



# Memorandum

**To:** ISO Board of Governors

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

**Date:** May 7, 2015

**Re: Briefing on MSC Activities from March 11 to May 5, 2015**

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

Over the time period covered by this memorandum, members of the Market Surveillance Committee (MSC) have adopted a formal opinion on the reliability services initiative (phase 1) and commitment cost enhancements initiative (phase 2); held a general session meeting of the MSC on April 17, 2015; have interacted informally with ISO staff and stakeholders on several ISO initiatives; and have been preparing a draft opinion on the load granularity refinements. The final opinion on load granularity refinements is planned for adoption during a public call of the MSC on May 18, 2015.

## **1. Reliability Services and Commitment Costs Opinion<sup>1</sup>**

The MSC opinion on the reliability services and commitment cost enhancements initiatives was adopted during a public call on March 23, 2015, and was submitted to the Board at its March 2015 meeting. Dr. Shmuel Oren summarized the opinion at the Board meeting, which was the last action of Dr. Oren in his capacity as MSC member prior to the expiration of his term on the committee. His efforts and insights on critical market design issues facing the ISO will be very much missed, and during the public call on March 23 he was publicly thanked for his many contributions during his three years of service.

## **2. April 17, 2015 MSC general session meeting**

The April 17 general session meeting involved presentations by ISO staff and MSC members, as well as public discussions among MSC members, staff and stakeholders on two major topics.

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<sup>1</sup> J. Bushnell, S.M. Harvey, B.F. Hobbs, S.S. Oren, *Opinion on Reliability Services Phase 1 and Commitment Costs Enhancements Phase 2*, Opinion of the Market Surveillance Committee of the California ISO, Adopted March 23, 2015.

The first topic was the recently commenced ISO initiative on bid cost recovery and variable energy resource settlement modifications. Ms. Delphine Hou, Lead Market Design and Regulatory Policy Developer, and MSC chair Dr. Benjamin Hobbs each made formal presentations. Ms. Hou provided an overview of the conceptual and practical issues involved in placing the calculation and recovery of bid costs for variable energy resources on a more rational and consistent basis. Ms. Hou posed several questions to the MSC concerning calculation of default energy bids for variable energy resources; application of the persistent deviation metric to such resources; and calculation of payments when those resources have residual imbalance energy. These questions stimulated extensive discussion by MSC members and the attending stakeholders.

Dr. Hobbs' presentation emphasized the issue of how default energy bids should be defined for variable energy resources.<sup>2</sup> The presentation pointed out that forgone renewable subsidies are a real and substantial cost for variable renewable producers and, in a competitive market, would be reflected in their offers to the energy market (as negative bids) and, thus, they should be considered in bid cost recovery. However, the social cost to the market of curtailment is zero in the short run, as subsidies are a transfer of money from ratepayers or taxpayers to resource owners. During his presentation, Dr. Hobbs stated a preference for state and federal renewable policies that would maintain subsidies even if energy is curtailed, because this would result in offers that are instead near zero and more reflective of the marginal cost of renewable energy. In contrast, using negative bids to force renewable energy into the energy market when prices are negative increases the total cost of supply and can even increase pollution emissions. Nonetheless, it is not the responsibility of the ISO to adjust offers to reflect external costs or subsidies that cause private (resource owner) costs to deviate from social costs, and Dr. Hobbs recommended that default energy bids reflect out-of-pocket and opportunity costs to resource owners that are verifiable and transparent. Dr. Hobbs concluded that production tax credits and, when significant, renewable energy credits be reflected in default energy bids.

The MSC anticipates writing an opinion on proposed changes to variable energy resource bid cost recovery periods prior to the Board's consideration of the issue.

The second topic during the April 17 meeting was pricing and potential changes to price calculations in the energy imbalance market (EIM). Two ISO staff presentations were made. The first one, given by Dr. Guillermo Bautista-Alderete, Manager of Market Analysis and Quality Analysis, provided an overview of recent EIM price history and the causes of upward price excursions in that market. A second presentation was by Mr. Don Tretheway, Lead Market Design and Regulatory Policy Developer, and presented a tentative proposal for appropriately reflecting how EIM reserve resources are actually dispatched in energy markets by other balancing authorities. This led to extensive

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<sup>2</sup> [http://www.caiso.com/Documents/Discussion\\_BCR\\_VER\\_SettlementModifications-MSM\\_Presentation-April2015.pdf](http://www.caiso.com/Documents/Discussion_BCR_VER_SettlementModifications-MSM_Presentation-April2015.pdf)

discussion of the outline of the ISO's likely proposal and associated economic efficiency issues. The objectives of the EIM pricing redesign would be to calculate scarcity or penalty prices in the EIM that are reflective of actual costs incurred if the balancing authority area draws on operating reserves to manage energy market shortfalls, while also ensuring that operating reserves are not used to support exports to other balancing areas.

The EIM portion of the meeting also included a presentation by Dr. Scott Harvey that summarized in considerable detail how the NYISO and Midcontinent ISO (MISO) use penalties for regulation and reserve shortages, including those due to ramp rate limitations, to reflect more accurately the cost to the system of short-term inability to balance load and generation without using regulation or reserves.<sup>3</sup> Their experience, as well as the ISO's own experience, indicates that energy balance and ramp limit violations occur in all markets, and cannot be eliminated. However, appropriate penalties can provide meaningful scarcity signals while avoiding high price spikes when in fact imbalances are easily rectified by meeting load for an interval or two using capacity designated to provide regulation or reserves. This is automatically done in energy and reserve markets that are co-optimized in real-time, such as the MISO and NYISO, but such coordination is deliberately not a feature of the EIM. But as the early years of MISO showed (when it coordinated energy markets in several balancing areas, who retained control of reserves and regulation), it is possible to design energy markets so that they avoid triggering large price spikes at times when reserves are drawn upon but there is not true energy scarcity. This testimony was an expansion of Dr. Harvey's well-received testimony at a FERC technical conference on EIM pricing held the previous week in Washington, DC.<sup>4</sup>

### **3. Load Granularity Refinements Opinion**

The MSC is presently writing an opinion on the ISO's load granularity refinements, due to be submitted to FERC in early June 2015. This opinion has been informed by discussions at several general session meetings of the MSC over the past year, as well as less formal consultations between individual MSC members and ISO staff. These included general session meetings held on Aug. 22 and Dec. 16, 2014, and Feb. 19, 2015. A general session call is tentatively scheduled for May 18 for adoption of the opinion. The opinion will not be formally submitted to the ISO Governing Board in the manner of most of our opinions, since this does not concern an action that the Board is going to be making in the near future.

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<sup>3</sup> [www.caiso.com/Documents/Discussion\\_EnergyImbalanceMarketPotentialPricingSolutions-MSC\\_Presentation-April2015.pdf](http://www.caiso.com/Documents/Discussion_EnergyImbalanceMarketPotentialPricingSolutions-MSC_Presentation-April2015.pdf)

<sup>4</sup> [www.ferc.gov/CalendarFiles/20150324154821-ER15-861-000.pdf](http://www.ferc.gov/CalendarFiles/20150324154821-ER15-861-000.pdf)