

Memorandum

To: Audit Committee of the ISO Board of Governors
From: Eric Schmitt, Vice President, Operations
Date: December 10, 2015
Re: **Acceptance of the 2015 operations audit**

This memorandum requires Committee action.

EXECUTIVE SUMMARY

PricewaterhouseCoopers, LLC (PwC) completed the California Independent System Operator Corporation Compliance Assessment relating to Specified Control Room Operational Processes and issued its report dated December 01, 2015. The compliance assessment evaluated processes related to the energy imbalance market, FERC 764 (fifteen minute market & intra-hour transmission scheduling) and FERC 789 (new contingency reserve requirements) implementations. Procedures related to tool and task changes on the Interchange Scheduling desk were also reviewed. This compliance assessment was completed with no exceptions noted. Management presents the report for the Committee's acknowledgement, and proposes the following motion:

Moved, that the Audit Committee of the ISO Board of Governors accepts the audit opinion issued on December 1, 2015 by PricewaterhouseCoopers LLC for the testing of specified control room operational processes for 2015, as attached to the memorandum dated December 10, 2015.

BACKGROUND

In accordance with tariff section 22.1.2.2, Management engaged PwC to perform the annual independent review of compliance with the ISO's operations policies and procedures. Management directed that PwC provide an audit opinion conducted in accordance with generally accepted auditing standards to verify that the ISO's operational processes were in compliance with select operations procedures representing generally accepted good utility practice.

For 2015, based on stakeholder feedback, Management chose to review processes related to multiple 2014 implementation efforts. This topic was suggested by California Department of Water Resources as an area they would like to have reviewed and Management concurred with the recommendation. Audit scope criteria included

operating procedures related to Energy Imbalance Market (EIM), FERC 764 (fifteen minute market & intra-hour transmission scheduling) and FERC 789 (new contingency reserve requirements) implementations. Procedures related to tool and task changes on the Interchange Scheduling desk were also reviewed.

This examination scope affords an independent assessment of whether the processes in place are being followed, providing valuable feedback for continuous improvement of the ISO's control room processes.

This year's review was conducted in the Folsom control room. The auditors observed the Interchange Schedulers, Generation Dispatchers, and Real-Time Market Operators on August 31 – September 4, 2015 and November 2 - 6, 2015.

PwC performed the audit based on an attestation examination that results in an audit opinion. The examination included:

- The actual operations activities associated with the indicated scope.
- The validation of the information provided in the operators logs.

RESULTS

The review included processes set forth in the following Operating/Desktop Procedures:

- Pre-Schedule and Check-Out Validation, Operating Procedure #1510
- Contract Reference Number (CRN) Transfer – Day-Ahead, Operating Procedure #1520
- NERC Tagging Requirements, Operating Procedure #2510
- Real-Time and After the Fact Check Out, Operating Procedure #2520
- Manual Dispatch on Interties, Operating Procedure #2530
- Interchange Schedule Curtailments, Operating Procedure #2540
- Inadvertent Interchange ATEC Payback, Operating Procedure #2550
- Market Disruption-EIM, Operating Procedure #2720
- WebOMS Guide for NRS-RA Outage Management, Desktop Procedure INT-004
- Creating Manual Market Reservations in ITS, Desktop Procedure INT-010
- Real Time Market Desk Operations, Desktop Procedure RTM-001
- EIM Market Suspension and Administrative Price Real-Time Market Desk actions, Desktop Procedure RTM-002

The audit focused on twenty eight procedure elements within these twelve Operating/Desktop Procedures. The elements of the ISO's Operating Procedures included by Management in its assertion were selected on the basis that they were integral to the scope described above and could be objectively compared against actual operating practice.

PwC observed no exceptions.

The ten-day audit period included a total of 50 hours in which PwC directly observed operator actions. These included most hours of the day during Monday through Friday. Evidence was also collected for times in which there was no PwC auditor conducting direct observation evidence.

Of the twenty eight operating procedure elements audited, ten were validations that occurred every hour. Eighteen elements were event-based and of those eighteen, three occurred during the audit period.

PwC also observed seven additional Operating/Desktop elements that are not included in their report due to the confidential nature of those procedures. These procedures are not posted at the public level, therefore cannot be included in the publicly available PwC report.

All seven of these elements are event-based and none of them occurred during the observation period.

This additional scope was comprised of the following Operating/Desktop Procedures:

- Ancillary Service Requirements Setter, Desktop Procedure GEN-007
- COI Master Operating Procedure, Operating Procedure #6110
- RT Market Desk Emergency Operations, Desktop Procedure RTM-003
- Non-Firm Tag Validation, Desktop Procedure # INT-005

CONCLUSION

Management recommends that the Audit Committee accept the audit opinion issued on December 1, 2015.