



Stakeholder Comments Template

Price Performance Analysis

Submitted by	Organization	Date Submitted
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Please provide your organization's comments on the following issues and questions.

1. Scope

Calpine supports the broad scope of the proposed review. For several years, the RT price has been lower than the DA price, with further sustained differences between HASP, FMM and RTD average prices. The proper transmission of RT prices is critical to the performance of the CAISOs programs and systems. The CAISO should, as it has in the White Paper, expose the data which may be driving this outcome. At the same time, the CAISO must appreciate that the aggregation of data into averages can and does hide important and potentially counter-intuitive outcomes.

Calpine also suggests that the Bid Cost Recovery data may be valuable in pointing to the drivers of price divergence. Of course, BCR is payable to suppliers when market revenues do not cover bid costs. A simple inspection of CAISO BCR data yields insights that, while not the drivers of divergence, could lay the trail to the fundamental drivers.

For instance, BCR is predominantly awarded in RT, suggesting uneconomic resources are being committed or run in RT and possibly affecting RT price. Also, BCR volumes are at their peak when DA/RT price divergence is also at its peak. Finally, there appears to be a significant amount of RT commitment costs (which are ineligible to set LMP) included in BCR. While the volumes of energy generated in commitment (start and min load) do not contribute to LMP formation directly, they do shift the supply curve to the right indirectly affecting the marginal units setting price.

2. Drivers

Calpine appreciates the rather comprehensive list of possible drivers of price divergence that were identified by the CAISO in the White Paper. There are many likely drivers to the weakness in prices evident in CAISO RT markets including load conformance, blocking, “bid or better” manual dispatches at the ties and other interventions that occur outside the market (primarily Exceptional Dispatch). All of these actions could place unpriced (or underpriced) energy in the RT market, thereby affecting the marginal unit and marginal prices. Rather than prejudge the primary or presumptive drivers, Calpine supports the CAISO proposal for a more wholesome review of the data.

That said, we reflect on the comments of Dr. Harvey at the MSC meeting. He suggested a much deeper dive on at least two items – FlexiRamp and RT (generally post-HASP) manual intertie dispatches. In each case, he queried why the optimization is “not giving operators what they need.”

With respect to incremental dispatch (load conformance or ExD) to accommodate ramping needs, the volume of procured FlexiRamp may be insufficient – either because the procurement target (forecast of uncertainty) is too low or the demand curve limits procurement below the target, or both. Data on the correlation of demand curve limits and subsequent out-of-market dispatches might shed more light on the efficacy of the demand curve in solving ramping needs.

The frequency and magnitude of manual dispatches at the interties is, to our knowledge, not often explicitly reported by the ISO. Intertie dispatches – given their lumpy (i.e., large) and nearly instantaneous flow – could have a material impact on FMM and RTD SMEC. We encourage the ISO to look specifically at these data.

Finally, the asymmetric risks faced by RT operations cannot be ignored. Operators are faced with a Catch 22 – either dispatch incremental resources out-of-market that may suppress RT prices or, alternatively, run the system close to the edge of reliability. Their personal risk of suppressing price is insignificant compared to the existential threat of a reliability problem. Calpine believes that an operator should never be put in the position of making this choice (although we know which choice they, and we, would make). Ideally, this investigation will provide operators with sufficient resources – all of which will be appropriately priced – in order to run the grid reliably.

3. Data Requests

As suggested above, Calpine would be interested in seeing data related to manual intertie dispatches – by hour and by time of year. It would be interesting to see the percentage of these dispatches that are “bid or better” and any resultant BCR.

Calpine also would like to see the amount of RT ExD and post-HASP manual dispatch at interties *as a percent of RT imbalance energy*. Historically, the ISO has reported ExD as a percent of total metered load, which may be masking the effect of unpriced or as in the case of interties, underpriced (“bid or better”) energy on RT marginal clearing prices.

Finally, and possibly, most significantly, Calpine asks the CAISO to pick particularly troubling days (in terms of BCR or DA/RT price spreads) and re-run the market with “perfect dispatch”—that is, an optimal solution derived from all actual market conditions of the day. Perfect Dispatch¹ is a term coined in PJM where they claim to have saved over \$1 billion. Their system is a learning tool and not a re-pricing algorithm. PJM claims that by continuously running Perfect Dispatch they have identified sources of conservatism, unexpected outcomes of market systems and other sources of inefficiency. If the CAISO’s experience with re-running the market is beneficial, it should consider implementing a continuous “perfect dispatch” review.

Additional comments

Thanks.

¹A FERC presentation, with references, of the “perfect dispatch” system is located at: https://www.ferc.gov/CalendarFiles/20100530125849-Gisin,%20PowerGEM_Perfect_Dispatch_05_26_2010.pdf