Comments of Calpine Corporation on

Contingency Modeling Enhancements

Straw Proposal

Dated: May 15, 2013
Comments Submitted: May 28, 2013

_____

SUMMARY:

The clarifications included in the Straw Proposal allow Calpine to offer further support for the development of the Contingency Modeling Enhancements ("CME") proposal. Specifically, we appreciate the CAISO's candor in discussing the difficulty it faces in managing mandatory SOL post-contingency (N-1-1) flow limits. We understand that the CAISO manages WECC and NERC standards today with inexact tools such as Exceptional Dispatch ("ExD") and Minimum Online Capacity ("MOC") commitments.   In addition to the price-suppressive effects of these tools, the lack of both precision and locational attribute leads to over-procurement. Indeed, Calpine supports one of the primary conclusions of the Straw Proposal which is that SOL standards require a nodal market model for capacity.

The Problem Is Clear, and Is Appropriately Addressed by CME

The CAISO is currently meeting WECC requirements related to preparing for and avoiding SOL post-contingency violations. This effort is uniquely required by the WECC and must be managed regardless of the likelihood of improbable events actually occurring. In fact, on a daily basis the CAISO commits units through ExD and/or MOC based on their maximum expectation of exposure to post-contingency capacity requirements. The problem expressed quite clearly in the Straw Proposal is not with CAISO compliance, but rather, with the cost and unintended consequences of their methods of compliance.

According to the CAISO, approximately 40 percent of their ExD volume is related to positioning units to meet SOL post-contingency flow limits. FERC has long-recognized that the unintended consequences of ExD, such as price suppression, should be avoided and has consistently and painstakingly encouraged the CAISO to reduce ExD volumes. This proposal represents an historic opportunity to move in the direction of FERC's unambiguous direction.

In addition, almost all of the volumes acquired through MOC commitments are intended to position those units to meet post-contingency SOL limits. Units placed at Minimum Load through MOC have the same price suppressive effects as ExD. These commitments interfere with normal price formation and often create systemic structural price spreads between DA and RT.

When using ExD or MOC, the CAISO uses a very blunt instrument to address a dynamic and locationally specific need. The lack of precision of the tools and the required forward procurement horizon naturally leads to a conservatively large view of the need. All parties seem to agree that better model of the post-contingency capacity requirement is needed that will present a more locationally-specific, and dynamic assessment of need.

But a better predictive-corrective model alone will not solve the post-contingency need. Some parties support the continued use of the same blunt and troubling instruments used today such as ExD and MOC. They claim that the use of these instruments is insignificantly small or justified because of the low probability of multiple contingencies or they imply that CME is wrong because it may raise costs. Calpine disagrees with each of these allegations.

First, unpriced energy has the effect of suppressing marginal prices, regardless of volume. And the relative volume is not small or insignificant. Indeed, most ExD calls are made after the DA market closes. While the ExD is a small proportion of *total* load, ExD represents a *significant* proportion the small volumes that flow in RT, and as suggested by the ISO's ExD FERC reports, has a material effect on RT prices. In addition, virtually all MOC energy is at Minimum Load. Since units at Minimum Load cannot set LMP, DA MOC energy pushes the supply curve to the right and suppresses DA prices.

Second, the probability of SOL contingencies actually occurring is irrelevant, because the CAISO must prepare for post-contingency flows 100 percent of the time.

And third, costs may rise – and they should rise -- as the price suppressive effects of ExD and MOC are eliminated.

Calpine supports the use of CME to develop a model which manages post contingency flows with real-time, dynamic, locational, capacity requirements and market-based energy re-dispatch. Integrating CME into CAISO market models will allow LMPs to better reflect marginal capacity and energy costs, eliminate structural differences between DA and RT and better encourage both economic bidding and enhancements to flexibility (such as improved ramp rates.)

A Cost-Benefit Analysis Must First Acknowledge Price Suppression.

Several parties suggest the development of a cost-benefit analysis. Calpine disagrees. The Straw Proposal identifies the problem that the CAISO intends on addressing. It is not speculative. It is not unclear.

But if, nonetheless, the CAISO feels compelled to present such an analysis, it must start with a quantification of the price suppression that ExD and MOC create. Once this market inefficiency is removed from the calculus, Calpine is convinced that the more precise procurement envisioned by CME will result in substantial benefits associated with lower cost and high reliability.

The Explicit Inclusion of 10-Minute Reserves is Helpful

The Straw Proposal clarifies that if Spin or Non-Spin A/S is locationally advantageous it can be used in response to a targeted contingency. This cross-functional use is beneficial, and must be optimized to ensure that post-contingency SOL flow limits can be maintained while also meeting Contingency Reserves requirements. In other words, while the use of units may be fungible, the requirements need to be mutually exclusive.

The possibility of such cross-functional use implies that the Spin and CME capacity are interchangeable and that bid (including the provisions for an explicit capacity bid), market clearing and energy settlement must be co-optimized and handled similarly. Calpine suggests that the CAISO include a further discussion of this overlap, as well as a discussion of the possible FlexiRamp product in the next draft of the CME proposal. Examples of the co-optimization would help in understanding the interactions of these products.

CME Encourages Economic Bidding and Flexibility

CME is designed to reposition the dispatch of units in order to protect from post-contingency flow limits. The possible compensation for repositioning will encourage units to offer economic bids (including, and importantly, downward flexibility.) Additionally, since the ISO will be limited to roughly a 20 minute ramp, the possible compensation will encourage ramp speed. Durable capacity compensation for this ramp speed could create the incentive for investments in existing capacity to increase response time and ramp speed.

Further Clarifications For the Next Draft

1. In the proposal, CAISO indicated that the CME model will only be applied to 8 paths for which CAISO is responsible and only the critical contingencies will be modeled. Calpine asks that the CAISO commit to full transparency of the model. For instance, will the critical contingencies be identified publicly and only be those which limit the transfer capability of the CAISO paths? Will the

critical contingencies include generator contingencies? Will CAISO model the contingencies outside CAISO which may impact the path ratings? For instance, the loss of the Palo Verde nuclear units is a critical contingency for COI and Path15. Will that be considered? Since CAISO's Full Network Model doesn't cover the entire WECC footprint, how will CAISO implement the proposal using the FNM?

2. When will the contingency rating for a path be calculated and published during actual DA/RT operations? WECC ratings for certain paths are highly dependent on their interaction with other paths, how does CAISO plan to deal with the dynamics in the new model?

3. How will the CRR be calculated under the proposed new market model? It will be great if CAISO can provide some numerical example to illustrate the approach.

Thanks