

Operating Committee
PJM Conference & Training Center, Audubon, PA
January 5, 2016
9:00 a.m. – 3:30 p.m. EPT

Administration

The OC Agenda for this meeting was approved.

Draft Minutes of the December 1, 2015 OC meeting were reviewed and approved.

The OC Work Plan was reviewed.

The OC Posting Report Card was reviewed. Members were also informed that, going forward, the Posting Report Card will not be reviewed as part of the formal agenda. The report card will still be posted as part of the OC meeting materials each month.

Review of Operations

Review of Operational Events

Mr. Chris Pilong, PJM, reviewed PJM Operations since the last OC Meeting. The review included only November operational statistics. There was 1 Cold Weather Alert and 2 Synchronous Reserve events during this time.

Endorsements / Approvals

Manual 40 Changes

Mr. Glen Boyle, PJM, reviewed the proposed changes to Manual 40: Training and Certification Requirements. The manual changes were based on the SOS's approved proposal to resolve the Training and Certification Non-Compliance issue. Section 3.3 was updated to include Member Representative and Compliance contact in the communication of non-compliance. Language in this section was also modified to include notice of potential OA/OATT violation, as well as language requiring operators to be removed from shift responsibilities if compliance obligations are not met. Several administrative changes were also made throughout the manual which were unrelated to the Training and Certification Non-Compliance issue. **The Operating Committee endorsed these changes with 0 objections and 0 abstentions.**

[Issue Tracking: PJM Training and Certification Requirements Non-Compliance.](#)

Manual 38 Changes

Mr. Liem Hoang, PJM, reviewed the proposed changes to Manual 38: Operations Planning. The changes were administrative in nature and involved corrections to grammar, terminology changes for consistency purposes, and an update to the Interregional Study groups identified in Section 1.2. **The Operating Committee endorsed these changes with 0 objections and 0 abstentions.**

First Readings

There were no First Readings completed at this Operating Committee Meeting.

OC Subcommittee Updates

System Operations Subcommittee (SOS)

Mr. Pilong provided a summary of the most recent SOS meeting.

Systems Information Subcommittee (SIS)

Mr. Ron Graff, PJM, provided a summary of the most recent SIS meeting.

System Restoration Coordinators Subcommittee (SRCS)

The SRCS had not met since the last OC meeting. The next SRCS meeting is scheduled for February 11, 2016.

Tool and Informational Updates

Review of Operating Metrics

Ms. Chantal Hendrzak, PJM, reviewed the PJM Operating Metrics Slides, updated with November and December metrics data. Metrics included PJM's load forecast error, BAAL performance, transmission / generation outage statistics, and Perfect Dispatch performance.

NERC Lessons Learned

There were no new NERC Lessons Learned posted since the last OC meeting.

Pricing Interface Update

There were no new or updated Closed Loop Interfaces implemented since the last OC.

Frequency Response Update

- a. Mr. Eric Hsia, PJM, provided an update on PJM's Frequency Response Performance with respect to the new BAL-003-1 standard. Field trials were used to calculate Frequency Response Obligation (FRO). PJM's field trial performance exceeded FRO every year since 2012.
- b. Mr. David Schweizer, PJM, reviewed the results of the June 2015 Generator Governor survey which was conducted as part of a response to a related NERC Advisory issued on February 5, 2015. In the interest of gathering a more complete, updated set of unit governor data, PJM will be conducting a follow up survey. The survey is expected to be sent out in late January 2016 via eDART, and questions will be pre-populated with previously provided Generator Owner responses.

Hot Weather / Cold Weather Update

Mr. Dave Souder, PJM, informed members that all Hot Weather and Cold Weather Action Items have now been completed. The last update on this item was presented during the June OC meeting. Since that last update, Cold Weather action items related to Capacity Performance, regulation market rules, and gas infrastructure future adequacy have been completed. Hot Weather action items related to the following topics were also completed since the last update was provided: synchronized reserves, cascading outage analysis procedure, facility limits, emergency procedures tool, and system modeling.

Generator Cold Weather Testing Update

Mr. Schweizer provided an update on the Generator Cold Weather Testing efforts. Statistics showed a decrease in the number of units that were able to complete the testing exercise compared to last year due to mild weather throughout the month of December. As a result, PJM will extend testing into the

first week of January 2016. PJM will consider extending tests beyond the first week of January 2016 until the first significant cold weather period occurs, or until the total tested MW amount exceeds the total tested MW amount from 2014.

Phasor Measurement Unit (PMU) Placement Strategy

Mr. Dave Hislop, PJM, reviewed PJM's proposed PMU Placement Strategy. PJM currently utilizes PMU data for both operational and system planning purposes. In 2015, PJM Transmission Owners expanded PMU infrastructure to 386 PMUs at 123 substations. PMU installations are expected to begin expanding to the (Generation Owner) low side of generator step-up (GSU) transformers in early 2016. PJM is currently developing its initial list of proposed PMU locations. The criteria used to select PJM's proposed PMU locations was reviewed and included areas of known stability concern, substations impactful to IROs, and several other criteria. This list involves approximately 60 substations, 12 of which already contain PMUs (but not on the GSU low-side).

NERC and Regional Coordination Update

Mr. Mark Kuras, PJM, provided an update on NERC, SERC and RFC standards and other pertinent regulatory and compliance information, and solicited feedback from the members on the N&RC departmental efforts. There are currently several standards under development including BAL-005-0.2b, BAL-006-2, FAC-001-1, IRO-018-1 and TOP-010-1. Standards which became enforceable on January 1, 2016 include FAC-001-2, FAC-002-2, NUC-001-3, and PRC-005-4.

Capacity Performance

Emergency Procedures Notification

Mr. Hislop reviewed the process for setting up Emergency Procedures email notifications. A related presentation and short instructional video can be found on the PJM website at the following location under 'User Profile & Email Notification Setup':

<http://www.pjm.com/markets-and-operations/etools/emerg-procedure.aspx>

Comparison of Generator Outage Obligations

Mr. Schweizer provided an overview of the existing generator outage rules as they relate to capacity vs. energy-only resources. Several sections of Manual 10 were referenced (sections 1.2, 1.3 and 2.1) along with several TOP and IRO NERC standards. References were also made to the PJM Open Access Transmission Tariff (OATT), Operating Agreement (OA) and Reliability Assurance Agreement (RAA). Based on these references, PJM's position is that the Planned, Maintenance and Forced Outage reporting rules described in Manual 10 are applicable to both Capacity and Energy Resources. PJM plans to update Manual 10 with a future revision to provide additional clarity around the generator outage scheduling requirements of Energy Resources.

Unit Specific Parameter Adjustment Process

Ms. Alpa Jani, PJM, reviewed additional details related to the Unit Specific Parameter Adjustment Process. A description of the process as it currently stands was provided, including the unit parameters to be reviewed based on their current eMKT user guide definitions. The Operating Parameter Definitions proposed problem statement currently being discussed at the Market Implementation Committee (MIC) was then reviewed. Finally, a transition plan for incorporating any

changes associated with the proposed problem statement into the Unit Specific Adjustment Process was provided.

Performance Assessment Hour Ramp Rate Discussion and Proposed Problem Statement

Ms. Rebecca Stadelmeyer, PJM, presented a proposal for incorporating a Ramp Rate parameter into the Performance Assessment Hour process. Based on stakeholder discussion it was determined that additional education was needed before determining a path forward.

Performance Assessment Hour

Mr. Pulong presented details around the new Performance Assessment Guidance tab to be added to the Emergency Procedures Application. Ms. Stadelmeyer then reviewed several Capacity Performance operational scenarios involving Partial Hour Assessments.