

**Markets and Reliability Committee**  
**PJM, Conference and Training Center, Audubon, PA**  
**September 27, 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. Vince Duane and Ms. Tawnya Luna presented an informational update on PJM.com web-based agreements.

## Consent Agenda

Mr. Carl Johnson, PJM Public Power Coalition requested removal from the Consent Agenda a portion of item B regarding Operating Agreement new section 18.1 (regarding service of FERC filings) Consideration of this section was deferred to a later meeting. Item A and the remainder of item B were **approved** by acclamation with no objections or abstentions.

- A. Minutes of the August 23, 2018 meeting of the Markets and Reliability Committee (MRC).
- B. Proposed Tariff and OA revisions developed by the Governing Documents Enhancement & Clarification Subcommittee (GDECS).

## Endorsements/Approvals

### 1. PJM Manuals

- A. Ms. Bilge Derin presented revisions to Manual 01: Control Center and Data Exchange Requirements.
- B. Ms. Gabrielle Genuario reviewed updates to Manual 15: Cost Development Guidelines as part of the Biennial Review.
- C. Mr. Jason Shoemaker presented proposed changes to Manual 14F: Competitive Planning Process related to Cost Containment.

Following discussion, the committee **endorsed** the proposed revisions in items 1.A and B by acclamation with no objections or abstentions, and item 1.C by acclamation with one objection and one abstention.

### 2. Behind-the-Meter Generation

Mr. Pete Langbein presented a proposal and associated manual revisions developed by the Distributed Energy Resources Subcommittee (DERS) that would give PJM and Transmission Owners better observability of Behind the Meter Generation resources. Following discussion, the committee **endorsed** the proposed revisions by acclamation with no objections and two abstentions.

### 3. Market Seller Offer Cap Balancing Ratio Proposal

Mr. Pat Bruno presented the market seller offer cap balancing ratio proposal approved by the Market Implementation Committee. Following discussion, the committee **endorsed** the proposed revisions in a sector-weighted vote with 3.51 in favor.

### 4. Variable Operations and Maintenance

Ms. Melissa Pilog presented a proposal for stakeholder consideration which is documented in draft revisions to Manual 15: Cost Development Guidelines, the Operating Agreement and Tariff. Mr. Brian Wilkie, RECO, moved and Ms. Adrien Ford, ODEC, seconded this proposal. Following discussion, the committee **endorsed** the proposed revisions in a sector-weighted vote with 3.40 in favor. Ms. Daugherty noted that the Members Committee will be asked to vote on these proposals at its September 27, 2018 meeting. Mr. Greg Poulos, CAPS indicated that he would object to voting on this item at the September 27, 2018 MC meeting.

### 5. Quadrennial Review

Mr. Gary Helm presented the Quadrennial Review packages. Following discussion, the committee **voted** on the various proposals with the following results:

- PJM Proposal – 2.32 in favor
- IMM Proposal – 1.92 in favor
- Calpine Proposal – 2.14 in favor
- DC Office of the Peoples' Counsel Proposal – 1.42 in favor

Ms. Daugherty noted that the Members Committee will be asked to vote on these proposals at its September 27, 2018 meeting; there were no objections.

### 6. FTR Default Liquidation Provisions

A. Ms. Suzanne Daugherty presented information on the four proposed packages and the status quo regarding alternative FTR Default Liquidation Provisions and associated revisions to governing documents, all developed during special sessions of the MRC. Ms. Daugherty noted that proposals B and J1 received greater than simple majority support in the non-binding polling at the special MRC meetings and in accordance with the guidelines established in the special MRC meetings they were considered to be moved and seconded and brought before the MRC for voting at this meeting. She also noted that options B' and J1' had been moved by Ms. Christi Nicholay, Macquarie Energy LLC, and seconded by Mr. Kevin Kelley, Apogee Energy Trading. Mr. Brian Wilke, RECO, moved and Mr. Jason Barker, Exelon, seconded a new proposal B'' consisting of proposal B with the provisions regarding the option for bilateral counterparty to assume some positions removed. Mr. Dean Bickerstaff, Hartree Partners, L.P., moved and Mr. Bruce Campbell, Enerwise Global Technologies, seconded proposal K1B. Mr. Bickerstaff also moved proposal K1B'

(K1B including application to only the current FTR default). This motion **failed** for lack of a second. Following discussion, the committee **voted** on the various proposals with the following results:

- Proposal B – 3.73 in favor (as this is the only proposal receiving greater than super-majority sector-weighted support, it will become the main motion at the September 27, 2018 Members Committee meeting)
- Proposal J1 – 1.80 in favor
- Proposal B' – 1.80 in favor
- Proposal J1' – 1.44 in favor
- Proposal B'' – 1.88 in favor
- Proposal K1B – 0.44 in favor

A non-binding poll was taken to determine whether Members preferred the status quo to making a change. The results of this poll indicated that Members prefer Proposal B over the status quo in a sector-weighted poll with 4.50 in favor.

Ms. Daugherty noted that the Members Committee will be asked to vote on proposal B at its September 27, 2018 meeting.

B. This item was deleted.

## First Readings

### 7. RPM Credit Requirement Reduction Clarifications

Mr. Hal Loomis presented draft tariff language to remove an apparent overlapping credit reduction provision for Qualified Transmission Upgrades, to clarify milestone documentation requirements for internally financed projects, and to clarify that Capacity Market Sellers should submit requests for reductions. The committee will be asked to endorse these revisions at its next meeting.

### 8. Transmission Constraint Penalty Factors

Mr. Angelo Marcino reviewed the joint PJM/IMM package developed at the Special Market Implementation Committee sessions related to Transmission Constraint Penalty Factors, and present draft Manual 11 and Manual 33 revisions, as well as Operating Agreement and Tariff language. The committee will be asked to endorse a proposal and these revisions at its next meeting.

### 9. Summer-Only Demand Response

Ms. Rebecca Carroll presented a first read of the proposal endorsed by the Summer-Only Demand Response Sr. Task Force (SODRSTF) to better value summer-only demand response resources. The committee will be asked to endorse a proposal at its next meeting.

## 10. FERC Order 831 – Offer Caps

Ms. Susan Kenney presented draft Manual 11 language that describes the long term automated process for Price-Based Offers greater than \$1,000/MWh. The committee will be asked to endorse these revisions at its next meeting.

## 11. 2018 Reserve Requirements Study Results

Mr. Patricio Rocha Garrido reviewed the 2018 Reserve Requirements Study results (IRM, FPR). The committee will be asked to endorse these study results at its next meeting.

## 12. Regulation Market Pricing Issue

Mr. Adam Keech provided a first read of a problem statement and issue charge to address recent regulation market clearing price issues as well presented a proposed solution. The committee will be asked to endorse these items at its next meeting.

## 13. PJM Manuals

- A. Ms. Diane Lake reviewed proposed changes to Manual 03A: Energy Management System (EMS) Model Updates and Quality Assurance (QA). The committee will be asked to endorse the manual revisions at its next meeting
- B. Mr. Dean Manno reviewed proposed changes to Manual 13: Emergency Operations. The committee will be asked to endorse these revisions at its next meeting.
- C. Ms. Nikki Militello reviewed proposed changes to Manual 11: Energy & Ancillary Services Market Operations related to Pseudo-Tie Overlapping Congestion. The committee will be asked to endorse these revisions at its next meeting.
- D. Mr. Ray Fernandez reviewed proposed changes to Manual 28: Operating Agreement Accounting related to Pseudo-Tie Overlapping Congestion. The committee will be asked to endorse these revisions at its next meeting.

## Informational Updates

### 14. Market Operations Price Transparency

Mr. Rami Dirani provided a status update on Market Operations Price Transparency problem statement and issue charged that was worked through special sessions of the Market Implementation Committee. Mr. Dirani indicated that this issue has been closed.

## Future Agenda Items

No new future agenda items were identified.

## Future Meeting Dates

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.

Valley Forge, PA

Author: D. Anders

## Chair and Secretary

Daugherty	Suzanne	PJM Interconnection	Not Applicable
Stotesbury	Christina	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
Benetti	Alex	Dayton Power & Light	Other Supplier
Benetti	Alex	Dayton Power & Light Company (The)	Transmission Owner
Bickerstaff	Dean	Hartree Partners, LP	Other Supplier
Bleiweis	Bruce	DC Energy, LLC	Other Supplier
Bleiweis	Bruce	Vitol Inc.	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	NextEra Energy Marketing, LLC	Other Supplier
Borgatti	Michael	York County Solid Waste and Refuse Authority	Generation Owner
Brodbeck	John	EDP Renewables North America, LLC	Generation Owner
Bruce	Susan	Air Products & Chemicals, Inc.	End-Use Customer
Bruce	Susan	ArcelorMittal USA LLC	End-Use 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-Use Customer
Bruce	Susan	Letterkenny Industrial Development Authority - PA	Electric Distributor
Bruce	Susan	Linde, LLC	End-Use Customer
Bruce	Susan	MeadWestvaco Corporation	End-Use Customer
Bruce	Susan	Praxair, Inc.	End-Use Customer
Bruce	Susan	Procter & Gamble Paper Products Company (The)	Generation Owner

Bruce	Susan	Trustees of the University of Pennsylvania	End-Use Customer
Bruce	Susan	Wellsboro Electric Company	Electric Distributor
Campbell	Bruce	Enerwise Global Technologies, Inc.	Other Supplier
Campbell	Bruce	MidAtlantic Power Partners, LLC	Other Supplier
Canter	David	Appalachian Power Company	Transmission Owner
Chintapalli	Raj	BP Energy Company	Other Supplier
Chu	Michael	Forest Investment Group, LLC	Other Supplier
Cox	Jason	EDF Trading North America, LLC	Other Supplier
Cromarty	Chloe	Mercuria Energy America, Inc.	Other Supplier
Crystle	Gil	UGI Development Company	Generation Owner
Davis	James	Virginia Electric & Power Company	Transmission Owner
Domian	Christin	Duquesne Light 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
Fondacci	Luis	North Carolina Electric Membership Corporation	Electric Distributor
Ford	Adrien	Old Dominion Electric Cooperative	Electric Distributor
Gahimer	Michael	Indiana Office of Utility Consumer Counselor (IN OUCC)	End-Use Customer
Gorman	Kevin	The Highlands Energy Group, LLC	Other Supplier
Guler	Teoman	Apogee Energy Trading LLC	Other Supplier
Guler	Teoman	J. Aron & Company LLC	Other Supplier
Hastings	David	Mics Company	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	Joseph	Rainbow Energy Marketing Corporation	Other Supplier
Hoatson	Tom	Larsam Power	Generation Owner
Hoatson	Tom	Riverside Generating, LLC	Generation Owner
Hoatson	Tom	West Deptford Energy, LLC	Generation Owner
Hohenshilt	Jennifer	Talen Energy Marketing, LLC	Generation Owner
Hurwich	Mark	Elliott Bay Energy Trading, LLC	Other Supplier
Hyzinski	Thomas	Carroll County Energy LLC	Generation Owner
Hyzinski	Thomas	Dynegy Marketing and Trade, LLC	Generation Owner

Janicki	Diane	Boston Energy Trading & Marketing	Other Supplier
Jardot	Gina	Essential Power Rock Springs, LLC	Transmission Owner
Jens	Thomas	Black Oak Capital	Other Supplier
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 Electric Membership Corporation	Electric Distributor
Johnson	Carl	North Carolina Municipal Power Agency Number 1	Other Supplier
Johnson	Carl	Northern Illinois Municipal Power Agency	Electric Distributor
Johnson	Carl	Northern Indiana Public Service Company	Other Supplier
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
Kauffman	Brian	EnerNOC, Inc.	Other Supplier
Keenan	Matthew	Elwood Energy, LLC	Generation Owner
Kelly	Stephen	Brookfield Energy Marketing LP	Other Supplier
Kevin	Gorman	Highland Energy Group	Other Supplier
Kilgallen	Kevin	Avangrid Renewables, LLC	Generation Owner
Klein	Abram	Appian Way Energy Partners	Other Supplier
Kogut	George	New York Power Authority	Other Supplier
Landis	Daniel	Hemsworth Capital, L.P.	Other Supplier
Lieberman	Steven	American Municipal Power, Inc.	Electric Distributor
Lieberman	Steven	Borough of Butler, Butler Electric Division	Electric Distributor

Lieberman	Steven	Borough of Lavallette, New Jersey	Electric Distributor
Lieberman	Steven	Borough of Madison, New Jersey	Electric Distributor
Lieberman	Steven	Borough of Milltown, New Jersey	Electric Distributor
Lieberman	Steven	Borough of Park Ridge, New Jersey	Electric Distributor
Lieberman	Steven	Borough of Pemberton, New Jersey	Electric Distributor
Lieberman	Steven	Borough of Seaside Heights, New Jersey	Electric Distributor
Lieberman	Steven	Borough of South River, New Jersey	Electric Distributor
Lieberman	Steven	Vineland Municipal Electric Utility	Electric Distributor
Melnyk	Markian	Atlantic Grid Operations A, LLC	Other Supplier
Nicolay	Christi	Macquarie Energy, LLC	Other Supplier
O'Connell	Robert	PPGI Fund A/B Development, LLC.	Generation Owner
Olson	Chad	Manatee Transmission LLC	Other Supplier
Pakela	Greg	DTE Energy Trading, Inc.	Other Supplier
Pakula	Maggie	Invenergy	Generation Owner
Pelletier	Eveline	H.Q. Energy Services (U.S.), Inc.	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-Use Customer
Poulos	Greg	Delaware Division of the Public Advocate	End-Use Customer
Poulos	Greg	Illinois Citizen Utility Board	End-Use Customer
Poulos	Greg	Maryland Office of People's Counsel	End-Use Customer
Poulos	Greg	Michigan Department of Attorney General, Environment, Natural Resources, & Agriculture Division	End-Use Customer
Poulos	Greg	New Jersey Division of Rate Counsel	End-Use Customer
Poulos	Greg	Office of the Attorney General, Kentucky	End-Use Customer
Poulos	Greg	Office of the People's Counsel for the District of Columbia	End-Use Customer
Poulos	Greg	Ohio Consumers' Counsel	End-Use Customer
Poulos	Greg	Public Staff - North Carolina Utilities Commission	End-Use Customer
Poulos	Greg	Virginia Division of Consumer Counsel	End-Use Customer
Poulos	Greg	West Virginia Consumer Advocate Division	End-Use Customer
Pratzon	David	Eastern Generation, LLC	Generation Owner
Pratzon	David	Wheelabrator Frackville Energy Co., Inc.	Generation Owner
Prokop	Brenda	ITC Interconnection LLC	Transmission Owner
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



Scarpignato	David	Calpine Energy Services, L.P.	Generation Owner
Shparber	Steve	Carolina Solar Energy III, LLC	Other Supplier
Shparber	Steven	Solar Ato Coalition	Generation Owner
Shparber	Steve	Syncarpha Solar, LLC	Generation Owner
Simpson	Daniel	Apogee Energy Trading LLC	Other Supplier
Singer	Chad	Trane Grid Services LLC	Other Supplier
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	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	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
Spears	James	Biourja Llc	Other Supplier
Steele	Robert	Sanitas Power	Other Supplier
Stern	Alex	Public Service Electric & Gas Company	Transmission Owner
Sturgeon	John	Duke Energy Business Services LLC	Transmission Owner
Swalwell	Bradley	Tangent Energy Solutions, Inc.	Other Supplier
Trayers	Barry	Citigroup Energy, Inc.	Other Supplier
Vargo	Daniel	Allegheny Electric Cooperative, Inc.	Electric Distributor
Whitehead	Jeffrey	Direct Energy Business, LLC	Other Supplier
Whitehead	Jeffrey	Neptune Regional Transmission System, LLC	Transmission

			Owner
Wilkie	Brian	Rockland Electric Company	Transmission Owner
Zhu	Min	Jane Street Energy Trading, LLC	Other Supplier

## NonVoting Participants

LAST NAME	FIRST NAME	COMPANY	SECTOR
Ainspan	Malcolm	Nrg	Other Supplier
Anderson	Jared	Platts	Not Applicable
Avend	Erik	Erik Avend Consulting	Not Applicable
Bayless	Charles	North Carolina Electric Membership Corporation	Electric Distributor
Beattie	Jeff	Consumers Energy	Other Supplier
Bowring	Joe	Monitoring Analytics	Not Applicable
Branch	John	St Josephs Energy Center	Generation Owner
Brooks	Michael	RTO Insider	Not Applicable
Canchi	Deventra	Monitoring Analytics	Not Applicable
Carmean	Gregory	OPSI	Not Applicable
Cecilia-Liang	Nicoll	First Energy	Transmission Owner
Chandlers	Kent	Kentucky office of The Attorney General	End-Use Customer
Cocco	Michael	Old Dominion Electric Cooperative	Electric Distributor
Cook	Michael	Aep Energy	Transmission Owner
Cox	Phil	American Electric Power	Not Applicable
Dalessandris	Lou	First Energy	Transmission Owner
Dayal	Hanish	Hemsworth Capital Midwest	Not Applicable
Denby	Brett	Novec	Electric Distributor
DePillo	Raymond	PSEG Energy Solutions LLC	Transmission Owner
Dillon	Matt	Ugi Development	Other Supplier
Dorko	Keri	Monitoring Analytics	Not Applicable
Duensing	Allison	Saracen	Other Supplier
Esposito	Pat	A2a Energy	Special Member
Feller	John	PPL Electric Utilities Corp. dba PPL Utilities	Transmission Owner
Filomena	Guy	Customized Energy Solutions, Ltd.*	None
Foladare	Kenneth	Tangibl	Not Applicable

Fuess	Christian	White Pine Energy Consulting	Not Applicable
Gebolys	Debbie	The Public Utilities Commission of Ohio	Not Applicable
Gilani	Rehan	Con Edison Energy	Other Supplier
Giles	Steven	Allegheny Electric	Electric Distributor
Godson	Gloria	Upright Energy	Not Applicable
Gorman	Kevin	Highlands Energy Group	Other Supplier
Grau	Patrick	Apogee	Other Supplier
Greco	Steven	NextEra Energy Resources	Other Supplier
Haas	Howard	Monitoring Analytics	Not Applicable
Hansen	Noah	Nimpa	Electric Distributor
Harmon	Mike	Ameren	Other Supplier
Hayik	Seth	Monitoring Analytics	Not Applicable
Heider	Benjamin	Aces	Not Applicable
Heinle	Frederick	Office of the People's Counsel for the District of Columbia	End-Use Customer
Hemajit	Kalita	Uncia Energy	Other Supplier
Holdbrook	Ruth	Novec	Electric Distributor
Holland	Cynthia	New Jersey Bpu	Not Applicable
Holstein	Matt	Duke Energy	Other Supplier
Hudis	Gabriella	Gabel Associates	Not Applicable
Huntoon	Steve	Energy Council LLP	Not Applicable
Jampani	Srini	Roscommon Analytics	Not Applicable
Johnson	Ryan	American Electric Power Company	Not Applicable
Kennedy	Sahiti	Shell	Other Supplier
Kinser	Cynthia	Tennessee Attorney General	End-Use Customer
Kinspan	Malcolm	Nrg	Other Supplier
Kolkmann	Ryan	Shell	Other Supplier
Kreitler	Ginny	Sustainable Ferc	Not Applicable
Kulha	David	American Electric Power	Not Applicable
Kumar	Nikhil	Sig	Other Supplier
Kupcinski	Candice	Pepco Holdings	Not Applicable
Lang	Courtney	Voltus	Other Supplier
Leach	Brad	Energy Advisory Services	Not Applicable
Logan	Sharon	Federal Regulatory Energy Commission	Not Applicable
Mabry	David	Mwn	Not Applicable
Marineloi	Richard	Public Service Electric & Gas Company	Transmission Owner
Martin	Valerie	Federal Energy Regulatory Commission	Not Applicable
Marzewski	Skyler	Monitoring Analytics	Not Applicable

Matuszak	Alex	Ugi Energy Services	Other Supplier
Mcdaniel	John	Baltimore Gas & Electric	Transmission Owner
Mellovitz	Alan	Accenture	Not Applicable
Midgley	Sharon	Exelon Business Services Company, LLC	Transmission Owner
Miller	John	Comed	Transmission Owner
Neeraj	Gurpreet	Atnv	Other Supplier
Noewer	Sharon	Firstenergy	Not Applicable
Ondayko	Brock	American Electric Power	Not Applicable
Pang	Michael	Bank of America Merrill Lynch	Other Supplier
Peoples	John	Duquesne Light Company	Other Supplier
Pezalla	Bill	Old Dominion Elective Corporative	Electric Distributor
Philips	Marji	Direct	Other Supplier
Price	Mark	DC Energy	Other Supplier
Price	Ruth Ann	Delaware Division of the Public Advocate	End-Use Customer
Rismiller	Randy	Illinois Commerce Commission	Not Applicable
Roberts	Casey	Sierra Club	Not Applicable
Robson	Matt	Sesco Enterprises	Other Supplier
Rutigliano	Tom	Emc	Other Supplier
Sasser	Jonathan	Customized Energy Solutions	Not Applicable
Saxena	Richa	Calpine Energy Solutions	Other Supplier
Schneider	Jonathan	Firstenergy	Transmission Owner
Schreim	Morris	Maryland Public Service Commission	Not Applicable
Schultheis	Daniel	Exelon Business Services Company, LLC	Transmission Owner
Segner	Sharon	LS Power	Not Applicable
Shah	Pulin	Exelon Business Services Company, LLC	Transmission Owner
Shanker	Roy	East Coast Power	Not Applicable
Skucas	Ruta	Pierce Atwood	Not Applicable
Sotkiewicz	Paul	E-Cubed Policy Associates	Not Applicable
Stewart	Travis	Gabel and Associates	Not Applicable
Stone	Andy	Gabel and Associates	Not Applicable
Stubbe	Judy	Duke Energy Business Services LLC	Transmission Owner
Sulc	Maggie	Aep Energy	Transmission Owner

Thompson	Matthew	Xo Energy	Other Supplier
Tibbetts	Maeve	Pierce Atwood	Not Applicable
Walker	Jennifer	Exelon Business Services Company, LLC	Transmission Owner
Webster	John	Icetec.Com	Other Supplier
Wilhite	Chad	Firstenergy	Not Applicable
Wilmoth	Emily	Dominion Energy	Generation Owner
Wilson	Bram	Pbf Power Marketing	Generation Owner
Wilson	James	Wilson Energy Economics	Not Applicable
Xenopoulos	Damon	Stone Mattheis Xenopoulos & Brew	Not Applicable
Zhuang	Julia	Comed	Transmission Owner

## PJM

LAST NAME	FIRST NAME	COMPANY	SECTOR
Anders	David	PJM Interconnection	Not Applicable
Andrew	Grippe	PJM Interconnection	Not Applicable
Baker	Scott	PJM Interconnection	Not Applicable
Barrett	Francis	PJM Interconnection	Not Applicable
Bastian	Jeff	PJM Interconnection	Not Applicable
Bazar	Kevin	PJM Interconnection	Not Applicable
Berner	Aaron	PJM Interconnection	Not Applicable
Borradaile	Michael	PJM Interconnection	Not Applicable
Boyle	Glen	PJM Interconnection	Not Applicable
Bresler	Stu	PJM Interconnection	Not Applicable
Brown	Rich	PJM Interconnection	Not Applicable
Bruno	Joshua	PJM Interconnection	Not Applicable
Bryson	Mike	PJM Interconnection	Not Applicable
Buehler	Susan	PJM Interconnection	Not Applicable
Burlew	Jim	PJM Interconnection	Not Applicable
Burns	Gregory	PJM Interconnection	Not Applicable
Carroll	Rebecca	PJM Interconnection	Not Applicable
Chao	Hungpo	PJM Interconnection	Not Applicable
Cory	Patricia	PJM Interconnection	Not Applicable
Croop	Danielle	PJM Interconnection	Not Applicable
Cummings	Bridgid	PJM Interconnection	Not Applicable
Daugherty	Suzanne	PJM Interconnection	Not Applicable
Derin	Bilge	PJM Interconnection	Not Applicable

Dirani	Rami	PJM Interconnection	Not Applicable
Dolan	James	PJM Interconnection	Not Applicable
Drauschak	Lisa	PJM Interconnection	Not Applicable
Driscoll	MaryEllen	PJM Interconnection	Not Applicable
Duane	Vince	PJM Interconnection	Not Applicable
Dumitriu	Nicolae	PJM Interconnection	Not Applicable
Fabiano	Janell	PJM Interconnection	Not Applicable
Falin	Thomas	PJM Interconnection	Not Applicable
Fan	Zhenyu	PJM Interconnection	Not Applicable
Fereshetian	Damon	PJM Interconnection	Not Applicable
Foley	Pauline	PJM Interconnection	Not Applicable
Foley	Sheila	PJM Interconnection	Not Applicable
Foster	Denise	PJM Interconnection	Not Applicable
Genuario	Gabrielle	PJM Interconnection	Not Applicable
Glatz	Suzanne	PJM Interconnection	Not Applicable
Gledhill	Andrew	PJM Interconnection	Not Applicable
Greening	Michele	PJM Interconnection	Not Applicable
Hauske	Tom	PJM Interconnection	Not Applicable
Helm	Gary	PJM Interconnection	Not Applicable
Hendrzak	Chantal	PJM Interconnection	Not Applicable
Herel	Suzanne	PJM Interconnection	Not Applicable
Herling	Steve	PJM Interconnection	Not Applicable
Holter	Natasha	PJM Interconnection	Not Applicable
Horger	Tim	PJM Interconnection	Not Applicable
Hsia	Eric	PJM Interconnection	Not Applicable
Hugee	Jacquelynn	PJM Interconnection	Not Applicable
Keech	Adam	PJM Interconnection	Not Applicable
Kenney	Susan	PJM Interconnection	Not Applicable
Keshavamurthy	Bhavana	PJM Interconnection	Not Applicable
Lake	Diane	PJM Interconnection	Not Applicable
Langbein	Pete	PJM Interconnection	Not Applicable
Larocque	Matthew	PJM Interconnection	Not Applicable
Lauterbach	Tory	PJM Interconnection	Not Applicable
Llaroque	Matthew	PJM Interconnection	Not Applicable
Long	Glenn	PJM Interconnection	Not Applicable
Loomis	Hal	PJM Interconnection	Not Applicable
Lu	Chenchao	PJM Interconnection	Not Applicable
Manno	Dean	PJM Interconnection	Not Applicable
Marcino	Angelo	PJM Interconnection	Not Applicable

McGlynn	Paul	PJM Interconnection	Not Applicable
McLavery	Megan	PJM Interconnection	Not Applicable
Militello	Nicole	PJM Interconnection	Not Applicable
Mirhosseni	Niloufar	PJM Interconnection	Not Applicable
Monzon	Stephanie	PJM Interconnection	Not Applicable
Mooney	Molly	PJM Interconnection	Not Applicable
Morelli	Lisa	PJM Interconnection	Not Applicable
Nix	Emma	PJM Interconnection	Not Applicable
O'Brien	Tom	PJM Interconnection	Not Applicable
O'Hara	Christopher	PJM Interconnection	Not Applicable
O'Neill	Jack	PJM Interconnection	Not Applicable
Ott	Andrew	PJM Interconnection	Not Applicable
Patel	Anita	PJM Interconnection	Not Applicable
Phillips	Darlene	PJM Interconnection	Not Applicable
Pilong	Melissa	PJM Interconnection	Not Applicable
Pilong	Chris	PJM Interconnection	Not Applicable
Quevada	Jason	PJM Interconnection	Not Applicable
Reynolds	John	PJM Interconnection	Not Applicable
Ritchie	Sandra	PJM Interconnection	Not Applicable
Rocha-Garrido	Patricio	PJM Interconnection	Not Applicable
Scheidecker	Paul	PJM Interconnection	Not Applicable
Schmitt	Jeff	PJM Interconnection	Not Applicable
Schuyler	Ken	PJM Interconnection	Not Applicable
Schweizer	David	PJM Interconnection	Not Applicable
Seiler	Ken	PJM Interconnection	Not Applicable
Shah	Vijay	PJM Interconnection	Not Applicable
Shoemaker	Jason	PJM Interconnection	Not Applicable
Sims	Mark	PJM Interconnection	Not Applicable
Snyder	Susan	PJM Interconnection	Not Applicable
Souder	Dave	PJM Interconnection	Not Applicable
Squilla	Angelica	PJM Interconnection	Not Applicable
Stadelmeyer	Rebecca	PJM Interconnection	Not Applicable
Stefanowicz	Vincent	PJM Interconnection	Not Applicable
Stotesbury	Christina	PJM Interconnection	Not Applicable
Swimm	Nora	PJM Interconnection	Not Applicable
Tribulski	Jen	PJM Interconnection	Not Applicable
Ward	Michael	PJM Interconnection	Not Applicable
Warshel	Kim	PJM Interconnection	Not Applicable
Williams	Stan	PJM Interconnection	Not Applicable

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PJM Interconnection

Not Applicable