

Comments on Price Formation Enhancements:

Fast-Start Pricing Analysis

Department of Market Monitoring

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Comments

DMM appreciates the opportunity to comment on the April 8 presentation on the ISO's Analysis on Fast Start Pricing.¹ DMM has previously outlined reasons it believes fast-start pricing is inconsistent with the features of locational marginal pricing that maximize market surplus and provide incentives for units to operate at the most efficient, socially optimal dispatch level. However, DMM understands that in response to requests from some stakeholders, the California ISO is examining the possibility of adopting some form of fast-start pricing in the ISO and existing Western Energy Imbalance Market (WEIM) markets.

A solid empirical analysis is important in this portion of the initiative to help stakeholders understand the potential effects of implementing fast-start pricing. The ISO's analysis uses a very reasonable methodology, and provides a more accurate estimate of the potential effects of fast-start pricing than any other analysis to date. The analysis suggests that the estimated impacts of fast-start pricing are small on average, but can be large in a limited number of intervals. DMM believes these intervals showing large impacts should be closely examined to assess what may be driving the impacts. Further, the ISO's analysis is simplified, as it does not consider many complexities of the ISO market. It also does not directly assess impacts on bid cost recovery (BCR). The analysis could be improved by testing in the actual ISO market software and directly assessing impacts on bid cost recovery (BCR).

The ISO's estimated impacts of fast-start pricing are large in a limited number of intervals, but appear relatively small on average

The ISO's analysis shows relatively small average pricing impacts across the fast-start scenarios. However, these average impacts are driven by larger impacts in a small percentage of intervals.² Because they drive average impact, DMM thinks these intervals with larger impacts should be examined, to see if the results are driven by expected factors, or from assumptions or data peculiarities in the analysis.

DMM understands from discussion with the ISO that there was an issue with the presentation of the October 2022 data that is not related to the underlying analysis. Because the issue was limited to the presentation of the data, and not with the underlying analysis, the presented data and figures could be updated. DMM understands the ISO plans to repost the presentation with the updates to the October 2022 data. DMM has asked the ISO for the underlying interval level data for review.

¹ *Analysis on Fast Start Pricing*, California ISO, April 8, 2024:

<https://www.caiso.com/InitiativeDocuments/Presentation-Price-Formation-Enhancements-Apr8-2024.pdf>

² See slides 81-82.

The ISO should test fast-start pricing in the actual market software

While the ISO's analysis provides insight into the potential size and scope of price impacts, if the stakeholders and the ISO move forward with fast-start pricing, the ISO should test and analyze how it would interact with the ISO's actual market software. In particular, the ISO would need to analyze how the changes would interact with a number of key characteristics of the ISO's market software that differ substantially from the software of other ISOs that have implemented fast-start pricing. These include (1) multi-interval optimization, (2) multi-stage generator modeling, (3) the ISO's specific modeling of flexible ramping products, (4) the WEIM transfer and GHG constraints, and (5) how the ISO implements the pricing run penalty parameters in place of the scheduling run parameters.³

The ISO's analysis does not estimate effects on BCR

Given the aggregated revenue data, the net effect of fast-start pricing on BCR is not clear. The effect on BCR would depend on the increased revenues to resources receiving BCR in the base case, net of the increased costs to resources buying energy in real-time that may have BCR payments created or increased. BCR could increase for resources decremented in real-time or having incremental charging schedules in real-time. Given the small changes in net real-time revenues, DMM would not expect that there would be a significant decrease in real-time BCR. However, the ISO's analysis does not estimate impacts on BCR, and the impacts of fast-start pricing on BCR cannot not be known without a BCR specific analysis.

Constant amortization method should not be a case considered in the analysis

The ISO's analysis considered three possible cases to assess the potential impacts of fast-start pricing. One of these cases, the constant amortization case, amortizes the total *minimum load cost* over the resource bid curve. This is different than the *no-load cost* used in the adjusted amortization case. The no-load cost is the minimum load cost, less the gas cost at the minimum operating level. Amortizing the minimum load cost overcounts the minimum load gas cost, and can result in prices above the total average cost.

Although fast-start pricing allows for many different ways to construct the alternate bid curves in the pricing run, a method that creates prices above total average costs falls outside even the bounds of fast-start pricing. DMM believes that only the adjusted amortization and the minimum average cost cases should be considered for the analysis.

³ For example, it is DMM's understanding that currently, the pricing run holds resource and configuration commitments fixed at the scheduling run commitments, and only allows energy awards to change along the bid segment containing the cleared scheduling run award. It is unclear how these would interact with an implementation of fast-start pricing or how removing these features would affect the overall performance of the pricing run.