Comments of Calpine Corporation on

Contingency Modeling Enhancements

Issue Paper

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Summary:

Calpine supports modeling and market enhancements that reduce or eliminate some forms of Exceptional Dispatch and Minimum Online Constraints ("MOC"). In addition, Calpine supports the development of products or policies that provide incentives for generation to offer flexibility. Calpine conditionally supports the further development of the Preventative-Corrective Constraint ("PCC"). However we would like to have a more explicit comparison of bid-based products in the next straw proposal.

Calpine Supports Market Mechanisms instead of ExD and MOC

The use of out-of-market mechanisms like ExD and price suppressive MOC have long been the bane of many market participants. Calpine appreciates the CAISO's focus on creating a market constraint for sustained outage (N-1-1) conditions such as those addressed in the Issue Paper.

Calpine concurs with most of the conclusions reached by the Market Surveillance Committee when they reviewed this proposal in January. Specifically, Calpine agrees that any redispatch that is made to address pre-contingency concerns and post-contingency System Operating Limits ("SOL") should be reflected in LMPs. In this regard, congestion values should reflect the locational value of units that are beneficial in a constrained zone.

We also agree that the capacity reserved to meet the potentially required re-dispatch should be compensated. This would include all forms of capacity that are useful in potentially solving the constraint, including capacity above awarded energy schedules, capacity created by reducing generation below that which would be otherwise optimally economic, and capacity that is created through the optimal commitment of generation to Pmin.

All of this capacity assists the CAISO in securing the grid, and the value of all of this capacity to the CAISO is the same. In this regard, we agree with the Technical Paper attached to the Issue Paper, at page 14 where it says that all units in a constrained region "have the same marginal value".

As such, all units that contribute to meeting the needs of the constraint should be paid same capacity payment. If PCC is the mechanism of final choice, every resource should be paid the marginal opportunity cost for the capacity it contributes to meeting the constraint. If the unit contributes to multiple constraints, it should, as in the energy markets, receive a payment that is reflective of all constraints it resolves. .

Paying all contributing resources will encourage the bidding of, and possibly, investments in flexible resources. As said in the Technical Paper, the capacity payment will provide incentives "to improve ramping capacity." Resources that can move fast might be beneficially redispatched – and the benefits would flow to the generator through compensation, to the CAISO through reliability assurance, and to loads as avoidance of load-shedding risk. Units that self-schedule will not be available for redispatch or capacity payments for that portion of the capacity that is price-taking.

Which Enhancements Should be Explored?

Calpine supports the further refinement of the PCC approach. We appreciate the comparison table on page 15 of the Technical Paper where the CAISO compares the Weak (today), Preventative-Corrective, and Strong Preventative (N-2) proposals. Calpine agrees that the Weak approach should be abandoned, as it requires the use of ExD and MOC. We also understand that treating all N-1-1 contingencies as if they were simultaneous N-2 outages (Strong Preventative) may create a highly constrained grid that creates a high cost for reliability.

We believe that the CAISO should include in the next Straw Proposal, an analysis of explicit bid-based reserves. Indeed, the CAISO's PCC obtains a reserve product that is co-optimized with energy; it is, however not explicitly bid. Calpine understands the difficulties that the CAISO has identified with existing reserve products (e.g., the demand for PCC is not static, and the geography of need is not static.) Nonetheless, Calpine believes that the use of 10-minute and possibly the long-discussed 30-minute bid-based reserve product should be discussed and compared to PCC as in Table 5. While a 10-minute (or 30-minute) reserve product may not be necessary given the 30 minute NERC and WECC requirements, it is certainly sufficient to meet the need.

Thanks