Comments of Calpine Corporation on

Bidding Rules Enhancements

Revised Straw Proposal

Dated: Dec 3, 2015 Comments Submitted: Dec 18, 2015

Summary:

Section	Issue	Proposal	Calpine Response
5.1.1	FERC order 809	Not move the day- ahead market to be earlier	Approved by FERC
6.2	Differentiated bidding headroom	Retain 125% proxy cost cap	Support 125 % cap
6.3	Commitment cost mitigation	Retain 125% proxy cost cap	Support 125 % cap
7.1.1	Changing bids after a commitment decision during an inter- temporal constraint	Monitor or limit bidding flexibility	Support Monitoring, Do Not Implement Limitations
7.1.2	Changing bids after a commitment decision without inter-temporal constraints	Continue monitoring or limit bidding flexibility	Support Monitoring, Do Not Implement Limitations
7.2.1	Inefficient accounting for minimum load costs after a Pmin rerate	Calculate actual commitment costs based on the resource's default energy bid (DEB).	Support
7.2.2	Resources without a day-ahead schedule cannot rebid commitment costs.	Allow resources without a day-ahead schedule to rebid commitment costs in the real-time market.	Support with higher RT rebid cap
7.2.3	The ISO market inserts day-ahead market bids into STUC for resources that are not resource adequacy resources that are not scheduled in the day-ahead market and do not resubmit bids into the real-time market.	No longer generate bids for STUC for non-resource adequacy resources that do not have a day-ahead market award and do not resubmit bids into the real-time market.	Support

8.1.1.1 & 8.1.1.2	Gas price index may not reflect real-time gas purchase costs	Routinely use earliest published index for the day-ahead market, move day- ahead market timing to 11 am to 2 pm, and allow for consideration of real-time gas purchases above the gas price index.	Support Option 1 maximum gas price, one hour delay in market is OK and opportunity for RT gas price demonstration.
8.1.1.3	Gas price index may not reflect gas transportation costs	Increase the flexibility of registering fuel regions and allow for cap-and-trade credits to the base gas transportation rates for resources with GHG compliance costs within these fuel regions.	Support
8.1.2	Electricity price index may not reflect start- up energy costs	Change the electricity price index calculation consistent with the registered cost option to represent a projected electricity price during unit start- up or cost of auxiliary power provided by the generator based on a unit with a heat rate of 10,000 Btu/KWh.	Support
9.1	Proposal for resource characteristics	Allow for "market" resource characteristics in addition to physical characteristics	Conditionally Support, Continue evaluation of other characteristics.

<u>6.2 Differentiated bidding headroom.</u> Calpine supports the retention of the 125 percent cap applied to all commitment cost components. We appreciate the ISO's research and acknowledgement of cost recovery risk.

<u>6.3 Commitment Cost Mitigation.</u> Calpine does not object to retaining the cost cap as an alternative to conduct and impact or pivotal supplier tests.

7.1.1and 7.1.2 Energy Bid Flexibility. Calpine supports option 1, which would entail diligent market monitoring of behavior after ISO optimal commitment decisions are made. In fact, by openly addressing the potential for misbehavior, the CAISO has now made unambiguous that which seems obvious -- that changing bids in RT for the sole purpose of inflating BCR is unacceptable. This can be reconsidered if, or when, the ISO or DMM identify inappropriate actions.

7.2.1 Pmin changes and Min Load Cost. Calpine supports the DEB-based changes to minimum load costs when Pmin is re-rated. The causes of Pmin rerates are varied, but often related to environmental compliance or operational issues that require higher Pmins. In most cases the incremental heat rates used in the DEB calculation are reasonable estimates of the marginal effect on commitment costs.

7.2.2 Rebidding Commitment Costs. The CAISO proposes to allow units that do not have DA awards to rebid commitment costs before the RT market begins. Calpine supports this proposal as directionally correct, but highlights the fact that the 125 percent bid cap will still limit the generator's ability to recover RT gas costs. In fact, if the gas prices are highly volatile, and the generator already has bids at 125 percent of the cap in the DA, it appears that this proposal offers no further protection. As an alternative, the rebidding opportunity in RT could be limited to a higher bid cap, say 150 percent of proxy.

7.2.3 Generated bids for non-RA RT. We completely agree with the CAISO. A non-RA resource should never have an ISO-generated bid if no DA awards are granted, as suggested in this proposal. We encourage the CAISO to implement this change forthwith given the increasing overabundance of RA-qualified resources.

8.1.1.1 & 8.1.1.2 gas price issues. Calpine appreciates the ISO's conclusion that the best refection of actual costs would be a split of the electric day, using GD1 from HE1 to HE7 and GD2 for the rest of the day. However, we understand that while splitting commitment costs at HE7 would minimize the errors inherent in commitment decisions; such an approach might create unwarranted complexities in the optimization. As such, Calpine supports – and it seems the MSC does not object to – the use of the higher of GD1 or GD2 in the calculation of commitment costs.

We do not object to the slight delay in DA market submission and publication that the consistent use of the morning ICE index might require.

Finally, we appreciate and support the ability of generators to submit actual invoices for extraordinary gas costs. While administratively awkward and burdensome, this opportunity to collect actual gas costs that greatly diverge from the indices is reasonable. In drafting the tariff language, however, the ISO should be careful in describing the requirements for invoice specificity. Many market participants buy gas for a portfolio of resources, and the invoice will not necessarily be generation resource-specific. Incremental purchase invoices for incremental dispatch decisions should be sufficient evidence of cost exposure.

8.1.1.3 Fuel delivery costs. Calpine supports the CAISO proposal.

8.1.2 Electricity price index. Calpine supports the CAISO proposal.

9.1 RDT market characteristics. The CAISO proposes that two sets of Master File resource characteristics be created, a "market" characteristic and a "design" characteristic. We understand and appreciate the motivation for this proposal, presumably that resource characteristics are both negotiable (e.g., off-takers may not be willing to pay for extreme flexibility) and they are often not defined by OEMs or are subject to operational judgement.

However, setting two ill-defined standards ("market" and "design" characteristics) rather than one ("physical characteristics") provides little improved clarity. Unless and until the ISO can explain in detail, the expected behavior in establishing the two sets of characteristics, Calpine can only conditionally support the proposal.

At the heart of this matter is the presumption that there is one, single set of "design" characteristics for highly integrated but conditional operations. Calpine has long-argued that most plant characteristics must be evaluated through the lens of a reasonable operator, and in the light of the level and type of compensation offered.

A simple analogy might help. Let's say we are trying to agree on a set of "design" characteristics for you to rent my car. We look to the owner's manual and it describes several characteristics, like the time it takes to go from 0 to 60 mph and braking distance under highly specified conditions – conditions which would occur only by happenstance in actual operation. In renting you my car, I would not guarantee that you could accelerate as quickly or stop as quickly as the "design" because the conditions would vary and I might be exposed to liability if the design condition cannot be met. Maybe even more relevantly, the owner's manual does not prohibit continuous operation of the car in low gear, but it is possible based solely on the design of the machine. Certainly, if you wanted to rent my car, and drive it continuously in first gear, I would charge you a much higher rental fee, as in my operational judgement, you would depreciate my vehicle much more quickly that other forms of operation.

As such, Calpine offers two possible options.

First, if the ISO were to move forward with its proposal, option 1 would be to define the conditions under which "design" characteristics are established and acknowledge that those conditions are unlikely to be replicated in real operation. As such, even "design" characteristics are guidelines for the creation of Master File data and would be subject to operational judgement. Highly restrictive "design" characteristics would unreasonably expose resource owners to imbalance energy allocations, capacity payment claw-backs or other non-performance risks.

In addition, the ISO's proposed "market" characteristics must be better defined. For instance, how different can a "market" characteristic be from a "design" characteristic without triggering the scorn of CAISO operators or DMM? If a counterparty is not interested or unwilling to pay for multiple starts per day (for example), can the Master File say 1start even though the resource is capable of many more?

Lastly, if the CAISO proposal moves forward, Calpine sees no need in limiting the "market" characteristics to starts and ramp rates. In fact, we see very few characteristics that could not be based on negotiated in a market.

Option 2 is much simpler – revise the tariff to recognize that operational judgement is necessary. Modify the tariff section 4.6.4 as follows and as needed elsewhere:

All information provided to the CAISO regarding the operational and technical constraints in the Master File shall be accurate and actually reasonably represent the based on physical characteristics of the resources...

Thanks, and Happy Holidays!!