

Markets and Reliability Committee
Convene at the Cira Centre, Philadelphia, PA
December 7, 2017
9:00 a.m. – 1:40 p.m. EPT

Administration

Ms. Suzanne Daugherty and Mr. Dave Anders welcomed the participants, and provided the antitrust and code of conduct announcements.

Endorsements/Approvals

1. Draft Minutes

Minutes of the October 26, 2017 meeting of the Markets and Reliability Committee (MRC) were **approved** by acclamation with no objections or abstentions.

2. PJM Manuals

A. Ms. Suzanne Daugherty discussed very positive feedback received from Members regarding testing of system updates necessary to support transition to 5-Minute Settlements, and the desire to provide time for additional Member testing. She also noted that the FERC had not yet approved PJM's compliance filing. Thus PJM expects to file with the FERC a request to move the implementation date for 5-minute Settlements from February 1, 2018 to April 1, 2018.

Mr. Ray Fernandez presented revisions to Manuals 11: Energy & Ancillary Services, 18: PJM Capacity Market, 27: Open Access Transmission Tariff Accounting, 28: Operating Agreement Accounting and 29: Billing associated with the implementation of 5-Minute Settlements. Following discussion, the proposed Manual revisions were **endorsed** by acclamation with no objections or abstentions.

3. Distributed Energy Resources Update

Mr. Scott Baker presented a proposed charter revision to convert the Distributed Energy Resources effort to a subcommittee. Following discussion, the committee **approved** the proposed charter revision by acclamation with no objections and five abstentions.

4. 2018 Day Ahead Scheduling Reserve (DASR) Requirement

Mr. Eric Endress presented proposed revisions to the 2018 DASR requirement. Following discussion, the committee **approved** the proposed DASR requirement by acclamation with no objections or abstentions.

5. Credit Requirements for Regulation

Ms. Lisa Drauschak presented proposed Tariff revisions related to a proposed change in credit requirements for regulation resources. Following discussion, the committee **endorsed** the proposed

Tariff revisions by acclamation with no objections or abstentions. There were no objections to moving endorsement of the Tariff revisions from the standard agenda to the consent agenda for the December 7, 2017 MC meeting.

6. FTR Credit Requirements for Transmission Upgrades

Ms. Lisa Drauschak presented proposed Tariff revisions regarding FTR credit requirements to reduce exposure posed by anticipated congestion changes resulting from major transmission upgrades. Following discussion, the committee **endorsed** the proposed Tariff revisions by acclamation with one objection and one abstention. There were no objections to moving endorsement of the Tariff revisions from the standard agenda to the consent agenda for the December 7, 2017 MC meeting.

7. Price Responsive Demand

Mr. Pete Langbein presented proposals developed by the Demand Response Subcommittee (DRS) to address Price Responsive Demand.

Ms. Ruth Price, DE Division of the Public Advocate moved and Mr. Eric Heinle, Office of the People's Counsel for the District of Columbia, seconded the proposal of the Independent Market Monitor identified at the DRS. This proposal was considered the second alternate motion, as two proposals received greater than simple majority support at the DRS and therefore became the main and first alternate motions.

Mr. Greg Poulos, on behalf of Mr. Bill Fields of the MD Office of the Peoples' Counsel, moved and Mr. Eric Heinle, seconded deferring a vote on the any of the proposals until the newly formed Summer-Only Demand Response Senior Task Force endorses a proposed solution to its problem statement or fails to do so.

The motion to defer was **approved** in a sector-weighted vote with 3.44 in favor; therefore no voting was conducted on the three proposals.

First Readings

8. FTR Modeling, Performance & Surplus (FTRMPS)

Mr. Brian Chmielewski presented a first read of proposals 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 its next meeting.

9. New Service Request Study Methods

Mr. Ed Franks discussed proposed changes to the procedures associated with the study of Transmission Service Requests and Upgrade Requests in the New Services Queue process which

have been recently discussed in Planning Committee sub-group meetings. The committee will be asked to endorse the study methods at its next meeting.

10. Energy Market Price Formation Problem Statement & Issue Charge

Mr. Stu Bresler presented a proposed Problem Statement and Issue Charge related to Energy Market Price Formation. The committee will be asked to approve these documents at its next meeting.

PJM Technologies, Inc.

Ms. Suzanne Daugherty noted that a new PJM non-FERC regulated subsidiary, PJM Connex, has entered into an agreement with Peak Reliability to pursue the possibility of jointly offering reliability and market services in the Western Interconnection.

11. Capacity Construct / Public Policy Sr. Task Force (CCPPSTF)

Mr. Dave Anders provided an update on the activities of the CCPPSTF. Dr. Joe Bowring discussed the proposal of the Independent Market Monitor, which was the only proposal to receive simple majority support at the CCPPSTF. The committee will be asked to endorse the proposal at its next meeting.

12. Operationalizing Natural Gas Contingencies

Mr. Dave Souder discussed proposed manual revisions related to Operationalizing Natural Gas Contingencies. The proposed Manual 13: Emergency Operations revisions will be incorporated into revisions considered in item 14.D below.

13. PJM Manuals

- A. Mr. Ryan Nice reviewed proposed changes to Manual 01: Control Center and Data Exchange Requirements. The committee will be asked to endorse the manual revisions at its next meeting.
- B. Mr. Yuri Smolanitsky presented proposed revisions to Manual 03: Transmission Operations. The committee will be asked to endorse the manual revisions at its next meeting.
- C. Mr. Vince Stefanowicz presented proposed revisions to Manual 10: Pre-Scheduling Operations. The committee will be asked to endorse the manual revisions at its next meeting.
- D. Mr. Chris Pulong presented proposed revisions to Manual 13: Emergency Operations. The committee will be asked to endorse the manual revisions at its next meeting.
- E. Mr. Vince Stefanowicz presented proposed revisions to Manual 14D: Generator Operational Requirements. The committee will be asked to endorse the manual revisions at its next meeting.

14. Incremental Auction Sr. Task Force (IASTF) (12:55-1:10)

Mr. Brian Chmielewski provided a report on the activities of the IASTF including the results of recent voting regarding Interim Auction Re-Design proposals. Ms. Sharon Midgley moved and Ms. Susan Bruce seconded a first read to endorse proposal A'' developed by the IASTF. The committee will be asked to approve the motion at its next meeting.

Informational Updates

15. Ohio Valley Electric Corporation (OVEC) Integration

Mr. Mark Sims discussed the results of planning studies regarding integration of the OVEC.

16. PJM/MISO Pseudo-Tie Update

Ms. Jennifer Tribulski and Mr. Tim Horger provided an update on external capacity enhancements.

17. Work Plan Review

Mr. Anders discussed reviewed of work plans for ongoing stakeholder process issues. Stakeholders offered no changes to the proposed work plan.

Future Agenda Items

No new future agenda items were identified.

Future Meeting Dates

December 21, 2017	9:00 a.m.	Wilmington, DE
January 25, 2018	9:00 a.m.	Wilmington, DE
February 22, 2018	9:00 a.m.	Wilmington, DE
March 22, 2018	9:00 a.m.	Wilmington, DE
April 19, 2018	9:00 a.m.	Wilmington, DE
May 24, 2018	9:30 a.m.	Wilmington, DE
June 21, 2018	9:00 a.m.	Wilmington, DE
July 26, 2018	9:00 a.m.	Wilmington, DE
August 23, 2018	9:00 a.m.	Wilmington, DE
September 27, 2018	9:00 a.m.	Valley Forge, PA
October 25, 2018	9:00 a.m.	Wilmington, DE
December 6, 2018	9:00 a.m.	Wilmington, DE
December 20, 2018	9:30 a.m.	Wilmington, DE

Author: D. A. Anders

Chair/Secretary		Company	Sector
Anders	David	PJM Interconnection	Not Applicable
Daugherty	Suzanne	PJM Interconnection	Not Applicable
Voting Participants			
Last Name	First Name	Company	Sector
Barker	Jason	Exelon Business Services Company, LLC	Transmission Owner
Benchek	Jim	American Transmission Systems, Inc.	Transmission Owner
Birnel	William	Westar	Other Supplier

Bleiweis	Bruce	DC Energy	Other Supplier
Borgatti	Michael	Covanta Energy Group, LLC	Generation Owner
Borgatti	Michael	Jersey Green Energy, LLC	Other Supplier
Borgatti	Michael	Longview Power, LLC	Generation Owner
Borgatti	Michael	Moxie Freedom LLC	Generation Owner
Borgatti	Michael	Newark Energy Center, LLC	Generation Owner
Borgatti	Michael	York County Solid Waste and Refuse Authority	Generation Owner
Bruce	Susan	Air Products & Chemicals, Inc.	End User Customer
Bruce	Susan	ArcelorMittal USA LLC	End User Customer
Bruce	Susan	Gerdau Ameristeel Energy, Inc.	Other Supplier
Bruce	Susan	Industrial Energy Users-Ohio	Other Supplier
Bruce	Susan	Kimberly-Clark Corporation	Generation Owner
Bruce	Susan	Lehigh Portland Cement Company	End User Customer
Bruce	Susan	Letterkenny Industrial Development Authority - PA	Electric Distributor
Bruce	Susan	Linde, LLC	End User Customer
Bruce	Susan	MeadWestvaco Corporation	End User Customer
Bruce	Susan	Praxair, Inc.	End User Customer
Bruce	Susan	Procter & Gamble Paper Products Company (The)	Generation Owner
Bruce	Susan	Trustees of the University of Pennsylvania	End User Customer
Bruce	Susan	Wellsboro Electric Company	Electric Distributor
Burton	Mitch	Virginia Division of Consumer Counsel	End User Customer
Campbell	Bruce	Enerwise Global Technologies, Inc.	Other Supplier
Campbell	Bruce	MidAtlantic Power Partners, LLC	Other Supplier
Crystle	Gil	UGI Development Company	Generation Owner
Davis	James	Virginia Electric & Power Company	Transmission Owner
Debellis	Eric	Citizens Utility Board Of Illinois	Other Supplier
DeBellis	Eric	Illinois Citizen Utility Board	End User Customer
Dugan	Chuck	East Kentucky Power Cooperative, Inc.	Transmission Owner
Ellison	Alan	Grays Ferry Cogeneration Partnership	Generation Owner
Evrard	David	Pennsylvania Office of Consumer Advocate	End User Customer
Fitch	Neal	NRG Power Marketing, LLC	Generation Owner
Fondacci	Luis	North Carolina Electric Membership Corporation	Electric Distributor
Ford	Adrien	Old Dominion Electric Cooperative	Electric Distributor
Fox	Angela	Affirmed Energy LLC	Other Supplier
Fox	Angela	Wylan Energy LLC	Other Supplier
Gardner	Michelle	NextEra Energy Marketing, LLC	Generation Owner
Garnett	Bryan	Duke Energy Business Services LLC	Transmission Owner
Gorman	Kevin	The Highlands Energy Group, LLC	Other Supplier
Greening	Michele	PPL Electric Utilities Corporation d/b/a PPL Utilities	Transmission Owner
Guerry	Katie	EnerNOC, Inc.	Other Supplier
Hastings	David	Aspirity Energy, LLC	Other Supplier

Hastings	David	Mercuria Energy America, Inc.	Other Supplier
Hastings	David	MICS	Other Supplier
Hastings	David	Northstar Trading Ltd.	Other Supplier
Hastings	David	Saracen Energy East, L.P.	Other Supplier
Hastings	David	SESCO Enterprises, LLC	Other Supplier
Hastings	David	Solios Power Mid-Atlantic Trading, LLC	Other Supplier
Hastings	David	Tenaska Power Services Co.	Generation Owner
Helms	Joe	Rainbow Energy Marketing Corporation	Other Supplier
Helms	Joseph	Rainbow Energy Marketing Corporation	Other Supplier
Heinle	Frederick	Office of the People's Counsel for the District of Columbia	End User Customer
Hoatson	Tom	Riverside Generating, LLC	Generation Owner
Hoatson	Tom	Riverside Power	Generation Owner
Hoatson	Tom	West Deptford Energy, LLC	Generation Owner
Hohenshilt	Jennifer	Talen Energy Marketing, LLC	Generation Owner
Horstmann	John	Dayton Power & Light Company (The)	Transmission Owner
Horton	Dana	Appalachian Power Company	Transmission Owner
Hurwich	Mark	Elliott Bay Energy Trading, LLC	Other Supplier
Hurwich	Mark	Elliott Bay Energy Trading, LLC	Other Supplier
Hyzinski	Thomas	Dynegy Marketing and Trade, LLC	Generation Owner
Jardot	Gina	Cogentrix	Transmission Owner
Johnson	Carl	Allegheny Electric Cooperative, Inc.	Electric Distributor
Johnson	Carl	American Municipal Power, Inc.	Electric Distributor
Johnson	Carl	Blue Ridge Power Agency, Inc.	Electric Distributor
Johnson	Carl	Borough of Chambersburg	Electric Distributor
Johnson	Carl	Borough of Mont Alto, Pennsylvania	Electric Distributor
Johnson	Carl	Buckeye Power, Inc.	Electric Distributor
Johnson	Carl	Central Virginia Electric Cooperative	Electric Distributor
Johnson	Carl	City of Dover, Delaware	Electric Distributor
Johnson	Carl	Delaware Municipal Electric Corporation, Inc.	Electric Distributor
Johnson	Carl	Easton Utilities Commission	Electric Distributor
Johnson	Carl	Energy Cooperative Association of Pennsylvania (The)	Other Supplier
Johnson	Carl	Galt Power, Inc.	Other Supplier
Johnson	Carl	Hagerstown Light Department	Electric Distributor
Johnson	Carl	Illinois Municipal Electric Agency	Electric Distributor
Johnson	Carl	Indiana Municipal Power Agency	Generation Owner
Johnson	Carl	Madison Gas & Electric Co.	Other Supplier
Johnson	Carl	North Carolina Municipal Power Agency Number 1	Other Supplier
Johnson	Carl	Northern Illinois Municipal Power Agency	Electric Distributor
Johnson	Carl	Northern Virginia Electric Cooperative (NOVEC)	Electric Distributor
Johnson	Carl	Old Dominion Electric Cooperative	Electric Distributor

Johnson	Carl	Thurmont Municipal Light Company	Electric Distributor
Johnson	Carl	Town of Williamsport (The)	Electric Distributor
Johnson	Carl	WPPI Energy	Other Supplier
Kelly	Stephen	Brookfield	Other Supplier
Kier	Laura	EnergyHub, Inc.	Other Supplier
Kilgallen	Kevin	Avangrid Renewables, LLC	Generation Owner
Kilgallen	Kevin	EDP Renewables North America, LLC	Generation Owner
Kinser	Cynthia	Office Of The Attorney General Consumer	End User Customer
Kogut	George	New York Power Authority	Other Supplier
Kogut	George	New York Power Authority	Other Supplier
Lieberman	Steven	American Municipal Power, Inc.	Electric Distributor
Long	Scott	Allegheny Electric Cooperative	Electricity Distributor
Long	Scott	Allegheny Electric Cooperative, Inc.	Electric Distributor
Melnyk	Markian	Atlantic Grid Operations A, LLC	Other Supplier
O'Connell	Robert	PPGI Fund A/B Development, LLC.	Generation Owner
Pakela	Gregory	DTE Energy Trading	Other Supplier
Pakela	Greg	DTE Energy Trading, Inc.	Other Supplier
Pakula	Maggie	Invernergy	Generation Owner
Philips	Marji	Direct	Other Supplier
Philips	Marji	Direct Energy Business, LLC	Other Supplier
Picardi	Matthew	Shell Energy North America (US), L.P.	Other Supplier
Poulos	Greg	Consumer Protection and Advocate Division of the Tennessee Attorney General	End User Customer
Poulos	Greg	Delaware Division of the Public Advocate	End User Customer
Poulos	Greg	Illinois Citizen Utility Board	End User Customer
Poulos	Greg	Indiana Office of Utility Consumer Counselor (IN OUCC)	End User Customer
Poulos	Greg	Maryland Office of People's Counsel	End User Customer
Poulos	Greg	New Jersey Division of Rate Counsel	End User Customer
Poulos	Greg	Office of the Attorney General, Kentucky	End User Customer
Poulos	Greg	Office of the People's Counsel for the District of Columbia	End User Customer
Poulos	Greg	Pennsylvania Office of Consumer Advocate	End User Customer
Poulos	Greg	Public Staff - North Carolina Utilities Commission	End User Customer
Poulos	Greg	West Virginia Consumer Advocate Division	End User Customer
Pratzon	David	Eastern Generation, LLC	Generation Owner
Pratzon	David	Essential Power Rock Springs, LLC	Transmission Owner
Pratzon	David	ITC Interconnection LLC	Transmission Owner
Pratzon	David	Wheelabrator Frackville Energy Co., Inc.	Generation Owner
Ramsey	James	Suffolk Fund	Other Supplier
Ramsey	James	Suffolk Fund LLC	Other Supplier
Rohrbach	John	Southern Maryland Electric Cooperative, Inc.	Electric Distributor
Rohrbach	John	Wabash Valley Power Association, Inc.	Electric Distributor

Rushing	Nathan	CPV Power Holdings L.P.	Generation Owner
Rushing	Nathan	CPV Power Holdings, LP	Generation Owner
Rushing	Nathan	Homer City Generation, L.P.	Generation Owner
Rutigliano	Tom	Achieving Equilibrium LLC	Other Supplier
Rutigliano	Tom	Earth Networks, Inc.	Other Supplier
Rutigliano	Tom	EMC Development Company, Inc.	Other Supplier
Scarpignato	David	Calpine Energy Services, L.P.	Generation Owner
Skucas	Ruta	Aeon Energy Trading LLC	Other Supplier
Skucas	Ruta	Alphataraxia Palladium LLC	Other Supplier
Skucas	Ruta	Ames Energy, LLC	Other Supplier
Skucas	Ruta	Big Bend Trading, LLC	Other Supplier
Skucas	Ruta	BJ Energy, LLC	Other Supplier
Skucas	Ruta	Boston Energy Group, Inc.	Other Supplier
Skucas	Ruta	Dufossat Capital I, LLC	Other Supplier
Skucas	Ruta	Endurance Energy Midwest LLC	Other Supplier
Skucas	Ruta	Energya VM Gestion de Energia S.L.U.	Other Supplier
Skucas	Ruta	Falcon Energy, LLC	Other Supplier
Skucas	Ruta	Great Bay Energy III, LLC	Other Supplier
Skucas	Ruta	Greene Energy NE LLC	Other Supplier
Skucas	Ruta	Hexis Energy Trading, LLC	Other Supplier
Skucas	Ruta	Liberty Hill Power, LLC	Other Supplier
Skucas	Ruta	Mac Trading, Inc.	Other Supplier
Skucas	Ruta	MAG Energy Solutions, Inc.	Other Supplier
Skucas	Ruta	Monterey MA, LLC	Other Supplier
Skucas	Ruta	Precept Power LLC	Other Supplier
Skucas	Ruta	Pure Energy, Inc.	Other Supplier
Skucas	Ruta	Red Wolf Energy Trading, LLC	Other Supplier
Skucas	Ruta	Southard Energy Partners LLC	Other Supplier
Skucas	Ruta	Taller Cube, LLC	Other Supplier
Skucas	Ruta	Velocity American Energy Master I, L.P.	Other Supplier
Skucas	Ruta	XO Energy MA, L.P.	Other Supplier
Skucas	Ruta	Yasmin Partners LLC	Other Supplier
Stern	Alex	Public Service Electric & Gas Company	Transmission Owner
Trayers	Barry	Citigroup Energy, Inc.	Other Supplier
Vaudreuil	Greg	Mosaic Power	Other Supplier
Vayda	Brian	Borough of Butler, Butler Electric Division	Electric Distributor
Vayda	Brian	Borough of Lavallette, New Jersey	Electric Distributor
Vayda	Brian	Borough of Madison, New Jersey	Electric Distributor
Vayda	Brian	Borough of Milltown, New Jersey	Electric Distributor
Vayda	Brian	Borough of Park Ridge, New Jersey	Electric Distributor
Vayda	Brian	Borough of Seaside Heights, New Jersey	Electric Distributor

Vayda	Brian	Borough of South River, New Jersey	Electric Distributor
Vayda	Brian	Vineland Municipal Electric Utility	Electric Distributor
Wadsworth	Joe	Vitol Inc.	Other Supplier
Wicks	Tonja	Duquesne Light Company	Transmission Owner
Wilkie	Brian	Rockland Electric Company	Transmission Owner
Wood	Gordon	ETC Endure Energy	Other Supplier
Non-Voting Participants			
Last Name	First Name	Company	Sector
Abernethy	Cathy	Ameresco	Not Applicable
Ainspan	Malcolm	Energy Curtailment Specialists, Inc.	Not Applicable
Asplund	Russ	TransAlta	Other Supplier
Azar	Abe	Deutsche Bank	Other Supplier
Bae	Jae	Pa Consulting	Not Applicable
Bagot	Nancy	Electric Power Supply Association	Not Applicable
Bagshaw	Kate	Bruce Power	Other Supplier
Batta	Michael	Dominion Energy Generation Marketing, Inc.	Generation Owner
Berlinski	Michael	Customized Energy Solutions	Not Applicable
Bolan	Martin	FirstEnergy	Transmission Owner
Bowring	Joe	Monitoring Analytics	Not Applicable
Carista	James	Pseng	Not Applicable
Carmean	Gregory	OPSI	Not Applicable
Chen	Jennifer	NRDC	Not Applicable
Chen	Jay	Shell Energy North America	Other Supplier
Chintapalli	Raj	BP Energy Company	Other Supplier
Chocarro	Iker	E.ON Climate & Renewables	Generation Owner
Cocco	Michael	Old Dominion Electric Cooperative	Electric Distributor
Coffey	Cecelia	Federal Energy Regulatory Commission	Not Applicable
Covello	Philip	Evercore ISI	Not Applicable
Dailey	Mike	Northern Virginia Electric Cooperative	Electric Distributor
Dasher	Brett	The Energy Authority	Other Supplier
Day	Gren	Columbus Hill	Not Applicable
Delosa	Joe	Delaware Public Service Commission	Not Applicable
Depillo	Ray	PSEG Energy Resources	Other Supplier
Dillon	Matt	UGI Development	Generation Owner
Dolan	Ryan	American Municipal Power	Other Supplier
Domian	Christin	Duquesne	Transmission Owner
Douglass	Robert	Exelon Generation	Generation Owner
Estes	Charles	TransAlta	Other Supplier
Filomena	Guy	Customized Energy Solutions, Ltd.*	Not Applicable

First	Gary	FirstEnergy	Transmission Owner
Foladare	Kenneth	Tangibl	Not Applicable
Fort	Jim	The Energy Authority	Other Supplier
Foxen	Timothy	Osaka Gas USA Corporation	None
Freeman	Michael	Emerald Energy Consulting, LLC	Not Applicable
Frye	Sam	Mercuria Energy America	Other Supplier
Gahimer	Mike	OUCC	End User Customer
Gignac	James	Illinois Attorney General's Office	Not Applicable
Gilani	Rehan	ConEdison Energy	Other Supplier
Godson	Gloria	Exelon Business Services Company, LLC	Transmission Owner
Gonta	Igor	Blackrock	Not Applicable
Gramlich	Rob	Grid Strategies LLC	Not Applicable
Grimes	Jordan	Morgan Stanley	Not Applicable
Hamilton	Brian	North American Electric Reliability Corporation	Not Applicable
Hannweber	Troy	TransAlta Energy Marketing	Other Supplier
Hanser	Erik	Michigan Public Service Commission	Not Applicable
Harmon	Mike	Ameren	Not Applicable
Hawkins	Peterson	Luminus	Not Applicable
Haynes	Greg	The Energy Authority	Other Supplier
Henry	Michelle	FirstEnergy Solutions Corp.	Transmission Owner
Hepplewhite	Peter	DC Energy	Other Supplier
Hitch	George	Dominion Energy Generation Market, Inc.	Generation Owner
Holbrook	Ruth	Northern Virginia Electric Cooperative	Electric Distributor
Hudis	Gabriella	Jersey Green Energy, LLC	Other Supplier
Huntoon	Steve	Energy Counsel LLP	Not Applicable
Hyatt	John	Monitoring Analytics	Not Applicable
Iyer	Shrikant	Exelon Generation	Generation Owner
Janicki	Diane	Boston Energy Trading & Marketing	Generation Owner
Jett	William	Duke Energy	Transmission Owner
Johnston	David	The Indiana Utility Regulatory	Not Applicable
Kaczanowski	Marek	Baltimore Gas & Electric	Transmission Owner
Kauffman	Brian	NRG Curtailment Solutions, Inc.	Other Supplier
Kerecman	Joe	Calpine Energy Services, L.P.	Generation Owner
King	Robert	Whisker Labs	
Kolo	Elta	GTM Research	Not Applicable
Levine	Jeffrey	ENGIE Resources	Other Supplier
Liang-Nicol	Cecilia	FirstEnergy Solutions Corp.	Transmission Owner
Logan	Sharon	Federal Energy Regulatory Commission	Not Applicable
Mabry	David	MWN	Not Applicable
Mack	Amanda	NextEra Energy Transmission	Generation Owner
Mariam	Yohannes	Office of the People's Counsel DC	End User Customer

Marinelli	Richard	Public Service Electric & Gas Company	Transmission Owner
Marzewski	Skyler	Monitoring Analytics	Not Applicable
Mccdaniel	John	Baltimore Gas & Electric	Transmission Owner
Mendelsohn	Mark	Mercuria Energy America	Other Supplier
Merola	Becky	Calpine Energy Services, L.P.	Generation Owner
Midgley	Sharon	Exelon Business Services Company, LLC	Transmission Owner
Miller	John	Commonwealth Edison Company	Transmission Owner
Moncayo	Jorge	Federal Energy Regulatory Commission	Not Applicable
Mount	Colin	FirstEnergy	Transmission Owner
Nadel	Steven	PPL Electric Utilities	Transmission Owner
Nader	Jordan	RunnerStone LLC	Not Applicable
Nawaz	Zainab	New Jersey Board Of Public Utilities	Not Applicable
Nicolay	Christi	Macquarie Energy	Other Supplier
Obrien	Kevin	Leidos	Not Applicable
Ogden	Henry	New Jersey Division of Rate Counsel	End User Customer
O'hara	Brian	Mercuria Energy America	Other Supplier
Olenick	Cory	Inertia Power	Other Supplier
Ondayko	Brock	Appalachian Power Company	Transmission Owner
Pang	Michael	Bank Of America Merrill Lynch	Not Applicable
Peebles	Andy	Saracen	Other Supplier
Pelletier	Eveline	HQUS Power	Not Applicable
Peoples	John	Duquesne Light Company	Transmission Owner
Phillips	Amanda	Aces Power Marketing, Inc.	Electric Distributor
Price	Mark	DC Energy	Other Supplier
Price	Ruth Ann	Delaware Division of the Public Advocate	End User Customer
Rainey	Frank	PEI Power Corporation	Generation Owner
Rains	Rob	WAC	
Rajan	Abhijit	Dominion Energy	Generation Owner
Reeping	Bob	FirstEnergy	Transmission Owner
Riehl	John	Federal Energy Regulatory Commission	Not Applicable
Rismiller	Randy	Illinois Commerce Commission	Not Applicable
Robinson	Maria	Advanced Energy Economy	Not Applicable
Romero	Joel	Monitoring Analytics	Not Applicable
Ruck	Andrew	PSEG	Other Supplier
Rudebusch	Tom	City Of Hagerstown, Maryland	Not Applicable
Rutigliano	Tom	EMC Development Company, Inc.	Other Supplier
Saini	Ishwar	Macquarie Energy	Other Supplier
Sarvis	Lynn	ABB Inc.	Not Applicable
Sasser	Jonathan	Customized Energy Solutions	Not Applicable
Schneider	Jon	FirstEnergy Solutions Corp.	Transmission Owner
Schreim	Morris	Maryland Public Service Commission	Not Applicable

Schultheis	Daniel	Exelon Business Services Company, LLC	Transmission Owner
Schum	Alice	Illinois Municipal Electric Agency	Electric Distributor
Shanker	Roy	East Coast Power	Other Supplier
Shelton	Chris	Millennium	Not Applicable
Sillin	John	Federal Energy Regulatory Commission	Not Applicable
Smaczniak	Kim	Earthjustice	Not Applicable
Sock	Bryan	PSEG	Other Supplier
Stone	Andy	Gabel Associates	Not Applicable
Stubbe	Judy	Duke Energy Kentucky, Inc.	Transmission Owner
Stuchell	Jeff	FirstEnergy	Transmission Owner
Suh	Jung	Calpine Energy Solutions	Generation Owner
Swain	Chad	TransAlta	Other Supplier
Sweeney	Rory	RTO Insider	Media
Synnott	Ian	Blackstart	Not Applicable
Tatum	Edward	American Municipal Power	Electric Distributor
Theodore	Sharon	Electric Power Supply Association	Not Applicable
Thomas	Glen	GT Power Group	Not Applicable
Thomson	Heather	Mid-Atlantic Renewable Energy	Not Applicable
Thundiyil	Kevin	Exelon Business Services Company, LLC	Transmission Owner
Tibbetts	Maeve	Pierce Atwood	Not Applicable
Tsao	Stephanie	S&P Global	Media
Tyler	Catherine	Monitoring Analytics	Not Applicable
Vargo	Daniel	Allegheny Electric Cooperative	Electric Distributor
Walker	Jennifer	Exelon Business Services Company, LLC	Transmission Owner
Walters	Josh	NRDC	Not Applicable
Webster	John	Icetec.Com	Other Supplier
Wei	Jie	Monitoring Analytics	Not Applicable
Wheeler	Daniel	NextEra Energy	Generation Owner
Whitehead	Jeffrey	Direct Energy Business Marketing, LLC	Other Supplier
Wilks	Daneille	ENGIE Resources	Other Supplier
Wilson	Bram	PBF Power Marketing, LLC	Generation Owner
Wilson	James	Wilson Energy Economics	Not Applicable
Wynn	Laura	Stone Mattheis Xenopoulos & Brew, PC	Not Applicable
Xenopoulos	Damon	Stone Mattheis Xenopoulos & Brew, PC	Not Applicable
Yukins	Jeffrey	Exelon Business Services Company, LLC	Transmission Owner
Zhou	Yuan	Castleton Commodity International	Not Applicable
PJM Attendees			
Last Name	First Name	Company	Sector
Baker	Scott	PJM Interconnection	Not Applicable

Barrett	Francis	PJM Interconnection	Not Applicable
Bastian	Jeff	PJM Interconnection	Not Applicable
Berner	Aaron	PJM Interconnection	Not Applicable
Borradaile	Michael	PJM Interconnection	Not Applicable
Bresler	Stu	PJM Interconnection	Not Applicable
Bresler	Stu	PJM Interconnection	Not Applicable
Bricklin	Brian	PJM Interconnection	Not Applicable
Brown	Rich	PJM Interconnection	Not Applicable
Bruno	Josh	PJM Interconnection	Not Applicable
Bruno	Patrick	PJM Interconnection	Not Applicable
Bryson	Mike	PJM Interconnection	Not Applicable
Buck	Rachel	PJM Interconnection	Not Applicable
Budney	David	PJM Interconnection	Not Applicable
Buehler	Susan	PJM Interconnection	Not Applicable
Burlew	Jim	PJM Interconnection	Not Applicable
Chao	Hungpo	PJM Interconnection	Not Applicable
Chmielewski	Brian	PJM Interconnection	Not Applicable
Connell	Jason	PJM Interconnection	Not Applicable
Coyne	Suzanne	PJM Interconnection	Not Applicable
Cummings	Bridgid	PJM Interconnection	Not Applicable
Derin	Bilge	PJM Interconnection	Not Applicable
Dimartino	Denise	PJM Interconnection	Not Applicable
Drauschak	Lisa	PJM Interconnection	Not Applicable
Driscoll	MaryEllen	PJM Interconnection	Not Applicable
Duane	Vince	PJM Interconnection	Not Applicable
Egan	Amanda	PJM Interconnection	Not Applicable
Egan	David	PJM Interconnection	Not Applicable
Endress	Eric	PJM Interconnection	Not Applicable
Eslerly	Theresa	PJM Interconnection	Not Applicable
Fabiano	Janell	PJM Interconnection	Not Applicable
Falin	Thomas	PJM Interconnection	Not Applicable
Fan	Zhenyu	PJM Interconnection	Not Applicable
Fernandez	Ray	PJM Interconnection	Not Applicable
Fitzpatrick	Brian	PJM Interconnection	Not Applicable
Foley	Sheila	PJM Interconnection	Not Applicable
Foster	Denise	PJM Interconnection	Not Applicable
Foster	Denise	PJM Interconnection	Not Applicable
Foster	Neel	PJM Interconnection	Not Applicable
Franks	Chris	PJM Interconnection	Not Applicable
Franks	Ed	PJM Interconnection	Not Applicable
Furnholm	Whitney	PJM Interconnection	Not Applicable

Genuario	Gabby	PJM Interconnection	Not Applicable
Giacomoni	Anthony	PJM Interconnection	Not Applicable
Glatz	Suzanne	PJM Interconnection	Not Applicable
Glazer	Craig	PJM Interconnection	Not Applicable
Gledhill	Andrew	PJM Interconnection	Not Applicable
Gresh	Leslie	PJM Interconnection	Not Applicable
Harhai	Michelle	PJM Interconnection	Not Applicable
Hendrzak	Chantal	PJM Interconnection	Not Applicable
Herling	Steve	PJM Interconnection	Not Applicable
Herman	Michael	PJM Interconnection	Not Applicable
Holland	Risa	PJM Interconnection	Not Applicable
Holter	Natasha	PJM Interconnection	Not Applicable
Horger	Tim	PJM Interconnection	Not Applicable
Hsia	Eric	PJM Interconnection	Not Applicable
Hugee	Jacquelyn	PJM Interconnection	Not Applicable
Kelley	Michael	PJM Interconnection	Not Applicable
Kenney	Susan	PJM Interconnection	Not Applicable
Keshavamurthy	Bhavana	PJM Interconnection	Not Applicable
Langbein	Pete	PJM Interconnection	Not Applicable
Larocque	Matthew	PJM Interconnection	Not Applicable
Long	Amanda	PJM Interconnection	Not Applicable
Loomis	Harold	PJM Interconnection	Not Applicable
Manion	Evelyn	PJM Interconnection	Not Applicable
Manion	Evelyn	PJM Interconnection	Not Applicable
Maxwell	Melissa	PJM Interconnection	Not Applicable
Mclaughlin	Jeff	PJM Interconnection	Not Applicable
McLaverly	Megan	PJM Interconnection	Not Applicable
Monzon	Stephanie	PJM Interconnection	Not Applicable
Morelli	Lisa	PJM Interconnection	Not Applicable
O'Brien	Tom	PJM Interconnection	Not Applicable
O'Hara	Chris	PJM Interconnection	Not Applicable
Olaleye	Michael	PJM Interconnection	Not Applicable
O'Neill	Jack	PJM Interconnection	Not Applicable
Orme	Brian	PJM Interconnection	Not Applicable
Ott	Andrew	PJM Interconnection	Not Applicable
Park	Jinny	PJM Interconnection	Not Applicable
Patel	Anita	PJM Interconnection	Not Applicable
Patel	Keyur	PJM Interconnection	Not Applicable
Perera	Asanga	PJM Interconnection	Not Applicable
Phillips	Darlene	PJM Interconnection	Not Applicable
Pilong	Chris	PJM Interconnection	Not Applicable

Ritchie	Sandra	PJM Interconnection	Not Applicable
Robinson	Charlie	PJM Interconnection	Not Applicable
Rocha	Patricio	PJM Interconnection	Not Applicable
Schmitt	Jeff	PJM Interconnection	Not Applicable
Schweizer	David	PJM Interconnection	Not Applicable
Seiler	Ken	PJM Interconnection	Not Applicable
Sims	Mark	PJM Interconnection	Not Applicable
Souder	Dave	PJM Interconnection	Not Applicable
Souder	Michelle	PJM Interconnection	Not Applicable
Stadlmeyer	Rebecca	PJM Interconnection	Not Applicable
Stotesbury	Christina	PJM Interconnection	Not Applicable
Swimm	Nora	PJM Interconnection	Not Applicable
Swimm	Nora	PJM Interconnection	Not Applicable
Tribulski	Jen	PJM Interconnection	Not Applicable
Velasco	Cheryl	PJM Interconnection	Not Applicable
Walter	Laura	PJM Interconnection	Not Applicable
Ward	Michael	PJM Interconnection	Not Applicable