Memorandum

To: ISO Board of Governors

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

Date: May 8, 2013

Re: Briefing on MSC Activities from March 4, 2013 - May 2, 2013

This memorandum does not require Board action.

Over the period covered by this memorandum, the Market Surveillance Committee has focused on two activities. First, it has written a draft opinion on the California ISO's proposed market changes in response to FERC Order No. 764. Second, we have been undertaking analyses of data provided by the Department of Market Monitoring that will be included in the report that the MSC is required to submit to the Federal Energy Regulatory Commission on local market power mitigation. Originally, FERC asked that the report be submitted on May 1, 2013, but at our request, the ISO petitioned FERC for a time extension until June 28, 2013, which was granted.

Opinion on Order 764 Market Changes

The MSC has been asked to provide an opinion on the ISO's proposal for complying with FERC Order No. 764 and related market design changes. Order No. 764 requires that jurisdictional transmission providers allow interchange to be scheduled on a 15-minute basis, and that variable energy resources provide data to market operators for the purpose of forecasting power output.

The proposed changes have three main threads, two of which have been the subject of prior stakeholder processes and MSC opinions. The first thread is the California ISO's compliance with FERC Order No. 764, particularly its requirement that jurisdictional utilities allow 15-minute scheduling of interchange transactions. The second thread consists of associated changes to the way the California ISO prices interchange transactions, which has been the subject of multiple stakeholder processes over the past two years and was discussed in our August 16, 2011 opinion.[1] Significantly, the changes proposed by the ISO would extend beyond the pricing of interchange

[1] Market Surveillance Committee of the California ISO, Final Opinion on Intertie Convergence Bidding and the Imbalance Energy Offset, August 16, 2011, www.caiso.com/Documents/ FinalOpinion_IntertieConvergenceBidding_ImbalanceEnergyOffset.pdf

transactions with external balancing authority areas to also change the way internal generation and load are settled. The third thread is comprised of changes to the PIRP program that would serve to align the design of the Participating Intermittent Resource Program (PIRP) with the new elements of the ISO market and allow PIRP resources to participate in the economic dispatch. We discussed some of these changes in our December 8, 2011 opinion.[2] Over the last two years, potential changes to the way the ISO settles interchange transactions have been discussed in several MSC meetings over the past two years, and MSC members have participated in several stakeholder calls discussing Order No. 764 compliance and these associated changes. In the period covered by this activities report, individual members participated in stakeholder calls on April 2, 2013, and May 1, 2013.

In our draft opinion,[3] we have offered the following conclusions, which are subject to change in the final opinion. The final opinion is to be adopted in a MSC public call scheduled for May 7, 2013.

First, we expressed support for the three key elements of the ISO's proposal. The introduction of 15-minute scheduling is not only necessary to comply with FERC Order No. 764, it offers the potential to improve the performance of the ISO market (and indeed markets throughout the West) and reduce the cost of meeting load by enabling more optimal scheduling of interchange with adjacent balancing authority areas. The associated changes in the settlement of interchange transactions and virtual bids (in which they are based on binding real-time pre-dispatch prices (RTDP)) should allow net interchange to be settled at prices that are better aligned with real-time prices than is the case with the present hour-ahead scheduling process (HASP) -based settlement process for interchanges. Finally, we anticipate that scheduling interchanges involving intermittent resources closer to real-time and allowing internal and external intermittent resources to be dispatched based on price will have several benefits. In particular, this element of the proposal should improve the ISO's ability to balance load and generation in real-time with reduced price volatility; enable external variable energy resources to supply power to California at lower cost; and allow internal variable energy resources to participate more efficiently in the real-time market.

Second, we concluded that there are three groups of risks associated with the implementation of these changes which will need to be analyzed by the ISO as this design moves toward implementation, and monitored following implementation.

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[2] Market Surveillance Committee of the California ISO, Opinion on Integration; Market and Product Review, Phase I, December 8, 2011, www.caiso.com/Documents/ MSC_Final_Opinion_RenewableIntegrationMarket-ProductReviewPhase1.pdf

[3] Market Surveillance Committee of the California ISO, Draft Opinion on Order 764 Compliance and Related Market Design Changes, Posted May 2, 2013, www.caiso.com/informed/Pages/BoardCommittees/ MarketSurveillanceCommittee/Default.aspx

1. There will not necessarily be a liquid supply of 15-minute interchange bids and offers when the ISO design is first implemented. If this is the case, then uncertainty concerning the impact of implementing these changes could lead to somewhat higher offer prices for import supply. Further, it should be anticipated that the overall elasticity of import supply in real-time, both hourly and 15-minute transactions, may, at least initially, be somewhat lower than under the current design. There will, however, be offsetting benefits in the form of reduced costs from uneconomic import and export transactions. The ISO will need to monitor the relationship between prices projected in HASP and binding RTPD prices and make changes needed to maintain convergence to help maintain the elasticity of import supply.
2. While settling interchange transactions at RTPD prices determined closer to real-time should tend to reduce uplift costs (real-time energy offset costs) relative to the current design, settling internal generation and load deviations from day-ahead schedules at RTPD prices and then settling deviations from RTPD schedules at real-time dispatch (RTD) prices will give rise to new uplift costs. We anticipate that the net effect of these changes will likely be a reduction in overall uplift costs relative to the current design. Nonetheless, the ISO will need to carefully monitor the relationship between RTPD solutions and the real-time dispatch to minimize both systematic errors and large random errors in order to achieve the intended benefits of these design changes. We also recommend that the ISO promptly begin archiving second interval RTPD data so that the relationship between RTD prices and the RTPD prices that will be used for settlements is understood by the ISO and its stakeholders well before the proposed new settlement design is implemented.
3. If the supply of 15-minute interchange bids and offers is initially not very liquid, the elements of the design that allow output-contingent intermittent offers to displace fixed hourly import schedules may contribute to the volatility of RTPD and RTD prices. This potential can be studied prior to implementation and managed by the way the ISO forecasts variable resource output for the hour-ahead scheduling process.

MSC Study of Alternative Competitive Screens in Local Market Power Mitigation

In its 2012 order accepting the ISO's revisions to the Local Market Power Mitigation procedures, [4] FERC directed the MSC to file a report by May 1, 2013 reporting 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. During the period covered by this memo, we have been

[4] Federal Energy Regulatory Commission, "Order Accepting Tariff Revisions,"138 FERC ¶ 61,154, www.caiso.com/Documents/2012-03-01_ER12-423_LMPMorder.pdf

analyzing data provided by the ISO's Department of Market Monitoring which will be reported upon in our submission.

To allow adequate time to analyze the data as well as the Department of Market Monitoring's 2012 Annual Report on Market Issues and Performance, and because of the need for formal posting and MSC adoption of the report, the ISO filed on our behalf on April 24, 2013 a motion for an extension of time to file the report until June 28, 2013. On April 30, 2013, FERC approved that motion. The MSC looks forward to posting a draft version of our report and then holding a public call for approving it prior to the new deadline.