



Distributed Energy Resources Subcommittee PJM Conference and Training Center January 31, 2018 9:00 a.m. – 3:00 p.m. EDT

<u>Distributed Energy Resource (DER)</u> is a generation or electric energy storage resource connected at distribution voltages and/or connected behind a load meter.

#### Administration

- 1. Mr. Baker called the meeting to order and reviewed the agenda. Several items were shuffled around in the agenda to accommodate presenters' schedules.
- 2. Mr. Gledhill reviewed meeting participation guidelines. Attendance was taken in the room and WebEx attendance was taken offline. Minutesfrom the January 5th meeting of the Distributed Energy Resources Subcommittee were reviewed. Attendance was taken in the room and WebEx attendance was taken offline.

#### Wholesale DER Market Rules (9:15 – noon; 1:00 – 1:45)

- 3. Mr. Andrew Levitt, PJM, presented on a proposed method to measure retail vs. wholesale stored energy for primarily front of the meter resources with energy storage that occasionally serve load. Stakeholders provided feedback and requests for additional clarity. PJM will enter details into the solutions matrix.
- 4. Siva Josyula, Monitoring Analytics, provided details on the Three Pivotal Supplier test and cost-based offers.
- 5. Mr. Tom Rutigliano, representing Icetec, presented an energy market example related to their proposal on market rules for combined wholesale DER and load response resources. Stakeholders requested additional clarity on the accounting methodology.
- 6. Mr. Levitt, PJM, presented PJM's perspective on concerns associated with current PJM proposal to separate demand response resources and W-DER at the same site into distinct market resources, as well as possible remedies. Stakeholders provided feedback and requested additional detail on impacts to different involved parties at a future meeting.

#### Non-Wholesale DER

7. Mr. Langbein, PJM, presented proposed changes to gain visibility of non-wholesale DER resources within the PJM footprint.

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### **Updates**

8. Ms. Danielle Croop provided an update on the Primary Frequency Response Senior Task Force and discussed potential new primary frequency response requirements for wholesale DER resources in PJM. These requirements will be documented in PJM Manual M14B: PJM Region Transmission Planning Process.

### Wrap-up and Future Agenda Items

9. Mr. Baker summarized action items and discussed agenda items for the next meeting.

Future I	Meeting	<b>Dates</b>

March 2, 2018	9:00 a.m. – 12:00 p.m.	PJM Conference & Training Center/ WebEx
April 25, 2018	9:00 a.m. – 3:00 p.m.	PJM Conference & Training Center/ WebEx
June 8, 2018	9:00 a.m. – 3:00 p.m.	PJM Conference & Training Center/ WebEx
June 29, 2018	9:00 a.m. – 3:00 p.m.	PJM Conference & Training Center/ WebEx
July 30, 2018	9:00 a.m. – 3:00 p.m.	PJM Conference & Training Center/ WebEx
August 27, 2018	9:00 a.m. – 3:00 p.m.	PJM Conference & Training Center/ WebEx
October 4, 2018	9:00 a.m. – 3:00 p.m.	PJM Conference & Training Center/ WebEx
October 31, 2018	9:00 a.m. – 3:00 p.m.	PJM Conference & Training Center/ WebEx
November 30, 2018	9:00 a.m. – 3:00 p.m.	PJM Conference & Training Center/ WebEx

#### Attendance

Attendees	Company	Sector
Scott Baker (Facilitator)	PJM Interconnection, LLC	Not Applicable
Andrew Gledhill (Secretary)	PJM Interconnection, LLC	Not Applicable
Drew Adams	A.F. Mensah, Inc.	Other Supplier
Ed Achaab	AEP Energy Partners, Inc.	Other Supplier
Ryan Dolan	AEP Energy Partners, Inc.	Other Supplier
Toby Hu	Ameren Corporation	Not Applicable
Chris Norton	American Municipal Power, Inc.	Electric Distributor
Kristin Rothey	American Municipal Power, Inc.	Electric Distributor
Kent Feliks	Appalachain Power Company	Transmission Owner
Brock Ondayko	Appalachain Power Company	Transmission Owner
David Canter	Appalachian Power Company	Transmission Owner
Kevin Kilgallen	Avangrid Renewables, LLC	Generation Owner
Brian Vayda	Borough of Park Ridge, NJ	Electric Distributor
David Scarpignato	Calpine Energy Services, L.P.	Generation Owner
Greg Poulos	CAPS	Not Applicable
Maya Prica	Case Western Reserve University	Not Applicable
Rehan Gilani	Consolidated Edison Energy, Inc.	Other Supplier
Brian O'Boyle	Consolidated Edison Energy, Inc.	Other Supplier
Brian Wilkie	Consolidated Edison Solutions, Inc	Other Supplier
Bruce Campbell	Cpower	Other Supplier

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**Amber Williams** 



Not Applicable

Not Applicable

Not Applicable

Not Applicable

Not Applicable

Other Supplier

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**Transmission Owner** 

Guy Filomena Customized Energy Solutions, Ltd.\*

Carl Johnson Customized Energy Solutions, Ltd.\*

Jonathan Sasser Customized Energy Solutions, Ltd.\*

Patrick Shoop Customized Energy Solutions, Ltd.\*

John Horstmann Dayton Power & Light Company (The)

Joseph DeLosa DE Public Service Commission

David Hastings Dhast Co

Peter CavanDirect Energy Business Marketing, LLCOther SupplierJames DavisDominion Energy Marketing, Inc.Generation OwnerChristin DomianDuquesne Light CompanyTransmission OwnerAlex RosenblattDuquesne Light CompanyTransmission OwnerChuck DuganEast Kentucky Power Cooperative, Inc.Transmission Owner

Richard Drom Eckert Seamans Not Applicable
John Brodbeck EDP Renewables North America, LLC Other Supplier
Malcolm Ainspan Energy Curtailment Specialists, Inc. Other Supplier
Katie Guerry EnerNOC, Inc. Other Supplier

Sharon MidgleyExelon Business Services Company, LLCTransmission OwnerJim BenchekFirstEnergy Solutions Corp.Transmission OwnerMartin BolanFirstEnergy Solutions Corp.Transmission OwnerJustin PriceFirstEnergy Solutions Corp.Transmission Owner

Jos Schneider FirstEnergy Solutions Corp. Transmission Owner Ed Stein FirstEnergy Solutions Corp. Transmission Owner Christopher Wehr FirstEnergy Solutions Corp. Transmission Owner Transmission Owner

Christopher WehrFirstEnergy Solutions Corp.Transmission OrJed TrottGalt Power Inc.Other SupplierTom HyzinskiGT Power GroupNot ApplicableDavid PratzonGT Power GroupNot ApplicableJeffrey WhiteheadGT Power GroupNot Applicable

Mike Gahimer IN Office of Utility Consumer Counselor End User Customer

Matthew McCaffree Itron Not Applicable

Megan WiserskyMadison Gas & Electric CoOther SupplierStacy SherwoodMaryland Public Service CommissionNot ApplicableDavid MabryMcNees Wallace & Nurick LLCNot Applicable

Thomas Weeks Michigan Public Power Agency Generation Owner
Erik Hanser Michigan Public Service Commission Not Applicable
Siva Josyula Monitoring Analytics Not Applicable
Skyler Marzewski Monitoring Analytics Not Applicable

Brett Feldman Navigant Consulting, Inc. Not Applicable
David Brown New Jersey Board of Public Utilities Not Applicable
George Kogut New York Power Authority Other Supplier

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New York State Electric & Gas Corporation



Jung Suh Noble Americas Energy Solutions LLC Other Supplier Laurie Wiegand-Jackson North America Power Partners LLC Other Supplier Not Applicable **Brian Hamilton** North American Electric Reliability Corporation North Carolina Electric Membership Corporation Electric Distributor Robert Beadle NRG Curtailment Solutions Other Supplier Brian Kauffman NRG Curtailment Solutions Other Supplier Courtney Lang Office of the Peoples Counsel for the D.C. **End User Customer** Frederick Heinle Yohannes Mariam Office of the Peoples Counsel for the D.C. **End User Customer** Bruce Remmel Ohio Edison Company (ATSI CSP) **Transmission Owner** Adrien Ford Old Dominion Electric Cooperative Electric Distributor Jenjira Knernschield Electric Distributor Old Dominion Electric Cooperative **Gregory Carmean OPSI** Not Applicable Other Imelda Foley Not Applicable Dave Anders PJM Interconnection, LLC Not Applicable Murty Bhavaraju PJM Interconnection, LLC Not Applicable Joe Ciabattoni PJM Interconnection, LLC Not Applicable Danielle Croop PJM Interconnection, LLC Not Applicable Michael Del Viscio PJM Interconnection, LLC Not Applicable Mary Ellen Driscoll PJM Interconnection, LLC Not Applicable PJM Interconnection, LLC Not Applicable Theresa Esterly Andy Ford PJM Interconnection, LLC Not Applicable Craig Glazer PJM Interconnection, LLC Not Applicable Eric Hsia PJM Interconnection, LLC Not Applicable David Kimmel PJM Interconnection, LLC Not Applicable Pete Langbein PJM Interconnection, LLC Not Applicable Andrew Levitt PJM Interconnection, LLC Not Applicable Kanning Li PJM Interconnection, LLC Not Applicable Not Applicable Glenn Long PJM Interconnection, LLC Chenchao Lu PJM Interconnection, LLC Not Applicable Joseph Mulhern PJM Interconnection, LLC Not Applicable Masha Nyemko PJM Interconnection, LLC Not Applicable Jack O'Neill PJM Interconnection, LLC Not Applicable Melissa Pilong PJM Interconnection, LLC Not Applicable Steven Pincus PJM Interconnection, LLC Not Applicable Ken Schuyler PJM Interconnection, LLC Not Applicable Natalie Tacka PJM Interconnection, LLC Not Applicable Jack Thomas Not Applicable PJM Interconnection, LLC Laura Walter Not Applicable PJM Interconnection, LLC Electric Distributor Marjorie Garbini Potomac Electric Power Company Scott Razze Electric Distributor Potomac Electric Power Company

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Mike Colby James Stover Gary Greiner

David Ellis Al Grisolia

Andrew Powers
Jim Sherman
Alex Stern

Tom Hoatson

Betty Watson George Beam Brad Swalwell

Kenneth Foladare

Adam Weber Susan Covino Virgil Nunan Joshua Walters

Eric Winkler

Author: Andrew Gledhill

PPL Electric Utilities Corp. dba PPL Utilities PPL Electric Utilities Corp. dba PPL Utilities

PSEG Energy Resources and Trade LLC Public Service Electric & Gas Company Public Service Electric & Gas Company

Riverside Generating, LLC

SolarCity

Talen Energy Marketing, LLC
Tangent Energy Solutions, Inc.

Tangibl

Union Electric Company d/b/a Ameren Missouri

Unknown Unknown Unknown

Winkler Energy Consulting

Transmission Owner
Transmission Owner

Transmission Owner
Transmission Owner
Transmission Owner

Transmission Owner Transmission Owner Transmission Owner

Other Supplier Not Applicable

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

Not Applicable

Not Applicable

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