

## DER and Inverter-based Resources Subcommittee

WebEx Only

November 22, 2021

10:00 a.m. – 3:00 p.m. ET

### Administration (10:00 – 10:10)

1. Scott Baker opened the meeting and reviewed the agenda.
2. Hamad Ahmed reviewed the meeting participation guidelines. The minutes from the EDC coordination workshop in October and November and the DIRS in October were approved with zero objections and zero abstentions.

### Order 2222 – Staff input on compliance proposal (10:10 – 12:00)


3. Discussion on the functional roles of “Market Agent” and “Dispatch Agent” in the DERA operational coordination model.
  - a. Donnie Bielak, PJM, provided additional thoughts on how these roles will be implemented by reviewing the proposed operation coordination model. Donnie emphasized that PJM does not intend to define ‘Market Agent’ and ‘Dispatch Agent’ in the Tariff as part of the compliance filing and reviewed several other thoughts on the implementation of roles.
  - b. Bruce Campbell, CPower, provided input on the role of the Dispatch Agent highlighting that CPower supports a properly designed dispatch agent (DA) construct.
4. Thomas DeVita, PJM, discussed proposed Tariff language around categories of DER registration data.
5. Madelyn Beban, PJM, reviewed updates to use cases based on stakeholder feedback.
  - a. Maddie discussed use case updates, high-level overview of outline for use cases, homogeneity vs heterogeneity in different DERA levels and walked through use case 1, 2 and 3.

### Order 2222 – Stakeholder feedback on compliance proposal (12:30 – 2:45)

6. Danielle Croop, PJM, will reviewed a small number of changes made to the compliance proposal since the last meeting.
  - a. Danielle reviewed DER terminology on slide 9 that will be implemented into the PJM Tariff, proposed data requirements for Planning on slide 20, annual verification of DER aggregation modeling on slide 21, registration data on slide 134 and Market Participation agreements on slide 25
7. Danielle reviewed current thinking on implementation timing for the DERA Market Participation Model and took stakeholder comments on this implementation timing. Danielle stated that expected implementation date is 2025/2026 or earlier, if feasible.

## Action items (2:45 – 3:00)

8. The facilitation team reviewed action items from the meeting and took requests for future agenda items.
  - a. PJM team to bring location data exchange process between Pnode and planning model bus and use case examples to EDC coordination workshop on December 9, 2021.
  - b. PJM stakeholders requested more detail on the implementation date and net metering.
  - c. There was a request to add to the parking lot a future deliverable that outlines which functional entities need to be a member, and which do not, with respect to the entire DERA participation model.

<i>Future Meeting Dates and Materials</i>			Materials Due to Secretary 	Materials Published
<i>Date</i>	<i>Time</i>	<i>Location</i>	<b>5 p.m.</b>	<b>4 p.m.</b>
<i>December 9, 2021-EDC Coordination workshop</i>	3:00 – 5:00	WebEx	<b>December 1, 2021</b>	<b>December 6, 2021</b>
<i>December 21, 2021</i>	9:00 – 4:00	WebEx	<b>December 13, 2021</b>	<b>December 16, 2021</b>

Author: Hamad Ahmed

## WebEx Meeting Attendance

Name	Company Name	Sector
Hamad Ahmed	PJM Interconnection	None
Melissa Alfano	Solar Energy Industry Association	Transmission Owner
William Allen	Commonwealth Edison Company	None
David Anders	PJM Interconnection	None
Jeff Baker	PJM Connect	None
Scott Baker	PJM Interconnection	Transmission Owner
George Beam	PPL Elec Utilities Corp dba PPL Utilities (PPL POLR Small C&I)	None
Madalyn Beban	PJM Interconnection	Transmission Owner
Jim Benchek	FirstEnergy Corporation	None
Tyler Berton	AEP Appalachian Transmission Company, Inc.	None
Donnie Bielak	PJM Interconnection	None
Michael Borgatti	PJM Committee Voting Generic Account	Other Supplier
John Borkoski	MD Public Service Commission	None
Joe Bowring	Monitoring Analytics	None
Glen Boyle	PJM Interconnection	Other Supplier
Aaron Breidenbaugh	Centrica Business Solutions Optimize, LLC	None

		Generation Owner
John Brodbeck	EDP Renewables North America LLC	
Michael Bryson	PJM Internal	
Thomas Buhler	PJM Connect	
Kevin Bunch	EDF Trading North America, LLC	Other Supplier
Kat Burnham	Advanced Energy Economy (AEE)	
Kevin Burns	Open Access Technology International, Inc.	None
Zachary Callen	Illinois Commerce Commission	
Bruce Campbell	Enerwise Global Technologies, LLC	Other Supplier
David Canter	Appalachian Power Company (AEP Generation)	Transmission Owner
Sean Chang	Shell Energy North America (US), L.P.	Other Supplier
Iker Chocarro Aguirrebengoa	RWE Renewables Americas, LLC	Generation Owner
Mahila Christopher	Public Utilities Commission of Ohio	
Roseanne Circelli	Public Service Electric & Gas Company	Transmission Owner
Tyler Cline	East Point Energy	
Chandra Colaresi	Enerwise Global Technologies, LLC	Other Supplier
Nancy Connelly	Duke Energy Ohio, Inc.	Transmission Owner
James Conrad	PPL Electric Utilities Corp. dba PPL Utilities (LSE)	Transmission Owner
Danielle Croop	PJM Interconnection	None
Jeff Currier ES	Dominion Virginia Power	Transmission Owner
Kerinia Cusick	Center for Renewables Integration	
Louis D'Alessandris	American Transmission Systems, Inc.	Transmission Owner
Behnam Danai	Open Access Technology International, Inc.	None
Elizabeth Davis	PJM Interconnection	None
James Davis	Dominion Energy Generation Marketing, Inc.	Generation Owner
Joseph DeLosa	New Jersey Board of Public Utilities	
Brett Denby	Northern Virginia Electric Cooperative (NOVEC)	Electric Distributor
Thomas DeVita	PJM Interconnection	None
Laura DiNicola	firstenergy	

		Transmission Owner
Mamadou Diong	Dominion Virginia Power	
		Transmission Owner
Ryan Dolan	Dayton Power & Light Company (The) (EDC)	
		Transmission Owner
Christin Domian	Duquesne Light Company	
Rick Drom	Rick Drom	
		Transmission Owner
Chuck Dugan	East Kentucky Power Cooperative, Inc.	
Nicolae Dumitriu	PJM Interconnection	None
David Egan	PJM Interconnection	None
		Transmission Owner
Rachel Elkins	American Transmission Systems, Inc.	
		Transmission Owner
David Ellis	Public Service Electric & Gas Company	
Theresa Esterly	PJM Interconnection	None
zhenyu fan	PJM Interconnection	None
Brett Feldman	Other	
Guy Filomena	Customized Energy Solutions, Ltd.	None
		Other Supplier
Luke Fishback	Affirmed Energy LLC (F3)	
		Other Supplier
Kenneth Foladare	Geenex Solar LLC	
		Electric Distributor
Adrien Ford	Old Dominion Electric Cooperative	
Darrell Frogg	PJM Interconnection	None
		End-Use Customer
Christian Fuess	PBF Power Marketing, LLC	
		Other Supplier
Betty Fung	Recurrent Energy, LLC	
Jill Gates	PJM Interconnection	
		Transmission Owner
Terry Gates	Appalachian Power Company (AEP Generation)	
		Other Supplier
Steve Gerard	Palm Energy LLC	
		Other Supplier
Rehan Gilani	ConEdison Energy, Inc.	
Suzanne Glatz	PJM Interconnection	None
Craig Glazer	PJM Interconnection	None
Michele Greening	PJM Interconnection	None
		End-Use Customer
Vince Guntle	American PowerNet Management, L.P.	
Erik Hanser	Michigan Public Service Commission	

		Transmission Owner
Gary Hartman	PPL Electric Utilities Corp. dba PPL Utilities (LSE)	
David Hastings	PJM Committee Voting Generic Account	
Jason Hathcock	Strata Solar	
Thomas Hauske	PJM Interconnection	None
Frederick Heinle	Office of the Peoples Counsel	
Suzanne Herel	PJM Interconnection	None
Rebecca Hilderbrand	EY	
		Generation Owner
Tom Hoatson	West Deptford Energy, LLC	
		Transmission Owner
Phil Hoffer	Appalachian Power Company (AEP Transmission)	
		Generation Owner
Jennifer Hohenshilt	Talen Energy Marketing, LLC	
Lynn Marie Horning	Customized Energy Solutions, Ltd.	None
		Transmission Owner
John Horstmann	Dayton Power & Light Company (The)	
		Transmission Owner
Steven Hughes	PPL Electric Utilities Corp. dba PPL Utilities (LSE)	
		Electric Distributor
Gerit Hull	American Municipal Power, Inc.	
Tom Hyzinski	gtpghyzinsk	
Ali Ipakchi	Open Access Technology International, Inc.	None
Farhad Jamshidian	OSI Digital Grid Solutions	
		Other Supplier
Gina Jardot	NRG Curtailment Solutions, Inc.	
		Transmission Owner
William Jett	Duke Energy Business Services LLC	
		Transmission Owner
Bethany Johnson	PPL Electric Utilities Corp. dba PPL Utilities (TO)	
Carl Johnson	Customized Energy Solutions, Ltd.	None
		Transmission Owner
Nathaniel Johnson	Appalachian Power Company (AEP Generation)	
David Johnston	Other	
Clark Kaml	Power System Engineering	
		Other Supplier
Brian Kauffman	Enel X North America, Inc.	
Samuel Kayne	Delaware PSC	
		Other Supplier
Stephen Kelly	Brookfield Renewable Trading and Marketing LP (BSMH)	
		Transmission Owner
Janessa Kent	Duquesne Light Company	

		Other Supplier
Bakhtawar Khan	Jersey Green Energy LLC	
Brady Klein	EnergyHub	
Nicolas Koehler	Appalachian Power Company (AEP Transmission)	Transmission Owner
Alexandria Koeplinger	Michigan Public Service Commission	
George Kogut	New York Power Authority	Other Supplier
David Leventhal	Dayton Power & Light Company (The) (EDC)	Transmission Owner
Andrew Levitt	PJM Interconnection	None
Cecilia Liang-Nicol	Allegheny Power (MonPwr Gen)	
Steven Lieberman	American Municipal Power, Inc.	Electric Distributor
Camille Littlefield	AMP Solar US Services, LP.	
Glenn Long	PJM Interconnection	None
CONNIE LOWE	Dominion Virginia Power	Transmission Owner
Xi Lu	Ford Motor Company	
Leonid Lyakhovich	Public Service Electric & Gas Company	Transmission Owner
David Mabry	McNees Wallace & Nurick LLC	
Yohannes Mariam	Office of the People's Counsel for the District of Columbia	
Valerie martin	Federal Energy Regulatory Commission	
Doug Matheson	Enel X North America, Inc.	Other Supplier
Brian McArdle	NextEra Energy Marketing, LLC	Other Supplier
John McCombIII	PJM Interconnection	None
Christian McDewell	Pennsylvania Public Utility Commission	
Susan McGill	PJM Interconnection	None
Paul McGlynn	PJM Interconnection	None
Timothy McInerney	Commonwealth Edison Company	Transmission Owner
Justin McNeil	Kentucky Public Service Commission	
John Metz	University of Delaware	
Sharon Midgley	Exelon Business Services Company, LLC	Transmission Owner
John Miller	Calico Energy	
Terrence Moran	Public Service Electric & Gas Company	Transmission Owner

		Electric Distributor
Koushy Nareshkumar	Potomac Electric Power Company	
Ryan Nice	PJM Interconnection	
Nathaniel Nichols	PECO Energy Company	Transmission Owner
Emma Nix	Jersey Green Energy LLC	Other Supplier
Chris Norton	American Municipal Power, Inc.	Electric Distributor
Cynthia Nowell	Potomac Electric Power Company	Electric Distributor
Michael Olaleye	PJM Interconnection	None
Brock Ondayko	AEP Energy Partners, Inc. (AEP Gen Resources)	Transmission Owner
Sara Parkison	University of Delaware	
keyurbhai patel	PJM Interconnection	None
Darlene Phillips	PJM Interconnection	None
Christopher Piong	PJM Interconnection	None
Joseph Polka	Duquesne Light Company (ARS)	Transmission Owner
Joseph Polka	Duquesne Light Company (F59)	Transmission Owner
Greg Poulos	PJM Committee Voting Generic Account	
Salil Pradhan	Salil LLC	
Nicholas Pratt	PPL Electric Utilities Corp. dba PPL Utilities (TO)	Transmission Owner
Ruth Price	Delaware Division of the Public Advocate	
Rajat Pungaliya	Pine Gate Mid-Atlantic, LLC	
Michael Purdie	Dominion Virginia Power	Transmission Owner
Farrokh Rahimi	Open Access Technology International, Inc.	None
Ryann Reagan	New Jersey Board of Public Utilities	
Jim REILLY	Reilly Associates	
Tomas Rodriguez	Organization of PJM States, Inc.	
John Rohrbach	Wabash Valley Power Association, Inc.	Electric Distributor
Alexa Rooney	PPL Electric Utilities Corp. dba PPL Utilities (TO)	Transmission Owner
Alex Rosenblatt	Duquesne Light Company	Transmission Owner
James Rouland	PPL Electric Utilities Corp. dba PPL Utilities (LSE)	Transmission Owner

Amanda Rumsey	PPL Electric Utilities Corp. dba PPL Utilities (TO)	Transmission Owner
Jonathan Sasser	Customized Energy Solutions, Ltd.	None
David Scarp	Calpine Energy Services, L.P.	Generation Owner
David Scarpignato	Calpine Energy Services, L.P.	Generation Owner
Bahaa Seireg	Rockland Electric Company	Transmission Owner
William Sharkazy III	PPL Electric Utilities Corp. dba PPL Utilities (LSE)	Transmission Owner
Evan Shearer	Duke Energy Business Services LLC	Transmission Owner
Mohit Singh	Commonwealth Edison Company	Transmission Owner
James Sorrels	AEP Appalachian Transmission Company, Inc.	Transmission Owner
Vincent Stefanowicz	PJM Interconnection	None
Alexander Stern	Public Service Electric & Gas Company	Transmission Owner
Rob Stupar	Invenergy Energy Management LLC	Generation Owner
Jung Suh	Calpine Energy Solutions, LLC	Other Supplier
Heather Svenson	Public Service Electric & Gas Company	Transmission Owner
Brad Swalwell	Tangent Energy Solutions, Inc.	Other Supplier
Rory Sweeney	GT Power Group, LLC	None
Kristin Swenson	Midcontinent Independent Sys Op, Inc. (CTS)	
Robert Taylor	Commonwealth Edison Company	Transmission Owner
Kevin Thundiyil	Exelon Generation Co., LLC (NEV_XLON)	Generation Owner
Andrea Tighe	CAPS	
Jed Trott	David Energy Supply, LLC	Other Supplier
Catherine Tyler	Monitoring Analytics	
Jim Waight	Siemens Industry, Inc.	Other Supplier
Jerry Warchol	Dominion Virginia Power (EDC)	Transmission Owner
Kathleen Wehnes	Maryland Department of the Environment	



Christopher Wehr	Ohio Edison Company (EDC)	Electric Distributor
Christopher Werner	Appalachian Power Company (AEP Transmission)	Transmission Owner
Matthew Wharton	Guidehouse Inc.	None
Jeffrey Whitehead	GT Power Group	
Bernie Whitmoyer	Jersey Central Power & Light Company	Transmission Owner
Amy Willey	Delaware Public Service Commission	
Fernie Williams	East Kentucky Power Cooperative, Inc.	Transmission Owner
De Andre Wilson	Maryland Public Service Commission	
Megan Wisersky	Madison Gas & Electric Co.	Other Supplier
Damon Xenopoulos	Other	
Andrea Yeaton	PJM Interconnection	None
Michael Yoder	RTO Insider	
Kyungjin Yoo	Monitoring Analytics	
Vivian Younes	PPL Electric Utilities Corp. dba PPL Utilities (LSE)	Transmission Owner
Mike Zhang	PJM Interconnection	None

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