

Memorandum

To: ISO Board of Governors

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

Date: January 30, 2014

Re: Briefing on MSC Activities from December 6, 2013 to January 16, 2014

This memorandum does not require Board action.

Over the month covered by this memorandum, the Market Surveillance Committee held a general session meeting in Folsom on January 16, 2014 and prepared a draft formal opinion on the full network model proposal of the ISO.

MSC members have interacted with staff and stakeholders on several ISO initiatives. The draft opinion on the full network model has been posted and is scheduled to be adopted during a general session teleconference meeting on January 30 and then submitted to the Board of Governors at its February 6, 2014 meeting. The MSC is also preparing a formal opinion on the flexible resource adequacy criteria and must offer requirements (FRACMOO) initiative for submission to the Board at its March meeting.

January 16, 2014 MSC meeting

During the January 16 MSC meeting, two ISO initiatives were discussed with stakeholders and staff, including:

- the full network model initiative; and
- definition of flexible resource adequacy criteria and must offer obligations under the FRACMOO initiative.

A formal presentation was made by MSC member Dr. Scott Harvey on the full network model initiative. He discussed four issues. First is the need for pre-implementation testing. The improved network model is expected to significantly enhance representations of loop flows, which are unscheduled flows of power over particular lines that occur because power exchanges between the ISO and neighboring systems take different physical routes than anticipated as result of inaccurate modeling of networks and locations of power injections and withdrawals. However, there will still remain several sources of inaccuracy that could result in divergence between predicted and actual loop flows. Examples include the incomplete representations of some

balancing authorities' networks, imperfect forecasts of load and generation distributions in neighboring networks, and the representation of imports to/exports from the ISO as injections/withdrawals at intertie points. Dr. Harvey stated that testing prior to implementation will be necessary to adjust the model to improve its accuracy, and that the implementation will need to be flexible to accommodate adjustments that are likely to be necessary post-implementation.

The second issue discussed by Dr. Harvey concerned the inclusion of both scheduling constraints (that limit the amount of scheduled MW exchanges over individual interties) and physical constraints (such as line capacity) in the full network model. It is expected that there will remain inaccuracies in forecasting loopflows through tielines, which could result in either over- or under-constraining exchanges; network adjustments are likely to be necessary to improve the representations of those flows. However, Dr. Harvey argued that the physical intertie constraints are essential for efficient management of congestion on internal ISO constraints due to loopflows, and that use of scheduling constraints for such management alone would be more costly and perhaps ineffective.

Dr. Harvey then expressed his concern about a third issue, which is that the ISO full network model should not be used to provide incentives for transmission expansion outside the ISO system purely to create contract path entitlements, irrespective of physical transfer capability effects. The last issue discussed in his presentation was allocation of congestion rent shortfalls that arise from modeling errors. He argued that such shortfalls should not be allocated to virtual bids that benefit from the errors, because virtual bidders do not contribute to real-time loop flows; some physical buyers and sellers also benefit from the shortfalls (depending on how prices are affected); and if the ISO correctly models expected loop flows, consistent price differences between day-ahead and real-time will largely be eliminated.

These presentations complemented ISO staff presentations on the full network model and flexible resource adequacy criteria and must offer requirements initiatives, as well as stakeholder discussions. All presentations from the MSC meeting are posted on the ISO website at:

www.aiso.com/Documents/Board%20and%20committees/Market%20Surveillance%20Committee/Market%20Surveillance%20Committee%20meetings/Market%20Surveillance%20Committee%20meeting%20Jan%202016,%202014 .

Opinion on the Full Network Model

The draft opinion on the full network model has been posted and is scheduled to be adopted on January 30, 2014. The final opinion will be submitted to the Board at its February 6 meeting. The opinion expresses the Committee's recommendations concerning the full network model and its use to improve market efficiency; addresses several stakeholder concerns about its implementation; and suggests a program of pre- and post-implementation testing to enhance the accuracy of its prediction of loop flows.