Memorandum

To: ISO Board of Governors

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

Date: June 21, 2016

Re: **Briefing on MSC activities from March 15 to June 14, 2016**

This memorandum does not require Board action.

During the time interval covered by this memorandum, members of the Market Surveillance Committee (MSC) held a general session meeting of the MSC on April 19, 2016. Previously, Dr. Ben Hobbs, the chair of the MSC, attended the ISO Board of Governors meeting of March 24-25, 2016 to discuss the MSC's "Opinion on Bidding Rules Enhancements and Commitment Cost Enhancements Phase 2", which the MSC adopted on March 14, 2016. The MSC will also be discussing several ISO initiatives with ISO staff and stakeholders at the next general session meeting to be held in Folsom on June 17, 2016; these include transmission access charge (TAC) determination and regional resource adequacy under the expanded ISO footprint; enhancement of bid cost recovery; and stepped penalty parameters for constraint relaxations in the ISO market software.

The discussions undertaken in the April 19 meeting are summarized in the next section of this memorandum.

April 19, 2016 MSC General Session Meeting

Five topics were addressed in the meeting, each being the subject of ISO staff presentations and subsequent MSC and stakeholder discussion.

1. Reliability services phase 2 and flexible resource adequacy criteria and must offer obligation phase 2;
2. Congestion revenue rights clawback modifications;
3. Aliso Canyon gas-electric coordination; and
4. Regional transmission access charges.

Dr. Karl Meeusen, ISO Senior Advisor for Infrastructure Policy, started the discussion of the reliability services/flexible resource adequacy criteria & must offer obligation initiative with a presentation that focused on three issues:

- What requirements and must-offer obligations should be placed on flexible capacity from intertie resources?
- Should effective flexible capacity from pumped storage exclude storage that is subject to discrete dispatches to reduce load?
- Should the ISO allow RA resources in a local area but procured as system RA be allowed to substitute with system capacity to avoid resource adequacy availability incentive mechanism charges?

The first issue engendered a significant amount of discussion among the MSC members, staff, and stakeholders. A key issue is whether flexible intertie capacity should be specifically identifiable resources or not. Given the need for flexible resources and imports, and given that northwest hydro resources are usually marketed as system resources rather than identifiable units, a MSC member expressed the opinion that there should not be an identifiability requirement.

The second item, congestion revenue rights clawback modifications, was addressed in a presentation by Don Tretheway, Senior Advisor for Market Design and Regulatory Policy at the ISO. Mr. Tretheway explained that the proposal was in response to a desire to address the possible discouraging effect of the present clawback rule upon fifteen minute offers on the interties. The proposal had two parts. The first part created an exemption for day-ahead intertie schedules that are also bid into the real-time market and meet the following conditions: the day-ahead schedule is supported by an E-tag; the bid price in the case of imports is less than the day-ahead price; the bid price in the case of exports exceeds the day-ahead price; and the MW quantity bid is no less than the day-ahead schedule. The MSC members supported this part of the proposal. They generally agreed that such bids are highly unlikely to represent attempts to affect intertie prices in an effort to influence the value of congestion revenue rights.

However, the second part of the clawback modifications proposal instead broadens the applicability of the clawback provision, which could have an opposite effect upon intertie bidding in the fifteen minute market and could also adversely impact the use of virtual bids by physical market participants for hedging purposes. Some of the MSC members have concerns about this part of the proposal. A MSC member questioned the basis for imposing mitigation at all load aggregation points and hubs, particularly when there has not been an analysis of the impact of doing this or a full explanation of the need. Despite these reservations, the MSC has not fully evaluated all of the implications of this part of the clawback modification proposal, and so does not offer a formal opinion of it at this time.

The third substantive item on the agenda concerned market changes to improve gas-power system operations in Southern California in light of the Aliso Canyon operating restrictions. Cathleen Colbert, Senior Market Design and Policy Developer, Market & Infrastructure Policy gave a presentation discussed the goals and procedures of possible market mechanisms or tools that are necessary to support reliability and ensure markets are not adversely impacted by the Aliso Canyon restrictions. The proposals discussed included: limiting scheduled daily gas burn in Southern California by a gas availability constraint; reserving power import capacity on Path 26; releasing advisory schedule information for two days ahead; and restricting real-time gas-burn imbalances from day-ahead schedules. The MSC, ISO staff, and stakeholders discussed at length the possible general procedures along with some specific implementation issues. One MSC member suggested that more refined operating reserve constraints on generation might be a more efficient means of ensuring that there is importable reserve capacity in case Southern California is short, compared to reserving capacity on Path 26. Another MSC member suggested consideration of shifting generator schedules from energy to reserves, or vice versa, to save gas in the case of the real-time gas balancing constraint. A MSC member also suggested that the residual unit commitment process could also be used to ensure there is enough gas capacity and fuel to meet contingencies in real time.

The last item on the agenda concerned regional transmission access charges. The ISO staff presentation was made by Eric Kim, Market and Infrastructure Policy. He summarized principles that have been proposed by the Federal Energy Regulatory Commission for the determination of such charges, and the sharing of costs of transmission projects among beneficiaries. Several issues were presented and discussed, such as how to distinguish between existing and new facilities, where the latter's costs would be eligible for sharing among sub-regions in an expanded ISO.

Dr. Hobbs, chair of the MSC, then made a presentation that summarized the state-of-the-art for the assessment of transmission benefits. This included a review of categories of benefits, and specific methods used to quantify them. Some categories of benefits, such as savings in capital or operating costs resulting from improved siting of new generation, are not captured by existing production costing-based methods. The ISO's TEAM (Transmission Economic Assessment Methodology) was assessed to be the state-of-the-art in terms of the practice of benefits assessment, but improvements are possible. Dr. Hobbs discussed how the "option value" or "flexibility value" of transmission could be quantified using a method called stochastic programming, which has been the subject of a demonstration application in the Western Electricity Coordination Council region. Dr. Hobbs concluded by proposing a method for assessing reliability benefits based on the next best alternative to achieve a particular reliability target, and consideration of how the reliability-based reinforcement would benefit each sub-region in the ISO. He argued against a blanket policy of having the sub-region containing the reliability reinforcement be responsible for paying the entire reinforcement.