

Memorandum

To: ISO Board of Governors

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

Date: July 5, 2012

Re: **Briefing on MSC Activities from May 8 to June 30, 2012**

This memorandum does not require Board action.

Over the period covered by this memorandum, the Market Surveillance Committee held a public teleconference meeting on May 25, 2012 and a public in-person meeting on June 22, 2012, during which several important on-going initiatives of the ISO were discussed:

- The intertie pricing and settlement initiative (discussed at both meetings);
- Development of a flexible ramping product (discussed during the May 25 meeting);
- Replacement requirements for scheduled generation outages, which are being addressed at the July Board meeting (discussed during the June 22 meeting); and
- Long-run flexible generation capacity procurement (discussed during the June 22 meeting).

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. The MSC anticipates adopting formal opinions on the intertie pricing and settlement, flexible ramping product, and flexible capacity procurement initiatives before they are considered by the Board later this year. We are not issuing a formal opinion on the replacement requirement initiative, although members of the MSC have contributed suggestions for its enhancement, the most important of which are summarized below.

In addition, two additional sets of issues that are important to the California power market were discussed at the June 22 public meeting:

- California's greenhouse gas cap, how it accounts for emissions associated with imported power, and possible effects on power imports to ISO system; and
- The ISO's 33% renewable study.

1. Intertie Pricing and Settlement

An earlier version of this initiative was discussed during the MSC meeting on March 30, 2012, and this initiative was addressed during both the May 25 teleconference meeting and June 22 in-person meeting. At the June 22 meeting, Karl Meeusen of the ISO staff presented the latest ISO proposals concerning the settlement prices for hour ahead scheduling process transactions, treatment of undelivered hour ahead scheduling process schedules, make-whole payments, virtual bidding limits, and the dual intertie flow constraint. There was significant discussion on most of these issues at that meeting by the MSC members and stakeholders.

The latter issue was one that received significant attention at previous MSC meetings. It concerns the pricing implications of two (“dual”) intertie constraints in the day-ahead market, one for all transactions and the other for just physical flows. Possible pricing anomalies and their potential implications have been discussed at previous MSC meetings. The present ISO proposal is to eliminate the dual constraints in the day-ahead market, and to instead constrain the number of accepted e-tags of imports accepted day-ahead. This would eliminate most and perhaps all of the concerns that the MSC membership have had over the possible pricing anomalies.

Much of the discussion by MSC members and stakeholders in the June 22 meeting concerned make-whole payments. The discussion reflected the considerable complexity of defining the circumstances under which make-whole payments to exports would benefit the market, and the situations under which the ISO would make such payments under the proposal.

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

2. Flexible ramping Product Development

The development of a system to manage and compensate system ramping capability day-ahead and in real-time is the focus of this proposal. This was one of the two major agenda items during the May 25 MSC teleconference meeting. During the meeting, ISO staff member Lin Xu summarized several issues for which MSC input was desired. Subsequent MSC member discussion touched on several topics, one being the issue of how much flexible ramping capability to procure day-ahead versus in real-time. A related issue that was raised concerned the definition of the day-ahead flexible ramping product. In particular, it was asked whether two otherwise identical units that could ramp the same number of MW in an hour would be treated the same in the day-ahead market, even if one of the units could ramp more quickly over a shorter (e.g., 5 minute)

time frame. Another issue discussed concerned the lessons that have been learned since the implementation of the flexible ramping constraint in the real-time market at the end of 2011.

The MSC anticipates providing more feedback and suggestions in the coming months as the proposal is refined. The MSC plans on issuing a formal opinion in time for consideration when the proposal is brought to the Board.

3. Replacement Requirements for Scheduled Generation Outages

The purpose of this ISO initiative is to revise its outage management and resource adequacy procedures to address the elimination by the California Public Utility Commission of its resource adequacy replacement rule in the 2013 resource adequacy year. Members of the MSC have been participating in ISO stakeholder calls on this initiative, which was also discussed during the June 22 MSC meeting. Gillian Biedler of the ISO staff presented an overview of the present version of the proposal and addressed questions about it raised by MSC members and stakeholders.

In general, MSC members believe that the proposal addresses a significant need, and that the revisions in the ISO's proposal have generally been useful. During the discussion at the June 22 meeting, and in our interactions with staff, no fundamental objections have been made by MSC members to the general principles of the proposal as it now stands. MSC members in particular appreciate how the Electronic Bulletin Board feature of the proposal provides flexibility by increasing the range of possible replacement resources.

The MSC has not developed a formal opinion on the proposal, which will be considered by the Board at its July 2012 meeting. However, although the individual MSC members support the general outline of the proposal, they in addition have suggestions for possible enhancements of the flexibility of the proposal, with aim of lowering costs while ensuring that resource adequacy needs are met. These include the following.

- It is possible that certain non-resource adequacy capacity that is generally ineligible to provide resource adequacy because it is energy-limited might be an appropriate source of replacement capacity in some circumstances. The proposal could indicate that such capacity would be considered as substitute capacity by the ISO in appropriate situations.
- In some cases, the required 72 hour notice of a planned outage may discourage taking advantage of low demand conditions over weekends to complete desirable short-term maintenance. Although the ISO has good reasons to require such

notice when possible, the proposal could indicate that the ISO would normally attempt to make a best effort to consider allowing substitution on shorter notice without providing any guarantees.

Notwithstanding these specific suggestions, individual MSC members have expressed support for the general proposal.

4. Flexible Generation Capacity Procurement

The first phase of this initiative is directed at providing the ISO backstop procurement capability that will ensure that sufficient capacity is available in the medium-term (up to 5 years ahead) to meet the increased flexibility needs of a power system with 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. During the June 22 MSC meeting, Karl Meeusen of the ISO staff made a presentation summarizing some of the basic features of the ISO draft proposal, in particular how it would deal with the following issues: need determination; compensation and adjustments for resource adequacy payments from other sources; and cost allocation.

Members of the MSC made comments addressing several aspects of the proposal. Among the issues raised were:

- Possible incentives for load serving entities to overly rely on ISO backstop procurement;
- How resources would be selected when there would be more than one candidate resource, but the resources may differ in their going-forward costs over time (e.g., due to possible requirements for major maintenance in future years);
- Appropriate reliability-based criteria for determining the amount of ramping capacity needed (see discussion under Section 6, below);
- Whether the ISO has the information needed to evaluate the amount of ramping capacity that will be available in future years; and
- How payments from the short-run flexible ramping product would interact with payments from the longer-run backstop procurement to incent preservation of existing flexible capacity. In particular, it was asked whether sufficient short-run payments obviate the need for longer-term capacity payments?

These issues were briefly discussed, and the MSC looks forward to working with staff and stakeholders on them as the proposal is further developed. The MSC plans on issuing a formal opinion in time for consideration when the proposal is brought to the Board.

5. California's Greenhouse Gas Cap

At the June 22 meeting, MSC Member Jim Bushnell, who is also a member of the Market Simulation Group for the California Air Resources Board's AB32 greenhouse gas trading program, made a presentation that summarized recent developments in that program.

An important issue is the accounting for emissions that result from out-of-state generation that is imported to the state. On one hand, if legal developments preclude the State from requiring imports to buy greenhouse gas allowances, imports will gain an important cost advantage and out-of-state emissions may simply offset (or worsen) in-state reductions. On the other hand, if the State is permitted to regulate emissions associated with imports, other distortions in the market for imports may occur. For example, the Air Resources Board will develop rules designed to prevent so-called "contract shuffling"; uncertainty in how those rules will be implemented and enforced may discourage power imports to California. Contract shuffling is the rearrangement of financial power contracts to give the appearance that low-carbon sources were being used to provide imports to California, while at the same time high-carbon sources are recontracted from California to non-California loads. The net impact of shuffling may be no overall change in out-of-state emissions, although the AB32 accounting system would indicate that emissions associated with imports had decreased. This is of concern to the Air Resources Board which is attempting to adopt rules to prevent such shuffling. But MSC members argued that it will be difficult or even ultimately impossible to prevent shuffling as long as the rest of the West (1) has more clean capacity than California requires and (2) dispatches plants on a least-cost basis without putting a price on carbon emissions. Stringent California rules designed to prevent contract shuffling might increase regulatory uncertainty and possibly discourage imports to California, without actually decreasing emissions.

Dr. Bushnell pointed out two other issues that would be of concern to the ISO. There may be changes in the mix and volume of unspecified sources of imported power to the state, which could, for instance, impact the amount of resource adequacy capacity. To successfully implement the greenhouse gas trading program, the California Air Resources Board may need additional monitoring and compliance capabilities, in particular more detailed tracking of sources of out-of-state power.

6. The 33% Renewable Study

This set of analyses by the ISO and its contractors was summarized in a presentation by Mark Rothleder of the ISO staff at the June 22 meeting. An important issue that received significant attention during the discussion was the appropriate standard for determining whether ramping resources were adequate. In power systems planning, the traditional standard for overall adequacy of resources has been 1 day of customer curtailment (“loss of load”) every 10 years, or similarly phrased standards. A pair of questions faced in these studies is the following. First, should a similarly stringent standard be used for system ramping capacity? Second, in what circumstances would inadequate ramping capability result in a loss of load, and how large a short-fall in ramping capability would have to be to cause load curtailment. Members of the MSC suggested that a less stringent standard for assessing the future adequacy of ramping capability would be appropriate if inadequate ramping capability was highly unlikely to result in loss of load.

The MSC is highly interested in the progress of this study, and the implications of its conclusions for the flexible ramping product and flexible capacity procurement initiatives.