

# Comments on Price Formation Enhancements October 12, 2023 Working Group

## Department of Market Monitoring

November 2, 2023

The Department of Market Monitoring (DMM) appreciates the opportunity to comment on the *Price Formation Enhancements October 12, 2023 Working Group*.<sup>1</sup>

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.<sup>2</sup> 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. As noted at the workshop, the impact of fast-start pricing depends on the resource fleet, system conditions, and existing market rules. The ISO is seeking stakeholder feedback for developing a scope for analysis on fast-start pricing in the ISO and WEIM markets that will allow for robust discussion in subsequent phases of this initiative.

DMM agrees that such empirical analysis is important in this portion of the pricing enhancements initiative. This analysis should include the potential impacts of fast-start pricing in the context of market rules and conditions in the California ISO and broader regional market – through the existing Western Energy Imbalance Market (WEIM) and the ISO’s proposed Extended Day Ahead Market (EDAM). The analysis should also examine the interaction of fast-start pricing with other aspects of the ISO market software – which is more complex, and has numerous features that are not incorporated in the market software of other RTOs that have implemented fast-start pricing. These include:

- Minimum online constraints (MOCs) that set minimum on-line capacity requirements for groups of units;
- Multi-stage generation (MSG) unit model;
- Extended multi-interval optimization; and
- Flexible ramping product

The remainder of these comments provide a more detailed discussion of these issues.

### **Bid cost recovery payments**

One of the major benefits that has been cited for fast-start pricing is that “reflecting commitment costs in the LMP would reduce uplift and support efficient investments in ramping capacity.” DMM’s recent annual market reports provide a detailed breakdown of bid cost recovery payments that are received by

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<sup>1</sup> *Price Formation Enhancements – Working Group Session #6*, CAISO, October 12, 2023:

<https://www.caiso.com/InitiativeDocuments/Presentation-Price-Formation-Enhancements-Oct12-2023.pdf>

<sup>2</sup> Comments of the Department of Market Monitoring for the California Independent System Operator in RM17-3-000: [https://www.caiso.com/Documents/Feb28\\_2017\\_DMMComments-Fast-StartPricingNOPR\\_RM17-3.pdf](https://www.caiso.com/Documents/Feb28_2017_DMMComments-Fast-StartPricingNOPR_RM17-3.pdf)

units that would be classified as “fast start units” under fast-start pricing. As shown in DMM’s 2022 annual report:<sup>3</sup>

- In the ISO balancing area, bid cost recovery paid to fast-start combustion turbines totaled about \$18 million and \$32 million in 2021 and 2022, respectively. These payments are only 12 percent and 16 percent of total bid cost recovery payments to gas resources in the ISO balancing area in 2021 and 2022, respectively.
- In the WEIM balancing areas, bid cost recovery paid to fast-start combustion turbines totaled only \$600k and \$1 million in 2021 and 2022, respectively. These payments are about 5 percent and 3 percent of total bid cost recovery payments to gas resources in the WEIM areas in 2021 and 2022, respectively.

Furthermore, under fast-start pricing, any reduction in these bid cost recovery payments may be offset by increased bid cost recovery payments to other types of units, due to the discrepancy between market schedules and prices caused by fast-start pricing.

### **System and unit constraints**

More detailed analysis by DMM has shown that a very large portion of bid cost recovery payments to fast-start units in the ISO were received by a handful of individual units, which appear to be committed due to special system or unit constraints. These include minimum online constraints (MOCs) that set minimum on-line capacity requirements for groups of units. In other cases, it appears units receiving high bid cost recovery payments may be constrained on due to special unit constraints associated with the ISO’s multi-stage generation (MSG) unit model. Other complex and unique aspects of the ISO market rules and software include the flexible ramping product and the extended multi-interval optimization.

DMM believes that it is important to consider these features of the ISO market design and software when analyzing the potential impacts of fast-start pricing. The simplified approach for assessing the impacts of fast-start pricing described in the workshop excludes these important market features, and will not provide insight into the impacts and interactions of these market constraints and features under fast-start pricing. Further analysis is needed to assess how fast-start pricing could be implemented in a manner that accurately accounts for units that are constrained on due to these system and unit constraints, and that does not allow these units to set market prices under fast-start pricing.

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<sup>3</sup> DMM 2022 Annual Report on Market Issues and Performance, pp. 98-99:  
<https://www.caiso.com/Documents/2022-Annual-Report-on-Market-Issues-and-Performance-Jul-11-2023.pdf>