

Market Implementation Committee Special Session: Electric Storage Participation/FERC Order 841 PJM Conference and Training Center June 27, 2018 1:00 p.m. – 4:00 p.m. EPT

<u>Electric Storage Resource (ESR)</u> = a resource capable of receiving electric energy from the grid and storing it for later injection of electric energy back to the grid. Questions, concerns, feedback: ESR@pim.com

Administration

1. Ms. Chrissy Stotesbury, PJM, provided announcements and reviewed the PJM Meeting Guidelines.

Issue Tracking: Electric Storage Participation - FERC Order 841

Education

2. Ms. Laura Walter, PJM, presented an updated working document of frequently asked questions.

A webinar featuring the compliance plans of NYISO, PJM, ISO-NE, and MISO is posted here: <u>https://www.strategen.com/webinar-three/</u>

- 3. Mr. Ray Fernandez, PJM, presented status quo on Balancing Operating Reserve credits.
- 4. Dr. Howard Haas, Monitoring Analytics, presented an overview of the Market Monitor's draft proposal.
- 5. Mr. Scott Baker, PJM, provided an update on the Distributed Energy Resource Subcommittee work plan.

Working Discussion

6. Stakeholder feedback on the matrix was requested and solution options were discussed.

Future Meeting Dates		
August 3, 2018 September 14, 2018	1:00 p.m. 1:00 p.m.	PJM Conference & Training Center/ WebEx PJM Conference & Training Center/ WebEx
Meeting Attendees		
Hendrzak, Chantal (Chair) Stotesbury, Christina (Secretary) Abdur-Rahman, Muhsin Abend, Erik Achaab, Edward Ahmad, Syed Ainspan, Malcolm Anders, David Anderson, Jared Bagot, Nancy Baur, Sean Bayless, Charles Beattie, Jeff	PJM Interconnection, LLC PJM Interconnection, LLC PJM Interconnection, LLC Erik Abend Consulting AEP Energy Partners, Inc. The Federal Energy Regulatory Commission Energy Curtailment Specialists, Inc. PJM Interconnection, LLC SPGlobal Electronic Systems Professional Alliance GlidePath Development LLC North Carolina Electric Membership Corporatior CMS Energy Resource Management Company	



Benchek. Jim Bennett, Daniel Berlinski, Mike Bhavaraiu. Murtv Bolan, Martin Bowring, Joe Boyle, Glen Brisley, Steven Britt, Debbie Brodbeck, John Burdis, Tim Campbell, Bruce Canter, David Cawley, Troy Cham, Edrissa Chintapalli, Raj Chocarro Aguirrebengoa, Iker Ciabattoni. Joe Cocco. Michael Croop, Danielle Currier ES, Jeff D'Alessandris, Lou Davis. Elizabeth Davis, James DeLosa, Joseph Depillo, Raymond Deshmukh, Ankita DiNicola, Laura Dirani, Rami Dixon, Chad Dolan. James Dolan, Ryan Domian. Christin Drakely, Nicole Dugan, Chuck Dumitriu, Nicolae Endress, Eric Feliks. Kent Feller, John Fereshetian, Damon Filomena, Guy Fitch, Neal Foladare, Kenneth Ford, Adrien Fort, Jim Foster, Denise Franks, Edmund Fuhr. Gretchen Fuller, Peter Gahimer, Michael Garbini. Mari Gebolys, Debbie Genuario, Gabrielle Gilani, Rehan Gledhill, Andrew Greiner, Gary

American Transmission Systems, Inc. PJM Interconnection, LLC Customized Energy Solutions. Ltd.* PJM Interconnection. LLC FirstEnergy Solutions Corp. Monitoring Analytics, LLC PJM Interconnection, LLC Vertiv North Carolina Electric Membership Corporation EDP Renewables North America, LLC PJM Interconnection, LLC EnergyConnect, Inc. Appalachian Power Company PJM Interconnection, LLC Tradewind Energy, Inc. Galt Power Inc. E.ON Climate & Renewables North America, Inc. PJM Interconnection. LLC Old Dominion Electric Cooperative PJM Interconnection, LLC Dominion Virginia Power FirstEnergy Solutions Corp. PJM Interconnection, LLC Dominion Energy Marketing, Inc. **DE Public Service Commission** PSEG Energy Resources and Trade LLC Constellation Energy Services, Inc. FirstEnergy Solutions Corp. PJM Interconnection, LLC Viridity Energy, Inc. PJM Interconnection. LLC American Municipal Power, Inc. Mitsubishi Electric Power Products Inc. PPL Electric Utilities Corp. dba PPL Utilities East Kentucky Power Cooperative, Inc. PJM Interconnection, LLC PJM Interconnection, LLC Appalachian Power Company PPL Electric Utilities Corp. dba PPL Utilities PJM Interconnection, LLC Customized Energy Solutions, Ltd. NRG Power Marketing LLC Tangibl Old Dominion Electric Cooperative The Energy Authority PJM Interconnection, LLC PJM Interconnection, LLC Commerce Energy, Inc. NRG Power Marketing, LLC IN Office of Utility Consumer Counselor Potomac Electric Power Company Public Utilities Commission of Ohio (The) PJM Interconnection, LLC ConEdison Energy, Inc. PJM Interconnection, LLC PSEG Energy Resources and Trade LLC

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EnerNOC. Inc.

Guerry, Katie Hall, Tim Hanser. Erik Hastings. David Hauske, Thomas Hebert. Christopher Heinle, Frederick Heisey, Bradley Herel, Suzanne Hilderbrand, Rebecca Hoatson, Tom Hohenshilt, Jennifer Holdbrook, Ruth Holland, Risa Horger, Tim Horstmann, John Hudis, Gabriella Hunter, Rebecca Huntoon, Stephen Hyzinski, Tom Janicki, Diane Johnson, Carl Josyula, Siva Kaczanowski, Marek Kauffman, Brian Kelly, Stephen Kenney, Susan Keshavamurthy, Bhavana Kilgallen, Kevin Kimmel, David Kinser, Cynthia Kogut, George Kuo. David Laguardia, Alejandro LaRocque, Matthew LeBris Erffmeyer, Jacques Libbos, Robin Lieberman, Steven Lin, Jiadong Liu, Eva Long, Amanda Long, Scott Loose, Trevor Lowe, Connie Mabry, David Mack, Amanda Marcino, Angelo Mariam. Yohannes Marton, David Marzewski, Skyler Matheson, Doug McGill, Susan McKissack, Chris McMonagle, Matt meridionale, Kevin Midgley, Sharon

Southern OPCO's: APC, GPC, GuPC, MPC, SPC - J&S Michigan Public Service Commission Market Interconnection LLC PJM Interconnection, LLC Beacon Power, LLC Office of the People's Counsel Wolf Hills Energy, LLC **RTO** Insider PJM Interconnection, LLC Riverside Generating, LLC Talen Energy Marketing, LLC Northern Virginia Electric Cooperative PJM Interconnection, LLC PJM Interconnection, LLC Dayton Power & Light Company (The) Jersey Green Energy LLC Calpine Energy Solutions, LLC NextEra Energy Power Marketing, LLC GT Power Group Boston Energy Trading & Marketing, LLC Customized Energy Solutions, Ltd.* Monitoring Analytics, LLC Baltimore Gas and Electric Company EnerNOC, Inc. Brookfield Energy Marketing LP PJM Interconnection, LLC PJM Interconnection. LLC Avangrid Renewables LLC PJM Interconnection, LLC Tennessee Department of Agriculture New York Power Authority DC Energy LLC Covanta Energy Group, LLC PJM Interconnection, LLC Illinois Citizens Utility Board FirstEnergy Solutions Corp. American Municipal Power, Inc. DC Energy, LLC NRG Power Marketing LLC PJM Interconnection, LLC Allegheny Electric Cooperative, Inc. Energrid **Dominion Virginia Power** McNees Wallace & Nurick LLC NextEra Energy Power Marketing, LLC PJM Interconnection, LLC Office of the Peoples Counsel for the District of Columbia FirstEnergy Solutions Corp. Monitoring Analytics, LLC EnerNOC. Inc. PJM Interconnection, LLC **GlidePath Energy Solutions** Dimension Energy Services Jersey Central Power & Light Company Exelon Business Services Company, LLC

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Mok. Alan Morelli, Lisa Nadel. Steven Nawaz, Zainab Nix, Emma Norton. Chris Nyemko, Masha O'Boyle, Brian O'Connell, Robert OHara, Christopher Olaleye, Michael Ondayko, Brock Pakula, Maggie Park, Jinny Patel, Keyur Pelletier, Eveline Peoples, John Peterson. Jeff Philips, Marjorie Phillips, Darlene Poulos, Greg Pratzon, David Price. Ruth Prokop, Brenda Rajan, Abhijit Razze. Scott Richardson, Frank Riley, Kent Riopko, Eric Rismiller, Randy Ritchie. Sandra Robinson, Maria Rohrbach, John Rosenblatt, Alex Rothey, Kristin Rutigliano, Tom Sasser, Jonathan Scarpignato, David Schneider, Jonathan Schuyler, Ken Shoop, Patrick Shorin, Emily Sillin, John Sims, Mark Singer, Chad Snyder, Sue Starkov, Stefan Stern. Alexander Stewart, Travis Strella, Lauren Stubbe, Judy Suh, Jung Sweeney, Rory Talbot, Soria Tangirala, Subha Thompson, Matt

Duke Energy Kentucky, Inc. PJM Interconnection, LLC PPL Electric Utilities Corp. dba PPL Utilities NJ Board of Public Utilities PJM Interconnection, LLC American Municipal Power, Inc. PJM Interconnection, LLC Rockland Electric Company PPGI Fund A/B Development, LLC PJM Interconnection, LLC PJM Interconnection, LLC Appalachain Power Company Invenergy, LLC PJM Interconnection, LLC PJM Interconnection, LLC Hvdro-Quebec Duquesne Light Company Duke Energy Business Services LLC Direct Energy Business, LLC PJM Interconnection, LLC CAPS GT Power Group Division of the Public Advocate of the State of Delaware ITC Mid-Atlantic Development LLC Dominion Resources Potomac Electric Power Company PPL Electric Utilities Corp. dba PPL Utilities Clean Line Energy Partners LLC Exelon Generation Co., LLC Illinois Commerce Commission PJM Interconnection. LLC Advanced Energy Economy, Inc. Southern Maryland Electric Cooperative Duquesne Light Company American Municipal Power, Inc. Achieving Equilibrium LLC Customized Energy Solutions, Ltd.* Calpine Energy Services, L.P. FirstEnergy Solutions Corp. PJM Interconnection, LLC Customized Energy Solutions, Ltd.* The Brattle Group The Federal Energy Regulatory Commission PJM Interconnection, LLC Fellon McCord PJM Interconnection, LLC PJM Interconnection, LLC Public Service Electric & Gas Company Gable and Associates PJM Interconnection, LLC Duke Energy Ohio, Inc. Calpine Energy Services, L.P. **RTO** Insider NextEra Energy Power Marketing, LLC ABB XO Energy MA, LP

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Tribulski, Jennifer Tsao, Stephanie Tutino, Joseph Velasco, Cheryl Mae Vu, John Walter, Laura Ward, Michael Warshel, Kim Watson, Betty Wehr, Christopher Whitehead, Jeffrey Wicks, Tonja Wilhite, Chad Wilkie, Brian Williams, Amber Wilson, Bram Withrow, David Xenopoulos, Damon Yi, Weili York, Amy Zuretti, Bill

PJM Interconnection, LLC SPGlobal PJM Interconnection. LLC PJM Interconnection. LLC NextEra Energy Marketing, LLC PJM Interconnection, LLC PJM Interconnection, LLC PJM Interconnection, LLC SolarCity Metropolitan Edison Company GT Power Group **Duquesne Light Company** FirstEnergy Solutions Corp. Rockland Electric Company New York State Electric & Gas Corporation Diamond State Generation Partners, LLC Customized Energy Solutions, Ltd.* Brickfield, Burchette, Ritts & Stone, P.C. The Energy Authority, Inc. McNees Wallace & Nurick Electronic Systems Professional Alliance

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

Author: Christina Stotesbury

Provide feedback on the progress of this group: <u>*Facilitator Feedback Form*</u> Visit <u>*learn.pjm.com*</u>, an easy-to-understand resource about the power industry and PJM's role.