

Memorandum

To: ISO Board of Governors

From: Benjamin F. Hobbs, Chair, ISO Market Surveillance Committee

Date: December 6, 2012

Re: Briefing on MSC Activities from October 16 – Dec. 6, 2012

This memorandum does not require Board action.

Summary

Over the period covered by this memorandum, the Market Surveillance Committee drafted and adopted two opinions, both addressing proposals to enhance market power mitigation in real-time. These proposals are on the agenda of the Board's December meeting. The first opinion addresses bid cost recovery, while the second concerns exceptional dispatch.

In addition, individual members of the MSC have continued to confer with ISO staff and stakeholders concerning these and other important on-going initiatives of the ISO. Finally, a public meeting of the MSC was held in Folsom on October 19, 2012, and addressed mitigation in real-time bid cost recovery and exceptional dispatch, as well as the ISO's flexible ramping product initiative and its possible interactions with the ISO's response to FERC Order No. 764.

Bid Cost Recovery Mitigation Measures

The ISO's market rules provide for recovery of start-up, minimum run, and energy bid costs if the market software schedules a generator but energy and ancillary services revenues are insufficient to cover those bid costs. The separation of bid cost recovery payment calculations for the day-ahead and real-time markets was approved by the Board in December 2011. The goal of this separation is to increase the incentive for supply bids to be submitted to the real-time market.

It is possible that this separation will also provide incentives for adverse bidding behavior in real-time to increase bid-recovery payments. Such behavior can harm market efficiency and increase costs to consumers. The ISO's initiative to address this

behavior was discussed at the October 19, 2012 MSC meeting, and was also the subject of a formal MSC opinion that was adopted on December 5, 2012.

Our major recommendation in the opinion is that we support the simple and transparent approach to monitoring persistent deviations from real-time dispatch instructions. Previous proposals for mitigating the adverse effect of persistent uninstructed deviations on real-time bid cost recovery payments attempted to scale the payment by using scaling factors that try to track uninstructed energy and then rescale the recovery payments accordingly. The intent of such scaling was to produce a strategy-proof payment scheme that would motivate participation in the real-time market while neutralizing opportunities to inflate recovery payments through adverse behavior. Unfortunately, that approach was complicated and non-transparent. Furthermore, from a theoretical perspective, a strategy-proof payment scheme may be impossible when the bidders have the ability to adjust both bid price and delivered quantity. Auction theory is based on the premise that awarded quantities in an auction are binding, and market clearing rules and payments designed so as to incent truthful bidding and efficient outcomes. We are unaware of any theory which addresses the possibility of winning bidders not supplying the quantities awarded to them in the auction. Two-settlement systems (day-ahead and real-time) and various ad hoc heuristics implemented by various U.S. ISOs have been designed to minimize strategic manipulation through bid price and uninstructed deviations, but there is no theoretical gold standard to guide such rules. Consequently, a simple enforcement mechanism that penalizes noncompliance with respect to quantity delivered, as proposed by the ISO, seems a reasonable solution.

However, monitoring, together with appropriate parameter tuning in response to that monitoring, are essential. If persistent uninstructed deviations from real-time dispatch instructions occur that inflate recovery payments and yet escape mitigation, then structural change to the mitigation system may be required.

We also expressed our support for the proposed mitigation of bid cost recovery payment for generating units who try to avoid shut-down by maintaining output above their Pmin level (minimum output) contrary to ISO instructions, or who start-up uninstructed.

Mitigation Measures for Exceptional Dispatch in Real Time

The issues surrounding the mitigation of bids when units are subject to exceptional dispatch have been discussed by the MSC several times over the past decade. In its May 7, 2008 Opinion,¹ the MSC outlined several principles that it believed should be followed when devising and implementing an offer mitigation mechanism for units subject to exceptional dispatch, and strongly supported capturing system constraints in the market software to the extent feasible rather than resorting to out-of-merit dispatch of units.

The October 30, 2012 exceptional dispatch mitigation proposal by the ISO is motivated by forthcoming changes in local market power mitigation. In particular, upon implementing Phase 2 of the local market power mitigation revisions, the current static path designations assessment, which presently determines the triggers for exceptional dispatch mitigations, will transition to a dynamic competitive path assessment. This dynamic assessment will flag paths as uncompetitive based on the application of a three-pivotal supplier test to transmission constraints that bind in the real-time pre-dispatch. However, this transition introduces a gap in identifying and mitigating the offer prices of exceptionally dispatched resources that have local market power. The ISO's proposal addresses that gap as well as creating a set of default path designations that would be used if the dynamic assessment fails to produce a valid set of path designations.

In summary, we support the ISO's exceptional dispatch proposal as a bare minimum mitigation measure made necessary by changes to the process of designating transmission constraints as competitive or uncompetitive. We also support the proposed mitigation rules that apply when the dynamic competitive path analysis fails to run.

In the opinion, we also express several concerns about the continuing high levels of exceptional dispatch, and particularly the relative lack of information concerning their causes and effects. We worry that exceptional dispatch may unnecessarily raise costs to consumers because of nontransparent and possibly inefficient dispatch decisions that do not appropriately consider alternative ways to meet non-modeled constraints. We also are concerned that generators who are exceptionally dispatched for competitive constraints (and therefore are not mitigated) may be consistently selected in a manner that enables them to raise their bids, thereby potentially increasing the amount of bid cost recovery they would be eligible for, even though other resources could also be used to resolve the constraint. Whether this will occur under the new system will require careful monitoring.

¹ See Wolak *et al.*, Note 2, *infra*.

Finally, we recommend that in cases in which a real-time exceptional dispatch call applies to multiple periods, a generating unit should not be allowed to change its bid from the level it offered before the first exceptional dispatch call.

Flexible Ramping Product Development

This ISO initiative focuses on the management and compensation of resources for the provision of system ramping capability day-ahead and in real-time.

During the October 19 MSC meeting, besides hearing presentations on the present status of the proposals from ISO staff, MSC member Scott Harvey made a presentation² that framed three sets of issues that should be considered in the design, and offered some preliminary conclusions. The first concerned a set of questions concerning the actual performance of the flexible ramping constraint since its implementation in late 2011. Answers to these questions would be very useful in designing the flexiramp product. The second was a theoretical analysis of what capacity costs are incurred in real-time for flexiramp capacity. His conclusion (which represents his recommendation at this time, and is not necessarily the opinion of the entire MSC) was that there are no costs except the opportunity costs calculated by the market software, so that the appropriate offer by flexiramp suppliers in the short-run is zero. The third topic concerned whether there should be a single price for all ramping capacity, or some differentiation depending, for instance, on whether the ramp would be used for “expected” net load changes. Dr. Harvey’s recommendation was that the former is the correct conclusion.

The MSC plans on issuing a formal opinion in time for consideration when the proposal is brought to the Board in fall 2013.

² S. Harvey, “Flexi Ramp Product Design Issues,” MSC Meeting, Folsom, CA, Oct. 19, 2012, www.caiso.com/Documents/FlexiRampProductDesignIssues-MSCPresentation.pdf