Draft Minutes

Planning Committee
PJM Conference and Training Center, Audubon, PA
June 9, 2016

Administration

1. Mr. Steve Herling, PJM, called the meeting to order and asked if the Planning Committee had any additional items for the agenda. There were no suggestions for additional agenda items.

2. Mr. Herling asked Mr. Michael Herman to review the meeting minutes of the May 12, 2016 Planning Committee meeting. Mr. Herling asked the Planning Committee to approve the minutes. Mr. Dave Pratzon made a motion to approve the minutes. Mr. Ronnie Bailey seconded the motion. In a voice vote, the Planning Committee approved the May 12th Planning Committee Minutes.

Endorsements/Approvals

3. **PJM Manual 14C Updates**

   Mr. Jason Shoemaker, PJM, presented redline changes to Manual 14C. The changes include additions to Manual 14C to support the inclusions of Order 1000 processes. Mr. Dave Pratzon made a motion to endorse and Mr. Carl Johnson seconded the motion. **In a voice vote, the Planning Committee endorsed the changes regarding updates to Manual 14C.**

4. **PJM Manual 14B Updates**

   Mr. Michael Herman, PJM, presented revisions to Manual 14B. The revisions included updates to Light Load and Winter Peak Reliability analyses to align with current practices; references to TPL-001-1; and updates to Attachment G including compliance language. Mr. Dave Pratzon made a motion to endorse and Mr. John Syner seconded the motion. **In a voice vote, the Planning Committee endorsed the changes regarding updates to Manual 14B.**

5. **IRM Study Assumptions**

   Mr. Tom Falin, PJM, presented the IRM study assumptions as developed by the Resource Adequacy Analysis Subcommittee. Mr. David Scarpignato made a motion to endorse and Mr. Dave Pratzon seconded the motion. **In a voice vote, the Planning Committee endorsed the IRM study assumptions.**

6. **PJM Manual 7 Updates**

   Mr. Glenn Bray, PJM Relay Subcommittee Chairman, presented changes to PJM Manual 7, recommended as part of the PJM Relay Subcommittee's biennial review of Manual 7. Based on questions from the membership, updates to Appendix F: Triggered Current Limiters was removed from the approval at this meeting. This item will be brought back to a future Planning Committee meeting pending the outcome of investigation into the prevalence of this technology in PJM's system. Ms. Lisa Krizenoskas made a motion to endorse and Mr. David Scarpignato seconded the motion. **In a voice vote, the Planning Committee endorsed the updates to PJM Manual 7 (with the exception of the Appendix F updates).**

First Readings

7. **Transmission Owner Upgrades**

   Mr. Mark Sims, PJM, discussed RTEP process enhancements related to transmission substation equipment. He also presented revisions to the PJM Operating Agreement. Requests for additions and clarifications to the language were noted and will be considered. Members are asked to review the proposed Operating Agreement revisions that have been made available under the May 12th Planning Committee material. The committee will be asked to endorse this language at the July meeting. Planning Committee Website

8. **PJM Manual 20 Updates**

   Mr. Tom Falin, PJM, presented updates to PJM Manual 20, which are a result of a periodic review of this manual. Revisions included updating out of date language to ensure the manual reflects current processes, as well as revisions needed to clarify the implementation of Capacity Performance. Members are asked to review the proposed manual changes that were made available under the June 9th Planning Committee material. The committee will be asked to endorse these manual changes at the July meeting. Planning Committee Website

Informational Updates

9. **DEDSTF Update**

   Mr. Herman, PJM, presented an update on the progress of the Designated Entity Design Standards Task Force. Mr. Herman explained that this task force has been divided into three sub task forces charged with addressing the following areas: 1) Substations 2) Transmission Lines 3) System Protection and Control Design and Coordination. Mr. Herman presented an update of the status of each of these three subgroups and stated that he will return to the Planning Committee in September with expected timelines for completion. PJM DEDSTF

10. **PJM/MISO Queue Study Coordination & Retirement Studies**

    Mr. Aaron Berner, PJM, provided an update regarding the April 21, 2016 FERC order requiring PJM and MISO to make changes to the location and content of the MISO and PJM queue coordination language as well as adding language for deactivation study coordination. Mr. Berner indicated that the next MISO/PJM JCM meeting will occur in late August, during which the retirement language changes will be reviewed for comment. Additionally, the changes for the retirement and queue coordination language in the JOA and the queue coordination language removal from Manual 14A will be brought back to the PC.

11. **Network Upgrade Cost Allocation**

    Mr. Berner, PJM, provided an update in relation to issues PJM has identified in regards to the network upgrade cost allocation process for New Service Queue Requests. Mr. Berner explained that these updates will not change existing cost allocation procedures for baseline cost allocation. A problem statement including examples of the issue will be brought to the July Planning Committee meeting.

12. **PJM Interconnection Queue Status Update**

    Mr. Dave Egan, PJM, provided an update of the status of the PJM interconnection queues. This update included charts and graphs depicting MW values that have entered the queue in recent months as well as the progression of new generation by study type. Mr. Egan will continue to give periodic updates of the status of the Queues to the Planning Committee.

13. **Voltage Threshold**

    Ms. Sue Glatz, PJM, discussed activities regarding voltage threshold including a deficiency notice that PJM has received and the associated additional information that has been requested by FERC.

14. **TPL Spare Equipment Strategy**

    Mr. Stan Sliwa, PJM, provided an update on TPL Spare equipment strategies. Mr. Sliwa described next steps in PJM spare equipment strategy including polling Transmission Owners regarding lead time and strategies.

15. **MOD-032 Update**

    Mr. Jonathan Thompson, PJM, provided an update of the MOD-032 Gen Model data input system. Mr. Thompson explained that the system went live on May 1 2016, and all Generation Owners are required to submit generator data by July 31, 2016. Please contact MOD-032@pjm.com with any questions.

16. **NERC/RRO Update**

    Mr. Srinivas Kappagantula, PJM, provided an update on recent NERC activities and PJM compliance activities. NERC standards subject to future enforcement can be found under the June 9th Planning Committee Material at the Planning Committee Website.

17. **Dominion SPS Modification**

    Mr. Kyle Hannah, Dominion, presented modification to the existing Clover SPS based on PJM baseline project b1907, a third 230/500 kV transformer at Clover.

18. **COMED Planning Criteria**

    Mr. Ronald Regner, COMED, presented revisions to the COMED Planning Criteria. These revisions include new requirements for generators wishing to cut into an existing line for their point of interconnection, and new substation requirements for 345 kV and 765 kV substations, as well as breaker configuration when modifying an existing nuclear substation.

19. **Tech Change Forum**

    Mr. Jim Gluck, PJM, discussed a new member-focused group called the Tech Change Forum. This new group will centralize and share information about system changes that are being made

and will provide a forum for gathering member feedback on change readiness and application design. Please contact your Client Manager if you have any questions.

Informational Section

PJM/NYISO Wheel Modeling

The current PJM/NYISO wheel agreement is set to expire in April 2017 and ConEd has communicated their intent to not extend the contract. The wheel agreement contracts the transfer of power from PJM to NYISO at Goethals and Farragut and back to PJM from NYISO at the Ramapo and Waldwick interfaces. Currently a four party discussion (PJM, NYISO, ConEd, PSE&G) is ongoing to determine updated operational and planning protocols moving forward.

Order 1000 Lessons Learned

On April 29, 2016, an Order 1000 Lessons Learned meeting was held. PJM presented a path forward which included 3 tracks: Reliability project process document, Energy Efficiency project process document, and TEAC Redesign. A fourth track was suggested at the meeting: Upgrade projects. Also, stakeholders requested an education session on the overall RTEP process before embarking on discussion on solutions on any of the tracks. Additional meetings will be scheduled.

Model On Demand Update

PJM has posted the 12 MMWG cases within Model On Demand and distributed profiles from last years MMWG cases to facilitate the creation of profiles for this years series of MMWG cases. On June 17th, TOs need to provide profiles for the 12 posted cases to facilitate the finalization of Trial 1 cases. This date will be monitored for compliance.

Subcommittee/Task Force Updates

Transmission Replacement Processes Senior Task Force (TRPSTF)

The TRPSTF Charter was approved at the MRC on May 26th with no objections or abstentions. Education sessions are currently underway, and the first was held on May 9th, provided an overview of the PJM RTEP planning process. The second session was presented by the Transmission Owners on May 23rd, covering planning criteria and asset management. The next meeting on June 3rd will be the third education session, and cover several modules, including duties, rights, and obligations of signatories to the CTOA along with a review of Order 888, Order 890, Order 1000, and the Atlantic City decision. Additional topics will include FERC rules and orders surrounding planning process and transparency, and cost recovery and allocation.

Please encourage any subject matter experts who may later participate in the TRPSTF to view the recorded training sessions and attend future education sessions, as it is important for participants to remain on the same page for continued progress of this senior task force. Please visit the TRPSTF site for further information, and direct any questions you may have to the TRPSTF secretaries (Julia Spatafore and Jason Quevada).

To receive email notifications, please subscribe to the Transmission Replacement Processes Senior Task Force list serve on the My Email Lists page on your My PJM account.

Future Meeting Dates

July 14, 2016	9:30 a.m.	PJM Conference and Training Center, Audubon, PA
August 11, 2016	9:30 a.m.	PJM Conference and Training Center, Audubon, PA
September 15, 2016	9:30 a.m.	PJM Conference and Training Center, Audubon, PA
October 6, 2016	9:30 a.m.	PJM Conference and Training Center, Audubon, PA
November 3, 2016	9:30 a.m.	PJM Conference and Training Center, Audubon, PA
December 15, 2016	9:30 a.m.	PJM Conference and Training Center, Audubon, PA

Author: Michael Herman

Attendees

Attendees	Company	Sector
Steve Herling (Chair)	PJM Interconnection, LLC	Not Applicable
Michael Herman (Acting Secretary)	PJM Interconnection, LLC	Not Applicable
Thomas Rutigliano	Achieving Equilibrium	Not Applicable
Kiran Thammineni	Ameren Corporation	Not Applicable
Chris Norton	American Municipal Power, Inc.	Electric Distributor
Edward Tatum	American Municipal Power, Inc.	Electric Distributor
Gary Fuerst	American Transmission Systems, Inc.	Transmission Owner
Jim Zweig	American Transmission Systems, Inc.	Transmission Owner
Brock Ondayko	Appalachain Power Company	Transmission Owner
Takis Laios	Appalachian Power Company	Transmission Owner
Markian Melnyk	Atlantic Grid Operations A, LLC	Other Supplier
Hugh Scott	Baltimore Gas and Electric Company	Transmission Owner
James Jablonski	Borough of Butler, Butler Electric Division	Electric Distributor
Tom Hoatson	Carroll County Energy LLC	Other Supplier
Yan Du	Central Transmission, LLC	Transmission Owner
Connie Davis	City of Cleveland, DPU, Div of Cleveland Public Pwr	Electric Distributor
Alan Engelmann	Commonwealth Edison Company	Transmission Owner
Kevin Happ	Commonwealth Edison Company	Transmission Owner
Paul Mills	Commonwealth Edison Company	Transmission Owner
Ronald Regner	Commonwealth Edison Company	Transmission Owner
Yonas Habtemichael	Constellation NewEnergy, Inc	Transmission Owner
Dan Griffiths	Consumer Advocates of PJM States	Not Applicable
Guy Filomena	Customized Energy Solutions, Ltd.*	Not Applicable
Carl Johnson	Customized Energy Solutions, Ltd.*	Not Applicable
Jonathan Sasser	Customized Energy Solutions, Ltd.*	Not Applicable
John Horstmann	Dayton Power & Light Company (The)	Transmission Owner

Mike Hurd	Dayton Power & Light Company (The)	Transmission Owner
Joseph DeLosa	DE Public Service Commission	Not Applicable
John Farber	DE Public Service Commission	Not Applicable
Matt Hartigan	Division of the Public Advocate of the State of Delaware	Other Supplier
Rebekah Kelman	DNVGL	Not Applicable
Ronnie Bailey	Dominion Virginia Power	Transmission Owner
Craig Crider	Dominion Virginia Power	Transmission Owner
Kyle Hannah	Dominion Virginia Power	Transmission Owner
Sarah Rana	Dominion Virginia Power	Transmission Owner
Frank Zhang	Dominion Virginia Power	Transmission Owner
George Owens	Downes Associates, Inc.	Other Supplier
Greg Pakela	DTE Energy Trading, Inc.	Other Supplier
Steve Steinkuhl	Duke Energy Business Services LLC	Transmission Owner
Julie Mason	Duke Energy Ohio, Inc.	Transmission Owner
Judy Stubbe	Duke Energy Ohio, Inc.	Transmission Owner
Steve Abate	Duquesne Light Company	Transmission Owner
Chad Hirsh	Duquesne Light Company	Transmission Owner
Iker Chocarro	E.on Climate & Renewables North America, Inc	Generation Owner
Chris Adams	East Kentucky Power Cooperative, Inc.	Transmission Owner
Darrin Adams	East Kentucky Power Cooperative, Inc.	Transmission Owner
Nathan Bradley	East Kentucky Power Cooperative, Inc.	Transmission Owner
John Brodbeck	EDP Renewables North America, LLC	Other Supplier
Brian Lonergan	Elliot Bay Energy	Other Supplier
Kevin Kilgallen	Emerald Energy Consulting, LLC	Not Applicable
Malcolm Ainspan	Energy Curtailment Specialists, Inc.	Not Applicable
Neil Burbure	Energy Initiatives Group	Not Applicable
Nicolas Anitsakis	ERM	Not Applicable
Nick Gangi	Eversource Energy	Not Applicable
Melanie Sanders	Exelon Business Services Company, LLC	Transmission Owner
Robert Taylor	Exelon Business Services Company, LLC	Transmission Owner
Sharon Midgley	Exelon Generation Co., LLC	Generation Owner
Roozbeh Shegarfi	Exelon Generation Co., LLC	Generation Owner
Alina Halay	Federal Energy Regulatory Commission (The)	Not Applicable
Chad Singer	Fellon McCord	Not Applicable
Thomas Bainbridge	FirstEnergy Solutions Corp.	Transmission Owner
Jim Benchek	FirstEnergy Solutions Corp.	Transmission Owner
Martin Bolan	FirstEnergy Solutions Corp.	Transmission Owner
Lou D'Alessandris	FirstEnergy Solutions Corp.	Transmission Owner
David Marton	FirstEnergy Solutions Corp.	Transmission Owner
Jeff Stuchell	FirstEnergy Solutions Corp.	Transmission Owner

John Syner	FirstEnergy Solutions Corp.	Transmission Owner
Michael Borgatti	Gabel and Associates	Not Applicable
Travis Stewart	Gabel and Associates	Not Applicable
Derek Hagaman	GT Power Group	Not Applicable
David Pratzon	GT Power Group	Not Applicable
Jim Nash	Hudson Transmission Partners, LLC	Other Supplier
William VanderLaan	Illinois Commerce Commission	Not Applicable
Kenneth Foladare	IMG Midstream LLC	Generation Owner
John Kopinski	ITC Mid-Atlantic Development LLC	Other Supplier
David Mindham	ITC Mid-Atlantic Development LLC	Other Supplier
Brenda Prokop	ITC Mid-Atlantic Development LLC	Other Supplier
Rehan Gilani	Leidos	Not Applicable
John Seelke	LS Power Transmission, LLC	Transmission Owner
Heather Thomson	Marec	Not Applicable
David Mabry	McNees Wallace & Nurick LLC	Not Applicable
Erik Hanser	Michigan Public Service Commission	Not Applicable
Adam Solomon	Midwest Independent Transmission System Operator, Inc.	Not Applicable
Christin Domian	Mitsubishi Electric Power Products Inc.	Not Applicable
Douglas Dickson	New Jersey Board of Public Utilities	Not Applicable
George Kogut	New York Power Authority	Other Supplier
Gabriel Hollis	Nextera Energy, Inc	Other Supplier
Frederico Von Pinho	NextEra Energy Transmission, LLC	Other Supplier
Neal Fitch	NRG Power Marketing LLC	Generation Owner
Yohannes Mariam	Office of the Peoples Counsel for the D.C.	End User Customer
John Donelson	Old Dominion Electric Cooperative	Electric Distributor
Robert Duan	Ontario Power Generation Inc.	Other Supplier
Iris Boci	PECO Energy Company	Transmission Owner
Mike Donnelly	PECO Energy Company	Transmission Owner
Dhruv Acharya	PEPCO Holdings, Inc.	Transmission Owner
Gloria Godson	PEPCO Holdings, Inc.	Transmission Owner
Aaron Berner	PJM Interconnection, LLC	Not Applicable
Jason Connell	PJM Interconnection, LLC	Not Applicable
Mary Ellen Driscoll	PJM Interconnection, LLC	Not Applicable
David Egan	PJM Interconnection, LLC	Not Applicable
Janell Fabiano	PJM Interconnection, LLC	Not Applicable
Tom Falin	PJM Interconnection, LLC	Not Applicable
Pauline Foley	PJM Interconnection, LLC	Not Applicable
Andrew Gledhill	PJM Interconnection, LLC	Not Applicable
Erich Mauroschadt	PJM Interconnection, LLC	Not Applicable
Paul McGlynn (Acting Chair)	PJM Interconnection, LLC	Not Applicable

Wenzhen Qui	PJM Interconnection, LLC	Not Applicable
Jason Quevada	PJM Interconnection, LLC	Not Applicable
Patricio Rocha Garrido	PJM Interconnection, LLC	Not Applicable
Jason Shoemaker	PJM Interconnection, LLC	Not Applicable
Stan Sliwa	PJM Interconnection, LLC	Not Applicable
Mark Sims	PJM Interconnection, LLC	Not Applicable
Julia Spatafore	PJM Interconnection, LLC	Not Applicable
Lauren Strella	PJM Interconnection, LLC	Not Applicable
Mike Ward	PJM Interconnection, LLC	Not Applicable
Glenn Weiss	PJM Interconnection, LLC	Not Applicable
Alex Worcester	PJM Interconnection, LLC	Not Applicable
Jeff Palermo	PJP Consulting	Not Applicable
Zelalem Tekle	PowerGEM	Not Applicable
Shadab Ali	PPL Electric Utilities Corp. dba PPL Utilities	Transmission Owner
Lisa Krizenoskas	PPL Electric Utilities Corp. dba PPL Utilities	Transmission Owner
Steven Nadel	PPL Electric Utilities Corp. dba PPL Utilities	Transmission Owner
Frank Richardson	PPL Electric Utilities Corp. dba PPL Utilities	Transmission Owner
Sam Giordano	PSEG Energy Resources and Trade LLC	Transmission Owner
Gary Greiner	PSEG Energy Resources and Trade LLC	Transmission Owner
Bryan Mills	PSEG Energy Resources and Trade LLC	Transmission Owner
James Calore	Public Service Electric & Gas Company	Transmission Owner
James Caristia	Public Service Electric & Gas Company	Transmission Owner
Richard Crouch	Public Service Electric & Gas Company	Transmission Owner
Leonid Lyakhovich	Public Service Electric & Gas Company	Transmission Owner
Rich Marinelli	Public Service Electric & Gas Company	Transmission Owner
Jerry Martinez	Public Service Electric & Gas Company	Transmission Owner
Ming Zhou	Public Service Electric & Gas Company	Transmission Owner
Chandana Bommareddy	Quanta Technology	Not Applicable
Matt Robinson	RLC Engineering	Not Applicable
David Burnham	Rock Island Clean Line LLC	Not Applicable
Roleto Mangonon	Rockland Electric Company	Transmission Owner
Suzanne Herel	RTO Insider	Not Applicable
Stephanie Tsao	S&P Global Market Intelligence	Not Applicable
Jonathan Fernandez	The Federal Energy Regulatory Commission	Not Applicable
John Sillin	The Federal Energy Regulatory Commission	Not Applicable
Pati Esposito-Hils	TransCanada Power Marketing Ltd.	Other Supplier
Pat Hayes	Union Electric Company d/b/a Ameren Missouri	Other Supplier
Adam Weber	Union Electric Company d/b/a Ameren Missouri	Other Supplier
James Wilson	Wilson Energy Economics	Not Applicable