

# Delaware Governor's Energy Advisory Council Grid Modernization Working Group

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Aug. 14, 2023

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Continuing Reliability in PJM

Ensuring Resource Adequacy in PJM

• Promoting New Entry through Interconnection Reform

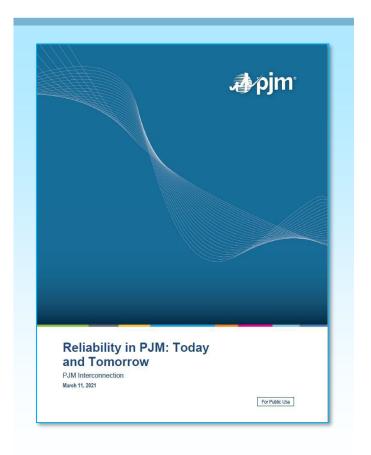


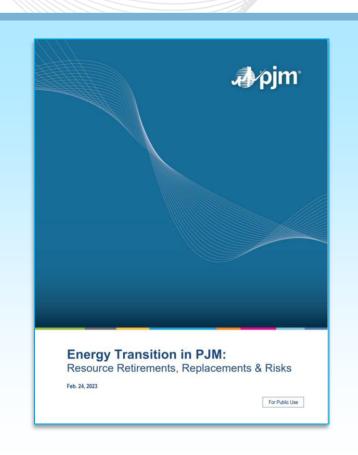
## Continuing Reliability in PJM

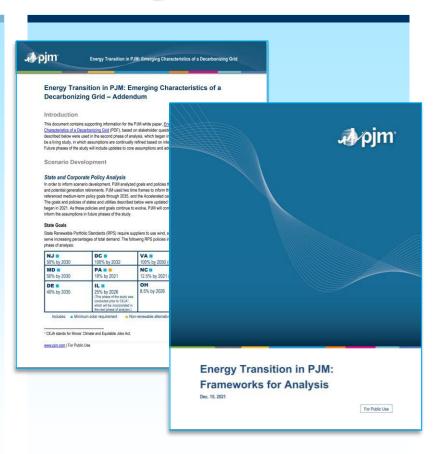
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#### Reliability Papers and Studies

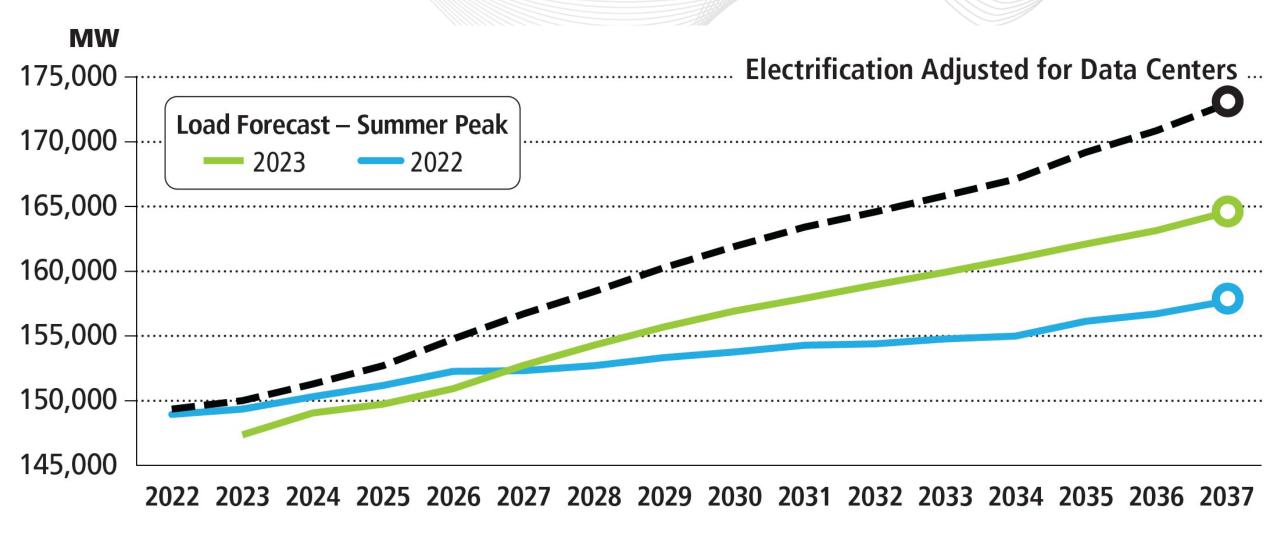






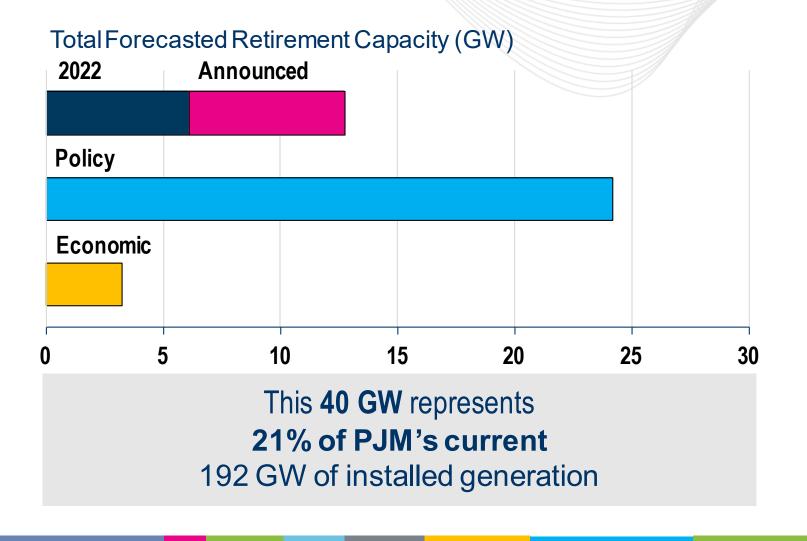


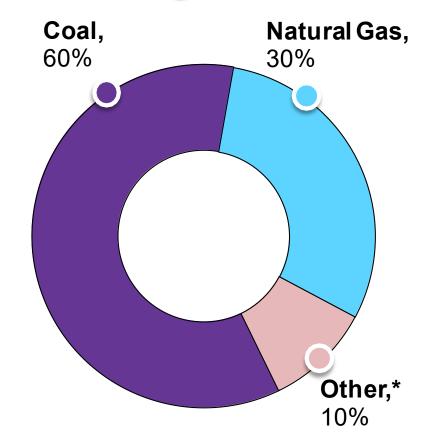
#### Load Growth Forecasts





#### Forecasted Retirements (2022–2030)

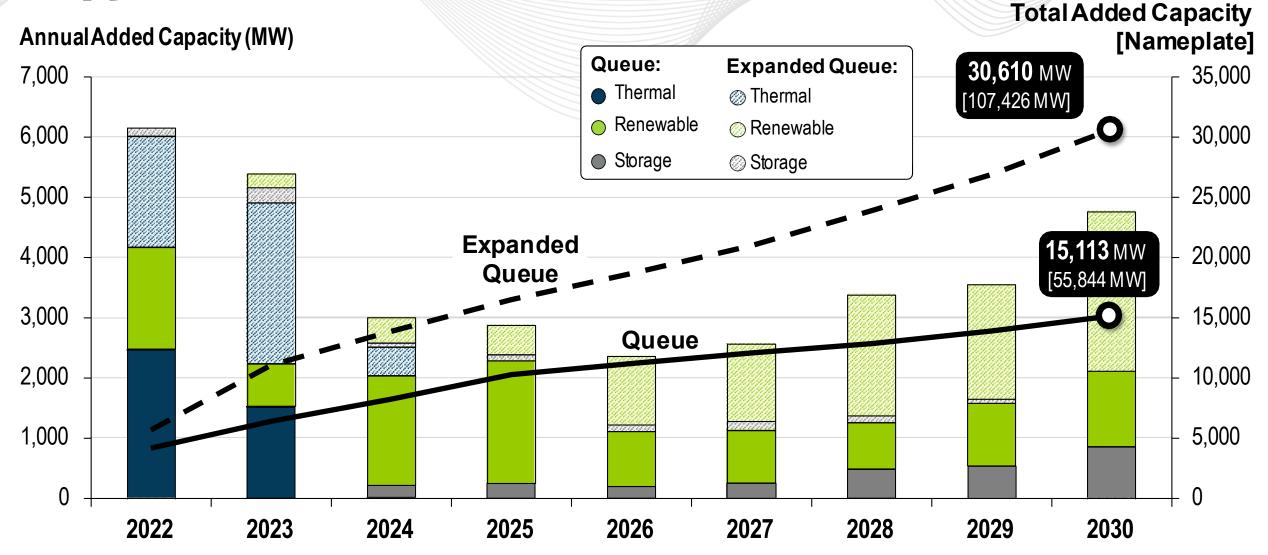




\*Other includes diesel, etc.



#### PJM Forecasted New Entry (2022–2030)





## 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.



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.



## Ensuring Resource Adequacy in PJM

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## PJM Resource Adequacy Proposals

#### **Key Elements of PJM's Phased Seasonal Proposal:**

- 1. Enhance reliability risk modeling in resource adequacy studies and move to Expected Unserved Energy (EUE) as the primary reliability metric.
- 2. Improve capacity accreditation to reflect resources' contribution during periods of risk by season.
- 3. Maintain the capacity performance framework but enhance the rules and testing requirements.
- 4. Align FRR rules and improve other areas of the market construct, including balanced market power mitigation rules.
- Implement now or in the future a seasonal (or other beneficial more granular) capacity market design.

Focus of the market design reforms is on near-term achievable improvements to the market's ability to meet resource adequacy requirements in an efficient, least-cost manner.



Promoting New Entry through Interconnection Reform

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#### Interconnection Queue Reform



 Transitioned to new process on July 10, 2023

 Will see more than 260,000 MW of renewables studied

• First come, first served → First ready, first served

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