

Energy Price Formation Sr. Task Force PJM Conference and Training Center December 14, 2018 9:00 p.m. – 4:00 p.m. EPT

#### Administration

- 1. Mr. Dave Anders and Mr. Vijay Shah provided announcements, reviewed the Anti-trust, Code of Conduct and PJM meeting guidelines policies and performed in-room roll-call
- 2. The Senior Task Force approved minutes from the November 28, 2018 Energy Price Formation Senior Task Force (EPFSTF) meeting.
- Mr. Dave Anders reviewed the latest updates from the PJM Board letter that was sent out on December 5, 2018 regarding Energy Price Formation Senior Task Force. The letter was posted as part of today's meeting materials.

### Details of Comprehensive Package

4. PJM outlined components of the comprehensive package for Reserve pricing reform in response to the Board letter.

#### Simulation Results

5. Dr. Anthony Giacomoni, PJM, provided simulation results of the comprehensive package for Reserve pricing reform.

#### Work plan

 Mr. Dave Anders reviewed the latest work plan for EPFSTF. Two additional meetings have been added to the calendar for January 11, 2019 and January 17, 2019. Stakeholders are encouraged register for these additional meetings.





### Future Agenda Items

Future I	Meeting	Dates

December 14, 2018	9:00 a.m.	PJM Conference & Training Center/ WebEx
January 4, 2019	9:00 a.m.	PJM Conference & Training Center/ WebEx
January 23, 2019	9:00 a.m.	PJM Conference & Training Center/ WebEx

### Attendance (In Person)

Last Name First Company Name		Company	Sector	
Anders	David	PJM Interconnection, LLC	Not Applicable	
Arabia	Steven	Light Stone Gen	Generation Owner	
Bernabeu	Emanuel	manuel PJM Interconnection, LLC Not Applicable		
Borgatti	Michael	Gabel and Associates	Not Applicable	
Bowring	Joe	Monitoring Analytics, LLC	Not Applicable	
Bruce	Susan	McNees Wallace & Nurick LLC	Not Applicable	
Burdis	Timothy	PJM Interconnection, LLC	Not Applicable	
Carmean	Gregory	OPSI	Not Applicable	
Dirani	Rami	PJM Interconnection, LLC	Not Applicable	
Fereshetian	Damon	PJM Interconnection, LLC	Not Applicable	
Fitch	Neal	NRG Power Marketing LLC	Generation Owner	
Foladare	Kenneth	Tangibl	Not Applicable	
Ford	Adrien	Old Dominion Electric Cooperative	Electric Distributor	
Giacomoni	Anthony	PJM Interconnection, LLC	Not Applicable	
Horger Tim PJM Interconnection, LLC		PJM Interconnection, LLC	Not Applicable	
Jha	Monica	PCI	Not Applicable	
Johnson	Carl	Customized Energy Solutions, Ltd.	Not Applicable	
Kauffman	Brian	EnerNOC, Inc.	Other Supplier	
Keech	Adam	PJM Interconnection, LLC	Not Applicable	
Kogut	George	New York Power Authority	Other Supplier	
Lieberman	Steven	American Municipal Power, Inc.	Electric Distributor	
Long	Amanda	PJM Interconnection, LLC	Not Applicable	
Marcino	Angelo	PJM Interconnection, LLC	Not Applicable	
Midgley	Sharon	Exelon Business Services Company, LLC	Transmission Owner	
Morelli Lisa PJM Interconnection, LLC Not Applic		Not Applicable		
Nix	Nix Emma PJM Interconnection, LLC		Not Applicable	
O'Connell	Robert	PPGI Fund A/B Development, LLC	Generation Owner	
Pratzon	David	GT Power Group	Not Applicable	
Price Ruth Division of th Delaware		Division of the Public Advocate of the State of Delaware	End User Customer	



Rocha-Garrido	Garrido Patricio PJM Interconnection, LLC		Not Applicable
Scarpignato David Calpine Energy Services, L.P.		Calpine Energy Services, L.P.	Generation Owner
Shah	Vijay	PJM Interconnection, LLC	Not Applicable
Stewart Travis Gable and Associates		Gable and Associates	Not Applicable
Suh	Jung	Calpine Energy Services, L.P.	Generation Owner
Sweeney	Rory	RTO Insider	Not Applicable
Toomey Megan	Talen Energy Marketing, LLC	Generation Owner	
Tribulski	Jennifer	PJM Interconnection, LLC	Not Applicable
Tyler	Catherine	Monitoring Analytics	Not Applicable
Velasco	Cheryl Mae	PJM Interconnection, LLC	Not Applicable
Warshel	Kim	PJM Interconnection, LLC	Not Applicable
Whitehead Jeffrey GT Power Group		GT Power Group	Not Applicable
Wilson         James         Wilson Energy Economics		Wilson Energy Economics	Not Applicable

### Attendance (Teleconference)

Last Name	First	Company	Sector
	Name		
Anderson	Jared	S&P Global	Not Applicable
Baker	Scott	PJM Interconnection, LLC	Not Applicable
Barker	Jason	Exelon Business Services Company, LLC	Transmission Owner
Bennett	Stephen	PJM Interconnection, LLC	Not Applicable
Bergin	Kieran	Public Service Electric & Gas Company	Transmission Owner
Bernstein	Matthew	PJM Interconnection, LLC	Not Applicable
Bonner	Charles	Dominion Virginia Power	Not Applicable
Boyle	Glen	PJM Interconnection, LLC	Not Applicable
Brodbeck	John	EDP Renewables North America, LLC	Other Supplier
Burdis	Tim	PJM Interconnection, LLC	Not Applicable
Campbell	Bruce	EnergyConnect, Inc.	Other Supplier
Cawley	Troy	PJM Interconnection, LLC	Not Applicable
Chen	Hong	PJM Interconnection, LLC	Not Applicable
Chintapalli	Raj	BP Energy Company	Other Supplier
Chmielewski	Brian	PJM Interconnection, LLC	Not Applicable
Chung	Taewoo	Millenium	Not Applicable
Соссо	Michael	Old Dominion Electric Cooperative	Electric Distributor
Colbert	Cathleen	NRG Power Marketing LLC	Other Supplier
Cox	Edward P	Appalachian Power Company	Transmission Owner
Coyne	Suzanne	PJM Interconnection, LLC	Not Applicable
Croop	Danielle	PJM Interconnection, LLC	Not Applicable
Crystle	Gil	UGI Development Company	Transmission Owner



Dasher	Brett	Energy Authority, Inc. (The)	Other Supplier	
Daugherty	Suzanne	PJM Interconnection, LLC Not Applicable		
Davis	Elizabeth	PJM Interconnection, LLC	Not Applicable	
DeLosa	Joseph	eph DE Public Service Commission Not Applicable		
Depillo         Raymond         PSEG Energy Resources and Trade LLC         Other Su		Other Supplier		
		Generation Owner		
DiNicola	Laura	FirstEnergy Solutions Corp.	Transmission Owner	
Dugan	Chuck	East Kentucky Power Cooperative, Inc.	Transmission Owner	
Endress	Eric	PJM Interconnection, LLC	Not Applicable	
Fan	Zhenyu	PJM Interconnection, LLC	Not Applicable	
Fenner	Charles	Macquarie Energy, LLC	Other Supplier	
Filomena	Guy	Customized Energy Solutions, Ltd.	Not Applicable	
Gahimer	Michael	IN Office of Utility Consumer Counselor	End User Customer	
Garnett	Bryan	Duke Energy Ohio, Inc.	Transmission Owner	
Gebolys	Debbie	Public Utilities Commission of Ohio (The)	Not Applicable	
Gilani	Rehan	ConEdison Energy, Inc.	Other Supplier	
Giraldo	Juan	Monitoring Analytics, LLC	Not Applicable	
Glazer	Craig	PJM Interconnection, LLC	Not Applicable	
		NextEra Energy Resources	Other Supplier	
Greening Michele PJM Interconnection, LLC		PJM Interconnection, LLC	Not Applicable	
Greiner	Gary	PSEG Energy Resources and Trade LLC	Other Supplier	
Grimes	Jordan	Morningstar Commodity Data	Not Applicable	
Guo	JauJia	Appalachian Power Company	Transmission Owner	
Hanser	Erik	Michigan Public Service Commission	Not Applicable	
Hastings	David	Market Interconnection LLC	Not Applicable	
Heinle	Frederick	Office of the People's Counsel	End User Customer	
Herel	Suzanne	PJM Interconnection, LLC	Not Applicable	
Hoatson	Tom	Riverside Generating, LLC	Other Supplier	
Hohenshilt	Jennifer	Talen Energy Marketing, LLC	Generation Owner	
Horstmann	John	Dayton Power & Light Company (The)	Transmission Owner	
Horton	Dana	Appalachian Power Company	Transmission Owner	
Hsia	Hsia Eric PJM Interconnection, LLC Not Applicable		Not Applicable	
Huang	Henry	Constellation Energy Services, Inc.	Other Supplier	
Hudis	Gabriella	Jersey Green Energy LLC	Other Supplier	
Hyzinski	Tom	GT Power Group	Not Applicable	
Janicki	Diane	Boston Energy Trading & Marketing, LLC	Generation Owner	
Jett	William	Duke Energy Business Services LLC	Generation Owner	
Johnston	David	Indiana Utility Regulatory Commission	Not Applicable	
Kelly	Stephen	Brookfield Energy Marketing LP	Other Supplier	



Kharod	Ankit	PJM Interconnection, LLC	Not Applicable
Kilgallen	Kevin	Avangrid Renewables LLC Generation Owner	
Kimmel	nmel David PJM Interconnection, LLC Not Applicable		Not Applicable
Little	John PSNC Energy Not Applicable		Not Applicable
Lowe	Connie	Dominion Virginia Power	Not Applicable
Mabry	David	McNees Wallace & Nurick LLC	Not Applicable
Maple	Quentin	PJM Interconnection, LLC	Not Applicable
Mariam	Yohannes	Office of the Peoples Counsel for the District of Columbia	End User Customer
Matzen	Jeff	Dominion Retail, Inc.	Not Applicable
Mendelsohn	Mark	Noble Americas Gas & Power Corp.	Other Supplier
Murray	Kevin	McNees Wallace & Nurick LLC	Not Applicable
O'Boyle	Brian	Rockland Electric Company	Transmission Owner
Ondayko	Brock	Appalachain Power Company	Transmission Owner
Pakela	Greg	DTE Energy Trading, Inc.	Other Supplier
Pakula	Maggie	Invenergy, LLC	Generation Owner
Patel	Keyur	PJM Interconnection, LLC	Not Applicable
Pelletier	Eveline	Hydro-Quebec	Not Applicable
Peoples John Duquesne Light Company		Duquesne Light Company	Transmission Owner
Perera	Asanga	PJM Interconnection, LLC	Not Applicable
Philips	Marjorie	Direct Energy Business, LLC	Other Supplier
Pierce	Clayton	EnerNOC, Inc.	Other Supplier
Poulos	Greg	CAPS	Not Applicable
Promubol	Jim	Shell Energy North America (US), LP	Other Supplier
Rehert	Nathan	SIG	?
Rismiller	Randy	Illinois Commerce Commission	Not Applicable
Robson	Matt	SESCO Enterprises LLC	Other Supplier
Rohrbach	John	Southern Maryland Electric Cooperative	Electric Distributor
Sasser	Jonathan	Customized Energy Solutions, Ltd.*	Not Applicable
Schreim	Morris	Maryland Public Service Commission	Not Applicable
Schuyler	Ken	PJM Interconnection, LLC	Not Applicable
Shanker	Roy	H.Q. Energy Services (U.S.), Inc.	Other Supplier
Starkov	Stefan	PJM Interconnection, LLC	Not Applicable
Sullivan	Michael	Wolfe Research	?
Swalwell	Brad	Tangent Energy Solutions, Inc.	Other Supplier
Wei	Jane	Monitoring Analytics	Not Applicable
Wilhite	Chad	FirstEnergy Solutions Corp.	Transmission Owner
Williams	Stanley	PJM Interconnection, LLC	Not Applicable
Wilson	Bram	Diamond State Generation Partners, LLC	Generation Owner





Wisersky	Megan	Madison Gas & Electric Company	Other Supplier
Wright	James	Old Dominion Electric Cooperative	Electric Distributor

Author: Vijay Shah

#### Antitrust:

You may not discuss any topics that violate, or that might appear to violate, the antitrust laws including but not limited to agreements between or among competitors regarding prices, bid and offer practices, availability of service, product design, terms of sale, division of markets, allocation of customers or any other activity that might unreasonably restrain competition. If any of these items are discussed the chair will re-direct the conversation. If the conversation still persists, parties will be asked to leave the meeting or the meeting will be adjourned.

#### Code of Conduct:

As a mandatory condition of attendance at today's meeting, attendees agree to adhere to the PJM Code of Conduct as detailed in PJM Manual M-34 section 4.5, including, but not limited to, participants' responsibilities and rules regarding the dissemination of meeting discussion and materials.

#### Public Meetings/Media Participation:

Unless otherwise noted, PJM stakeholder meetings are open to the public and to members of the media. Members of the media are asked to announce their attendance at all PJM stakeholder meetings at the beginning of the meeting or at the point they join a meeting already in progress. Members of the Media are reminded that speakers at PJM meetings cannot be quoted without explicit permission from the speaker. PJM Members are reminded that "detailed transcriptional meeting notes" and white board notes from "brainstorming sessions" shall not be disseminated. Stakeholders are also not allowed to create audio, video or online recordings of stakeholder meetings for internal and training purposes, and your participation at such meetings indicates your consent to the same.

#### Participant Identification in WebEx:

When logging into the WebEx desktop client, please enter your real first and last name as well as a valid email address. Be sure to select the "call me" option. PJM support staff continuously monitors WebEx connections during stakeholder meetings. Anonymous users or those using false usernames or emails will be dropped from the teleconference.

On the	Phone Dial	Linking Teleconference Connection to WebEx	
*6 Mute / Unmute		To link your teleconference connection (audio presence) to your WebEx presence, please dial *29 and enter your Personal Identification Number. Once you are logged in to the WebEx, this PIN can be found under the "Meeting Info" tab of your WebEx window.	
Join a Meeting	<ol> <li>Join meeting in the WebEx desktop client</li> <li>Enter name (<i>First and Last*</i>) and corporate email</li> <li>Under "Select Audio Option" select "Call Me" option from the dropdown menu</li> </ol>		

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Provide feedback on the progress of this group: <u>*Facilitator Feedback Form*</u> Visit <u>*learn.pjm.com*</u>, an easy-to-understand resource about the power industry and PJM's role.