

Market Implementation Committee PJM Conference & Training Center, Audubon, PA November 8, 2017 9:00 a.m. – 3:20 p.m. EPT

Administration

- 1. Ms. Christina Stotesbury and Ms. Chantal Hendrzak, PJM, provided announcements and reviewed the Antitrust, Code of Conduct, and Public Meetings/Media Participation Guidelines.
- 2. The committee approved the draft minutes from the October 11, 2017 Market Implementation Committee meeting by acclamation with 0 objections and 0 abstentions.
- 3. Ms. Christina Stotesbury, PJM, and Ms. Chantal Hendrzak, reviewed the active MIC issues on <u>Issue Tracking</u> and proposed updating issue statuses to address and resolve open issues, and recommended closing a number of issues within the MIC and subcommittees of the MIC.

<u>The following MIC issues will be closed:</u> Operating Parameter Definitions, pending implementation of new parameter Soak Time planned for 2019 Efficiency of PJM MIS Real-Time Interchange Spot-in Transmission Service for Energy Imports from NYISO Annual Revenue Requirements for new Black Start units Shortage Pricing Operating Reserve Demand Curve (ORDC) – Order 825

<u>The following MIC Subcommittee issues will be closed:</u> Sub-Hourly Settlements – Order 825 Pseudo-Tied Generators and Dynamic Schedules End-of-Month Meter Correction

4. Mr. Foluso Afelumo, PJM, provided a brief update on security changes to the Account Manager tool.

Endorsements/Approvals

5. Proposed FTR Credit Requirements for Transmission Upgrades

Mr. Hal Loomis, PJM, reviewed a proposed change in FTR credit requirements to reduce exposure posed by congestion reductions resulting from major transmission upgrades. The committee endorsed the proposal by acclamation with 1 objection and 0 abstentions.

6. Proposed changes to Price Responsive Demand for Capacity Performance requirements

Mr. Pete Langbein, PJM, reviewed four proposals that came from the Demand Response Subcommittee to update Price Responsive Demand for Capacity Performance requirements. The IMM offered a new proposal and Whisker removed their proposal prior to voting. The committee approved two of the three proposals. The PJM package was endorsed with 171 in favor (83%), 35 opposed (17%) and 14 abstentions. Package C was endorsed with 116 in favor (62%), 72 opposed (38%) and 21 abstentions. The IMM package was not endorsed with 28 in favor (15%), 164 opposed (85%) and 20 abstentions.



 Manual 11, 18, 27, 28, and 29 Revisions for 5-minute Settlements Mr. Ray Fernandez, PJM, presented revisions to Manuals 11, 18, 27, 28, and 29 associated with the implementation of 5-Minute Settlements. The committee endorsed the manual revisions by acclamation with 0 objections and 8 abstentions.

8. Distributed Energy Resources (DER) Charter

Mr. Scott Baker, PJM, provided an update on the Distributed Energy Resource issue that has been worked at Special Sessions of the MIC, and presented two charters to convert the effort to a subcommittee. The committee approved the amended charter (Item 8B) with 160 in favor (92%), 14 opposed (8%) and 12 abstentions. The original charter failed majority motion with 26 in favor (17%), 130 opposed (83%) and 28 abstentions.

First Readings

9. FTR Modeling, Performance & Surplus

Mr. Brian Chmielewski, PJM, presented a first read of proposals addressing 3 problem statements and issue charges that have been worked in the FTRMPS Special Sessions of the MIC.

- A. Long Term FTR Modeling Enhancements for Future Transmission Expansions
- B. FTR Auction Case Performance
- C. FTR Surplus

The committee will be asked to endorse a proposal for each issue at the December meeting.

10. Seasonal DR Aggregation Registration Rules – Problem Statement and Issue Charge

Mr. Steve Doremus, EnerNOC, presented a first read of a problem statement and issue charge to address the aggregation of summer and winter Demand Response MWs for the Capacity Performance Annual Requirement. The committee will be asked to endorse the problem statement and issue charge at the December meeting.

Working Issues

11. Market Path/Interface Pricing Point Alignment

Mr. John Dadourian, Monitoring Analytics, and Mr. Tim Horger, PJM, reviewed the Market Path/Interface Pricing Point Alignment issue and presented a proposed joint solution. Stakeholders were given an opportunity to offer additional design components and solution options. If you have a solution package to include, please send to the MIC Chair or Secretary prior to the December 13 MIC.

12. Transmission Penalty Factors

Mr. Devendra Canchi, Monitoring Analytics, reviewed the Transmission Penalty Factors issue and matrix. Stakeholders were given an opportunity to offer interests and design components and are encouraged to send suggested additions to the matrix prior to the December 13 MIC.



Additional Updates

- 13. Interregional Coordination Activity Mr. Tim Horger, PJM, provided an update on Interregional Coordination efforts.
- 14. Operationalizing Gas Pipeline Contingencies Mr. Brian Fitzpatrick, PJM, provided an update on continuing efforts to operationalize gas pipeline contingencies.
- 15. Market Operations Price Transparency Issue

Mr. Rami Dirani, PJM, provided an update on the Market Operations Price Transparency issue worked in Special Sessions of the MIC.

16. Net Energy Injections – Quarterly Report

Ms. Jennifer Warner-Freeman, PJM, reviewed the 3rd Quarter Net Energy Injections report.

Informational Section

Credit Subcommittee (CS)

Meeting materials will be posted to the <u>CS website</u>.

Demand Response Subcommittee (DRS)

Meeting materials will be posted to the DRS web site.

Intermittent Resources Subcommittee (IRS)

Meeting materials will be posted to the <u>IRS web site</u>.

Market Settlements Subcommittee (MSS)

Meeting materials are posted to the MSS web site.

Report on Market Operations

The Report on Market Operations will be reviewed during the MC Webinar.

December 13, 2017	9:00 a.m.	PJM Interconnection – Conference & Training Center
January 10, 2018	9:00 a.m.	PJM Interconnection – Conference & Training Center
February 7, 2018	9:00 a.m.	PJM Interconnection – Conference & Training Center
March 7, 2018	9:00 a.m.	PJM Interconnection – Conference & Training Center
April 4, 2018	9:00 a.m.	PJM Interconnection – Conference & Training Center
May 2, 2018	9:00 a.m.	PJM Interconnection – Conference & Training Center
June 6, 2018	9:00 a.m.	PJM Interconnection – Conference & Training Center

Hendrzak, Chantal (Chair) Stotesbury, Christina (Secretary) Afelumo, Foluso PJM Interconnection, LLC PJM Interconnection, LLC PJM Interconnection, LLC Not Applicable Not Applicable Not Applicable



Anders, David Barker, Jason Benchek, Jim Bleiweis, Bruce Borgatti, Michael Carmean, Gregory Chmielewski, Brian Ciabattoni, Joseph Dirani, Rami Drauschak, Lisa Fabiano, Janell Fernandez, Ray Filomena, Guy Foladare, Kenneth Ford, Adrien Fuess, Jay Greiner, Gary Hauske, Thomas Holter, Natasha Horger, Tim Horstmann, John Hudis, Gabriella Hyzinski, Tom Jani, Alpa Jardot, Gina Johnson, Carl Kauffman, Brian Keech, Adam Kogut, George Langbein, Pete Lieberman, Steven Loomis, Harold Lu, Chen Midgley, Sharon Morelli, Lisa O'Connell, Robert Pilong, Melissa Pratzon, David Scarpignato, David Schmitt, Jeffrey Suh, Jung Sweeney, Rory

PJM Interconnection, LLC Exelon Business Services Company, LLC FirstEnergy Solutions Corp. DC Energy LLC Gabel and Associates **OPSI** PJM Interconnection, LLC Customized Energy Solutions, Ltd. Tangibl Old Dominion Electric Cooperative White Pine Energy Consulting PSEG Energy Resources and Trade LLC PJM Interconnection, LLC PJM Interconnection, LLC PJM Interconnection, LLC Dayton Power & Light Company (The) Jersey Green Energy LLC **GT** Power Group PJM Interconnection, LLC Essential Power Rock Springs, LLC Customized Energy Solutions, Ltd.* **NRG** Curtailment Solutions PJM Interconnection, LLC New York Power Authority PJM Interconnection, LLC American Municipal Power, Inc. PJM Interconnection, LLC PJM Interconnection, LLC Exelon Business Services Company, LLC PJM Interconnection, LLC PPGI Fund A/B Development, LLC PJM Interconnection, LLC **GT** Power Group Calpine Energy Services, L.P. PJM Interconnection, LLC Noble Americas Energy Solutions LLC **RTO** Insider

Not Applicable Transmission Owner Transmission Owner Other Supplier Not Applicable **Electric Distributor** Not Applicable Other Supplier Not Applicable Not Applicable Not Applicable Transmission Owner Other Supplier Not Applicable Not Applicable Transmission Owner Not Applicable Other Supplier Not Applicable Other Supplier Not Applicable **Electric Distributor** Not Applicable Not Applicable Transmission Owner Not Applicable Generation Owner Not Applicable Not Applicable Generation Owner Not Applicable Other Supplier Not Applicable



Trayers, Barry Tribulski, Jennifer Wadsworth, Joseph Warner-Freeman, Jennifer Whitehead, Jeffrey Wilson, Bram Xu, Xu

WebEx Attendees

Abdelhamid, Nadeen Ainspan, Malcolm Anderson, Jared Bazar, Kevin Bennett, Stephen Binder, Gerry Birnel, William Bolan, Martin Bonner, Kevin Bowring, Joe Boyle, Glen Britt, Debbie Brodbeck, John Brown, Rich Bruno, Patrick Budney, Dave Burdis, Tim Campbell, Bruce Canchi, Devendra Carroll, Rebecca Cawley, Troy Cerchio, Jerry Chen, Jennifer Chintapalli, Raj Chocarro Aguirrebengoa, Iker Cocco, Michael Cox, Phil Coyne, Suzanne Croop, Danielle Crystle, Gil Cummings, Bridgid Dadourian, John Dantonio, Phil

Citigroup Energy, Inc. PJM Interconnection, LLC Vitol Inc. PJM Interconnection, LLC GT Power Group Diamond State Generation Partners, LLC PJM Interconnection, LLC

North Carolina Electric Membership Corporation Energy Curtailment Specialists, Inc. S & P Global PJM Interconnection, LLC PJM Interconnection, LLC SESCO Enterprises LLC Westar Energy, Inc. FirstEnergy Solutions Corp. PJM Interconnection, LLC Monitoring Analytics, LLC PJM Interconnection, LLC North Carolina Electric Membership Corporation EDP Renewables North America, LLC PJM Interconnection, LLC PJM Interconnection, LLC PJM Interconnection, LLC PJM Interconnection, LLC EnergyConnect, Inc. Monitoring Analytics, LLC PJM Interconnection, LLC PJM Interconnection, LLC Monitoring Analytics, LLC Natural Resources Defense Council Galt Power Inc. E.ON Climate & Renewables North America, Inc. Old Dominion Electric Cooperative Appalachian Power Company PJM Interconnection, LLC PJM Interconnection, LLC **UGI** Development Company PJM Interconnection, LLC Monitoring Analytics, LLC

PJM Interconnection, LLC

Other Supplier Not Applicable Other Supplier Not Applicable Not Applicable Generation Owner Not Applicable

Electric Distributor Other Supplier Not Applicable Not Applicable Not Applicable Other Supplier Other Supplier Transmission Owner Not Applicable Not Applicable Not Applicable Electric Distributor Other Supplier Not Applicable Not Applicable Not Applicable Not Applicable Other Supplier Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable Other Supplier Generation Owner **Electric Distributor** Transmission Owner Not Applicable Not Applicable Transmission Owner Not Applicable Not Applicable Not Applicable



Dasher, Brett Daugherty, Suzanne Davis, James DeLosa, Joseph DePillo, Ray Dessender, Harry Dillon, Matthew Dimartino, Denise Dolan, Jim Domian, Christin Doremus, Steven Driscoll, Mary Ellen Drom, Richard Dugan, Chuck Egan, Amanda Endress, Eric Esterly, Theresa Feierabend, Rick Fitch, Neal Fox, Angela Gahimer, Mike Garnett, Bryan Gebolys, Debbie Genuario, Gabrielle Giacomoni, Anthony Gilani, Rehan Glazer, Craig Gledhill, Andrew Gorman, Kevin Guerry, Katie Hanser, Erik Harmon, Mike Hastings, David Hatch, Kevin Hayik, Seth Haynes, Greg Heinle, Frederick Helms, Joseph HIggins, Sharon Hilaski, Steve Hoatson, Tom Hohenshilt, Jennifer

Energy Authority, Inc. (The) PJM Interconnection, LLC Dominion Energy Marketing, Inc. **DE Public Service Commission** PSEG Energy Resources and Trade, LLC Customized Energy Solutions, Ltd. **UGI** Development Company PJM Interconnection, LLC PJM Interconnection, LLC Mitsubishi Electric Power Products Inc. EnerNOC, Inc. PJM Interconnection, LLC **Eckert Seamans** East Kentucky Power Cooperative, Inc. PJM Interconnection, LLC PJM Interconnection, LLC PJM Interconnection, LLC **Dominion Virginia Power** NRG Power Marketing LLC Wylan Energy, L.L.C. IN Office of Utility Consumer Counselor Duke Energy Ohio, Inc. Public Utilities Commission of Ohio (The) PJM Interconnection, LLC PJM Interconnection, LLC ConEdison Energy, Inc. PJM Interconnection, LLC PJM Interconnection, LLC Highlands Energy Group LLC (The) EnerNOC, Inc. Michigan Public Service Commission Union Electric Company d/b/a Ameren Missouri Market Interconnection LLC PJM Interconnection, LLC Monitoring Analytics, LLC Energy Authority, Inc. (The) Office of the People's Counsel Rainbow Energy Marketing Corporation Duke Energy Commercial Asset Management, Inc. Potomac Electric Power Company Riverside Generating, LLC Talen Energy Marketing, LLC

Other Supplier Not Applicable Generation Owner Not Applicable Other Supplier Not Applicable **Generation Owner** Not Applicable Not Applicable Not Applicable Other Supplier Not Applicable Not Applicable Transmission Owner Not Applicable Not Applicable Not Applicable Not Applicable Generation Owner Not Applicable End User Customer Transmission Owner Not Applicable Not Applicable Not Applicable Other Supplier Not Applicable Not Applicable Other Supplier Other Supplier Not Applicable Other Supplier Not Applicable Not Applicable Not Applicable Other Supplier End User Customer Other Supplier Generation Owner **Electric Distributor** Other Supplier **Generation Owner**



Holdbrook, Ruth Holland, Risa Horton, Dana Hsia, Eric Hurwich, Mark Hyatt, John Janicki, Diane Jayachandran, Marilyn Jett, William Josyula, Siva Kaczanowski, Marek Karnik, Rashmi Kazerooni, Hamid Keeney, Jerry Kelly, Stephen Kenney, Susan Kilgallen, Kevin Kimmel, David Kingston, Amber Kinser, Cynthia Knies, Heather LaRocque, Matthew Lee, Lori Murphy Lejcar, Jamie Leopold, Chris Liang-Nicol, Cecilia Libbos, Robin Lind, Clarke Logan, Sharon Lokhandwalla, Faizmin Long, Glenn Loudenburg, Zack Lowe, Connie Mabry, David Mack, Amanda Mancuso, Melanie Marcino, Angelo Mariam, Yohannes Markiewicz, Cindy Martin, Valerie Marton, David Marzewski, Skyler

Northern Virginia Electric Cooperative PJM Interconnection, LLC Appalachian Power Company PJM Interconnection, LLC Elliott Bay Energy Trading, LLC Monitoring Analytics, LLC Boston Energy Trading & Marketing, LLC PJM Interconnection, LLC **Duke Energy Business Services LLC** Monitoring Analytics, LLC Baltimore Gas and Electric Company Other Talen Energy Marketing, LLC Dynegy Marketing & Trade, LLC Brookfield Energy Marketing LP PJM Interconnection, LLC Avangrid Renewables LLC PJM Interconnection, LLC North Carolina Electric Membership Corporation Tennessee Department of Agriculture EDF Trading North America, LLC PJM Interconnection, LLC PJM Interconnection, LLC Allegheny Electric Cooperative, Inc. Appalachian Power Company Monongahela Power Company d/b/a Allegheny Power FirstEnergy Solutions Corp. **Powerex Corporation** The Federal Energy Regulatory Commission Dynegy PJM Interconnection, LLC Pennsylvania Renewable Resources, Associates **Dominion Virginia Power** McNees Wallace & Nurick LLC NextEra Energy Power Marketing, LLC FirstEnergy Solutions Corp. PJM Interconnection, LLC Office of the Peoples Counsel for the District of Columbia FirstEnergy Solutions Corp. The Federal Energy Regulatory Commission FirstEnergy Solutions Corp. Monitoring Analytics, LLC

Electric Distributor Not Applicable **Transmission Owner** Not Applicable Other Supplier Not Applicable **Generation Owner** Not Applicable **Generation Owner** Not Applicable **Transmission Owner** Not Applicable Generation Owner Generation Owner Other Supplier Not Applicable Generation Owner Not Applicable **Electric Distributor** Not Applicable Other Supplier Not Applicable Not Applicable Electric Distributor Transmission Owner Transmission Owner **Transmission Owner** Other Supplier Not Applicable Generation Owner Not Applicable Generation Owner Not Applicable Not Applicable Generation Owner **Transmission Owner** Not Applicable End User Customer Transmission Owner Not Applicable Transmission Owner Not Applicable



Matheson, Doug McAlister, Lisa McCaffree, Matthew McDaniel, John McLaverty, Megan Mercier, Christian Metzler, Jakob Miller, John Nanavati, Shaina Nawaz, Zainab Nix, Emma Norton, Chris Olaleye, Michael Ondayko, Brock O'Neill, Jack Pacella, Chris Pakela, Greg Patel, Keyur Patten, Kevin Peebles, Andy Pelletier, Eveline Peoples, John Philips, Marjorie Piovesan, Lori Poulos, Greg Powers, Sean Price, Mark Price, Ruth Prokop, Brenda Rajan, Abhijit Ramsey, James Rayhorn, Carolyn Reid, Ryan Reis, Raffi Riehl, John Ritchie, Sandra Robinson, Maria Robson, Matt Rohrbach, John Rothey, Kristin Ruck, Andrew Rushing, Nathan

EnerNOC, Inc. American Municipal Power, Inc. Comverge Inc. Baltimore Gas and Electric Company PJM Interconnection, LLC MAG Energy Solutions, Inc. Castleton Commodities Merchant Trading L.P. Commonwealth Edison Company North Carolina Electric Membership Corporation NJ Board of Public Utilities PJM Interconnection, LLC American Municipal Power, Inc. PJM Interconnection, LLC Appalachain Power Company PJM Interconnection, LLC PJM Interconnection, LLC DTE Energy Trading, Inc. PJM Interconnection, LLC Appalachain Power Company Saracen Energy East LP Hydro-Quebec **Duquesne Light Company** Direct Energy Business, LLC **Powerex Corporation** CAPS Linde Energy Services, Inc. DC Energy Mid-Atlantic, LLC Division of the Public Advocate of the State of Delaware ITC Mid-Atlantic Development LLC **Dominion Resources** Suffolk Fund LLC **Dominion Virginia Power** Buckeye Power, Inc. Other The Federal Energy Regulatory Commission PJM Interconnection, LLC Advanced Energy Economy, Inc. SESCO Enterprises LLC Southern Maryland Electric Cooperative American Municipal Power, Inc. PSEG Energy Resources and Trade, LLC CPV Maryland, LLC

Other Supplier **Electric Distributor** Not Applicable Transmission Owner Not Applicable Other Supplier Other Supplier Transmission Owner Electric Distributor Not Applicable Not Applicable **Electric Distributor** Not Applicable Transmission Owner Not Applicable Not Applicable Other Supplier Not Applicable Transmission Owner Other Supplier Not Applicable Transmission Owner Other Supplier Other Supplier Not Applicable End User Customer Other Supplier End User Customer Other Supplier Not Applicable Other Supplier Not Applicable **Electric Distributor** Not Applicable Not Applicable Not Applicable Not Applicable Other Supplier Electric Distributor **Electric Distributor** Other Supplier **Generation Owner**



Rutigliano, Tom Saini, Ishwar Sasser, Jonathan Scheidecker, Paul Schneider, Jon Schreim, Morris Schweizer, David Segner, Sharon Shanker, Roy Sillin, John Singer, Chad Skucas, Ruta Snyder, Sue Sock, Bryan Souder, Dave Souder, Rich Stewart, Travis Stone, Andy Tangirala, Subha Thomson, Heather Tibbetts, Maeve Tique, John Tsao, Stephanie Tse, Felix Tyler, Catherine Vayda, Brian Velasco, Cheryl Mae Villeneuv, Alexandre Ward, Michael Wei, Jane Wicks, Tonja Wilhite, Chad Wilkie, Brian Williams, Amber Williams, Stanley Wilmoth, Emily Wilson, James Wolfe, Alice Yang, Dan

Achieving Equilibrium LLC Macquarie Energy LLC Customized Energy Solutions, Ltd.* PJM Interconnection, LLC FirstEnergy Solutions Corp. Maryland Public Service Commission PJM Interconnection, LLC LS Power Transmission, LLC H.Q. Energy Services (U.S.), Inc. The Federal Energy Regulatory Commission Fellon McCord Pierce Atwood PJM Interconnection, LLC PSEG Energy Resources and Trade, LLC PJM Interconnection, LLC PJM Interconnection, LLC Gable and Associates PJM Interconnection, LLC ABB Mid-Atlantic Renewable Energy Pierce Atwood New York State Electric & Gas Corporation SPGlobal Inertia Power I, LLC **Monitoring Analytics** Borough of Park Ridge, NJ PJM Interconnection, LLC MAG Energy Solutions, Inc. PJM Interconnection, LLC Monitoring Analytics, LLC **Duquesne Light Company** FirstEnergy Solutions Corp. Consolidated Edison Solutions, Inc New York State Electric & Gas Corporation PJM Interconnection, LLC **Dominion Virginia Power** Wilson Energy Economics Blue Ridge Power Agency, Inc. Parma Energy LLC

Other Supplier Other Supplier Not Applicable Not Applicable Transmission Owner Not Applicable Not Applicable Not Applicable Other Supplier Not Applicable Not Applicable Not Applicable Not Applicable Transmission Owner Not Applicable Other Supplier Not Applicable Other Supplier Not Applicable Electric Distributor Not Applicable Other Supplier Not Applicable Not Applicable Transmission Owner Transmission Owner Other Supplier Other Supplier Not Applicable Not Applicable Not Applicable **Electric Distributor** Other Supplier

Author: Christina Stotesbury

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