

# Memorandum

**To:** ISO Board of Governors

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

**Date:** September 7, 2012

**Re: Briefing on Market Surveillance Committee Activities from July 1 to August 31, 2012**

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***This memorandum does not require Board action.***

## EXECUTIVE SUMMARY

Over the period covered by this memorandum, the MSC held a public meeting (August 14, 2012) during which several important on-going initiatives of the ISO were discussed. These include development of a flexible ramping product; long-run flexible generation capacity procurement (which is being addressed at the September Board meeting); price inconsistency market enhancements; and performance of local market power mitigation.

The MSC is drafting a formal opinion on flexible capacity procurement, which will be considered for adoption in a public call on September 7. In addition, members of the MSC have been working with ISO staff on a more informal basis on several of these initiatives, as well as participating in related stakeholder calls.

Finally, MSC members have been interacting with stakeholders and ISO staff on inertia pricing and settlement issues. The MSC supports the staff recommendation that consideration of proposals to address those issues be deferred in favor of consideration of more fundamental revisions of the interchange markets in response to FERC Order 764.

## DISCUSSION AND ANALYSIS

### Flexible Generation Capacity Procurement

The first phase of this initiative is directed at providing the back-up capability for the ISO to ensure that sufficient generation capacity is available in the medium-term (up to 5 years ahead) to meet the growing needs for flexibility resulting from having significantly more variable renewable power. The focus of the first phase of this initiative is to provide the ISO with the capability to secure flexible capacity at risk of retirement that

has been identified as necessary to meet future grid reliability needs. This first phase is the subject of the proposal to be presented at the September Board meeting.

During the August 14 MSC meeting, Karl Meeusen of the ISO staff made a presentation summarizing the final draft ISO proposal. Among the issues considered in the resulting discussion were compensation and adjustments for resource adequacy and energy payments from other sources; the amount of gross margin from energy market operations that contracted generators should be permitted to retain; how over-reliance on the back-stop mechanism at the expense of resource adequacy markets can be avoided; and whether or not there should be a sunset provision.

The MSC Opinion to be considered on September 7 will address these and other issues, and will provide the Committee's recommendations on the overall proposal and as well as specific features.

### **Flexible Ramping Product Development**

The management and compensation of resources for the provision of system ramping capability day-ahead and in real-time is the focus of this proposal. During the August 14 public MSC meeting, ISO staff member Lin Xu summarized examples that illustrated the mechanics of the proposed flexible ramping product in the real-time market. These examples served to clarify how ramp capability is reserved for immediate use in the next interval if the change in load differs from what is anticipated, and as well how ramp capability is preserved for later intervals. This information is crucial for assessing the efficient amount of ramp is to be acquired ahead of time in the day-ahead market, and for designing the flexible ramping constraint in the real-time unit commitment.

Among the issues discussed by members of the MSC was the need for a locational dimension for the flexible ramping product. The importance of this issue is reinforced by the experience in the second quarter of 2012, during which Department of Market Monitoring reports that local ramp shortages contributed to real-time price spikes in Southern California. Another issue discussed was the choice between an implicit (demand curve) versus explicit (fixed MW) requirement for flexible ramping. Although the approaches seem quite distinct in philosophy, in practice, a requirement with a penalty for violation is not that different from a demand curve that consists of one or more steps with distinct price levels for each. It may be that the distinction will not be important for implementation. In either case, it will be important to subject proposed penalty/prices to extensive analysis using historical or simulated data to determine the appropriate balance between risks of power balance violations (possibly arising from penalties that are too low) and unnecessary distortions of energy prices (if penalties are too high).

The MSC will provide more feedback and suggestions in the coming months as the proposal is refined. The MSC plans to issue a formal opinion in time for consideration when the proposal is brought to the Board.

### **Local Market Power Mitigation Performance**

In its Order accepting the ISO's revisions to the Local Market Power Mitigation procedures, FERC ordered the following

“CAISO's market surveillance committee is hereby directed to report its findings regarding the appropriateness of the three-pivotal-supplier test and whether an alternative competitive screen to identify market power opportunities for generation in load pockets is necessary by May 1, 2013, as discussed in the body of this order.”<sup>1</sup>

We have begun planning the studies that will be required to comply with this order. Part of the study will assess how the dynamic competitive path assessment as implemented in the day-ahead market has performed. The study will also undertake an assessment of whether alternative definitions of competitive paths based on fewer or more pivotal suppliers could appreciably change mitigation and market outcomes. This work will be undertaken with data and modeling assistance provided by the Department of Market Monitoring.

In our August 14 MSC meeting, Dan Yang of the Department of Market Monitoring summarized the present local market power mitigation procedures and how successful they have been in identifying what paths would actually be noncompetitive in the day-ahead market. Compared to the previous procedure, the present path identification procedure incorrectly flags far fewer paths as noncompetitive than the previous approach. The frequency of false negatives (an incorrect identification of a path as competitive that is actually noncompetitive in the market run) has not been reduced as much. Members of the MSC discussed possible reasons for this. The extent of bid mitigation experienced under the present system was then reviewed.

The MSC looks forward to working with the Department of Market Monitoring on designing and completing the analyses necessary for the report ordered by FERC.

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<sup>1</sup> Federal Energy Regulatory Commission, "Order Accepting Tariff Revisions," 138 FERC ¶ 61,154, [www.caiso.com/Documents/2012-03-01\\_ER12-423\\_LMPMorder.pdf](http://www.caiso.com/Documents/2012-03-01_ER12-423_LMPMorder.pdf)

## **Market Enhancements to Reduce Price Inconsistencies**

The fundamental issue dealt with by this ISO initiative is the occasionally experienced inconsistencies between market schedules and market prices. These inconsistencies occur when resource schedules are less beneficial to the market party (assuming their bids represent their true costs) than other feasible schedules under the announced prices. When such inconsistencies occur, they create incentives to deviate bids in order to obtain preferred schedules, which could result in market inefficiencies.

Guillermo Bautista-Alderete of the ISO staff made a presentation at the August 14 MSC meeting describing the particular circumstances in which such inconsistent pricing arises that are to be addressed by the proposal. Stakeholders and members of the MSC discussed the significance of each, and how the ISO proposal would attempt to correct each. Part of the discussion addressed possible unexpected consequences of the proposed changes.

The MSC plans to issue a formal opinion in time for consideration when the proposal is brought to the Board.

## **Intertie Pricing and Settlement**

The issue of intertie pricing and settlement has received significant attention over the past year from the MSC. This has included a MSC Opinion issued on Aug. 17, 2011<sup>2</sup> in which we supported the ISO's proposal to suspend convergence bidding on interties until a more robust solution is found to the pricing problems experienced on the interties between the ISO and neighboring control areas. We stated that it is our belief that the ability to submit convergence bids is not the root cause of the high levels of real-time energy imbalance offset charges, but that the suspension would be at least somewhat effective in reducing those charges until a more fundamental solution could be implemented. We recommended that the ISO investigate other longer term and more far reaching changes in the pricing and scheduling of imports and exports to address the problem. Since issuing that opinion, we have discussed intertie pricing and settlement in our March 2012 public meeting. Members of the MSC have also participated in public stakeholder calls and discussions with ISO staff on the issue.

In general, the existence of an hour-ahead market for imports and exports only, and the absence of import/export bidding in the real-time market, results in contradictions that are fundamentally unresolvable. Various proposals to patch the existing system would significantly reduce the problem of large imbalance energy offset payments, but inefficiencies would remain. Because each of the markets lacks full participation by internal resources, loads and external participants, we would not expect full

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<sup>2</sup>[www.caiso.com/Documents/FinalOpinion\\_IntertieConvergenceBidding\\_ImbalanceEnergyOffset.pdf](http://www.caiso.com/Documents/FinalOpinion_IntertieConvergenceBidding_ImbalanceEnergyOffset.pdf)

convergence of hour-ahead and real-time prices under any of the proposals considered. We support the ISO's proposal to defer further consideration of these partial proposals, and to instead investigate more fundamental market redesigns. Among the candidate redesigns is the possibility of cooperating with other Western markets moving to a 15 minute market for between-system transactions, in response to FERC Order 764 on Integration of Variable Energy Resources.<sup>3</sup> The MSC sees both potential market efficiency advantages as well as potential difficulties in moving from the present hour-ahead system to 15 minute scheduling of interchanges, and the MSC looks forward to its careful consideration by the ISO.

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<sup>3</sup>[www.ferc.gov/whats-new/comm-meet/2012/062112/E-3.pdf](http://www.ferc.gov/whats-new/comm-meet/2012/062112/E-3.pdf)