



Markets and Reliability Committee The DoubleTree Hotel, Wilmington, DE December 6, 2018 9:00 a.m. – 1:10 p.m. EPT

#### Administration

Ms. Suzanne Daugherty and Mr. Dave Anders welcomed stakeholders and provided the Anti-trust and Code of Conduct announcement.

Mr. Andy Ott addressed a letter sent on December 5, 2018 from the PJM Board of Managers regarding energy price formation.

Mr. Tim Horger discussed implementation of the adjustment to the timeline for the Day-Ahead Market, noting FERC approval on December 4, 2018. He announced that the adjustment will be implemented on December 19, 2018 for entry of bids and offers in the Day-Ahead Market for December 20, 2018.

#### Consent Agenda

Item A was **approved** by acclamation with no objections or abstentions.

A. Minutes of the October 25, 2018 meeting of the Markets and Reliability Committee (MRC).

#### **Endorsements/Approvals**

#### 1. PJM Manuals

- A. Mr. Yuri Smolanitsky reviewed proposed changes to Manual 03: Transmission Operations.
- B. Mr. Vince Stefanowicz reviewed proposed changes to Manual 10: Pre-Scheduling Operations.
- C. Mr. Vince Stefanowicz reviewed proposed changes to Manual 14D: Generator Operational Requirements.
- D. Mr. Ray Fernandez review proposed changes to Manual 27: Open Access Transmission Tariff Accounting as part of the Biennial Review.
- E. Mr. Brian Chmielewski reviewed proposed changes to Manual 06: Financial Transmission Rights as part of the Annual Review.
- F. Mr. Keyur Patel reviewed conforming changes to Manual 11: Energy & Ancillary Services Market Operations related to the changes to the Day Ahead Timeline.

Following discussion, the committee **endorsed** the proposed revisions in items 1.A through1.D and 1.F by acclamation with no objections or abstentions. The committee **endorsed** the proposed revisions in items 1.E by acclamation with one objection and seven abstentions.

#### 2. Price Responsive Demand Review for Capacity Performance Requirements

Mr. Pete Langbein reviewed proposals developed by the Demand Response Subcommittee (DRS) to address Capacity Performance changes required for Price Responsive Demand. Following discussion,





the committee **endorsed** the proposed revisions in a sector–weighted vote with 3.72 in favor. Ms. Daugherty noted that Members Committee (MC) will be asked to endorse the proposal its December 6, 2018 meeting.

#### 3. 2019 Day Ahead Scheduling Reserve (DASR) Requirement

Mr. Eric Endress reviewed proposed changes to the 2019 Day Ahead Scheduling Reserve (DASR) requirement. Following discussion, the committee **endorsed** the proposed revisions by acclamation with one objection and seven abstentions.

#### 4. Surety Bonds

Mr. Hal Loomis presented two stakeholder proposals developed at the Credit Subcommittee related to the use of surety bonds as an acceptable form of collateral. Ms. Sharon Midgley, Exelon, moved and Mr. Erik Heinle, DC Office of the Peoples' Counsel, seconded deferral of voting on these proposals until the first MRC meeting following issuance of the Board Special Committee report. The committee **approved** the motion to defer by acclamation with no objections or abstentions.

#### 5. Gas Pipeline Contingencies

Mr. Richard Brown reviewed the package endorsed by the Market Implementation Committee related to Gas Pipeline Contingencies. Mr. David Scarpignato proposed a posted friendly amendment to change "Penalties" to "Gas Balancing Costs" throughout the proposed revisions as well as some additional updates. There were no objections and therefore this was incorporated into the main motion. Ms. Susan Bruce, PJM Industrial Customer Coalition, moved and Mr. Erik Heinle seconded Package D as the first alternate motion. Following discussion, the proposed revisions associated with the main motion <u>failed</u> in a sector-weighted vote with 3.13 in favor. The proposed revisions associated with Package D, the first alternate motion, were <u>endorsed</u> in a sector-weighted vote with 3.77 in favor. Ms. Daugherty noted that MC will be asked to endorse the proposal its December 6, 2018 meeting.

#### First Readings

#### 6. FTR Mark-to-Auction Credit Requirements

- A. Ms. Bridgid Cummings presented the Mark-to-Auction proposals and associated Credit Subcommittee polling results.
- B. Dr. Scott Harvey, FTI Consulting, reviewed his assessment of the Mark-to-Auction proposals.

The committee will be asked to endorse a proposal at its next meeting.

#### 7. Must Offer Exception Process

Mr. Pat Bruno presented a proposal regarding the Must Offer Exception Process. The committee will be asked to endorse this proposal at its next meeting.





#### 8. FTR Forfeiture Rule

Mr. Brian Chmielewski presented proposed revisions to the FTR Forfeiture Rule. The committee will be asked to endorse this proposal at its next meeting.

#### 9. Distributed Energy Resources

Mr. Pete Langbein reviewed proposed clarifications of market participation rules for Distributed Energy Resources located behind a customer's meter participating as demand response to reduce load and as generation for additional power that can be injected with the appropriate interconnection agreement. The committee will be asked endorse to these revisions at its next meeting.

#### 10. PJM Manuals

- A. Ms. Rebecca Stadelmeyer reviewed proposed revisions to Manual 14D: Generator Operational Requirements related to Resource Tracker. The committee will be asked to endorse these revisions at its next meeting.
- B. Ms. Lisa Krizenoskas presented to Manual 14E: Upgrade & Transmission Interconnection Requests. The committee will be asked to endorse these revisions at its next meeting.

#### **Informational Updates**

#### 11. Transmission Replacement Process

Ms. Suzanne Daugherty provided an update on status of the Manual 14B revisions to address the transmission replacement process.

#### Future Agenda Items

No new future agenda items were identified.

#### **Future Meeting Dates**

Author: D.A. Anders

December 20, 2018 January 24, 2019	9:00 a.m. 9:00 a.m.	Valley Forge, PA Wilmington, DE
February 21, 2019	9:00 a.m.	Wilmington, DE
March 21, 2019	9:00 a.m.	Wilmington, DE
April 25, 2019	9:00 a.m.	Valley Forge, PA
May 30, 2019	9:00 a.m.	Valley Forge, PA
June 27, 2019	9:00 a.m.	Wilmington, DE
July 25, 2019	9:00 a.m.	Wilmington, DE
August 22, 2019	9:00 a.m.	Wilmington, DE
September 26, 2019	9:00 a.m.	Valley Forge, PA
October 31, 2019	9:00 a.m.	Wilmington, DE
December 05, 2019	9:00 a.m.	Wilmington, DE
December 19, 2019	9:00 a.m.	Valley Forge, PA





#### Secretary/Facilitator

Last Name	First Name	Company	Sector
Anders	David	PJM Interconnection, LLC	Not Applicable
Daugherty	Suzanne	PJM Interconnection, LLC	Not Applicable

#### **Voting Participants**

Last Name	First Name	Company	Sector
Benchek	Jim	American Transmission Systems, Inc.	Transmission Owner
Bleiweis	Bruce	DC Energy, LLC	Other Supplier
Borgatti	Michael	Rep.'g Covanta Energy Group, LLC	Generation Owner
Borgatti	Michael	Rep.'g Edgecombe Genco, LLC	Generation Owner
Borgatti	Michael	Rep.'g Jersey Green Energy, LLC	Other Supplier
Borgatti	Michael	Rep.'g Longview Power, LLC	Generation Owner
Borgatti	Michael	Rep.'g Moxie Freedom LLC	Generation Owner
Borgatti	Michael	Rep.'g NextEra Energy Marketing, LLC	Other Supplier
Borgatti	Michael	Rep.'g York County Solid Waste and Refuse Authority	Generation Owner
Brodbeck	John	EDP Renewables North America, LLC	Generation Owner
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
Bruce	Susan	Rep.'g Letterkenny Industrial Development Authority - PA	Electric Distributor
Bruce	Susan	Rep.'g Linde, LLC	End-Use Customer
Bruce	Susan	Rep.'g MeadWestvaco Corporation	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
Bursaw	Chris	CP Energy Marketing (US) Inc.	Other Supplier
Canter	David	Appalachian Power Company	Transmission 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
Ford	Adrien	Old Dominion Electric Cooperative	Electric Distributor
Fuess	Jay	Rep.'g Diamond State Generation Partners, LLC	Generation Owner
Fuess	Jay	Rep.'g Icetec.com, Inc.	Other Supplier
Fuess	Jay	Rep.'g Kuehne Chemical Company, Inc.	Other Supplier
Fuess	Jay	Rep.'g PBF Power Marketing, LLC	Generation Owner





Last Name	First Name	Company	Sector
Garnett	Bryan	Duke Energy Business Services LLC	Transmission Owner
Gorman	Kevin	The Highlands Energy Group, LLC	Other Supplier
Greiner	Gary	Public Service Electric & Gas Company	Transmission Owner
Hastings	David	Rep.'g Northstar Trading Ltd.	Other Supplier
Hastings	David	Rep.'g Saracen Energy East, L.P.	Other Supplier
Hastings	David	Rep.'g SESCO Enterprises, LLC	Other Supplier
Hastings	David	Rep.'g Solios Power Mid-Atlantic Trading, LLC	Other Supplier
Helms	Joseph	Rainbow Energy Marketing Corporation	Other Supplier
Hoatson	Tom	Rep.'g Renaissance Power & Gas, Inc.	Other Supplier
Hoatson	Tom	Rep.'g Riverside Generating, LLC	Generation Owner
Hoatson	Tom	Rep.'g West Deptford Energy, LLC	Generation Owner
Hohenshilt	Jennifer	Talen Energy Marketing, LLC	Generation Owner
Horstmann	John	Dayton Power & Light Company (The)	Transmission Owner
Hurwich	Mark	Elliott Bay Energy Trading, LLC	Other Supplier
Hyzinski	Thomas	Dynegy Marketing and Trade, LLC	Generation Owner
Jardot	Gina	Essential Power Rock Springs, LLC	Transmission Owner
Johnson	Carl	Rep.'g Allegheny Electric Cooperative, Inc.	Electric Distributor
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
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 Old Dominion Electric Cooperative	Electric Distributor
Johnson	Carl	Rep.'g Thurmont Municipal Light Company	Electric Distributor
Johnson	Carl	Rep.'g Town of Williamsport (The)	Electric Distributor





Last Name	First Name	Company	Sector
Johnson	Carl	Rep.'g WPPI Energy	Other Supplier
Keenan	Matthew	Elwood Energy, LLC	Generation Owner
Kelly	Stephen	Brookfield Energy Marketing LP	Other Supplier
Kilgallen	Kevin	Avangrid Renewables, LLC	Generation Owner
Kogut	George	New York Power Authority	Other Supplier
Lieberman	Steven	American Municipal Power, Inc.	Electric Distributor
Long	Scott	Allegheny Electric Cooperative, Inc.	Electric Distributor
Melnyk	Markian	Atlantic Grid Operations A, LLC	Other Supplier
O'Boyle	Brian	Rockland Electric Company	Transmission Owner
O'Connell	Robert	PPGI Fund A/B Development, LLC.	Generation Owner
Pakela	Greg	DTE Energy Trading, Inc.	Other Supplier
Pelletier	Eveline	H.Q. Energy Services (U.S.), Inc.	Other Supplier
Philips	Marji	Direct Energy Business, LLC	Other Supplier
Philips	Marji	Rep.'g Newark Energy Center, LLC	Generation Owner
Picardi	Matthew	Shell Energy North America (US), L.P.	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
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
Pratzon	David	Rep.'g Eastern Generation, LLC	Generation Owner
Pratzon	David	Rep.'g Essential Power Rock Springs, LLC	Transmission Owner
Pratzon	David	Rep.'g Neptune Regional Transmission System, LLC	Transmission Owner
Pratzon	David	Rep.'g Wheelabrator Frackville Energy Co., Inc.	Generation Owner
Price	Dann	Enerwise Global Technologies, Inc.	Other Supplier
Prokop	Brenda	ITC Interconnection LLC	Transmission Owner
Rohrbach	John	Rep.'g Southern Maryland Electric Cooperative, Inc.	Electric Distributor
Rohrbach	John	Rep.'g Wabash Valley Power Association, Inc.	Electric Distributor
Scarpignato	David	Calpine Energy Services, L.P.	Generation Owner
Sturgeon	John	Duke Energy Business Services LLC	Transmission Owner
Thomas	Amber	PPL Electric Utilities Corporation d/b/a PPL Utilities	Transmission Owner





Last Name	First Name	Company	Sector
Trayers	Barry	Citigroup Energy, Inc.	Other Supplier
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
Wadsworth	Joe	Vitol Inc.	Other Supplier
Wicks	Tonja	Duquesne Light Company	Transmission Owner

#### **Non-Voting Participants**

Last Name	First Name	Company	Sector
Abend	Erik	Erik Abend Consulting	Not Applicable
Adams	Sean	PSEG Energy Resources and Trade LLC	Transmission Owner
Ainspan	Malcolm	Energy Curtailment Specialists, Inc.	Other Supplier
Barker	Jason	Exelon Business Services Company, LLC	Transmission Owner
Benchek	Jim	American Transmission Systems, Inc.	Transmission Owner
Bleiweis	Bruce	DC Energy LLC	Other Supplier
Bowring	Joe	Monitoring Analytics, LLC	Not Applicable
Brown	William	VECO Power Trading	Not Applicable
Carmean	Gregory	OPSI	Not Applicable
Chandler	Kent	Office of the Attorney General, Kentucky	End-Use Customer
Соссо	Michael	Old Dominion Electric Cooperative	Electric Distributor
Colbert	Cathleen	NRG Power Marketing LLC	Other Supplier
Cox	Phil	Appalachian Power Company	Transmission Owner
Crystle	Gil	UGI Development Company	Transmission Owner
D'Alessandris	Lou	FirstEnergy Corporation	Not Applicable
Delosa	Joseph	DE Public Service Commission	Not Applicable
Depillo	Raymond	PSEG Energy Resources and Trade LLC	Other Supplier
Dilorio	Michelle	PSEG Energy Resources and Trade LLC	Other Supplier
Dillon	Matthew	UGI Development Company	Generation Owner
Domian	Christin	Duquesne Light Company	Transmission Owner
Duensing	Allison	Saracen Energy East LP	Other Supplier
Filomena	Guy	Customized Energy Solutions, Ltd.	Not Applicable
Fuess	Christian	PBF Power Marketing LLC	Generation Owner
Gagen	Rod	Dominion Virginia Power	Not Applicable
Gahimer	Michael	IN Office of Utility Consumer Counselor	End-Use Customer





Last Name	First Name	Company	Sector
Gebolys	Debbie	Public Utilities Commission of Ohio (The)	Not Applicable
Gilani	Rehan	ConEdison Energy, Inc.	Other Supplier
Gramlich	Rob	Grid Strategies, LLC	Not Applicable
Greiner	Gary	PSEG Energy Resources and Trade LLC	Other Supplier
Grimes	Jordan	Morningstar Commodity Data	Not Applicable
Guerry	Katie	EnerNOC, Inc.	Other Supplier
Harmon	Mike	Union Electric Company d/b/a Ameren Missouri	Other Supplier
Harvey	Scott	FTI Consulting	Not Applicable
Hastings	David	Market Interconnection LLC	Not Applicable
Hayik	Seth	Monitoring Analytics, LLC	Not Applicable
Heinle	Frederick	Office of the People's Counsel for the District of Columbia	End-Use Customer
Helms	Joseph	Rainbow Energy Marketing Corporation	Other Supplier
Hohenshilt	Jennifer	Talen Energy Marketing, LLC	Generation Owner
Horning	Lynn Marie	LMH Energy	Not Applicable
Horstmann	John	Dayton Power & Light Company (The)	Transmission Owner
Horton	Dana	Appalachian Power Company	Transmission Owner
Hudis	Gabriella	Gabel Associates	Not Applicable
Hurwich	Mark	Elliott Bay Energy Trading, LLC	Other Supplier
Hyzinski	Tom	GT Power Group	Not Applicable
Janicki	Diane	Boston Energy Trading & Marketing, LLC	Generation Owner
Janssen	Robert	Kelson Energy	Not Applicable
Jardot	Gina	Essential Power Rock Springs, LLC	Transmission Owner
Jett	William	Duke Energy Business Services LLC	Generation Owner
Kauffman	Brian	Enel X North America, Inc.	Other Supplier
Kelly	Kyo	Southern Company Services, Inc. as agent for Alabama Power Co.	Other Supplier
Kerecman	Joseph	Calpine Energy Services, L.P.	Generation Owner
Knernschield	Jenjira	Old Dominion Electric Cooperative	Electric Distributor
Kupcinski	Candice	Atlantic City Electric Company	Electric Distributor
Logan	Sharon	The Federal Energy Regulatory Commission	Not Applicable
Long	Greg	AK Steel Corporation	End-Use Customer
Malguarnera	Maria	AEP Energy, Inc.	Transmission Owner
Manganaro	Lynn	PSEG Energy Resources and Trade LLC	Transmission Owner
Marinelli	Richard	Public Service Electric & Gas Company	Transmission Owner
Martin	Valerie	The Federal Energy Regulatory Commission	Not Applicable
Marzewski	Skyler	Monitoring Analytics, LLC	Not Applicable
Matuszak	Alex	UGI Energy Services, LLC	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





Last Name	First Name	Company	Sector
Noewer	Sharon	FirstEnergy Corporation	Transmission Owner
Ondayko	Brock	Appalachain Power Company	Transmission Owner
Pakela	Greg	DTE Energy Trading, Inc.	Other Supplier
Pakula	Maggie	Invenergy, LLC	Generation Owner
Pelletier	Eveline	Hydro-Quebec	Not Applicable
Peoples	John	Duquesne Light Company	Transmission Owner
Picardi	Matt	Shell Energy North America (US), LP	Other Supplier
Price	Mark	DC Energy Mid-Atlantic, LLC	Other Supplier
Price	Ruth	Division of the Public Advocate of the State of Delaware	End-Use Customer
Raghavan	Vijay	BioUrja Power, LLC	Other Supplier
Rainey	Frank	PEI Power Corporation	Generation Owner
Ramsey	James	Suffolk Fund LLC	Other Supplier
Renda	Michael	VECO Power Trading, LLC	Other Supplier
Roberts	Casey	Sierra Club	Not Applicable
Robinson	Kathleen	Land O'Lakes, Inc.	End-Use Customer
Robson	Matt	SESCO Enterprises LLC	Other Supplier
Russ	Michael	Dayton Power & Light Company (The)	Transmission Owner
Saini	Ishwar	Macquarie Energy LLC	Other Supplier
Sawka	Justin	Exelon Generation Co., LLC	Generation Owner
Segner	Sharon	LS Power Transmission, LLC	Not Applicable
Shanker	Roy	H.Q. Energy Services (U.S.), Inc.	Other Supplier
Sidhom	Noha	Inertia Power I, LLC	Other Supplier
Silverthorne	Eric	Exelon Generation Co., LLC	Generation Owner
Squibb	Bill	Ohio Valley Electric	Generation Owner
Stancombe	Corey	Duke Energy Kentucky, Inc.	Transmission Owner
Stern	Alexander	Public Service Electric & Gas Company	Transmission Owner
Stewart	Travis	Gabel Associates	Not Applicable
Stone	Andy	Gabel Associates	Not Applicable
Sturgeon	John	Duke Energy Carolinas, LLC	Other Supplier
Sweeney	Rory	RTO Insider	Not Applicable
Tangirala	Subha	ABB	Not Applicable
Thompson	Matt	XO Energy MA, LP	Other Supplier
Tibbetts	Maeve	Pierce Atwood	Not Applicable
Toomey	Megan	Talen Energy Marketing, LLC	Generation Owner
Vargo	Daniel	Allegheny Electric Cooperative, Inc.	Electric Distributor
Vayda	Brian	Borough of Park Ridge, NJ	Electric Distributor
Wadsworth	Joseph	Vitol Inc.	Other Supplier
Walker	Jennifer	Exelon Business Services Company, LLC	Transmission Owner
Whitehead	Jeffrey	GT Power Group	Not Applicable





Last Name	First Name	Company	Sector
Wicks	Tonja	Duquesne Light Company	Transmission Owner
Wilcox	Evan	Appalachian Power Company	Transmission Owner
Wilson	Bram	Diamond State Generation Partners, LLC	Generation Owner
Wilson	James	Wilson Energy Economics	Not Applicable

#### **PJM Participants**

Last Name	First Name	Company	Sector
Baker	Scott	PJM Interconnection, LLC	Not Applicable
Barrett	Francis	PJM Interconnection, LLC	Not Applicable
Bastian	Jeff	PJM Interconnection, LLC	Not Applicable
Bazar	Kevin	PJM Interconnection, LLC	Not Applicable
Berner	Aaron	PJM Interconnection, LLC	Not Applicable
Boyle	Glen	PJM Interconnection, LLC	Not Applicable
Bresler	Stu	PJM Interconnection, LLC	Not Applicable
Brown	Richard	PJM Interconnection, LLC	Not Applicable
Bruno	Josh	PJM Interconnection, LLC	Not Applicable
Bryson	Mike	PJM Interconnection, LLC	Not Applicable
Buck	Rachel	PJM Interconnection, LLC	Not Applicable
Budney	David	PJM Interconnection, LLC	Not Applicable
Buehler	Susan	PJM Interconnection, LLC	Not Applicable
Burdis	Tim	PJM Interconnection, LLC	Not Applicable
Burlew	Jim	PJM Interconnection, LLC	Not Applicable
Carroll	Rebecca	PJM Interconnection, LLC	Not Applicable
Caven	Augustine	PJM Interconnection, LLC	Not Applicable
Chmielewski	Brian	PJM Interconnection, LLC	Not Applicable
Coyne	Suzanne	PJM Interconnection, LLC	Not Applicable
Croop	Danielle	PJM Interconnection, LLC	Not Applicable
Cummings	Bridgid	PJM Interconnection, LLC	Not Applicable
Davis	Elizabeth	PJM Interconnection, LLC	Not Applicable
DeVita	Thomas	PJM Interconnection, LLC	Not Applicable
Dirani	Rami	PJM Interconnection, LLC	Not Applicable
Dolan	James	PJM Interconnection, LLC	Not Applicable
Drauschak	Lisa	PJM Interconnection, LLC	Not Applicable
Duane	Vince	PJM Interconnection, LLC	Not Applicable
Edgar-Smith	Collin	PJM Interconnection, LLC	Not Applicable
Egan	Amanda	PJM Interconnection, LLC	Not Applicable
Endress	Eric	PJM Interconnection, LLC	Not Applicable
Fabiano	Janell	PJM Interconnection, LLC	Not Applicable
Fernandes	Anisha	PJM Interconnection, LLC	Not Applicable
Fernandez	Ray	PJM Interconnection, LLC	Not Applicable





Last Name	First Name	Company	Sector
Fitzpatrick	Brian	PJM Interconnection, LLC	Not Applicable
Foley	Sheila	PJM Interconnection, LLC	Not Applicable
Foster	Denise	PJM Interconnection, LLC	Not Applicable
Franks	Chris	PJM Interconnection, LLC	Not Applicable
Glatz	Suzanne	PJM Interconnection, LLC	Not Applicable
Glazer	Craig	PJM Interconnection, LLC	Not Applicable
Hauske	Tom	PJM Interconnection, LLC	Not Applicable
Herling	Steve	PJM Interconnection, LLC	Not Applicable
Hoang	Len	PJM Interconnection, LLC	Not Applicable
Holter	Natasha	PJM Interconnection, LLC	Not Applicable
Horger	Tim	PJM Interconnection, LLC	Not Applicable
Hsia	Eric	PJM Interconnection, LLC	Not Applicable
Hugee	Jacqulynn	PJM Interconnection, LLC	Not Applicable
Kappagantula	Srinivas	PJM Interconnection, LLC	Not Applicable
Keech	Adam	PJM Interconnection, LLC	Not Applicable
Kelley	Michael	PJM Interconnection, LLC	Not Applicable
Kenney	Susan	PJM Interconnection, LLC	Not Applicable
Keshavamurthy	Bhavana	PJM Interconnection, LLC	Not Applicable
Kimmel	David	PJM Interconnection, LLC	Not Applicable
Krizenoskas	Lisa	PJM Interconnection, LLC	Not Applicable
Langbein	Pete	PJM Interconnection, LLC	Not Applicable
Larocque	Matthew	PJM Interconnection, LLC	Not Applicable
Lee	Jin	PJM Interconnection, LLC	Not Applicable
Long	Amanda	PJM Interconnection, LLC	Not Applicable
Long	Glenn	PJM Interconnection, LLC	Not Applicable
Loomis	Hal	PJM Interconnection, LLC	Not Applicable
Lu	Chen	PJM Interconnection, LLC	Not Applicable
Manion	Evelyn	PJM Interconnection, LLC	Not Applicable
Marcino	Angelo	PJM Interconnection, LLC	Not Applicable
McGill	Susan	PJM Interconnection, LLC	Not Applicable
McGlynn	Paul	PJM Interconnection, LLC	Not Applicable
McLaverty	Megan	PJM Interconnection, LLC	Not Applicable
Monzon	Stephanie	PJM Interconnection, LLC	Not Applicable
Morelli	Lisa	PJM Interconnection, LLC	Not Applicable
Niemeyer	Jay	PJM Interconnection, LLC	Not Applicable
O'Neill	Jack	PJM Interconnection, LLC	Not Applicable
Ott	Andrew	PJM Interconnection, LLC	Not Applicable
Patel	Keyurbhai	PJM Interconnection, LLC	Not Applicable
Patt	Kate	PJM Interconnection, LLC	Not Applicable





Last Name	First Name	Company	Sector
Phillips	Darlene	PJM Interconnection, LLC	Not Applicable
Pilong	Chris	PJM Interconnection, LLC	Not Applicable
Ritchie	Sandra	PJM Interconnection, LLC	Not Applicable
Rocha	Patricio	PJM Interconnection, LLC	Not Applicable
Rogers	Sarah	PJM Interconnection, LLC	Not Applicable
Scheidecker	Paul	PJM Interconnection, LLC	Not Applicable
Schmitt	Jeff	PJM Interconnection, LLC	Not Applicable
Schuyler	Ken	PJM Interconnection, LLC	Not Applicable
Schweizer	David	PJM Interconnection, LLC	Not Applicable
Seiler	Ken	PJM Interconnection, LLC	Not Applicable
Shah	Vijay	PJM Interconnection, LLC	Not Applicable
Souder	Michelle	PJM Interconnection, LLC	Not Applicable
Stadelmeyer	Rebecca	PJM Interconnection, LLC	Not Applicable
Stefanowicz	Vince	PJM Interconnection, LLC	Not Applicable
Swimm	Nora	PJM Interconnection, LLC	Not Applicable
Tacka	Natalie	PJM Interconnection, LLC	Not Applicable
Tribulski	Jen	PJM Interconnection, LLC	Not Applicable
Velasco	Cheryl	PJM Interconnection, LLC	Not Applicable
Ward	Michael	PJM Interconnection, LLC	Not Applicable
Williams	Stan	PJM Interconnection, LLC	Not Applicable
Xu	Xu	PJM Interconnection, LLC	Not Applicable
Zhenyu	Fan	PJM Interconnection, LLC	Not Applicable