Comments on Flexible Ramping Product Technical Workshop

Submitted By	Company or Entity	Date Submitted
Gifford Jung 604-891-6040	Powerex Corp.	Sep. 24, 2012

Powerex appreciates the opportunity to provide these comments on the Flexible Ramping Product Technical Workshop Discussion ("Discussion") published on September 18, 2012. Powerex generally supports several of the design decisions outlined is the Discussion in response to stakeholder comments. Powerex will limit its comments to the CAISO's response to stakeholder comments but notes the CAISO has not responded to Powerex's comments that calculation of FRP needs to differentiate net requirements due to known variability causes versus uncertainty.

FRP Bid Rules

Powerex supports the CAISO proposal to recognize real-time FRP bids as offers for incremental flex ramp (and applying a zero dollar bid to Day-Ahead FRP awards).

Powerex has no objections at this time to the rule that the flex ramp bid cannot exceed the regulation bid on the assumption that the resource will be dispatched by the CAISO to provide the highest value product.

Variable Energy

Powerex disagrees with a framework that allows entities to utilize entirely subjective forecasts that potentially impact the FRP requirement and determine their cost allocation. Utilizing after-the-fact enforcement measurements to "contain" the level of forecast "skew" that will undoubtedly occur in a subjective forecast framework is an inappropriate approach. Powerex recommends that the CAISO work with each VER stakeholder to validate an objective methodology the VER will utilize in submitting its forecast (e.g., persistency, 3rd party provider, etc.), and limit CAISO reviews to ensure forecasts were submitted consistent with the agreed upon forecast methodology.

IFM and RUC

Powerex is very supportive of the CAISO proposal to combine IFM and RUC into a single market run. Powerex further believes that the CAISO must consider two key enhancements to its Day-Ahead RUC process that will be essential to ensuring the CAISO has sufficient up, *and down,* capacity in Real-Time to meet its reliability needs, without continuing to a) skew the HASP dispatch for reliability needs, and b) prematurely liquidate internal convergence bids that settle in the Real-Time market in the HASP market. Powerex believes such enhancements will pave the way for the CAISO to develop a true 2-settlement LMP framework, whereby it can allocate INC and DEC capacity commitment costs to the appropriate party (i.e., load, virtual demand and supply, variable resources, etc.), based on cost causation each hour. This will also

assist the CAISO in defining, and enforcing, much needed clarity between those intertie and internal energy deliveries that include capacity commitments from those that do not, and facilitate the appropriate allocation of RUC costs to those energy awards that come without a sufficient capacity commitment.

Powerex recommends two key enhancements to the CAISO's RUC design to:

1. Extend RUC to all firm intertie system resources (i.e., not restricted to only those system resources with an RA obligation); and
2. Create a RUC down product.

The CAISO tariff currently requires system resources with an RA obligation to provide a RUC bid, but also prohibits system resources without an RA obligation from providing RUC. Powerex believes that the CAISO should eliminate this tariff provision to significantly increase the liquidity of the RUC market. Furthermore, Powerex believes there are no technical or seams issues that would prevent the CAISO from receiving RUC offers on the interties. It is important to note that non-dynamic system resources on the interties are already utilized to provide RUC for RA resources, and also used to provide operating reserves – another critical reliability product. Allowing firm intertie system resources to provide much needed Day-Ahead capacity commitments, particularly in an LMP market design with virtual bidding, will provide necessary RUC liquidity and lower the overall cost of RUC service.

On the second enhancement, Powerex believes the CAISO should develop a RUC down product. The current RUC design requires resources that have been given a RUC award in the Day-Ahead market to show up in the Real-Time market with an INC energy bid to cover the RUC award. The CAISO has documented on several occasions that, at times, the CAISO also has a shortage of DEC bids in the Real-Time market. Powerex encourages the CAISO to develop a RUC down product that requires resources that receive a Day-Ahead RUC down award to show up with a DEC bid that can be dispatched in the Real-Time market.

Powerex looks forward to further discussions on both the expansion and co-optimization of the RUC process.