



Market Implementation Committee WebEx / Conference & Training Center April 12, 2023 9:00 a.m. – 4:00 p.m. EPT

#### Administration (9:00 - 9:05)

Amanda Martin reviewed the Antitrust, Code of Conduct, Public Meetings/Media Participation and the WebEx Participant Identification Requirements.

The Committee approved the draft minutes from the March 8, 2023 Market Implementation Committee by acclamation with 0 objections and 0 abstentions.

#### Endorsements/Approvals (9:05 – 9:35)

2. Manual 11 Periodic Review (9:05 – 9:35)

Lauren Strella-Wahba reviewed proposed revisions to Manual 11: Energy & Ancillary Services Market Operations on Real-time Values as part of the periodic review.

The committee endorsed the revisions with 98% in favor and 2% opposed.

#### First Reads (9:35 -10:55)

- 3. Base Residual Auction Smoothed Supply Curve (9:35 10:05)
  - Skyler Marzewski reviewed a Problem Statement, Issue Charge, and solution concept related to calculating the smoothed supply curve for the Base Residual Auctions.
  - The committee will be asked to approve the Issue Charge and endorse the solution concept as part of the Quick Fix process outlined in Section 8.6.1 of Manual 34 at its next meeting.
- 4. Synchronized Reserve Response during Event Deployment (10:05 10:35)
  - Phil D'Antonio reviewed a Problem Statement, Issue Charge and solution, including proposed revisions to Manual 11: Energy & Ancillary Services Market Operations to make adjustments to the second step of the Operating Reserve Demand Curve.
  - The committee will be asked to approve the Issue Charge and endorse the solution, including Manual 11 revisions as part of the Quick Fix process outlined in Section 8.6.1 of Manual 34 at its next meeting.
- 5. Manual 11 Transmission Constraint Penalty Factor (10:35 10:50)
  - Vijay Shah reviewed conforming revisions to Manual 11: Energy & Ancillary Services Market Operations for the approved Transmission Constraint Penalty Factor solution package. The committee will be asked to endorse the revisions at its next meeting.

    Issue Tracking: Operating Reserve Demand Curve (ORDC) & Transmission Constraint Penalty Factors
- 6. Hybrid Resources (10:50 11:10)

Zhenyu Fan reviewed conforming revisions to Manual 11: Energy & Ancillary Services, Manual 27: Open Access Transmission Tariff Accounting and Manual 28: Operating Agreement Accounting Market Operations for the approved Hybrid Resources Phase I solution package.





The committee will be asked to endorse the revisions at its next meeting. Issue Tracking: Solar-Battery Hybrid Resources

Manual 15 Heat Input Guidelines and Opportunity Cost Calculator (11:10 – 11:25)
 Glen Boyle reviewed proposed revisions to Manual 15: Cost Development Guidelines addressing heat input guidelines and IMM Opportunity Cost Calculator from the Cost Development Subcommittee.

The committee will be asked to endorse the revisions at its next meeting.

Issue Tracking: Opportunity Cost Calculator 2023

Issue Tracking: Combined Cycles and Specialized Boilers Heat Input Guidelines

#### Working Items (11:25 – 12:25)

8. Local Considerations in Net Cost of New Entry (CONE) (11:25 – 12:25)

Foluso Afelumo lead a discussion to solicit design components and solution options as part of the Consensus-Based Issue Resolution Process (CBIR).

Stakeholders are encouraged to provide solution options and packages in advance of the May meeting.

Issue Tracking: Local Considerations in Net Cost of New Entry

#### Lunch (12:25 - 1:25)

#### Working Items, cont. (1:25 – 2:55)

- 9. Capacity Offer Opportunities for Generation with Co-located Load (1:25 2:55)
  - a. Sharon Midgley, Exelon, reviewed Exelon's package.
  - b. Bill Berg, Constellation, reviewed the Constellation/Brookfield package.
  - c. Joe Bowring, IMM, reviewed the IMM package.
  - d. Bruce Campbell, Advanced Energy Management Alliance (AMEA), reviewed updates made to AMEA's package since the March meeting.
  - e. Foluso Afelumo lead a discussion on solution packages and next steps for this issue. The packages will be provided as a first read for the May 10 MIC.

Issue Tracking: Capacity Offer Opportunities for Generation with Co-located Load

#### Additional Items (2:55 - 4:00)

- Reserve Capability Calculation with Segmented Ramp Rates (2:55 3:15)
   Joel Luna, IMM, presented an overview of the calculation of the reserve capability of units that use segmented ramp rate curves and recommendations.
- 11. <u>Alternative Dispute Resolution Process (3:15 3:35)</u>

Erin Lai provided an informational update on the unavailability of PJM's Alternate Dispute Resolution process for Performance Assessment Interval-related disputes.

Issue Tracking: Winter Storm Elliot





12. Performance Assessment Interval Settlements (3:35 – 4:00)

Lisa Morelli provided an informational update on the Performance Assessment Interval settlements.

Issue Tracking: Winter Storm Elliot

#### **Informational Section**

#### Manual 3 Update

Version 64 of Manual 3: Transmission Operations are posted as informational only.

#### Reserve Price Formation Update

Materials are posted as informational only.

#### Interregional Coordination Update

Materials are posted as informational only.

#### Fast-Start Unit Request Process

Materials are posted as informational only.

#### Stability Limits in Markets and Operations

Materials are posted as informational only.

#### ARR FTR Market Task Force (AFMTF)

Meeting materials are posted to the AFMTF website.

#### Regulation Market Design Senior Task Force (RMDSTF)

Meeting materials are posted to the RMDSTF website.

#### Reactive Power Compensation Task Force (RPCTF)

Meeting materials are posted to the RPCTF website.

#### Cost Development Subcommittee (CDS)

Meeting materials are posted to the CDS website.

#### Distributed Resources Subcommittee (DISRS)

Meeting materials are posted to the DISRS website.

#### Market Settlements Subcommittee (MSS)

Meeting materials are posted to the MSS website.

#### Report on Market Operations

The Report on Market Operations will be reviewed during the MC Webinar.

**Future Meeting Dates and Materials** 

Materials Due to Secretary



Materials Published





Date	Time	Location	5 p.m.	4 p.m.
April 12	9 a.m.	WebEx / Conference & Training Center	March 31	April 5
May 10	9 a.m.	WebEx / Conference & Training Center	April 28	May 3
June 7	9 a.m.	WebEx / Conference & Training Center	May 26	May 31
July 12	9 a.m.	WebEx / Conference & Training Center	June 29	July 5
August 9	9 a.m.	WebEx / Conference & Training Center	July 28	August 2
September 6	9 a.m.	WebEx / Conference & Training Center	August 25	August 30
October 4	9 a.m.	WebEx / Conference & Training Center	September 22	September 27
November 1	9 a.m.	WebEx / Conference & Training Center	October 20	October 25
December 6	9 a.m.	WebEx / Conference & Training Center	November 22	November 29

Author: A. Martin

#### **Attendance**

Last Name	Attendance First Name	Company Name	Sector
Afelumo	Foluso (chair)	PJM Interconnection	None
Martin	Amanda (secretary)	PJM Interconnection	None
Anders	David	PJM Interconnection	None
Anderson	Juliet	Constellation Energy Generation, LLC	Generation Owner
Barker	Jason	Vitol Inc.	Generation Owner
bastian	jeffrey	pjm	None
Benchek	James	American Transmission Systems, Inc.	Transmission Owner
Berg	Bill	Constellation Energy Generation, LLC	Generation Owner
Boyle	Glen	PJM Interconnection	None
Brodbeck	John	EDP Renewables North America LLC	Generation Owner
Bruno	Patrick	1	None Seneration Owner
	Susan	PJM Interconnection	
Buehler Carroll	Rebecca	PJM Interconnection	None None
Chmielewski		PJM Interconnection	
	Brian	PJM Interconnection	None
Ciabattoni	Joe	PJM Interconnection	None
Connolly	Matthew	PJM Interconnection	None
Croop	Danielle	PJM Interconnection	None
Dantonio	Phil	PJM Interconnection	None
DeVita	Thomas	PJM Interconnection	None
Drauschak	Lisa	PJM Interconnection	None
Egan	Amanda	PJM Interconnection	None
Fabiano	Janell	PJM Interconnection	None
fan	zhenyu	PJM Interconnection	None
Filomena	Guy	Customized Energy Solutions, Ltd.	None
Ford	Adrien	Old Dominion Electric Cooperative	Electric Distributor
Fuess	Christian	PBF Power Marketing, LLC	End-Use Customer
Greening	Michele	PJM Interconnection	None
Helm	Gary	PJM Interconnection	None
Hicks	Colleen	PJM Interconnection	None
Horger	Tim	PJM Interconnection	None
Horning	Lynn Marie	American Municipal Power, Inc.	Electric Distributor
Kenney	Susan	PJM Interconnection	None
Kirk	Steven	NextEra Energy Marketing, LLC	Other Supplier
Kogut	George	New York Power Authority	Other Supplier
Lai	Erin	PJM Interconnection	None
LeithYessian	Devin	RTOinsider	None
Lu	Chenchao	PJM Interconnection	None
Mabry	David	McNees Wallace & Nurick LLC	None
Marzewski	Skyler	PJM Interconnection	None





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Mason	Gary	Monongahela Power Company d/b/a Allegheny Power	Transmission Owner
Morelli	Lisa	PJM Interconnection	None
O'Hara	Chris	PJM Interconnection	None
Poulos	Greg	CAPS	None
Ptak	Anton	EDF Renewable Development, Inc.	None
Scarp	David	Calpine Energy Services, L.P.	Generation Owner
Shah	Vijay	PJM Interconnection	None
Shields	Jeffrey	PJM Interconnection	None
Stadelmeyer	Rebecca	Jersey Green Energy LLC	Other Supplier
Swalwell	Brad	Tangent Energy Solutions, Inc.	Other Supplier
Tribulski	Jennifer	PJM Interconnection	None
Webex Att	endance		
Last Name	First Name	Company Name	Sector
Aitoro	David	Voltus, Inc.	Other Supplier
Almonte	Arelis	PJM Interconnection	None
Anderson	Bob	Tenaska Pennsylvania Partners, LLC	Generation Owner
Bagot	Nancy	Electric Power Supply Associations	None
Baizman	Aaron	PJM Interconnection	None
Bennett	Daniel	PJM Interconnection	None
Bleiweis	Bruce	DC Energy, LLC	Other Supplier
Bowring	Joe	Monitoring Analytics	None
Boyle	Glen	PJM Interconnection	None
Brahman	Azade	Orsted Onshore North America, LLC	Generation Owner
Breeding	Michael	PJM Interconnection	None
Bresler	Stu	PJM Interconnection	None
Brodbeck	John	EDP Renewables North America LLC	Generation Owner
Bryan	Garnett	Duke Energy Business Services LLC	Transmission Owner
Bryson	Michael	PJM Interconnection	None
Callen	Zachary	Illinios Commerce Commission	None
Campbell	Bruce	Enerwise Global Technologies, LLC	Other Supplier
Canter	David	Appalachian Power Company (AEP Generation)	Transmission Owner
Cao	Roger	PJM Interconnection	None
Carmean	Gregory	Organization of PJM States, Inc.	None
Carrier	Ronald	Big Lake Consulting Group, LLC	110.10
Chang	Sean	Shell Energy North America (US), L.P.	Other Supplier
Chappelle	Laura	Chappelle Consulting	None
Chintapalli	Rajat	BP Energy Company	Other Supplier
Christopher		Public Utilities Commission of Ohio	1
Christopher Chu	Mahila	Public Utilities Commission of Ohio P.IM Interconnection	· ·
Chu	Mahila George	PJM Interconnection	None
Chu clarke	Mahila George Iinda	PJM Interconnection PJM Interconnection	None None
Chu clarke Clifford	Mahila George Iinda Brigid	PJM Interconnection PJM Interconnection Pine Gate Mid-Atlantic, LLC	None None Other Supplier
Chu clarke Clifford Cocco	Mahila George linda Brigid Michael	PJM Interconnection PJM Interconnection Pine Gate Mid-Atlantic, LLC Old Dominion Electric Cooperative	None None Other Supplier Electric Distributor
Chu clarke Clifford Cocco	Mahila George linda Brigid Michael Michael	PJM Interconnection PJM Interconnection Pine Gate Mid-Atlantic, LLC Old Dominion Electric Cooperative Old Dominion Electric Cooperative	None None Other Supplier Electric Distributor Electric Distributor
Chu clarke Clifford Cocco Cocco Corash	Mahila George linda Brigid Michael Michael Richard	PJM Interconnection PJM Interconnection Pine Gate Mid-Atlantic, LLC Old Dominion Electric Cooperative Old Dominion Electric Cooperative PSEG Energy Resources and Trade LLC	None None Other Supplier Electric Distributor Electric Distributor Other Supplier
Chu clarke Clifford Cocco Cocco Corash Coyle	Mahila George linda Brigid Michael Michael Richard Billy	PJM Interconnection PJM Interconnection Pine Gate Mid-Atlantic, LLC Old Dominion Electric Cooperative Old Dominion Electric Cooperative PSEG Energy Resources and Trade LLC Dominion Virginia Power	None None Other Supplier Electric Distributor Electric Distributor Other Supplier Transmission Owner
Chu clarke Clifford Cocco Cocco Corash Coyle Coyne	Mahila George linda Brigid Michael Michael Richard Billy Suzanne	PJM Interconnection PJM Interconnection Pine Gate Mid-Atlantic, LLC Old Dominion Electric Cooperative Old Dominion Electric Cooperative PSEG Energy Resources and Trade LLC Dominion Virginia Power PJM Interconnection	None None Other Supplier Electric Distributor Electric Distributor Other Supplier Transmission Owner None
Chu clarke Clifford Cocco Cocco Corash Coyle Coyne Coyne	Mahila George linda Brigid Michael Michael Richard Billy Suzanne Suzanne	PJM Interconnection PJM Interconnection Pine Gate Mid-Atlantic, LLC Old Dominion Electric Cooperative Old Dominion Electric Cooperative PSEG Energy Resources and Trade LLC Dominion Virginia Power PJM Interconnection PJM Interconnection	None None Other Supplier Electric Distributor Electric Distributor Other Supplier Transmission Owner None None
Chu clarke Clifford Cocco Cocco Corash Coyle Coyne Coyne Curtis	Mahila George linda Brigid Michael Michael Richard Billy Suzanne Suzanne Kenneth	PJM Interconnection PJM Interconnection Pine Gate Mid-Atlantic, LLC Old Dominion Electric Cooperative Old Dominion Electric Cooperative PSEG Energy Resources and Trade LLC Dominion Virginia Power PJM Interconnection PJM Interconnection Enverus, Inc.	None None Other Supplier Electric Distributor Electric Distributor Other Supplier Transmission Owner None None None
Chu clarke Clifford Cocco Cocco Corash Coyle Coyne Coyne Curtis Davis	Mahila George linda Brigid Michael Michael Richard Billy Suzanne Suzanne Kenneth David	PJM Interconnection PJM Interconnection Pine Gate Mid-Atlantic, LLC Old Dominion Electric Cooperative Old Dominion Electric Cooperative PSEG Energy Resources and Trade LLC Dominion Virginia Power PJM Interconnection PJM Interconnection Enverus, Inc. Apex Clean Energy Holdings, LLC	None None Other Supplier Electric Distributor Electric Distributor Other Supplier Transmission Owner None None None None
Chu clarke Clifford Cocco Cocco Corash Coyle Coyne Coyne Curtis Davis Davis	Mahila George Iinda Brigid Michael Michael Richard Billy Suzanne Suzanne Kenneth David James	PJM Interconnection PJM Interconnection Pine Gate Mid-Atlantic, LLC Old Dominion Electric Cooperative Old Dominion Electric Cooperative PSEG Energy Resources and Trade LLC Dominion Virginia Power PJM Interconnection PJM Interconnection Enverus, Inc. Apex Clean Energy Holdings, LLC Dominion Energy Generation Marketing, Inc.	None None Other Supplier Electric Distributor Electric Distributor Other Supplier Transmission Owner None None None None Generation Owner
Chu clarke Clifford Cocco Cocco Corash Coyle Coyne Coyne Curtis Davis Davis Di Iorio	Mahila George linda Brigid Michael Michael Richard Billy Suzanne Suzanne Kenneth David James Michelle	PJM Interconnection PJM Interconnection Pine Gate Mid-Atlantic, LLC Old Dominion Electric Cooperative Old Dominion Electric Cooperative PSEG Energy Resources and Trade LLC Dominion Virginia Power PJM Interconnection PJM Interconnection Enverus, Inc. Apex Clean Energy Holdings, LLC Dominion Energy Generation Marketing, Inc. PSEG Energy Resources and Trade LLC	None None Other Supplier Electric Distributor Electric Distributor Other Supplier Transmission Owner None None None None Generation Owner Other Supplier
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Chu clarke Clifford Cocco Cocco Corash Coyle Coyne Coyne Curtis Davis Davis Di lorio Dorko Douglass Downs Drom Dugan	Mahila George linda Brigid Michael Michael Richard Billy Suzanne Suzanne Kenneth David James Michelle Keri Robert Jere Rick Chuck	PJM Interconnection PJM Interconnection Pine Gate Mid-Atlantic, LLC Old Dominion Electric Cooperative Old Dominion Electric Cooperative PSEG Energy Resources and Trade LLC Dominion Virginia Power PJM Interconnection PJM Interconnection Enverus, Inc. Apex Clean Energy Holdings, LLC Dominion Energy Generation Marketing, Inc. PSEG Energy Resources and Trade LLC Monitoring Analytics Constellation Energy Generation, LLC PJM Connect Affirmed Energy LLC East Kentucky Power Cooperative, Inc.	None None Other Supplier Electric Distributor Electric Distributor Other Supplier Transmission Owner None None None Other Supplier Vone Generation Owner Other Supplier None Generation Owner Other Supplier None Generation Owner Other Supplier Transmission Owner
Chu clarke Clifford Cocco Cocco Corash Coyle Coyne Coyne Curtis Davis Davis Di Iorio Dorko Douglass Downs Drom Dugan Edmonds	Mahila George linda Brigid Michael Michael Richard Billy Suzanne Suzanne Kenneth David James Michelle Keri Robert Jere Rick Chuck Brian	PJM Interconnection PJM Interconnection Pine Gate Mid-Atlantic, LLC Old Dominion Electric Cooperative Old Dominion Electric Cooperative PSEG Energy Resources and Trade LLC Dominion Virginia Power PJM Interconnection PJM Interconnection Enverus, Inc. Apex Clean Energy Holdings, LLC Dominion Energy Generation Marketing, Inc. PSEG Energy Resources and Trade LLC Monitoring Analytics Constellation Energy Generation, LLC PJM Connect Affirmed Energy LLC East Kentucky Power Cooperative, Inc. DC Public Service Commission	None None Other Supplier Electric Distributor Electric Distributor Other Supplier Transmission Owner None None None None Other Supplier Transmission Owner None Other Supplier None Generation Owner None Generation Owner None Other Supplier Transmission Owner None
Chu clarke Clifford Cocco Cocco Corash Coyle Coyne Coyne Curtis Davis Davis Di Iorio Dorko Douglass Downs Drom Dugan Edmonds Ericson	Mahila George linda Brigid Michael Michael Richard Billy Suzanne Suzanne Kenneth David James Michelle Keri Robert Jere Rick Chuck Brian Christine	PJM Interconnection PJM Interconnection Pine Gate Mid-Atlantic, LLC Old Dominion Electric Cooperative Old Dominion Electric Cooperative PSEG Energy Resources and Trade LLC Dominion Virginia Power PJM Interconnection PJM Interconnection Enverus, Inc. Apex Clean Energy Holdings, LLC Dominion Energy Generation Marketing, Inc. PSEG Energy Resources and Trade LLC Monitoring Analytics Constellation Energy Generation, LLC PJM Connect Affirmed Energy LLC East Kentucky Power Cooperative, Inc. DC Public Service Commission Illinois Commerce Commission	None None Other Supplier Electric Distributor Electric Distributor Other Supplier Transmission Owner None None None Other Supplier Transmission Owner None Other Supplier Other Supplier Transmission Owner None Generation Owner None Generation Owner None Generation Owner None End-Use Customer
Chu clarke Clifford Cocco Cocco Corash Coyle Coyne Coyne Curtis Davis Davis Di lorio Dorko Douglass Downs Drom Dugan Edmonds Ericson Esquivel	Mahila George linda Brigid Michael Michael Richard Billy Suzanne Suzanne Kenneth David James Michelle Keri Robert Jere Rick Chuck Brian Christine Manuel	PJM Interconnection PJM Interconnection Pine Gate Mid-Atlantic, LLC Old Dominion Electric Cooperative Old Dominion Electric Cooperative PSEG Energy Resources and Trade LLC Dominion Virginia Power PJM Interconnection PJM Interconnection Enverus, Inc. Apex Clean Energy Holdings, LLC Dominion Energy Generation Marketing, Inc. PSEG Energy Resources and Trade LLC Monitoring Analytics Constellation Energy Generation, LLC PJM Connect Affirmed Energy LLC East Kentucky Power Cooperative, Inc. DC Public Service Commission Illinois Commerce Commission Enel X North America, Inc	None None Other Supplier Electric Distributor Electric Distributor Other Supplier Transmission Owner None None None Other Supplier Transmission Owner None Other Supplier Toucher Supplier None Generation Owner None Generation Owner None Generation Owner None Other Supplier Transmission Owner None End-Use Customer Generation Owner
Chu clarke Clifford Cocco Cocco Corash Coyle Coyne Coyne Curtis Davis Davis Di lorio Dorko Douglass Downs Drom Dugan Edmonds Ericson Esquivel Esterly	Mahila George linda Brigid Michael Michael Richard Billy Suzanne Suzanne Kenneth David James Michelle Keri Robert Jere Rick Chuck Brian Christine Manuel Theresa	PJM Interconnection PJM Interconnection Pine Gate Mid-Atlantic, LLC Old Dominion Electric Cooperative Old Dominion Electric Cooperative PSEG Energy Resources and Trade LLC Dominion Virginia Power PJM Interconnection PJM Interconnection Enverus, Inc. Apex Clean Energy Holdings, LLC Dominion Energy Generation Marketing, Inc. PSEG Energy Resources and Trade LLC Monitoring Analytics Constellation Energy Generation, LLC PJM Connect Affirmed Energy LLC East Kentucky Power Cooperative, Inc. DC Public Service Commission Illinois Commerce Commission Enel X North America, Inc PJM Interconnection	None None Other Supplier Electric Distributor Electric Distributor Other Supplier Transmission Owner None None None Seneration Owner Other Supplier Transmission Owner Other Supplier Tome Other Supplier None Generation Owner None Other Supplier Transmission Owner None Other Supplier Transmission Owner None End-Use Customer Generation Owner None
Chu clarke Clifford Cocco Cocco Corash Coyle Coyne Coyne Curtis Davis Davis Di lorio Dorko Douglass Downs Drom Dugan Edmonds Ericson Esquivel	Mahila George linda Brigid Michael Michael Richard Billy Suzanne Suzanne Kenneth David James Michelle Keri Robert Jere Rick Chuck Brian Christine Manuel	PJM Interconnection PJM Interconnection Pine Gate Mid-Atlantic, LLC Old Dominion Electric Cooperative Old Dominion Electric Cooperative PSEG Energy Resources and Trade LLC Dominion Virginia Power PJM Interconnection PJM Interconnection Enverus, Inc. Apex Clean Energy Holdings, LLC Dominion Energy Generation Marketing, Inc. PSEG Energy Resources and Trade LLC Monitoring Analytics Constellation Energy Generation, LLC PJM Connect Affirmed Energy LLC East Kentucky Power Cooperative, Inc. DC Public Service Commission Illinois Commerce Commission Enel X North America, Inc	None None Other Supplier Electric Distributor Electric Distributor Other Supplier Transmission Owner None None None Other Supplier Transmission Owner None Other Supplier Toucher Supplier None Generation Owner None Generation Owner None Generation Owner None Other Supplier Transmission Owner None End-Use Customer Generation Owner





Ferguson	Mike	Indeck Niles, LLC	Generation Owner
Fernandez	Ray	PJM Interconnection	None
Fink	Sari	American Clean Power	None
Fishback	Luke	Affirmed Energy LLC (WMP)	Other Supplier
Fitzpatrick	Brian	PJM Interconnection	None
Foladare	Kenneth	Geenex Solar LLC	Other Supplier
Franks	Chris	PJM Interconnection	None
Frogg	Darrell	PJM Interconnection	None
Fultz	McClain	PPL Electric Utilities Corp. dba PPL Utilities (LSE)	Transmission Owner
Garth	Bill	Indeck Niles, LLC	Generation Owner
Gates	Terry	Appalachian Power Company (AEP Generation)	Transmission Owner
Gibbons	Jaret	Appaiachian i ower company (ALI Generation)	Transmission Owner
Gilani	Rehan	Rockland Electric Company	Transmission Owner
Gluck	Jim	PJM Interconnection	None
Gordon	Jonathan	Advanced Energy Ecomomy	INOTIC
			Transmission Owner
Gorman	Bradley	American Transmission Systems, Inc.	Transmission Owner
Graf	Walter	PJM Interconnection	None
Greene	Benjamin	AEP Appalachian Transmission Company, Inc.	Transmission Owner
Guntle	Vince	American PowerNet Management, L.P.	End-Use Customer
Hauske	David	PJM Interconnection	None
Heinle	Erik	Vistra Corp.	None
Heisey	Bradley	Tenaska Pennsylvania Partners, LLC	Generation Owner
Helms	Joseph	Commonwealth Chesapeake Company, LLC	Generation Owner
Hepplewhite	Peter	Wrigley Capital LLC	Other Supplier
Hoatson	Tom	Riverside Generating Company, L.L.C.	Other Supplier
Hohenshilt	Jennifer	Talen Energy Marketing, LLC	Generation Owner
Holdbrook	Ruth	Northern Virginia Electric Cooperative (NOVEC)	Electric Distributor
Holler	Mark	Tenaska Pennsylvania Partners, LLC	Generation Owner
Holter	Natasha	PJM Interconnection	None
Horstmann	John	Dayton Power & Light Company (The)	Transmission Owner
Hozbaur	Patrick	New Jersey Board of Public Utilities	None
Hsia	Eric	PJM Interconnection	None
Hudis	Gabriella		
		Jersey Green Energy LLC	Other Supplier
Hugee	Jacqulynn	Dominion Virginia Power	Transmission Owner
Hull	Gerit	American Municipal Power, Inc.	Electric Distributor
Hurwich	Mark	Elliott Bay Energy Trading, LLC	Other Supplier
Hyatt	Earl	Monitoring Analytics	None
Hyatt	John	Monitoring Analytics	None
Hyzinski	Tom	GT Power Group, LLC	None
ller	Arthur	Indiana Office of Utility Consumer Counselor	None
Janicki	Diane	Boston Energy Trading and Marketing LLC	Other Supplier
Jardot	Gina	NRG Curtailment Solutions, Inc.	Other Supplier
Jing	Zejia	Dominion Virginia Power (EDC VMEA)	Transmission Owner
Johnson	Carl	Customized Energy Solutions, LLC	None
Jones	Scott	Indiana Office of Utility Consumer Counselor (IN OUCC)	End-Use Customer
Kalaskar	Rahul	AES Laurel Mountain, LLC	Generation Owner
Kane	Timothy	PJM Interconnection	None
Keech	Adam	PJM Interconnection	None
Kelly	Stephen	Brookfield Renewable Trading and Marketing LP (BSMH)	Other Supplier
Kent	Janessa	Duquesne Light Company	Transmission Owner
Kerecman	Joe	Calpine Energy Services, L.P	Generation Owner
Keshavamurthy	Bhavana	PJM Interconnection	None
Kilgallen	Kevin	Avangrid Renewables, LLC	Generation Owner
Kim	Siwon	A Trangila Maniana LEO	CONTRACTOR OWNER
	Amber	Customized Energy Solutions LLC	None
Kingston		Customized Energy Solutions, LLC	
Konidena	Rao	Voltus, Inc.	None
Kroh	Jud	Seward Generation, LLC	Generation Owner
Laios	Takis	Appalachian Power Company (AEP Transmission)	Transmission Owner
LaVista	William	RWE Renewables Americas, LLC	Generation Owner
Lee	Ray	PJM Interconnection	None
Lejcar	Jamie	Allegheny Electric Cooperative, Inc.	Electric Distributor
Liang-Nicol		Allegheny Power (MonPwr Gen)	Generation Owner





Libbos	Robin	Allegheny Power (MonPwr Gen)	Generation Owner
Lockwood	Dan	PJM Interconnection	None
Loftus	Chad	PJM Interconnection	None
Lucia	Seth	Constellation Energy Generation, LLC	Generation Owner
Luke	Granstrand	Dominion Virginia Power	Transmission Owner
Luna	Joel	Monitoring Analytics	None
Manno	Dean	PJM Interconnection	None
Marcino	Angelo	PJM Interconnection	None
Matuszak	Alex	UGI Energy Services, LLC	Other Supplier
Maucher	Andrea	Delaware Division of the Public Advocate	End-Use Customer
McClelland	Maura	Public Utilities Commission of Ohio	None
McDewell	Christian	Pennsylvania Public Utility Commission	None
McGill	Susan	PJM Interconnection	None
McLaverty	Megan	PJM Interconnection	None
McNeil	Justin	Kentucky Public Service Commission	End-Use Customer
McNicholas	Daniel	Nautilus Power, LLC	Generation Owner
Messina	Emmy	PJM Interconnection	None
Midgley	Sharon	Exelon Business Services Company, LLC	Transmission Owner
Mihaly Mohan	Imola Chuck	Nautilus Power, LLC Seward Generation, LLC	Generation Owner
Mooney	Jeff	American Transmission Systems, Inc.	Generation Owner
	Jeπ Robert	Commonwealth Chesapeake Company, LLC	Transmission Owner
Moye Napoli	Matthew	Rockland Electric Company	Generation Owner Transmission Owner
Nix	Emma	Leeward Asset Management, LLC	Generation Owner
Noel Jeune	Reynaldo	Orsted Onshore North America, LLC	Generation Owner
Norton	Chris	American Municipal Power, Inc.	Electric Distributor
Novosel	Sarah	Calpine Energy Services, L.P	Generation Owner
Oakes	Brian	PJM Interconnection	None
ODonnell	Colleen	PUCO	None
O'Hara	Bernard	Sargent & Lundy	None
Okenfuss	James	Savion, LLC	None
Olinger	Robert	Keystone-Conemaugh Projects, LLC (Keystone)	Other Supplier
Ondayko	Brock	AEP Energy Partners, Inc. (AEP Gen Resources)	Transmission Owner
Osborn	Eric	EDF Trading North America, LLC	Other Supplier
Pakela	Greg	DTE Energy Trading, Inc.	Other Supplier
Panegal	Vaishaag	Apex Clean Energy	None
Parrot	Sarah	Public Utilities Commission of Ohio	None
Patel	Anita	PJM Interconnection	None
patel	keyurbhai	PJM Interconnection	None
Peoples	John	Duquesne Light Company	Transmission Owner
Perera	Asanga	PJM Interconnection	None
Pfeiff	Mike	Kindle Energy, LLC	None
Phenix	Michael	Red Oak Power, LLC	Generation Owner
Phillips	Amanda	Customized Energy Solutions, LLC	None
Phillips	Darlene	PJM Interconnection	None
Pilong	Chris	PJM Interconnection	None
Pilong	Melissa	PJM Interconnection	None
Price	Mark	DC Energy Mid-Atlantic, LLC	Other Supplier
Pungaliya	Rajat	Pine Gate Mid-Atlantic, LLC	Other Supplier
Ramsay	Eli	PJM Interconnection	None
Rasmussen	Jay	Duke Energy Business Services LLC	Transmission Owner
Redwine	Arlo	Federal Energy Regulatory Committee	None
Roberts	Casey	Sierra Club	None
Rode	Advait	Michigan Public Service Commission	None
Rohrbach	John	Wabash Valley Power Association, Inc.	Electric Distributor
Rutledge	Craig	Appalachian Power Company (APCO Dedicated)	Transmission Owner
Sasser	Johnathan	Customized Energy Solutions, LLC	None
Schuyler	Ken	PJM Interconnection	None
Schwarz	Stephanie	PJM Interconnection	None
Selick	Sam	Customized Energy Solutions, LLC	None
Shah	Vijay	PJM Interconnection	None
Shah	Pulin	Exelon Business Services Company, LLC	Transmission Owner
Shanker	Roy	East Coast Power Linden Holding, L.L.C.	Generation Owner





shegarfi	roozbeh	Constellation Energy Generation, LLC (NEV_XLON)	Generation Owner
Sherling	Eric	PJM Interconnection	None
Skucas	Ruta	PJM Committee Voting Generic Account	None
Sloan	Ben	Organization of PJM States, Inc.	None
Smith	Kara	Buckeye Power, Inc.	Electric Distributor
Sock	Bryan	Nautilus Power, LLC	Generation Owner
Sotkiewicz	Paul	E-Cubed Policy Associates	None
Souder	Michelle	PJM Interconnection	None
Sparks	Bridget	sPower Development Company, LLC	None
Sprinkle	Dan	Louisville Gas and Electric Company/Kentucky Utilities Company	Transmission Owner
Stefanowicz	Vince	PJM Interconnection	None
Stein	Mike	Indeck Niles, LLC	Generation Owner
Stern	Alexander	Public Service Electric and Gas Company	Transmission Owner
Stone	Andy	Gabel Associates	None
Strella Wahba	Lauren	PJM Interconnection	None
Sturgeon	John	Duke Energy Business Services LLC	Transmission Owner
Sussier	Philip	Maryland Office of People's counsel	End-Use Customer
Swalwell	Brad	Tangent Energy Solutions, Inc.	Other Supplier
Tangirala	Subha	Hitachi Energy USA Inc.	None
Theodore	Sharon	Electric Power Supply Associations	None
Thomas	Jack	PJM Interconnection	None
Tubridy	Meg	Rockland Electric Company	Transmission Owner
Tutino	Joseph	PJM Interconnection	None
Tyler	Catherine	Monitoring Analytics	None
Ushijima	Hiroaki	Elwood Energy, LLC	Generation Owner
VanderLaan	William	Illinois Commerce Commission	
Vayda	Brian	Borough of Park Ridge, New Jersey	Electric Distributor
Vos	Nico	Indeck Niles, LLC	Generation Owner
Walcavich	Colin	Green River Holdings, LLC	Generation Owner
Wang	Daisy	Enel X North America, Inc	Generation Owner
Waweru	James	PJM Interconnection	None
Wharton	Matthew	PJM Interconnection	None
Whitehead	Jeff	GT Power Group, LLC	None
Wilson	James	Other	
Wynder	Michael	Altrock LLC	Other Supplier
XÚ	XU	PJM Interconnection	None
Yasutake	Sarah	Jersey Green Energy LLC	Other Supplier
Yoo	June	Indeck Niles, LLC	Generation Owner
Yovanovich	Laura	PPL Electric Utilities Corp. dba PPL Utilities (TO)	Transmission Owner
Zhang	Mike	PJM Interconnection	None
Zhao	Tong	PJM Interconnection	None

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 PJM meetings. PJM may 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.





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#### Participant Use of Webex Chat:

The use of the Webex chat feature during meetings shall be primarily reserved for administrative and logistical purposes, such as managing a question or comment queue, noting technical difficulties, and meeting support or management purposes. Utilizing Webex chat for any other commentary should be limited to short phrases. Detailed commentary or substantive dialog shall be shared orally by entering the speaker queue.

#### On the Phone, Dial



to Mute/Unmute

#### Linking Teleconference Connection to Webex

When logging in to the meeting, access Webex first and select the "call me" feature to receive a direct call to your phone. Using this feature will connect your name to your Webex presence.

### Join a Meeting

- 1. Join meeting in the Webex desktop client
- 2. Enter name (First and Last\*) and corporate email
- 3. Under "Select Audio Option" select "Call Me" option from the dropdown menu

\*Note: Anonymous users or those using false usernames or emails will be dropped from the teleconference.

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