

System Operations Subcommittee – Generation and Transmission
 PJM Conference and Training Center
 August 26, 2015
 09:00am – 11:00am (EDT)

Transmission Members Present

LAST NAME	FIRST NAME	COMPANY	
D'Antonio (Acting Chair)	Phil	PJM Interconnection	In-Person
Scott (Secretary)	Nicole	PJM Interconnection	In-Person
Davis	Connie	City of Cleveland, DPU	Teleconference
Dinsmore	Frank	Appalachian Power Company	Teleconference
Garavaglia	John	Commonwealth Edison Company	Teleconference
Garbini	Marj	Potomac Electric Power Company	Teleconference
Gibellino	Dana	Appalachian Power Company	Teleconference
Guarneri	Matt	Baltimore Gas & Electric	Teleconference
Kern	Steve	American Transmission Systems	Teleconference
Klohonatz	Mark	Allegheny Power	Teleconference
Lowe	Connie	Dominion Virginia Power	Teleconference
Miller	Jermel	Baltimore Gas & Electric	Teleconference
Parker	Matt	Dominion Virginia Power	Teleconference
Sauriol	Dennis	AEP Ohio Transmission Company	Teleconference
Schloendorn	Ron	PECO	In-Person
Skumanich	Bill	PPL Electric Utilities Corp	Teleconference
Stine	Randy	Metropolitan Edison Company	Teleconference
Sullivan	James	Neptune Regional Transmission System	Teleconference
Wharton	Ron	Public Service Electric and Gas Company	Teleconference

Generation Members Present

Bonner	Charles	Dominion Virginia Power	Teleconference
Bryant	Eric	FirstEnergy Solutions Corporation	Teleconference
Campbell	Bruce	EnergyConnect Inc	Teleconference
Grear	Mark	Exel Generation Co.	Teleconference
Hoatson	Tom	Riverside Generating	Teleconference
Horstmann	John	Dayton Power & Light Company	Teleconference
Hopkins	Sandra	Dominion Virginia Power	Teleconference
James	Denise	Dominion Energy Marketing	Teleconference
Jankowski	Christopher	Talen Energy Marketing	Teleconference
Jardot	Gina	Essential Power Rock Springs	Teleconference

Johnston	Todd	Appalachian Power Company	Teleconference
Keilholtz	Kenny	GenOn Energy Management	Teleconference
Libbos	Robin	Allegheny Power	Teleconference
McKinney	Greg	East Kentucky Power Cooperative	Teleconference
Ondayko	Brock	Appalachian Power Company	Teleconference
Patten	Kevin	Appalachian Power Company	Teleconference
Pleiss	Gary	Jersey Central Power & Light company	Teleconference
Rhodes	Sherri	FirstEnergy Corporation	Teleconference
Scoglietti	Barbara	Tangent Energy Solutions	Teleconference
Talmadge	Tim	Dominion Energy Marketing	Teleconference
Vicini	Dave	PPL EnergyPlus	Teleconference
Whittaker	Greg	East Kentucky Power Cooperative	Teleconference

Others Present

Burlew	Jim	PJM Interconnection	In-Person
Curley	Maureen	PJM Interconnection	In-Person
Hatch	Kevin	PJM Interconnection	In-Person
Hendrzak	Chantal	PJM Interconnection	In-Person
Hislop	David	PJM Interconnection	In-Person
Hoang	Liem	PJM Interconnection	In-Person
Hoke	Mike	PJM Interconnection	In-Person
Huang	Nancy	PJM Interconnection	In-Person
Ike-Egbuonu	Chidi	PJM Interconnection	In-Person
Kappagantula	Sri	PJM Interconnection	In-Person
Schweizer	David	PJM Interconnection	In-Person
Souder	Dave	PJM Interconnection	In-Person
Tam	Simon	PJM Interconnection	In-Person

Administration

1. The Agenda for this meeting was approved.
2. The Draft Minutes of the July 29th, 2015 Joint meeting were approved.

Review of Operations

3. Mr. D'Antonio provided an update of System Operations. For July, the CPS1 was 153.0%, CPS2 was 86.1%, BAAL was 99.7%, and DCS was 100%. For the partial month of August:

1 Hot Weather Alert

- 1 High system voltage event
- 2 Shared Reserves events, 2 Spinning Events, and 9 PCLLRWs
- 1 Minimum Gen Advisory Event, 7 Minimum Gen Alert Events
- 1 Geomagnetic Disturbance Warning

Member Operational Issues: None

Working Group and Task Force Updates

4. eDART User Groups – Ms. Ike-Egbuonu provided an update on eDART changes and enhancements. The IRC testing has moved to two daily tests (0900 and 1500). PJM is contacting non-reporters for the second test (1500) only. The tool is still on track to become official on **9/1/15**. Issues/questions/feedback should still be sent to IRC_help@pjm.com. The next eDART release is scheduled for **9/16/15**. It will include the TOA-AC NDA signoff requirement for transmission users, transmission ticket linkage, network model notification, company system impacts report, and TERM reports of expiring temporary tickets and unrated facilities. All Q3 enhancements are available in sandbox. Changes coming in eDART for capacity performance (that will be documented in M-10) will be effective **10/1/15**. They include new fields on gen tickets called 'early return time' (forecasted/planned outages only) and 'early recall time' (maintenance outages only). There will also be a new button on gen tickets main menu called 'Recalled Tickets' which will be red when there are recalled outages.
5. Dispatcher Training Subcommittee (DTS) – Mr. Hoke provided some reminders on training from DTS. The new IRC training is loaded in PJM LMS and must be completed by **8/31/15**. Upcoming trainings include *Power System Fundamentals* (9/15 – 9/17); *Market Optimization Workshop* (9/15 – 9/17) [**Note that this training is full, anyone registered but not attending should please cancel to allow those on the waiting list to attend**]; *Fundamentals of Transmission Operation* (9/21 – 9/24 and 9/29 – 10/1); *Generator Operations Fundamentals* (10/5 – 10/9)

System Operator Training and Certification

6. Ms. Curley provided the results of certification and training statuses. Generation: 8 companies were non-compliant for certification, 3 have a mitigation plan in place; 4 companies were non-compliant for training, 2 have a mitigation plan in place. Small Generation: 4 companies were non-compliant for both certification and training and requirements, 1 of those has a mitigation plan in place. Transmission: All were compliant for certification and training. For CSP's: 5 companies were non-compliant, 1 of those companies has a mitigation plan in place. PJM is working with all companies to develop mitigation plans.

Regional Standards, NAESB, and Compliance Update

7. Mr. Kappagantula provided an update on NERC, SERC, RFC, and NAESB Regional Standards. BAL-005-0.2b, BAL-006-2, FAC-001-1: Project 2010-14.2 Phase 2 of Balancing Authority Reliability-based Controls has a comment period thru 9/14/15 and a ballot period from 9/4/15 – 9/14/15. TOP-009-1 Retirement of PRC-001-1.1: Project 2007-06.2 Phase 2 of System Protection Coordination has a

comment period thru 9/11/15 and a ballot period from 9/2/15 – 9/11/15. PRC-027-1 Retirement of PRC-001-1.1: Project 2007-06 System Protection Coordination has a comment period thru 9/11/15 and a ballot period from 9/2/15 – 9/11/15. PRC-005-3: Project 2007-17.4 PRC-005 FERC Order No. 803 Directive has a comment period thru 9/16/15 and a ballot period from 9/4/15 – 9/16/15. MOD-031-2: Project 2010-04.1 MOD-031 FERC Order No. 804 Directives has a comment period thru 9/18/15 and a ballot period from 9/9/15 – 9/18/15. FAC-010-3, FAC-011-3, FAC-014-2: Project 2015-09 Establish and Communicate System Operating Limits has an informal comment period from 8/20/15 – 9/21/15. He also reviewed the standards subject to future enforcement thru July 1, 2017. As of **October 1, 2015**, the following standards are being enforced: CIP-014-1: Physical Security, COM-001-2: Communications, and PRC-006-2: Automatic Underfrequency Load Shedding. The remainder of the list can be found in the presentation.

8. The SOS addressed any ongoing Member issues regarding NERC/RFC Audits. None identified.

Manual Updates

9. Mr. D'Antonio reviewed changes to M-37: Reliability Coordination. Changes included more detail around PJM's Enterprise Change Management Standard which encompasses the Change Control Review Board (CCRB); updates to the SOL definition and some IROL tables and definitions; clarification to SOL limit violations reporting; and some updated nomenclature. It was also noted that more changes related to TLR and SOL methodology will be coming for this manual this fall. This was the second read for this manual review. It has moved on for endorsement.
10. Mr. Schweizer reviewed changes to M-10: Prescheduling Operations. Changes included added notes for planned and maintenance outages that refer to the EL15-29-000 filing associated with Capacity Performance. There was also a note added that was NOT related to EL15-29-000 for Maintenance outage rules and regulations that was a result of a business rule clarification presented at the 4/7/15 OC meeting. This was the second read for this manual review. It will be moving to the OC for endorsement.
11. Mr. Schweizer reviewed changes to M-14D: Generator Operational Requirements. These changes are related to the Cold Weather Resource Operational Exercise which was worked thru in the 2015 OC meetings. Some suggestions for changes to the program were made after the 2014/2015 Winter Exercise via surveys. It was decided to maintain status quo with some minor process changes for 2015/2016. Minor changes include: requiring primary AND alternate dates for the exercise; clarifying CC offers for generators exercising one CT on alternate fuel; requiring generators to submit results of the tests to PJM; and reporting completion of the winter readiness checklist via eDART. The draft manual language reflects these changes and this revision will be effective **10/2/15**. This exercise remains voluntary.

Fall Restoration Drill Update

12. Mr. Hatch provided an update on the upcoming Fall Restoration Drills. The dates for the drills are now included in the SOS minutes and future agendas. Generation Owners that own black start units, nuclear units, and/or units with time to start < 4 hours have been requested to participate. GO's have been asked to check with their training liaisons if their company has not yet replied to the request.

GO's can participate remotely. Their real-time phone numbers will be used unless an alternate number is provided for the drills. There is a section on GO expectations in the drill packet provided. CEH hours will be available. There will be an online training refresh available via PJM LMS on 9/15/15. There is also an upcoming System Restoration Coordinator Subcommittee meeting on 9/9/15 which members are encouraged to attend for more detail on the drills.

Cloverdale – Lexington Winter 2016 Outage & Bath County Stability SPS Extension

13. Mr. Hoang provided information on some upcoming outages on Cloverdale – Lexington 500 kV line. The first outage, related to RTEP Project 1797.1 (reconductor), is scheduled from 1/14/16 – 6/30/16. Expected in-service date is 6/30/16. The second outage, related to supplemental project S0505 (replacing Cloverdale transformers), is scheduled from 9/17/16 – 10/21/16. Expected in-service date is 12/31/16. As far as capacity impact, there will be a one generator reduction at Bath County due to stability which is mitigated by the Bath County SPS. No reliability issues are anticipated at PJM load of 131,000 MW. Sensitivity studies performed at higher loads (polar vortex potential) indicated possible need for local PCLLRW. The Bath County stability SPS was originally intended to be temporary for use during the Dooms – Lexington outage. PJM and DOM are evaluating the use of this SPS beyond 2016 as it could be beneficial during future large outages in the area.

TO/TOP Matrix V9 Update

14. Mr. Kappagantula provided information on the latest version of the TO/TOP matrix which will be presented to the TOA-AC for approval. This matrix identifies assigned/shared tasks between PJM and member TO's for NERC Reliability Standards applicable to PJM as the TOP. It is used as an audit tool by PJM. Changes for V9 included: administrative changes, removal of inactive standards that are 3 years past their enforceable dates (for audit purposes), and addition of new standards COM-001-2, COM-002-4, PER-005-2. Some changes were also made to existing standards which had requirement revisions (EOP-003-2, PRC-001-1, PRC-022-1, TOP-006-2).

Oscillation Mitigation Procedure

15. Ms. Huang provided information on a new procedure that will be included in the next revision of M-03: Transmission Operations. The oscillation mitigation procedure will include documentation and actions for PJM and members to take if an oscillation event is detected (from PJM tools or member notification).

Certification/Training Non-Compliance Issue Charge Initial Discussion

16. Mr. Hoke reviewed the issue charge regarding certification/training non-compliance which was discussed at a previous SOS meeting. The issue charge was brought to the OC and assigned to be worked thru at the Joint SOS. The compliance rules are outlined in PJM Manual M-40 and they are referenced in the tariff and operating agreement. At the September SOS, the CBIR (Consensus Based Issue Resolution) process will begin. The process will include identification of member interests, solution components, and a recommended solution which will then be brought to the OC for endorsement.

Future Agenda Items

Review of Communication protocols per COM-002-4 Standard (Sept/Oct) – Glen Boyle

Synchrophasors – how will PJM be using them in 2015 – Dave Hislop

Reactive Curve Verification – recurring

Generator semi-annual review (October/April)

TO semi-annual review (November/May)

Generator Performance Monitor Update

Drill Dates

February 24-25, 2015	Spring RTO Restoration Drill
May 12, 2015	Summer Emergency Procedures Drill (Back-up: 5/19/15)
September 29-30, 2015	AEP, DEOK Fall Restoration Drill
October 1, 2015	Dominion Fall Restoration Drill
October 7, 2015	PEPCO, BGE Fall Restoration Drill
October 8, 2015	AE, DPL Fall Restoration Drill
October 14, 2015	FE-South, FE- PN, DUQ Fall Restoration Drill
October 15, 2015	PPL, FE- ME, UGI Fall Restoration Drill
October 21-22, 2015	Dayton, EKPC Fall Restoration Drill
October 22, 2015	FE-West (ATSI), CPP Fall Restoration Drill
October 28, 2015	ComEd, RMU, PECO Fall Restoration Drill
October 29, 2015	FE-JC Fall Restoration Drill
November 4, 2015	PS, Rockland Fall Restoration Drill
November 10, 2015	Winter Emergency Procedures Drill (Back-up: 11/17/15)

Future Meeting Dates

August 26, 2015	9:00 AM	PJM Conference & Training Center
September 30, 2015	9:00 AM	PJM Conference & Training Center
October 28, 2015	9:00 AM	PJM Conference & Training Center
November 24, 2015	9:00 AM	PJM Conference & Training Center
December 22, 2015	9:00 AM	PJM Conference & Training Center

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Anti-trust:

You may not discuss any topics that violate, or that might appear to violate, the antitrust laws including but not limited to agreements between or among competitors regarding prices, bid and offer practices, availability of service, product design, terms of sale, division of markets, allocation of customers or any other activity that might unreasonably restrain competition. If any of these items are discussed the chair will re-direct the conversation. If the conversation still persists, parties will be asked to leave the meeting or the meeting will be adjourned.

Code of Conduct:

As a mandatory condition of attendance at today's meeting, attendees agree to adhere to the PJM Code of Conduct as detailed in PJM Manual M-34 section 4.5, including, but not limited to, participants' responsibilities and rules regarding the dissemination of meeting discussion and materials.

Public Meetings/Media Participation:

Unless otherwise noted, PJM stakeholder meetings are open to the public and to members of the media. Members of the media are asked to announce their attendance at all PJM stakeholder meetings at the beginning of the meeting or at the point they join a meeting already in progress. Members of the Media are reminded that speakers at PJM meetings cannot be quoted without explicit permission from the speaker. PJM Members are reminded that "detailed

transcriptional meeting notes" and white board notes from "brainstorming sessions" shall not be disseminated. Stakeholders are also not allowed to create audio, video or online recordings of PJM meetings.

On the Phone Dial



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