

## PJM Introduction and Ensuring A Reliable Energy Transition

### Pennsylvania House Environmental Resources & Energy Committee

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SVP, State Policy and Member Services

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## PJM as Part of the Eastern Interconnection





## How Is PJM Different from Other Utility Companies?

#### **PJM Does:**

- Direct operation of the transmission system
- Remain profit-neutral
- Maintain independence from PJM members
- Coordinate maintenance of grid facilities

## PJM Does NOT:

- Own any transmission or generation assets
- Function as a publicly traded company with shareholders and concerns around "earnings"
- Perform maintenance on generators or transmission systems (e.g., repair power lines)
- Serve or direct any end-use customers (retail)

PJM Open Access Transmission Tariff (OATT)

Reliability Assurance Agreement

Transmission Owner (TO) Agreement PJM Operating Agreement



## PJM – Primary Focus

















## **Reliability Papers and Studies**





Energy Tra	nsition in PJM: En	nerging Characteristics	of a		
Decarboniz	ing Grid – Addend	Jum			
Introduction					
This document contail	ns supporting information for the P	PJM white paper, <u>En</u>			
described below were	used in the second phase of anal	lysis, which began in			Ja join
be a living study, in wi Future phases of the r	hich assumptions are continually r study will include updates to core a	refined based on inte assumptions and ad			All blue
Sconario Dev	alonment				
Scenario Dev	eropinent				
State and Corpo	rate Policy Analysis	n waaraana			
In order to inform sce and potential generati	hario development, PJM analyzed on retirements. PJM used two time	a goals and policies the frames to inform the			
referenced medium-te The ocals and policies	rm policy goals through 2035, and of states and utilities described h	d the Accelerated ca below were updated			
began in 2021. As the	se policies and goals continue to	evolve, PJM will con			
marm the assumption	s minure phases or the study.				
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## Forecasted Retirements (2022–2030)

Total Fore	ecas	sted Retire	ement Ca	pacity (GW)	)	
2022		Announce	ed			Ŧ
Policy						
Economic						
0	5	10	) 1	15 2	20	25
		Th	nis <b>40 GV</b>	V represer	its	
21% of PJM's current						
		192 GV	N of inst	alled gen	eration	



\*Other includes diesel, etc.

*pim* 

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## PJM Forecasted New Entry (2022-2030)





## Interconnection Queue Projects By Year





## Interconnection Process Reform Timeline





PJM©2021



## Pennsylvania Interconnection Projects

#### Interconnection Projects with Interconnection Service Agreement (ISA), not in service:

ISA Status	Project Status	# Projects	MW Energy
Post ISA	Engineering and Procurement	65	2,097
Post ISA	Partially in Service - Under Construction	7	76
Post ISA	Suspended	55	1,561
Post ISA Total		127	3,734

#### Active Generation Interconnection Projects in AE1 thru AG1

ISA Status	Project Status	# Projects	MW Energy
Pre ISA	Active	109	5,255
Pre ISA Total		109	5,255



## What Problem(s) Are We Solving For?

### RELIABILITY



The PJM fleet has adequate resources and enough essential reliability services, but we need our generators to perform when called upon. **Energy Transition in PJM:** Resource Retirements, Replacements & Risks Feb. 24, 2023

For Public Use

Generation retirements may outpace new entry with a simultaneous likelihood of load increasing, thereby creating resource adequacy concerns. Energy Transition in PJM: Frameworks for Analysis Dec. 15, 2021

For Public Use

We will continue to need some amount of thermal generation to provide certain essential reliability services until a replacement technology is deployable at scale.



#### The Immediate Concern



### **Support**

Resource Performance

#### **The Near-Term The Upcoming** Concern Concern **Energy Transition in PJM: Energy Transition in PJM:** Resource Retirements, Replacements & Risks **Frameworks for Analysis** Feb. 24, 2023 Dec. 15, 2021 For Public Use For Public Use **Ensure Maintain & Attract** Resource **Essential Reliability** Adequacy **Services**

**Our Reliability Concerns** 

#### www.pjm.com | Public



## Initial Actions To Support Reliability

CIFP/RASTF	P/RASTF Reserved iorities Certa		Load Following/		Short-Term	
Priorities			Dispatchability		Forecasting	
Proactive Planning:		Proactive Planning:		Proact	Proactive Planning:	
LTRTP		Resilience			Interregional	
LDA Modeling Imp		<b>MR</b> Policy Relia Safety Mea		Reliability Measures	iability asures Improvements	
Energy		Gas/E	Gas/Electric		Storm Elliott	
Assurance		Coordi	Coordination		Report	

## **A**pjm





## Ensuring a Reliable Energy Transition





# Thank You! and Questions