

**Planning Committee
PJM Interconnection
August 13, 2015**

Administration

1. Administrative Items

- A. Mr. Herling 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.
- B. Mr. Herling asked Ms. Thomas to review the meeting minutes of the July 9, 2015 Planning Committee meeting. Mr. Pratzon then made a motion to approve the minutes. Mr. Lieberman seconded the motion. In a voice vote, the Planning Committee approved the July 9, 2015 Planning Committee minutes.
- C. Mr. Herman provided an update on the on-going 2015 RTEP Proposal Windows. PJM closed the 2015 RTEP Proposal Window 1 on August 4th and is in the process of evaluating the submittals. The 2015 RTEP Proposal Window 2 opened on August 5th and included Transmission Owner Criteria Violations. In September, PJM will present preliminary recommendations for the Window 1 violation and will provide details on the proposals submitted in the Window 2.
- D. Mr. Berner provided an update regarding the PARTF which is reviewing the applicability of transmission withdrawal or injection rights for PARs. The task force is in process of doing scenario analysis and will be discussing their finding at the next meeting on August 18th. This upcoming meeting will focus on the package to be recommended to PC for implementation.
- E. Mr. Gledhill discussed the upcoming facilitation of the Earlier Queue Project Submittal Task Force. Mr. Gledhill will be the facilitator. Susan McGill will be the secretary and Dave Egan will be the subject matter expert. Meetings for this task force will be established soon and communicated to the Planning Committee.
- F. Mr. Herman discussed the new task force for Designated Entity Design Standards. Mr. Herman will be the facilitator, Anisha Fernandes will be secretary, and Sue Glatz will be one of the subject matter experts. Notifications will be sent to PC and TEAC for upcoming meetings. Mr. Herman requested that stakeholders review the issue charge and problem statement to get appropriate members to participate in on these discussions.
- G. Mr. McGlynn provided an update on potential changes to the Light Load Criteria that had been reviewed at previous Planning Committee meetings. PJM has received comments from different entities regarding the potential changes to the Light Load Criteria. PJM will provide an update on those efforts at the September meeting and provide clarification on the timeline for implementing the changes in both baseline RTEP studies and interconnection queue studies.

Endorsements/Approvals

2. Order 1000 Lesson Learned

Mr. Herman provided a final review of various templates to incorporate into the Proposal Window process, specifically the Proposal Redaction Guidelines, Greenfield RTEP Template Proposal, and RTEP Upgrade Proposal Template.

First Readings

3. Order 1000 Lesson Learned – Voltage Threshold and Administrative Items

Ms. Glatz reviewed draft Operating Agreement language regarding voltage. Ms. Glatz reviewed the prior and new data on historical greenfield projects per voltage level in the Transmission Planning databases, noting that less than 1% was allocated to multiple zones. Ms. Glatz presented the Proposed Guide for Voltage Floor which describes the scenarios in which violations would be included in the RTEP Proposal Windows. Members expressed concerns with voltage threshold and with the proposed language. Some concerns were voiced with having any threshold and others were concerned that the language would still include cases where a simple fix could resolve the issue without being included in the window. Similar members mentioned violations on a line that has several radial points of load along it, which could be a simple fix. Members asked for clarification on whether or not a violation that is below 200kV but the contingency is greater than 200kV would be included in the window. Members were requested to provide feedback on the table of scenarios for when PJM would post a violation in a window. The administrative changes in the Operating Agreement remained the same as presented at the July Planning Committee meeting and were not discussed. Ms. Glatz will be seeking endorsement at the September meeting

4. Winter Study Criteria

Mr. McGlynn reviewed Manual 14B additions regarding Winter Study Criteria. Mr. McGlynn reviewed the winter case topology and dispatch guidelines. Mr. McGlynn briefly discussed the planning studies that would be conducted, specifically the Winter Generator Deliverability, Common Mode Outage, Winter Load Deliverability, N-1, and N-1-1 for both thermal and voltage. Members inquired as to whether or not this new criterion will be applied to the queue. PJM will provide clarity at the September meeting where endorsement will also be sought.

5. PJM Manuals Update for Multi-Driver Approach

Mr. Herman provided a first read of PJM Manual 14 series updates regarding Multi-Driver Approach. Manual language changes in both clean and redline versions were posted for both Manuals 14A and 14B. Mr. Herman reviewed the Proportional and Incremental Multi-Driver Methods which will be added to the Manual 14A and 14B updates. Mr. Herman will present the changes at the August 27th MRC and will come back to both PC and MRC in September for endorsements.

6. Long Term Firm Charter

Mr. Berner provided a first read of the charter for Coordination of Long Term Firm Transmission Service Study. The charter details the group's work activities and intended deliverables. The problem statement for this task force was previously presents and endorsed at prior Planning Committee meetings. Mr. Berner will be back in September to seek endorsement for the charter.

Education

7. NERC/RRO Update

Mr. Kuras provided the Planning Committee with an update on recent NERC activities and PJM compliance activities. Comments for on-going standard reviews can be found under the August 13th Planning Committee Material. NERC Standards subject to future enforcement can be found under the August 13th Planning Committee Material.

8. Weather History used in the Load Forecast Model

Mr. Gledhill discussed PJM's investigation of the weather history used in the Load Forecast Model. Members are requesting additional LAS meetings to further discuss the new weather period and other load forecast changes.

9. Energy Market Uplift

Mr. McGlynn provided a first read of Manual 14 language changes to incorporate energy market uplift in the planning process. The draft language requires PJM to review historical uplift payments, system conditions and drivers for the uplift payments related to reactive services.

10. NERC TPL Standards Update

Mr. Herman provided an update on the NERC TPL 001 - 004 Standards effective January 1, 2016. These standards were originally approved October 2013. Requirements R1 and R7 were effective January 1, 2015 and Requirements R2 through R6 and R8 are effective January 1, 2016. The redline and clean Manual 14B changes related to the TPL requirements update have been posted in the Planning Committee material. Mr. Herman reviewed new requirements that weren't previously required such as Short Circuit Analysis, Dynamic Load Modeling, Non-Consequential 75 MW Load Loss, and 6 Month+ Equipment Outages. PJM will continue to review the new TPL standards and will be seeking endorsement of these changes in upcoming meetings.

11. PJM.com Update

Ms. Luna discussed the enhancements to the planning Web pages on PJM.com. Several pages have been updated, such as the Interconnection Queues, Cost Allocation and Long-Term Firm Transmission Service. A list of the enhancements can be found at the Planning Committee page under the August 13th material. The updates are intended to improve ease of use and performance. PJM will be continuing to improve the Planning section throughout the remainder of the year and into 2016. Please provide feedback via the Website Feedback link located on pjm.com.

Future Agenda Items

There were no future agenda items suggested.

Future Meeting Dates

| | | |
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| September 10, 2015 | 9:30 AM | PJM Conference and Training Center, Valley Forge, PA |
| October 8, 2015 | 9:30 AM | PJM Conference and Training Center, Valley Forge, PA |
| November 5, 2015 | 9:30 AM | PJM Conference and Training Center, Valley Forge, PA |
| December 3, 2015 | 9:30 AM | PJM Conference and Training Center, Valley Forge, PA |

Attendance

Attendees

Steven Herling
Amber Thomas
William Gallagher
Kiran Kumaraswamy
Sean Black
Scott Deffenderfer
Kiran Thammineni
Kamran Ali
David Canter
Nick Koehler
Takis Laios
Lisa McAlister
Mike Schindwein
Dale Burmester
Chris Hagman
Gary Fuerst
Brock Ondayko
Markian Melnyk
David Bloom
John McDaniel
Zelalem Tekle
James Jablonski
Ron Pezon
travis bouslog
Jakob Metzler
Connie Davis
Deral Danis
James Alexander
William Allen

Company Name

PJM Interconnection, LLC
PJM Interconnection, LLC
A.F. Mensah, Inc.
AES Energy Storage LLC
Ameren
Ameren
Ameren
American Electric Power
American Electric Power
American Electric Power
American Electric Power
American Municipal Power, Inc.
American Transmission Company LLC
American Transmission Company, LLC
American Transmission Company, LLC
American Transmission Systems, Inc.
Appalachain Power Company
Atlantic Grid Operations A, LLC
Baltimore Gas and Electric Company
Baltimore Gas and Electric Company
Baltimore Gas and Electric Company
Borough of Butler, Butler Electric Division
Borough of Chambersburg
Burns & McDonnell
Castleton Commodities Merchant Trading L.P
City of Cleveland, Div of Cleveland Public Pwr
CLEAN LINE ENERGY PARTNERS LLC
Comcast
Commonwealth Edison Company

Thomas Leeming
Paul Mills
Ronald Regner
Dan Griffiths
Sandeep Baidwan
Guy Filomena
Carl Johnson
Jonathan Sasser
John Horstmann
Mike Hurd
John Farber
Jaclyn Cantler
Michael Natrin
David Hastings
George Owens
George Dawe
Anita Schafer
Steve Steinkuhl
Bryan Garnett
Julie Mason
Judy Stubbe
Chad Hirsh
Joseph Pilch
Iker Chocarro
Aguirrebengoa
Chris Adams
Darrin Adams
Nathan Bradley
Rebecca Davis
Chuck Dugan
Amanda Stacy
Malcolm Ainspan
Bruce Campbell
Gina Jardot
Andrew Tan
Melanie Sanders
Rebecca Stadelmeyer
Roozbeh Shegarfi
Syed Ahmad
Jonathan Fernandez

Commonwealth Edison Company
Commonwealth Edison Company
Commonwealth Edison Company
Consumer Advocates of PJM States
Continuum Associates
Customized Energy Solutions, Ltd.*
Customized Energy Solutions, Ltd.*
Customized Energy Solutions, Ltd.*
Dayton Power & Light Company (The)
Dayton Power & Light Company (The)
DE Public Service Commission
Delmarva Power & Light Company
Delmarva Power & Light Company
Dhastings Co.
Downes Associates, Inc.
Duke Energy Business Services LLC
Duke Energy Business Services LLC
Duke Energy Business Services LLC
Duke Energy Ohio, Inc.
Duke Energy Ohio, Inc.
Duke Energy Ohio, Inc.
Duke Energy Ohio, Inc.
Duquesne Light Company
Duquesne Light Company

E.ON Climate & Renewables North America, Inc.
East Kentucky Power Cooperative, Inc.
Energy Curtailment Specialists, Inc.
EnergyConnect, Inc.
Essential Power Rock Springs, LLC
Eversource
Exelon Business Services Company, LLC
Exelon Business Services Company, LLC
Exeon
Federal Energy Regulatory Commission
Federal Energy Regulatory Commission

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|-----------------------|--|
| Alina Halay | Federal Energy Regulatory Commission |
| Thomas Bainbridge | FirstEnergy Solutions Corporation |
| Jim Benchek | FirstEnergy Solutions Corporation |
| Lou D'Alessandris | FirstEnergy Solutions Corporation |
| David Marton | FirstEnergy Solutions Corporation |
| Jeff Stuchell | FirstEnergy Solutions Corporation |
| John Syner (FE) | FirstEnergy Solutions Corporation |
| Amy Fisher | GE Energy Financial Services |
| Charles Vansant | Golder Associates |
| Derek Hagaman | GT Power Group |
| David Pratzon | GT Power Group |
| Kevin Gorman | Highlands Energy Group LLC (The) |
| James Nash | Hudson Transmission Partners, LLC |
| Bob Thomas | Illinois Municipal Electric Agency |
| Thomas Fecho | Indiana Michigan Power Company |
| Alex Ma | Invenergy |
| Ben Abing | ITC |
| Raju Brahmmandhabheri | ITC |
| Kaustubh Deshmukh | ITC Holdings |
| John Kopinski | ITC Mid-Atlantic Development LLC |
| Brenda Prokop | ITC Mid-Atlantic Development LLC |
| Sharon Segner | LSPower |
| Robert O'Connell | Main Line Electricity Market Consultants |
| Ralph De Geeter | Maryland Public Service Commission |
| David Mabry | McNees Wallace & Nurick LLC |
| Lynn Hecker | MISO |
| Eric Laverty | MISO |
| James Okullo | MISO |
| Adam Solomon | MISO |
| Zheng Zhou | MISO |
| Don Morrow | Navigant Consulting |
| George Kogut | New York Power Authority |
| Frederico Von Pinho | NextEra Energy Transmission, LLC |
| Jung Suh | Noble Americas Energy Solutions LLC |
| John Lemire | North Carolina Electric Membership Corporation |
| Miles Taylor | Northern Indiana Public Services Company |
| Neal Fitch | NRG Power Marketing LLC |
| Steven Lieberman | Old Dominion Electric Cooperative |
| Ed Tatum | Old Dominion Electric Cooperative |
| James Wright | Old Dominion Electric Cooperative |

| | |
|------------------------|---------------------------------------|
| Robert Duan | Ontario Power Generation Inc. |
| Gregory Carmean | OPSI |
| Debbie Gebolys | Other |
| Nikhil Kumar | Other |
| Kyle Clifford | PECO Energy Company |
| Mike Donnelly | PECO Energy Company |
| Pulin Shah | PECO Energy Company |
| Dhruv Acharya | PEPCO Holdings, Inc. |
| Gloria Godson | PEPCO Holdings, Inc. |
| Patricia Kurowski | PEPCO Holdings, Inc. |
| Amber Young | PEPCO Holdings, Inc. |
| Robert Marmet | Piedmont Environmental Council |
| Bridgid Cummings | PJM Interconnection, LLC |
| David Egan | PJM Interconnection, LLC |
| Janell Fabiano | PJM Interconnection, LLC |
| Thomas Falin | PJM Interconnection, LLC |
| Zhenyu Fan | PJM Interconnection, LLC |
| Nicholas Gangi | PJM Interconnection, LLC |
| Andrew Gledhill | PJM Interconnection, LLC |
| James Glennon | PJM Interconnection, LLC |
| Jacob Grande | PJM Interconnection, LLC |
| Michael Herman | PJM Interconnection, LLC |
| Charles Liebold | PJM Interconnection, LLC |
| Tawnya Luna | PJM Interconnection, LLC |
| Molly Mooney | PJM Interconnection, LLC |
| Jason Quevada | PJM Interconnection, LLC |
| John Reynolds | PJM Interconnection, LLC |
| Patricio Rocha-Garrido | PJM Interconnection, LLC |
| Glenn Weiss | PJM Interconnection, LLC |
| Jeffrey Palermo | PJP Consulting |
| Kenneth Carretta | PSEG Energy Resources and Trade LLC |
| Jim Calore | Public Service Electric & Gas Company |
| Frank Czigler | Public Service Electric & Gas Company |
| Esam Khadr | Public Service Electric & Gas Company |
| Leonid Lyakhovich | Public Service Electric & Gas Company |
| Jodi Moskowitz | Public Service Electric & Gas Company |
| Ming Zhou | Public Service Electric & Gas Company |
| Tom Hoatson | Riverside Generating, LLC |
| Roleto Mangonon | Rockland Electric Company |
| Joel Yu | Rockland Electric Company |

Gerry Binder
Andy Peebles
Ruth Ann Price
Michele Greening
John Sillin
Adam Weber
Justin Joiner
Michael Batta
Craig Crider
Frank Zhang
James Wilson
Brian Henke

SESCO Enterprises LLC
Shell Energy North America (US), LP
state.de.us
Talen Energy Marketing, LLC
The Federal Energy Regulatory Commission
Union Electric Company d/b/a Ameren Missouri
Vectren
Virginia Electric & Power Company
Virginia Electric & Power Company
Virginia Electric & Power Company
Wilson Energy Economics
Xcel Energy