation Process To Procure Primary Frequency Response Capability From External BAs While Considering Longer-Term Solutions

As CAISO recognized in its Frequency Response Straw Proposal, changes are needed to existing practices to ensure CAISO's consistent compliance with Reliability Standard BAL-003-1.¹ But the Straw Proposal also recognizes that it is highly unlikely that a permanent, long-term solution to meeting CAISO's primary frequency response needs could be designed, approved, and implemented by December 1, 2016, the date on which the North American Reliability Corporation ("NERC") will begin assessing compliance with Reliability Standard BAL-003-1.² For that reason, interim steps must be taken to ensure that CAISO is able to meet its reliability obligations during the initial compliance period for BAL-003-1 while CAISO and stakeholders further consider and develop a permanent market framework for procuring primary frequency response capability.

As explained at the December 14 Working Group meeting, Powerex believes that a competitive solicitation process whereby external balancing authorities ("BA") can submit offers to transfer frequency response to assist CAISO in meeting its BAL-003-1 requirement for the 2017 compliance period (*i.e.*, December 1, 2016 through December 2017) represents the most promising avenue available to meet CAISO's primary frequency response needs on an interim basis.

In particular, Powerex urges CAISO to establish a competitive solicitation process that incorporates the following elements:

- Each interested BA in the WECC, through their applicable scheduling coordinator, would be eligible to submit an offer to transfer a stated portion of frequency response, limited

¹ Cal. Indep. Sys. Operator Corp., Frequency Response: Straw Proposal at 8, 13 (Oct. 12, 2015).

² *Id.* at 13.

only by any technical qualifications imposed by NERC for satisfying the reliability standard.

- Those scheduling coordinators that elect to participate in the competitive solicitation process could submit offers for each month of the 2017 compliance period, with each month comprising an on-peak period and an off-peak period.³
- Offers would be subject to a price cap reflecting CAISO's estimate of the cost of meeting the frequency response standard during the initial compliance period without the contribution of external BAs.
- CAISO would then "clear the market" based upon the offers submitted and the target quantity of frequency response CAISO seeks to transfer to ensure compliance with Reliability Standard BAL-003-1 during the on-peak and off-peak periods of each month. In particular, CAISO would evaluate and select from among the offers submitted based on price and calculate market clearing prices for the on-peak and off-peak period of each month during the compliance period. The result would be 26 commitment periods—an on-peak and off-peak period for each of the 13 months of the 2017 compliance period—and corresponding market clearing prices.
- External BAs whose offers were selected through the competitive solicitation process would assume the frequency response transfer obligation for the awarded quantity during each of the relevant commitment periods in which their offers were accepted, and would be compensated based on the market clearing price calculated by CAISO for the applicable period(s).

Powerex believes that conducting a competitive solicitation process along the lines described above will deliver a number of significant efficiency benefits to CAISO and its ratepayers in meeting this reliability standard. As an initial matter, such a process provides an effective and efficient means of ensuring that CAISO is able to comply with its obligations under BAL-003-1 during the 2017 compliance period. Powerex believes that there are likely several external BAs in the WECC that will have surplus frequency response capability and that would compete to help CAISO meet its obligations through the competitive solicitation process described above. Moreover, by capping the price of frequency response capability procured through the competitive solicitation process based upon CAISO's estimate of meeting the BAL-003-1 standard using internal resources, CAISO will ensure that the competitive solicitation reduces

³ For purposes of NERC Reliability Standards, "on-peak" and "off-peak" hours are defined by reference to North American Energy Standards Board ("NAESB") business practices. See N. Am. Elec. Reliability Corp., Glossary of Terms Used in NERC Reliability Standards at 60 (Dec. 7, 2015), *available at* http://www.nerc.com/files/glossary_of_terms.pdf. For the Western Interconnection, the NAESB business practices define on-peak periods as hours ending 0700 through 2200 pacific Monday through Saturday. Other hours of Monday through Saturday, Sundays, and certain holidays are designated as off-peak. See N. Am. Energy Standards Bd., WEQ Inadvertent Interchange Payback Standards – WEQ-007, Version 003.1, Appendix A (Sept. 30, 2015), *available at* https://www.naesb.org/weq/weq_standards.asp.

costs compared to other available compliance alternatives and that the offers of external BAs will only be accepted if they represent a lower cost than internal CAISO resources. Together, these factors will create a strong incentive to submit competitively-priced offers and should ensure that the competitive solicitation process results in the least-cost forward procurement of primary frequency response capability during the 2017 compliance period.

Additionally, conducting a competitive solicitation avoids the unnecessary complexity of developing and implementing interim market design changes for the initial compliance year. This will permit scarce CAISO resources to be directed towards developing comprehensive long-term solutions, and avoid siphoning resources away from the myriad other initiatives CAISO is managing.

With less than a year before NERC will begin measuring CAISO's compliance with Reliability Standard BAL-003-1, Powerex believes that CAISO should take a number of immediate steps to ensure that CAISO is able to hold a competitive solicitation process no later than mid-2016. In particular, Powerex recommends that CAISO take the following actions:

- First, CAISO, in collaboration with interested BAs, should work with NERC and any other relevant regulatory bodies to confirm the specific process for transferring frequency response from one BA to another for a particular period. As CAISO recognized in its presentation at the December 14, 2015 Working Group meeting, FRS Form 2 contemplates that individual BAs may include an offset or adder to their individual frequency response obligation under BAL-003-1. However, other than the form's reference to "Transferred Frequency Response," there appears to be little NERC guidance on how such a transfer would occur in practice. And at the CAISO workshop, there appeared to be different views regarding whether it is the frequency response *obligation* that is transferred (from CAISO to one or more external BAs), or the frequency response *performance* (from one or more external BAs to CAISO). For these reasons, Powerex believes that further consultation with NERC is necessary to confirm the mechanics of transferring frequency response between CAISO and external BAs.
- Second, CAISO should analyze the costs of meeting the frequency response standard during the initial 2017 compliance period using only internal resources for purposes of establishing the price cap to be applied in the competitive solicitation process. For instance, CAISO could model the incremental costs that would be incurred if internal resources were committed and positioned to meet the frequency response standard during each month of the initial compliance period.
- Third, CAISO should issue a revised draft proposal in this stakeholder process specifying the terms and conditions for the proposed competitive solicitation process, with a goal of seeking CAISO Board approval and making a filing with FERC no later than March 2016 seeking authorization to conduct the competitive solicitation process.

To the extent CAISO faces staffing limitations on these important issues, Powerex believes that it would be appropriate for CAISO to consider deferring further consideration of long-term

measures to procure frequency response service as part of Phase 2 of this initiative, to commence immediately after CAISO successfully conducts its competitive solicitation process (e.g., until August/September 2016). Such a deferral would permit further interaction between CAISO and NERC on the mechanisms by which primary frequency response obligations may be transferred or otherwise satisfied, and would still provide sufficient time for a meaningful stakeholder process prior to implementation.

Once CAISO Commences Phase 2 Of This Initiative, CAISO Should Consider Establishing A Forward Procurement Mechanism In Addition To Day-Ahead And Real-Time Measures

Powerex strongly supports the development of a discrete primary frequency response product procured and compensated through CAISO's day-ahead and real-time market. Development of such a product will facilitate co-optimization of CAISO's procurement of primary frequency response service with the other products traded through CAISO's markets, helping to ensure that adequate "headroom" is preserved to meet frequency response needs and compensating resources that provide this capacity.

It is important to recognize, however, that actions taken solely in the day-ahead and real-time operational windows may not be sufficient to ensure that CAISO has the primary frequency response capability needed to meet its obligations under BAL-003-1. For instance, it may be too late during the day-ahead and real-time timeframes to reschedule maintenance or make physical changes to units that may be necessary to meet CAISO's primary frequency response obligations on a particular operating day. Similarly, external BAs may be unable to provide frequency response service with short notice, even if the BA would otherwise be capable of providing frequency response service on a more efficient and cost-effective basis than internal resources.

For the foregoing reasons, once CAISO elects to begin consideration of long-term measures as part of Phase 2 of this initiative, CAISO should consider establishing a mechanism to procure primary frequency response service from internal resources and external BAs on a year-ahead and month-ahead basis. CAISO could consider, for example, establishing a centralized auction for procuring primary frequency response capability from internal resources and external BAs. CAISO could also consider building upon its existing resource adequacy framework by imposing an obligation on load-serving entities to procure primary frequency response capability on a bilateral basis similar to the approach that has been used to procure flexible capacity. Powerex believes that establishing a forward procurement mechanism will help CAISO to meet its primary frequency response obligations on a least-cost basis by providing long-term incentives for market participants and external BAs to position their resources so that they can meet CAISO's primary frequency response needs.