

**Markets and Reliability Committee
PJM Conference and Training Center, Valley Forge, PA
December 5, 2019
9:00 a.m. – 12:20 p.m. EPT**

Administration (9:00-9:10)

Mr. Stu Bresler and Mr. Dave Anders welcomed stakeholders and provided the Anti-trust and Code of Conduct announcements.

Dr. Ake Almgren, Chair of the PJM Board of Managers, discussed the appointment of Mr. Manu Asthana as PJM President & CEO beginning January 6, 2020. He noted that Ms. Susan Riley will remain in her current role through January to assist with the transition before returning to her position as a member of the PJM Board of Managers. Dr. Almgren thanked Ms. Riley for her work as the Interim President & CEO.

Ms. Susan Riley, Interim PJM President & CEO, noted the progress made to build stronger relationships with regulators, members, the IMM and other stakeholders, and thanked members, regulators, stakeholders and PJM staff for the hard work and commitment to meet challenges together and to make PJM a stronger organization.

Ms. Jennifer Tribulski discussed the recent FERC Administrative Law Judges' certification of the uncontested settlement in the Dockets ER18-2068-000, ER18-2068-001, and ER18-2068-004 related disposition of the GreenHat FTR portfolio.

Consent Agenda (9:10-9:15)

Ms. Susan Bruce, PJM Industrial Customer Coalition, requested that Item C be removed from the Consent Agenda for separate consideration. Items A, B and D through H were **approved/endorsed** by acclamation with no objections or abstentions. Mr. Bob O'Connell, PPGI, moved and Mr. Alex Stern, PSEG, seconded that voting on Item C be deferred until the December 19, 2019 meeting of the committee. The motion to defer was **approved** in a sector-weighted vote with 3.82 in favor.

- A. Minutes of the October 31, 2019 meeting of the Markets and Reliability Committee (MRC).
- B. Proposed revisions to PJM Manual 3: Transmission Operations resulting from the bi-annual review to update operating procedures.
- C. Proposed revisions to the Operating Agreement (OA) and Manual 6: Financial Transmission Rights related to the Financial Risk Mitigation Senior Task Force (FRMSTF) endorsed solution package for FTR Product Range and Auction Process.
[Issue Tracking: Financial Risk Mitigation](#)
- D. Proposed revisions to the 2020 Day Ahead Scheduling Reserve (DASR) requirement incorporated into PJM Manual 13: Emergency Operations.

- E. Conforming revisions to Manual 15: Cost Development Guidelines consistent with the May 10, 2019 VOM Compliance Filing that was recently accepted by FERC (EL19-8).
- F. Conforming revisions to Manual 18: PJM Capacity Market related to the recent FERC Order (ER19-2417) on RPM must-offer exceptions and removal of Capacity Resource status.
- G. Proposed revisions to PJM Manual 19: Load Forecasting & Analysis related to a periodic review and forecast documentation.
- H. Proposed revisions to the OA clarifying the requirements for sharing forecasted unit commitment data to Transmission Owners for reliability studies.

Endorsements/Approvals (9:15-10:30)

1. Transmission Asset End of Life Problem Statement and Issue Charge (9:15-9:45)

Mr. Ed Tatum, American Municipal Power, presented a proposed Problem Statement and Issue Charge addressing transmission asset end of life processes. Following discussion, the Issue Charge was **approved** in a sector-weighted vote with 3.83 in favor.

2. Opportunity Cost Calculator (9:45-10:05)

Mr. Glen Boyle provided an overview of the Opportunity Cost Calculator proposals endorsed by the Market Implementation Committee. Mr. Jim Davis, Dominion, moved and Mr. David Scarpignato, Calpine, seconded, that voting on the proposals be deferred until the March 26, 2020 meeting of the committee. The motion to defer was **approved** by acclamation with no objections or abstentions. [Issue Tracking: Opportunity Cost Calculator](#)

3. Governing Document Enhancement and Clarifications Updates (10:05-10:20)

Mr. Mark J. Stanisz provided a review of non-substantive revisions to standardize governing document cross-references in the Tariff, OA and Reliability Assurance Agreement. Following discussion, the proposed revisions were **endorsed** by acclamation with no objections or abstentions. The Members Committee will be asked to endorse/approve the revisions on the same day.

4. Manual 03A Revisions (10:20-10:30)

Mr. Alex Lousos reviewed proposed revisions to PJM Manual 03A: Energy Management System (EMS) Model Updates resulting from the periodic review process, including updated language reflecting current procedures and modeling philosophies. Following discussion, the proposed revisions were **endorsed** by acclamation with no objections or abstentions.

First Readings (10:30-12:00)

5. Comparative Cost Framework (10:30-10:50)

Mr. Mark Sims reviewed the status of Comparative Cost Framework proposed revisions to PJM Manual 14F: Competitive Planning Process related to the cost commitment process. Mr. Sims noted that PJM staff continues to work with the Independent Market Monitor to finalize updates to the manual revisions. The committee will be asked to endorse the proposed revisions at its next meeting.

[Issue Tracking: Consideration of Cost Containment](#)

6. Real-Time Values Problem Statement and Issue Charge (10:50-11:10)

Ms. Lauren Strella Wahba presented a proposed Problem Statement and Issue Charge addressing a review of Real Time Values (RTVs) Market Rules. The committee will be asked to endorse the proposed issue charge at its next meeting.

7. Governing Document Revisions for Parameter Limited Schedules (11:10-11:35)

Mr. Adam Keech provided an overview of proposed Tariff and Operating Agreement language revisions regarding the use of market-based Parameter Limited Schedules (PLS). Dr. Joe Bowring, Monitoring Analytics, presented the IMM's perspectives. Additional discussion will be added to the agenda for the December 11, 2019 Market Implementation Committee meeting. The committee will be asked to endorse proposed OA and Tariff revisions at its next meeting.

8. PJM Manuals (11:35-12:00)

- A. Mr. Glen Boyle reviewed proposed revisions to PJM Manual 13: Emergency Operations incorporating event analysis updates. The committee will be asked to endorse these changes at its next meeting.
- B. Mr. Bernie O'Hara reviewed proposed revisions to Manual 14G: Generation Interconnection Requests, Section 2.2 regarding projects applying for interconnection under Tariff Attachment Y. The committee will be asked to endorse these changes at its next meeting.
- C. Mr. Ray Fernandez reviewed proposed revisions to Manual 27: Open Access Transmission Tariff Accounting addressing the implementation of the annual calculation of the Border Rate and the impact on firm point-to-point transmission service charges. The committee will be asked to endorse these changes at its next meeting.

Informational Reports (12:00-12:20)

9. Modeling Generation Senior Task Force (MGSTF) (12:00-12:10)

Mr. Stan Williams provided an update on the Modeling Generation Senior Task Force.

10. FERC Order EL08-14 (12:10-12:20)

Mr. Stan Williams provided an update on PJM's plans to move forward in response to FERC Order EL08-14 related to Marginal Line Loss.

Informational Postings Only

None

Future Agenda Items (12:20)

No additional future agenda items were identified.

Future Meeting Dates

December 19, 2019	9:00 a.m.	PJM Conference & Training Center/ WebEx
January 23, 2020	9:00 a.m.	PJM Conference & Training Center/ WebEx
February 20, 2020	9:00 a.m.	PJM Conference & Training Center/ WebEx
March 26, 2020	9:00 a.m.	PJM Conference & Training Center/ WebEx
April 30, 2020	9:00 a.m.	PJM Conference & Training Center/ WebEx
May 28, 2020	9:00 a.m.	PJM Conference & Training Center/ WebEx
June 18, 2020	9:00 a.m.	PJM Conference & Training Center/ WebEx
July 23, 2020	9:00 a.m.	PJM Conference & Training Center/ WebEx
August 20, 2020	9:00 a.m.	PJM Conference & Training Center/ WebEx
September 17, 2020	9:00 a.m.	PJM Conference & Training Center/ WebEx
October 29, 2020	9:00 a.m.	PJM Conference & Training Center/ WebEx
November 19, 2020	9:00 a.m.	PJM Conference & Training Center/ WebEx
December 17, 2020	9:00 a.m.	PJM Conference & Training Center/ WebEx

Author: D. Anders

Attendance

Secretary/Facilitator

Last Name	First Name	Company	Sector
Anders	David	PJM Interconnection, LLC	None
Bresler	Stu	PJM Interconnection, LLC	None

Voting Attendees

Last Name	First Name	Company	Sector
Aguilar	Fabiano	Strom Power, LLC	Other Supplier
Benchek	Jim	American Transmission Systems, Inc.	Transmission Owner
Bickerstaff	Dean	Hartree Partners, LP	Other Supplier
Bleiweis	Bruce	DC Energy, LLC	Other Supplier
Bruce	Susan	Rep.'g Air Products & Chemicals, Inc.	End-Use Customer
Bruce	Susan	Rep.'g ArcelorMittal USA LLC	End-Use Customer
Bruce	Susan	Rep.'g Gerdau Ameristeel Energy, Inc.	Other Supplier
Bruce	Susan	Rep.'g Industrial Energy Users-Ohio	Other Supplier
Bruce	Susan	Rep.'g Kimberly-Clark Corporation	Generation Owner
Bruce	Susan	Rep.'g Lehigh Portland Cement Company	End-Use Customer

Last Name	First Name	Company	Sector
Bruce	Susan	Rep.'g Letterkenny Industrial Development Authority - PA	Electric Distributor
Bruce	Susan	Rep.'g MeadWestvaco Corporation	End-Use Customer
Bruce	Susan	Rep.'g Messer LLC	End-Use Customer
Bruce	Susan	Rep.'g Praxair, Inc.	End-Use Customer
Bruce	Susan	Rep.'g Procter & Gamble Paper Products Company (The)	Generation Owner
Bruce	Susan	Rep.'g Trustees of the University of Pennsylvania	End-Use Customer
Bruce	Susan	Rep.'g Wellsboro Electric Company	Electric Distributor
Carrier	Ron	Direct Energy Business, LLC	Other Supplier
Chang	Sean	Shell Energy North America (US), L.P.	Other Supplier
Cox	Jason	EDF Trading North America, LLC	Other Supplier
Crystle	Gil	UGI Development Company	Generation Owner
Davis	James	Virginia Electric & Power Company	Transmission Owner
Dugan	Chuck	East Kentucky Power Cooperative, Inc.	Transmission Owner
Evrard	David	Pennsylvania Office of Consumer Advocate	End-Use Customer
Fitch	Neal	NRG Power Marketing, LLC	Generation Owner
Foladare	Kenneth	Geenex Solar LLC	Generation Owner
Ford	Adrien	Old Dominion Electric Cooperative	Electric Distributor
Fuess	Christian	Rep.'g Diamond State Generation Partners, LLC	Generation Owner
Fuess	Christian	Rep.'g Icetec.com, Inc.	Other Supplier
Fuess	Christian	Rep.'g Kuehne Chemical Company, Inc.	Other Supplier
Fuess	Christian	Rep.'g NextPower III US Holdco Inc.	Generation Owner
Fuess	Christian	Rep.'g PBF Power Marketing, LLC	Generation Owner
Gibbs	Ike	Citadel FNGE Ltd.	Other Supplier
Greiner	Gary	Public Service Electric & Gas Company	Transmission Owner
Helms	Joseph	Rainbow Energy Marketing Corporation	Other Supplier
Hoatson	Tom	Riverside Generating, LLC	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
Huang	Jame	Rockland Electric Company	Transmission Owner
Hurwich	Mark	Elliott Bay Energy Trading, LLC	Other Supplier
Hyzinski	Thomas	Rep.'g Dynegy Marketing and Trade, LLC	Generation Owner
Hyzinski	Thomas	Rep.'g GenOn Energy Management, LLC	Generation Owner
Janicki	Diane	Boston Energy Trading and Marketing LLC	Other Supplier
Johnson	Carl	Rep.'g American Municipal Power, Inc.	Electric Distributor
Johnson	Carl	Rep.'g Blue Ridge Power Agency, Inc.	Electric Distributor
Johnson	Carl	Rep.'g Borough of Chambersburg	Electric Distributor
Johnson	Carl	Rep.'g Borough of Mont Alto, Pennsylvania	Electric Distributor

Last Name	First Name	Company	Sector
Johnson	Carl	Rep.'g Buckeye Power, Inc.	Electric Distributor
Johnson	Carl	Rep.'g Central Virginia Electric Cooperative	Electric Distributor
Johnson	Carl	Rep.'g City of Dover, Delaware	Electric Distributor
Johnson	Carl	Rep.'g Delaware Municipal Electric Corporation, Inc.	Electric Distributor
Johnson	Carl	Rep.'g Easton Utilities Commission	Electric Distributor
Johnson	Carl	Rep.'g Energy Cooperative Association of Pennsylvania (The)	Other Supplier
Johnson	Carl	Rep.'g Galt Power, Inc.	Other Supplier
Johnson	Carl	Rep.'g Hagerstown Light Department	Electric Distributor
Johnson	Carl	Rep.'g Illinois Municipal Electric Agency	Electric Distributor
Johnson	Carl	Rep.'g Indiana Municipal Power Agency	Generation Owner
Johnson	Carl	Rep.'g Madison Gas & Electric Co.	Other Supplier
Johnson	Carl	Rep.'g North Carolina Electric Membership Corporation	Electric Distributor
Johnson	Carl	Rep.'g North Carolina Municipal Power Agency Number 1	Other Supplier
Johnson	Carl	Rep.'g Northern Illinois Municipal Power Agency	Electric Distributor
Johnson	Carl	Rep.'g Northern Virginia Electric Cooperative (NOVEC)	Electric Distributor
Johnson	Carl	Rep.'g Thurmont Municipal Light Company	Electric Distributor
Johnson	Carl	Rep.'g Town of Williamsport (The)	Electric Distributor
Johnson	Carl	Rep.'g WPPI Energy	Other Supplier
Kauffman	Brian	Enel X North America, Inc.	Other Supplier
Keenan	Matthew	Elwood Energy, LLC	Generation Owner
Kelly	Stephen	Brookfield Renewable Trading and Marketing LP	Other Supplier
Kilgallen	Kevin	Avangrid Renewables, LLC	Generation Owner
Kogut	George	New York Power Authority	Other Supplier
Lamp	Jeffrey	Peak Energy Capital LP	Other Supplier
Litchfield	Matt	CPV Power Holdings, LP	Generation Owner
Long	Scott	Allegheny Electric Cooperative, Inc.	Electric Distributor
Midgley	Sharon	Exelon Business Services Company, LLC	Transmission Owner
O'Connell	Robert	PPGI Fund A/B Development, LLC.	Generation Owner
Pelletier	Eveline	H.Q. Energy Services (U.S.), Inc.	Other Supplier
Poulos	Greg	Rep.'g Consumer Protection and Advocate Division of the Tennessee Attorney General	End-Use Customer
Poulos	Greg	Rep.'g Delaware Division of the Public Advocate	End-Use Customer
Poulos	Greg	Rep.'g Illinois Citizen Utility Board	End-Use Customer
Poulos	Greg	Rep.'g Indiana Office of Utility Consumer Counselor (IN OUCC)	End-Use Customer
Poulos	Greg	Rep.'g Maryland Office of People's Counsel	End-Use Customer
Poulos	Greg	Rep.'g Michigan Department of Attorney General, Environment, Natural Resources, & Agriculture Division	End-Use Customer
Poulos	Greg	Rep.'g New Jersey Division of Rate Counsel	End-Use Customer
Poulos	Greg	Rep.'g Office of the Attorney General, Kentucky	End-Use Customer
Poulos	Greg	Rep.'g Office of the People's Counsel for the District of Columbia	End-Use Customer

Last Name	First Name	Company	Sector
Poulos	Greg	Rep.'g Ohio Consumers' Counsel	End-Use Customer
Poulos	Greg	Rep.'g Public Staff - North Carolina Utilities Commission	End-Use Customer
Poulos	Greg	Rep.'g Virginia Division of Consumer Counsel	End-Use Customer
Poulos	Greg	Rep.'g West Virginia Consumer Advocate Division	End-Use Customer
Scarpignato	David	Calpine Energy Services, L.P.	Generation Owner
Skucas	Ruta	Rep.'g Alphataraxia Palladium LLC	Other Supplier
Skucas	Ruta	Rep.'g Ames Energy, LLC	Other Supplier
Skucas	Ruta	Rep.'g Big Bend Trading, LLC	Other Supplier
Skucas	Ruta	Rep.'g BJ Energy, LLC	Other Supplier
Skucas	Ruta	Rep.'g Boston Energy Group, Inc.	Other Supplier
Skucas	Ruta	Rep.'g Dufossat Capital I, LLC	Other Supplier
Skucas	Ruta	Rep.'g Endurance Energy Midwest LLC	Other Supplier
Skucas	Ruta	Rep.'g Greene Energy NE LLC	Other Supplier
Skucas	Ruta	Rep.'g Hexis Energy Trading, LLC	Other Supplier
Skucas	Ruta	Rep.'g MAG Energy Solutions, Inc.	Other Supplier
Skucas	Ruta	Rep.'g Monterey MA, LLC	Other Supplier
Skucas	Ruta	Rep.'g Precept Power LLC	Other Supplier
Skucas	Ruta	Rep.'g Pure Energy, Inc.	Other Supplier
Skucas	Ruta	Rep.'g Red Wolf PT, LLC	Other Supplier
Skucas	Ruta	Rep.'g Taller Cube, LLC	Other Supplier
Skucas	Ruta	Rep.'g Velocity American Energy Master I, L.P.	Other Supplier
Skucas	Ruta	Rep.'g XO Energy MA, L.P.	Other Supplier
Smith	Holly Rachel	Texas Retail Energy, LLC	Other Supplier
Sturgeon	John	Duke Energy Business Services LLC	Transmission Owner
Thomas	Amber	PPL Electric Utilities Corporation d/b/a PPL Utilities	Transmission Owner
Vayda	Brian	Rep.'g Borough of Butler, Butler Electric Division	Electric Distributor
Vayda	Brian	Rep.'g Borough of Lavallette, New Jersey	Electric Distributor
Vayda	Brian	Rep.'g Borough of Madison, New Jersey	Electric Distributor
Vayda	Brian	Rep.'g Borough of Milltown, New Jersey	Electric Distributor
Vayda	Brian	Rep.'g Borough of Park Ridge, New Jersey	Electric Distributor
Vayda	Brian	Rep.'g Borough of Pemberton, New Jersey	Electric Distributor
Vayda	Brian	Rep.'g Borough of Seaside Heights, New Jersey	Electric Distributor
Vayda	Brian	Rep.'g Borough of South River, New Jersey	Electric Distributor
Vayda	Brian	Rep.'g Vineland Municipal Electric Utility	Electric Distributor
Whitehead	Jeffrey	Rep.'g Eastern Generation, LLC	Generation Owner
Whitehead	Jeffrey	Rep.'g Essential Power Rock Springs, LLC	Generation Owner
Whitehead	Jeffrey	Rep.'g Wheelabrator Frackville Energy Co., Inc.	Generation Owner
Wicks	Tonja	Duquesne Light Company	Transmission Owner
Wilson	Bert	Holocene Finance, LLC	Other Supplier

Non-Voting Attendees

Last Name	First Name	Company	Sector
Abend	Erik	TransAlta Energy Marketing (U.S.) Inc.	Other Supplier
Adams	Darrin	East Kentucky Power Cooperative, Inc.	Transmission Owner
Anderson	Jared	Platts	None
Balaji	Ashwin	Daymark Energy Advisors	None
Batta	Michael	Virginia Electric & Power Company	Transmission Owner
Bayless	Charlie	North Carolina Electric Membership Corporation	Electric Distributor
Bockhorn	Tim	Dayton Power & Light Company (The)	Transmission Owner
Brodbeck	John	EDP Renewables North America, LLC	Generation Owner
Campbell	Bruce	Enerwise Global Technologies, LLC	Other Supplier
Canter	David	Appalachian Power Company	Transmission Owner
Carmean	Gregory	OPSI	None
Carrado	Regina	Exelon Business Services Company, LLC	Transmission Owner
Chandler	Kent	Kentucky Public Service Commission	None
Clark	Alden	DC Energy, LLC	Other Supplier
Cocco	Michael	Old Dominion Electric Cooperative	Electric Distributor
Dadourian	John	Monitoring Analytics	None
D'Alessandris	Lou	American Transmission Systems, Inc.	Transmission Owner
Dasher	Brett	Energy Authority, Inc. (The)	Other Supplier
DeLosa	Joseph	New Jersey Board of Public Utilities	None
Dillon	Matthew	UGI Development Company	Generation Owner
DiNicola	Laura	FirstEnergy Solutions Corp.	Transmission Owner
Dolan	Ryan	American Municipal Power, Inc.	Electric Distributor
Drom	Richard	Affirmed Energy LLC	Other Supplier
Duensing	Allison	Saracen Energy East, L.P.	Other Supplier
Durinsky	Mike	FirstEnergy Solutions Corp.	Transmission Owner
Ericson	Christine	Illinois Commerce Commission	None
Evergam	Scott	Blue Horseshoe Energy	None
Farkas	Michael	PBF Power Marketing, LLC	Generation Owner
Fazio	Danielle	Engelhart CTP (US) LLC	Other Supplier
Feller	John	PPL Electric Utilities Corporation d/b/a PPL Utilities	Transmission Owner
Filomena	Guy	Customized Energy Solutions, Ltd.*	None
Fuerst	Gary	FirstEnergy Solutions Corp.	Transmission Owner
Fuess	Jay	PBF Power Marketing, LLC	Generation Owner
Garbini	Marjorie	Exelon Business Services Company, LLC	Transmission Owner
Gates	Terry	AEP Energy Partners, Inc.	Transmission Owner
Gibelli	Stephen	NextEra Energy Marketing, LLC	Other Supplier
Gilani	Rehan	Consolidated Edison Company of New York, Inc.	Transmission Owner
Godson	Gloria	Upright Energy	None

Last Name	First Name	Company	Sector
Halay	Alina	The Federal Energy Regulatory Commission	None
Hanser	Erik	Michigan Public Service Commission	None
Harmon	Michael	Union Electric Company d/b/a Ameren Missouri	Other Supplier
Hastings	David	MICS	None
Hayik	Seth	Monitoring Analytics	None
Heinle	Frederick	Office of the People's Counsel for the District of Columbia	End-Use Customer
Heitmeyer	Chad	AEP Energy Partners, Inc.	Transmission Owner
Hollis	Gabriel	NextEra Energy Marketing, LLC	Other Supplier
Horning	Lynn	Customized Energy Solutions, Ltd.*	None
Hudis	Gabriella	Gabel Associates	None
Hull	Gerit	American Municipal Power, Inc.	Electric Distributor
Huntoon	Steve	Chesapeake Transmission LLC	Other Supplier
Hyatt	John	Monitoring Analytics	None
Islam	Lubaba	Rockland Electric Company	Transmission Owner
Jens	Tom	Black Oak Capital	None
Jett	William	Duke Energy Business Services LLC	Transmission Owner
Kirk	Ryan	AEP Energy Partners, Inc.	Transmission Owner
Kozhuharov	Dimitar	Delaware Public Service Commission	None
Kuhn	Tyler	Citadel FNGE Ltd.	Other Supplier
Kuo	David	DC Energy, LLC	Other Supplier
Laios	Takis	Appalachian Power Company	Transmission Owner
Lawson	Ryen	Dominion Energy Generation Marketing, Inc.	Generation Owner
Liang-Nicol	Cecilia	FirstEnergy Solutions Corp.	Transmission Owner
Lieberman	Steven	American Municipal Power, Inc.	Electric Distributor
Logan	Sharon	The Federal Energy Regulatory Commission	None
Lowe	Connie	Virginia Electric & Power Company	Transmission Owner
Mabry	David	McNees Wallace & Nurick LLC	None
Mancuso	Melanie	FirstEnergy Solutions Corp.	Transmission Owner
Martin	Valerie	The Federal Energy Regulatory Commission	None
Meadors	Amanda	Duke Energy Ohio, Inc.	Transmission Owner
Moncayo	Jorge	The Federal Energy Regulatory Commission	None
Nadel	Steven	PPL Electric Utilities Corporation d/b/a PPL Utilities	Transmission Owner
Nallan	Dwarakesh	Daymark Energy Advisors	None
Noewer	Sharon	FirstEnergy Solutions Corp.	Transmission Owner
O'Boyle	Brian	Rockland Electric Company	Transmission Owner
Ondayko	Brock A.	AEP Energy Partners, Inc.	Transmission Owner
Peoples	John	Duquesne Light Company	Transmission Owner
Powers	Sean	Messer LLC	End-Use Customer
Price	Mark	DC Energy, LLC	Other Supplier



Last Name	First Name	Company	Sector
Rainey	Frank	PEI Power Corporation	Generation Owner
Ringhausen	Mark	Old Dominion Electric Cooperative	Electric Distributor
Robinson	Becky	Vistra Energy	None
Rohrbach	John	Southern Maryland Electric Cooperative, Inc.	Electric Distributor
Rutigiano	Tom	NRDC	None
Sasser	Jonathan	Customized Energy Solutions, Ltd.*	None
Schmidt	Thomas	Buckeye Power, Inc.	Electric Distributor
Schreim	Morris	Maryland Public Service Commission	None
Shah	Pulin	Exelon Business Services Company, LLC	Transmission Owner
Shealy	Erin	GDS Associates	None
Sillin	John	The Federal Energy Regulatory Commission	None
Silveira	Fabiano	Strom Power, LLC	Other Supplier
Singer	Chad	Trane Grid Services LLC	Other Supplier
Skucas	Ruta	Pierce Atwood	None
Skumanich	William	RTR Energy Solutions LLC	None
Smith	Christen	RTO Insider	None
Sotkiewicz	Paul	Elwood Energy, LLC	Generation Owner
Steele	Robert	Sanitas Power, LLC	Other Supplier
Stern	Alex	Public Service Electric & Gas Company	Transmission Owner
Stewart	Travis	Gabel Associates	None
Stone	Andy	Gabel Associates	None
Stuchell	Jeff	FirstEnergy Solutions Corp.	Transmission Owner
Stupar	Rob	Enel X North America, Inc.	Other Supplier
Sweeney	Rory	GT Power Group	None
Tatum	Ed	American Municipal Power, Inc.	Electric Distributor
Tibbetts	Maeve	Pierce Atwood	None
Toomey	Megan	Talen Energy Marketing, LLC	Generation Owner
Trayers	Barry	BST Consulting	None
Tyler	Catherine	Monitoring Analytics	None
Vargo	Daniel	Allegheny Electric Cooperative, Inc.	Electric Distributor
Walker	Jennifer	Exelon Business Services Company, LLC	Transmission Owner
Weeks	Tom	Michigan Public Power Agency	Generation Owner
Wilson	Bram	PBF Power Marketing, LLC	Generation Owner
Wynder	Michael	Nodal Exchange	None

PJM Attendees

Last Name	First Name	Company	Sector
Almgren	Ake	PJM Interconnection, LLC	None
Anders	David	PJM Interconnection, LLC	None

Last Name	First Name	Company	Sector
Antonelli	Diane	PJM Interconnection, LLC	None
Baker	Scott	PJM Interconnection, LLC	None
Baptiste	Maria	PJM Interconnection, LLC	None
Barrett	Fran	PJM Interconnection, LLC	None
Bennett	Daniel	PJM Interconnection, LLC	None
Berner	Aaron	PJM Interconnection, LLC	None
Bernstein	Matt	PJM Interconnection, LLC	None
Blackwell	Terry	PJM Interconnection, LLC	None
Bloczynski	Nigeria	PJM Interconnection, LLC	None
Boyle	Glen	PJM Interconnection, LLC	None
Bresler	Stu	PJM Interconnection, LLC	None
Brown	Richard	PJM Interconnection, LLC	None
Bruno	Joshua	PJM Interconnection, LLC	None
Bruno	Patrick	PJM Interconnection, LLC	None
Bryson	Mike	PJM Interconnection, LLC	None
Buck	Rachel	PJM Interconnection, LLC	None
Budney	David	PJM Interconnection, LLC	None
Buehler	Susan	PJM Interconnection, LLC	None
Cao	Roger	PJM Interconnection, LLC	None
Carroll	Rebecca	PJM Interconnection, LLC	None
Chmielewski	Brian	PJM Interconnection, LLC	None
Ciabattoni	Joe	PJM Interconnection, LLC	None
Coyne	Suzanne	PJM Interconnection, LLC	None
D'Antonio	Phil	PJM Interconnection, LLC	None
Davis	Elizabeth	PJM Interconnection, LLC	None
DeVita	Thomas	PJM Interconnection, LLC	None
Drauschak	Lisa	PJM Interconnection, LLC	None
Egan	Amanda	PJM Interconnection, LLC	None
Fabiano	Janell	PJM Interconnection, LLC	None
Fan	Zhenyu	PJM Interconnection, LLC	None
Fernandez	Ray	PJM Interconnection, LLC	None
Fitzpatrick	Brian	PJM Interconnection, LLC	None
Foley	Pauline	PJM Interconnection, LLC	None
Franks	Christine	PJM Interconnection, LLC	None
Frogg	Darrell	PJM Interconnection, LLC	None
Glatz	Suzanne	PJM Interconnection, LLC	None
Glazer	Craig	PJM Interconnection, LLC	None
Gluck	Jim	PJM Interconnection, LLC	None
Greening	Michele	PJM Interconnection, LLC	None

Last Name	First Name	Company	Sector
Haque	Asim	PJM Interconnection, LLC	None
Hauske	Tom	PJM interconnection, LLC	None
Hendrzak	Chantal	PJM Interconnection, LLC	None
Herel	Suzanne	PJM Interconnection, LLC	None
Herling	Steve	PJM Interconnection, LLC	None
Herman	Michael	PJM Interconnection, LLC	None
Holter	Natasha	PJM Interconnection, LLC	None
Horger	Tim	PJM Interconnection, LLC	None
Hsia	Eric	PJM Interconnection, LLC	None
Keech	Adam	PJM Interconnection, LLC	None
Kenney	Susan	PJM Interconnection, LLC	None
Keshavamurthy	Bhavana	PJM Interconnection, LLC	None
Kimmel	David	PJM Interconnection, LLC	None
Lee	Ray	PJM Interconnection, LLC	None
Lousos	Alex	PJM Interconnection, LLC	None
Lu	Chen	PJM Interconnection, LLC	None
Lusska	Kirsten	PJM Interconnection, LLC	None
McElwee	Steve	PJM Interconnection, LLC	None
McGill	Susan	PJM Interconnection, LLC	None
McGlynn	Paul	PJM Interconnection, LLC	None
McGovern	Jason	PJM Interconnection, LLC	None
McLaverly	Megan	PJM Interconnection, LLC	None
Messina	Emmy	PJM Interconnection, LLC	None
Monzon	Stephanie	PJM Interconnection, LLC	None
Mooney	Molly	PJM Interconnection, LLC	None
Morelli	Lisa	PJM Interconnection, LLC	None
Muhl	Nancy	PJM Interconnection, LLC	None
Murphy	Shaun	PJM Interconnection, LLC	None
Nix	Emma	PJM Interconnection, LLC	None
O'Brien	Tom	PJM Interconnection, LLC	None
O'Hara	Bernie	PJM Interconnection, LLC	None
O'Hara	Chris	PJM Interconnection, LLC	None
Olaleye	Michael	PJM Interconnection, LLC	None
Patel	Anita	PJM Interconnection, LLC	None
Pilong	Melissa	PJM Interconnection, LLC	None
Reynolds	John	PJM Interconnection, LLC	None
Riley	Susan	PJM Interconnection, LLC	None
Robinson	Becky	PJM Interconnection, LLC	None
Salmon	Lisa	PJM Interconnection, LLC	None

Last Name	First Name	Company	Sector
Schmitt	Jeff	PJM Interconnection, LLC	None
Schuyler	Ken	PJM Interconnection, LLC	None
Schweizer	David	PJM Interconnection, LLC	None
Schwenk	Melissa	PJM Interconnection, LLC	None
Seiler	Ken	PJM Interconnection, LLC	None
Shenk	Jordan	PJM Interconnection, LLC	None
Shields	Jeffrey	PJM Interconnection, LLC	None
Sims	Mark	PJM Interconnection, LLC	None
Souder	Dave	PJM Interconnection, LLC	None
Souder	Michelle	PJM Interconnection, LLC	None
Stanisz	Mark	PJM Interconnection, LLC	None
Stefanowicz	Vince	PJM Interconnection, LLC	None
Strella Wahba	Lauren	PJM Interconnection, LLC	None
Swimm	Nora	PJM Interconnection, LLC	None
Tribulski	Jen	PJM Interconnection, LLC	None
Ward	Mike	PJM Interconnection, LLC	None
Warshel	Kim	PJM Interconnection, LLC	None
Williams	Stan	PJM Interconnection, LLC	None