



# Overview of PJM and Recent FERC Orders

Presented to the Energy Resilience and Efficiency Working Group of the  
Maryland Climate Change Commission

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PJM Interconnection

July 16, 2024

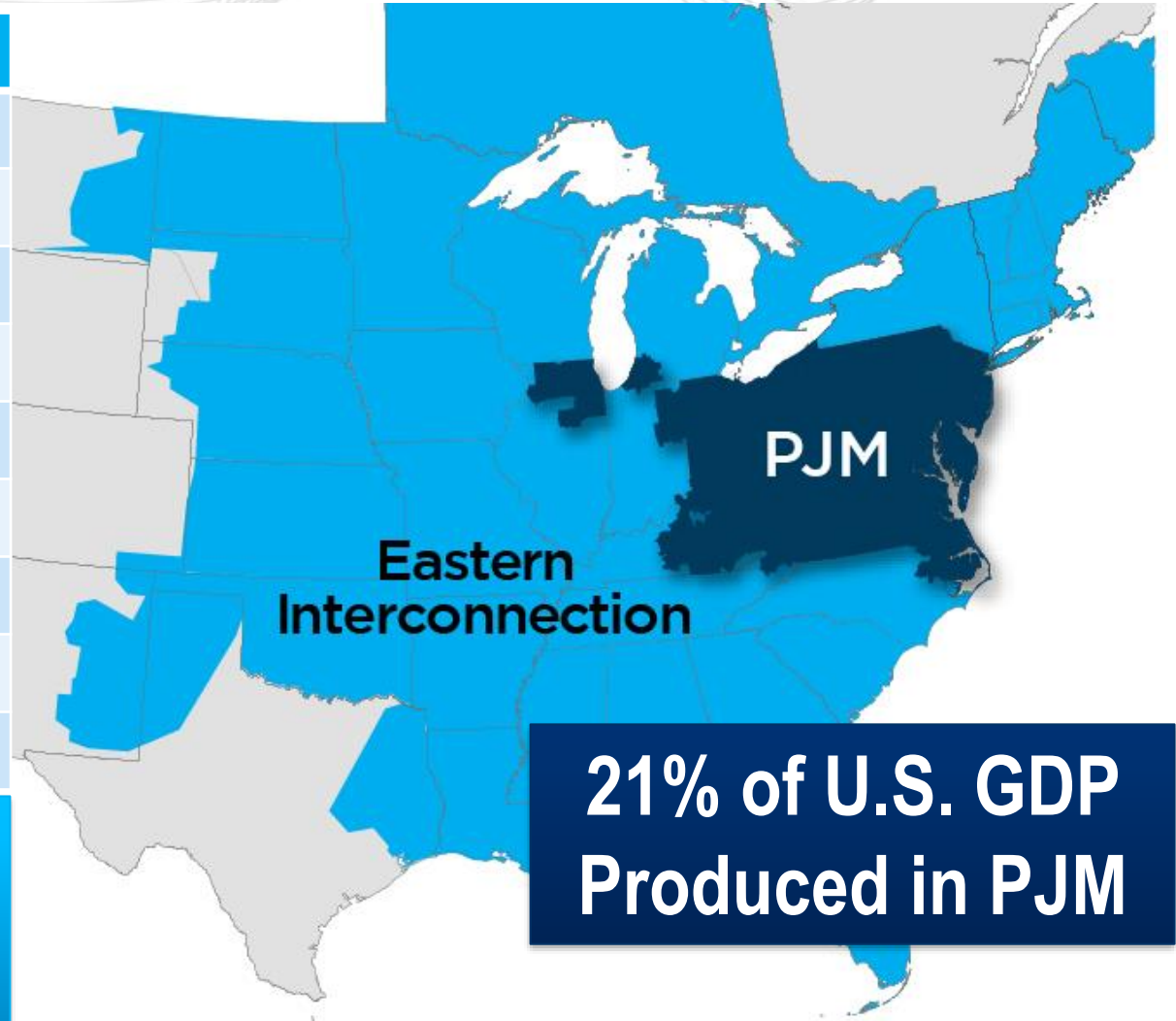


# PJM as Part of the Eastern Interconnection

## Key Statistics

Member companies	1,090
Millions of people served	65+
Peak load in megawatts	165,563
Megawatts of generating capacity	183,254
Miles of transmission lines	88,185
Gigawatt hours of annual energy	770
Generation sources	1,419
Square miles of territory	368,906
States served	13 + DC

- 26% of generation in Eastern Interconnection
- 25% of load in Eastern Interconnection
- 20% of transmission assets in Eastern Interconnection



As of 2/2024

## PLANNING



Planning for the future like...



## OPERATIONS



Matches supply with demand like...



## MARKETS

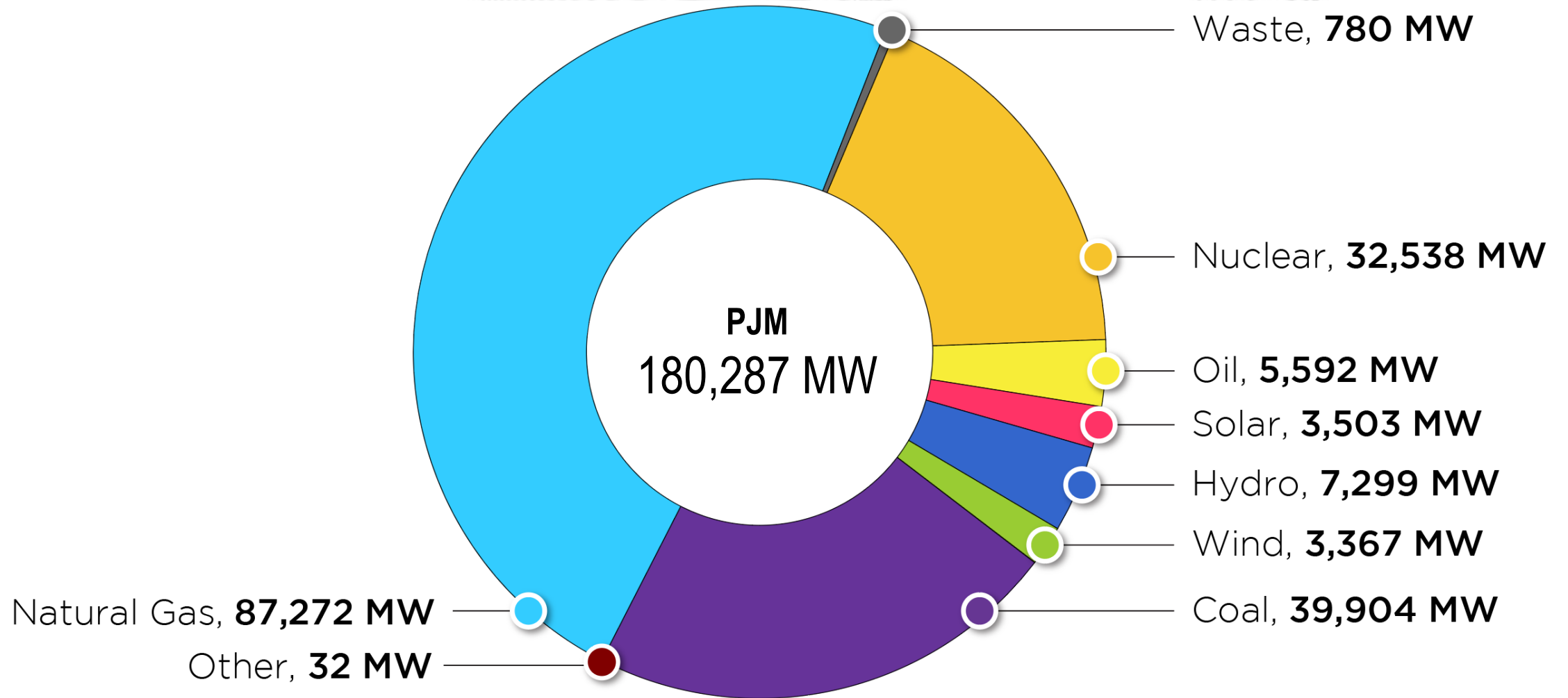


Energy Market Pricing like...



# PJM Existing Installed Capacity Mix

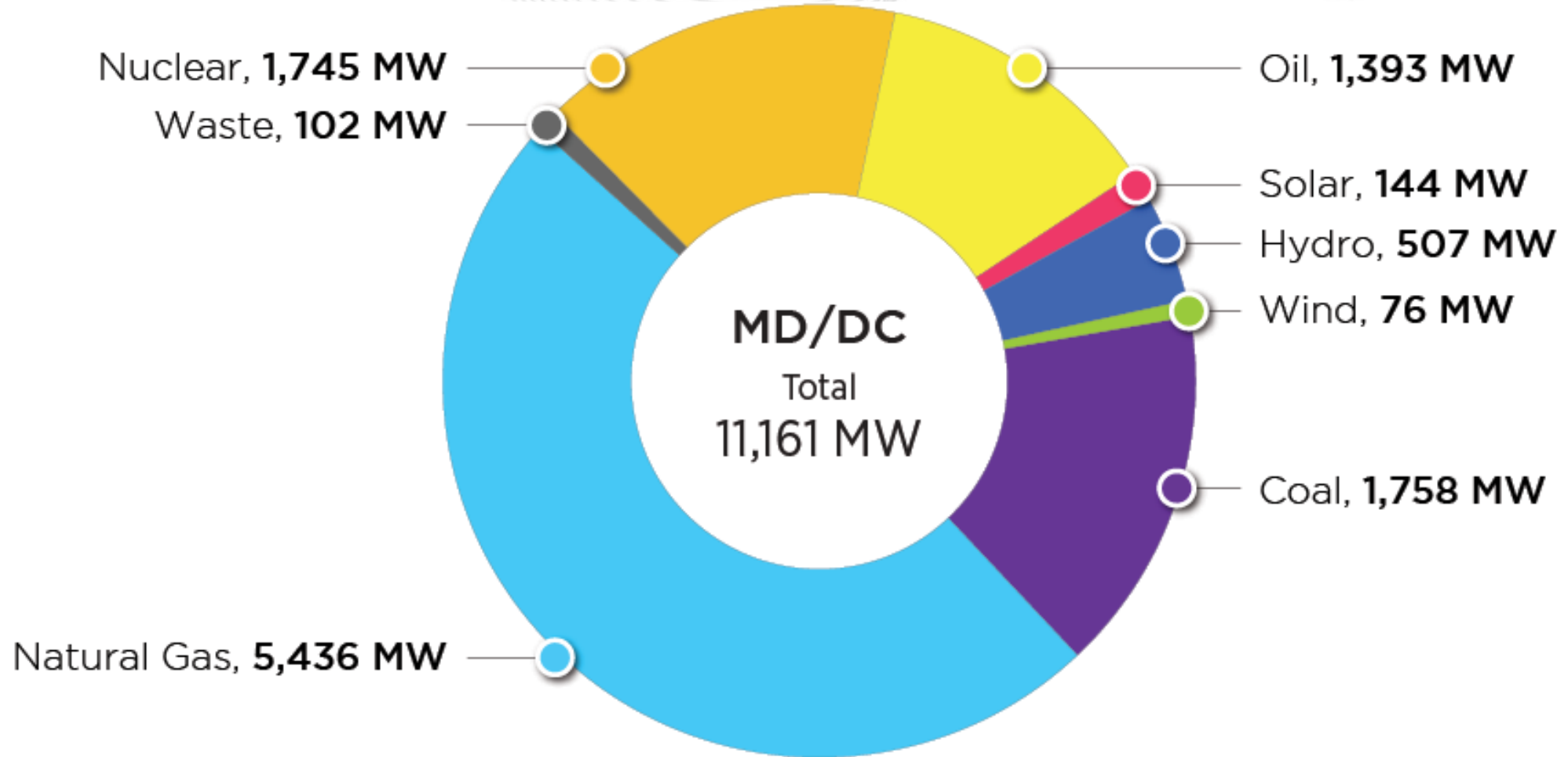
(Capacity for Resource Adequacy – as of Dec. 31, 2023)



Energy-only resources are also present on the PJM system but do not participate in PJM's capacity market.

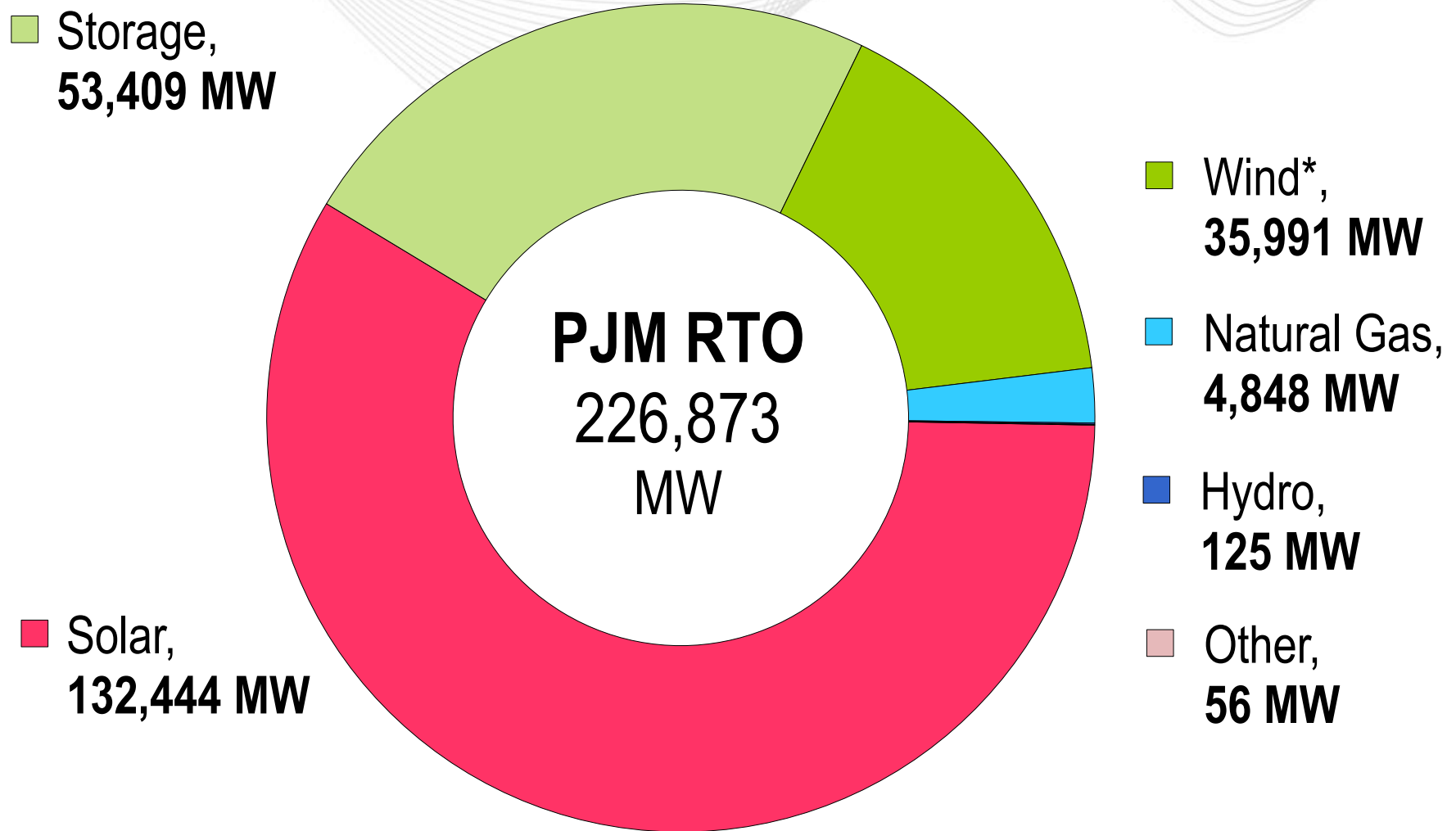
# MD/DC – Existing Installed Capacity (MW) by Fuel Type

(Dec. 31, 2023)



# PJM Queued Capacity (Nameplate) by Fuel Type

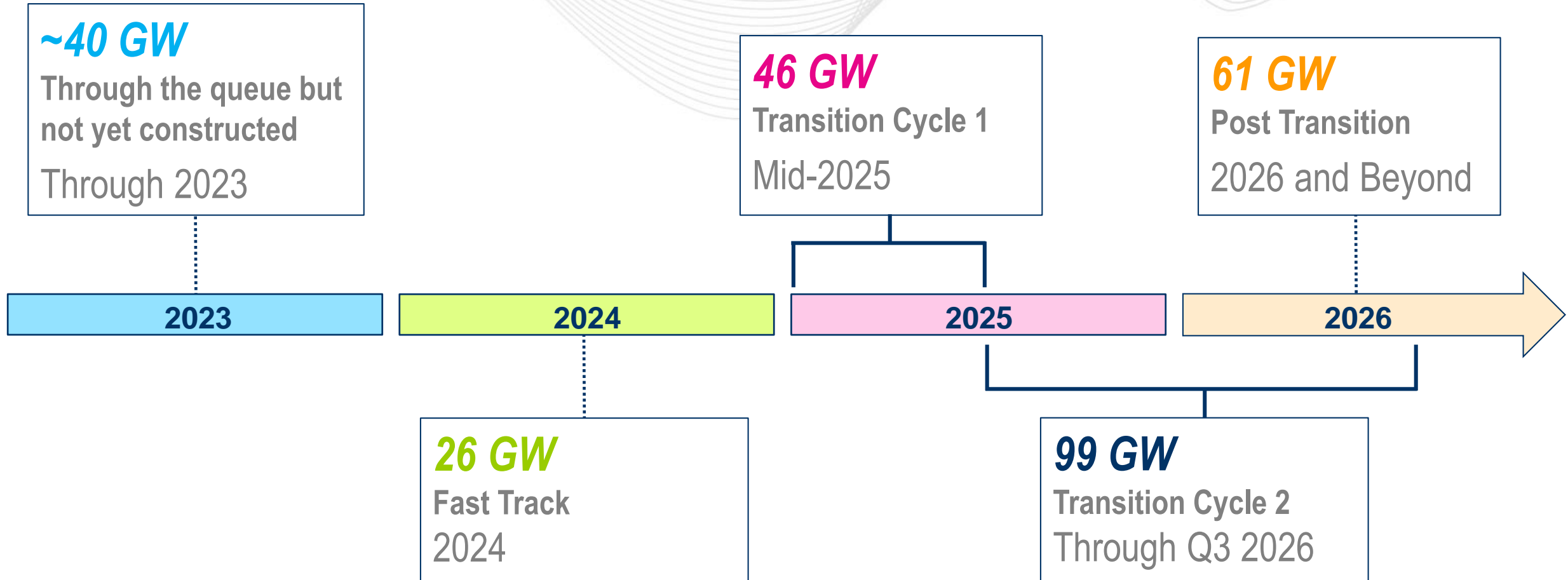
("Active" in the PJM Queue as of April 1, 2024)



\*Wind includes both onshore and offshore wind



# PJM's Interconnection Queue Reform and Timeline



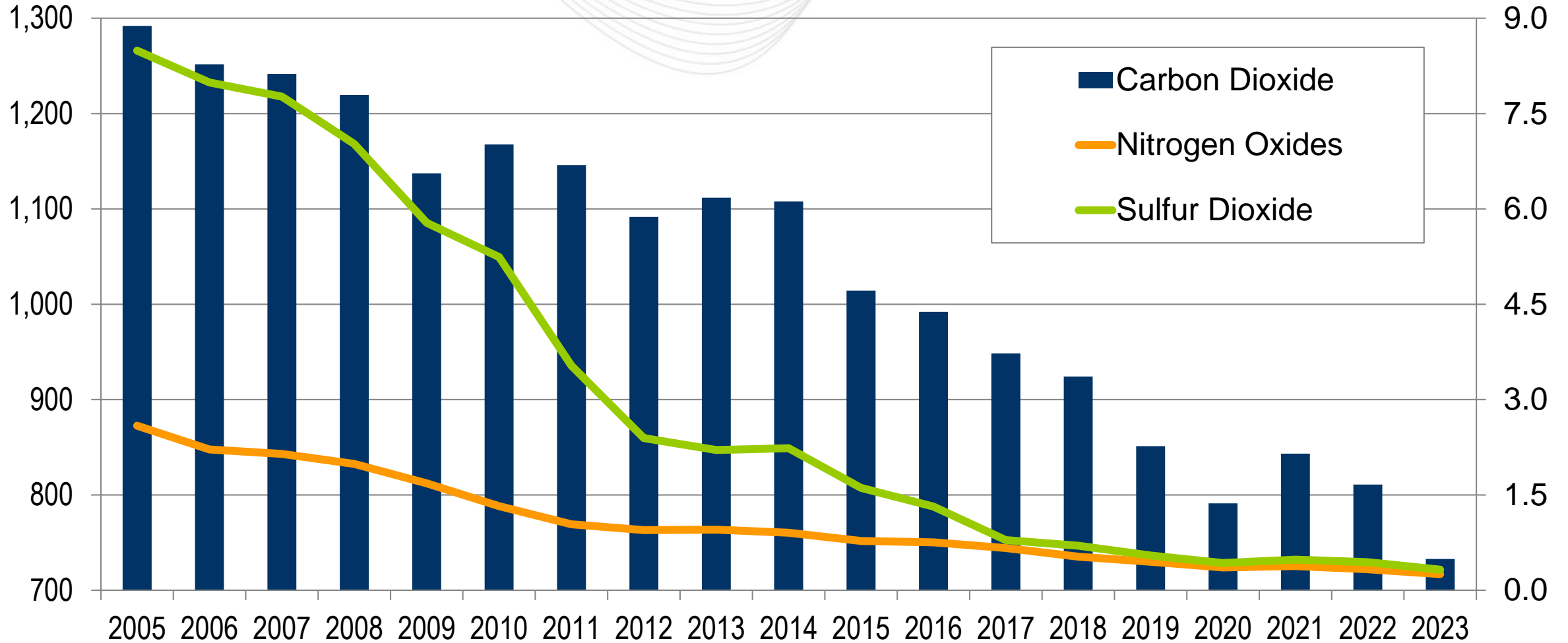


# 2005 – 2023 PJM Average Emissions (lbs/MWh)

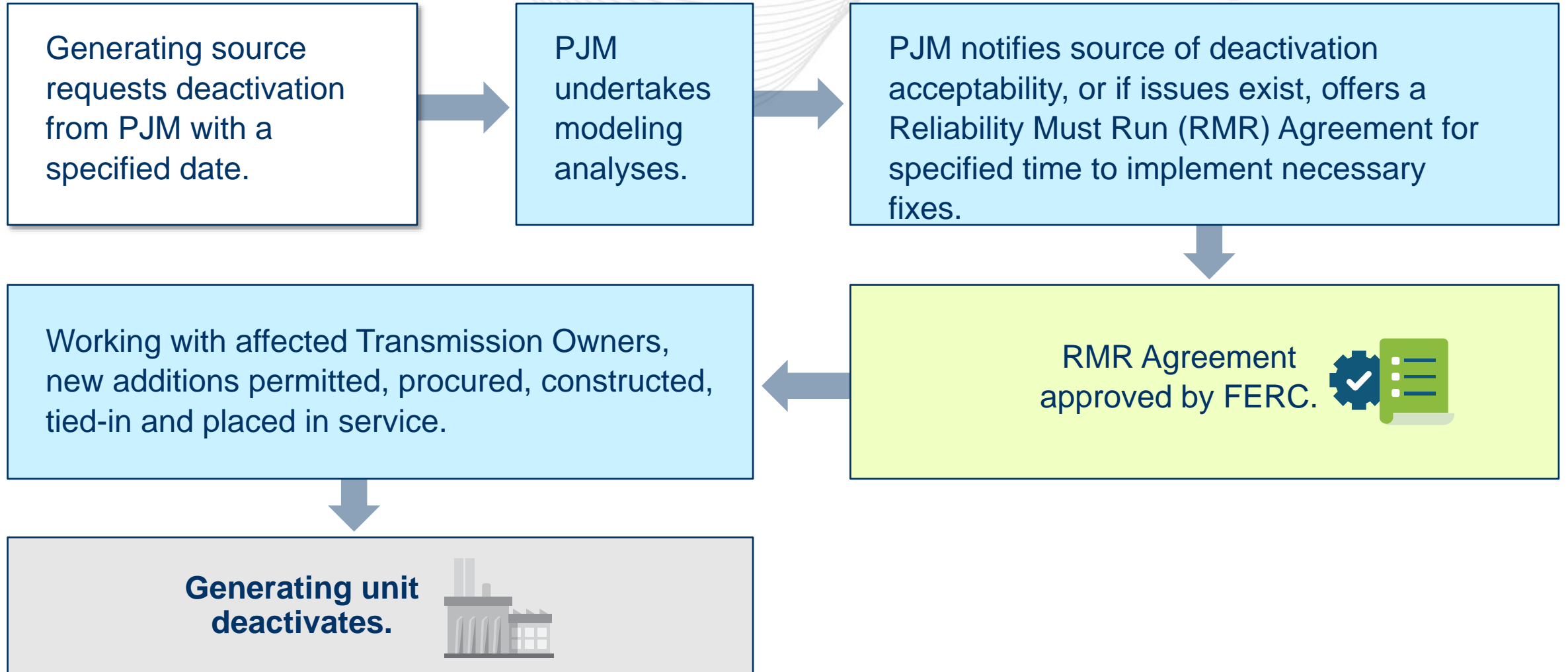
(March 2024)

**SO<sub>2</sub> and NO<sub>x</sub>**  
(lbs/MWh)

**CO<sub>2</sub>**  
(lbs/MWh)









# PJM Electricity Demand Growth

Load (MW)

195,000

185,000

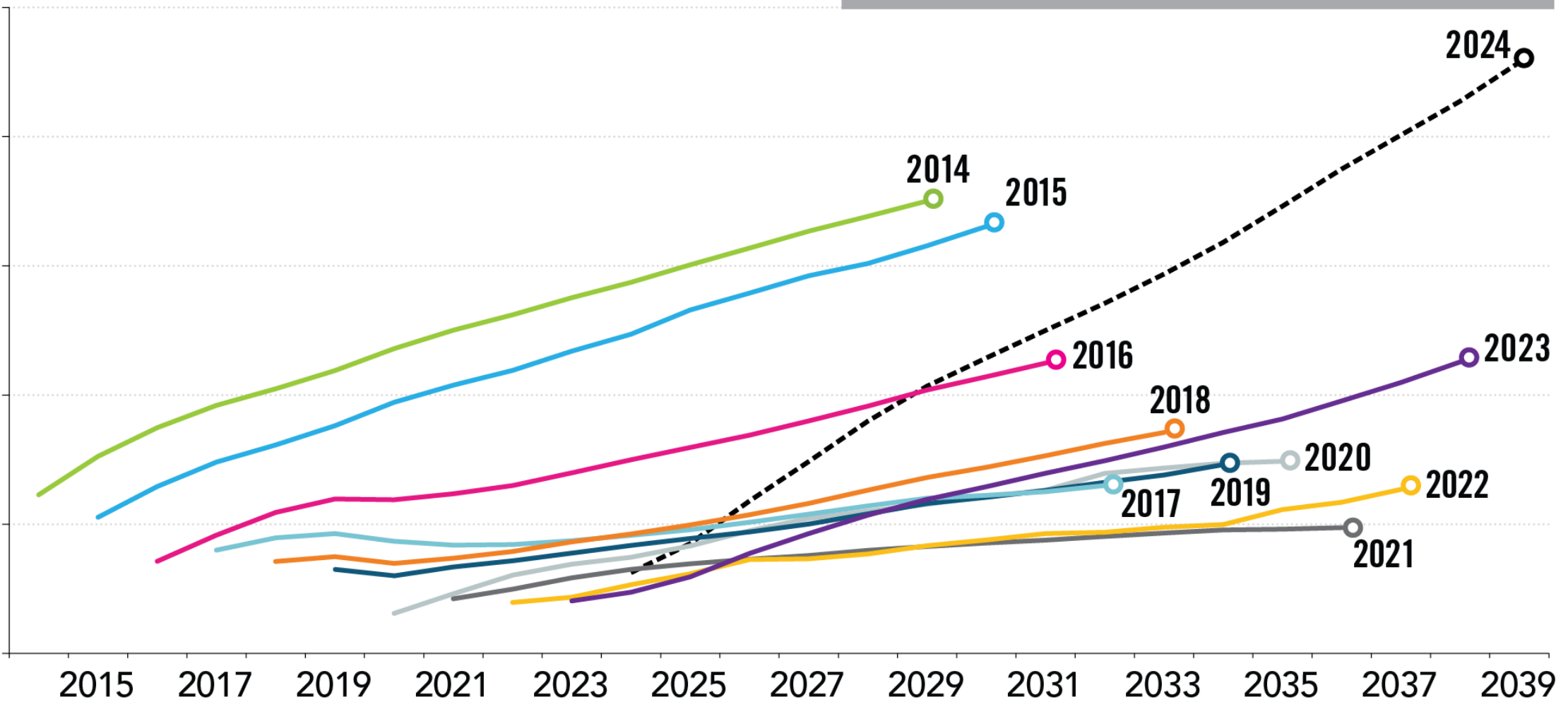
175,000

165,000

155,000

145,000

PJM RTO Summer Peak Demand Forecast



- On May 13 FERC issued Order No. 1920 on Long Term Planning

<p>Engage in regional long-term transmission planning to identify transmission needs.</p>	<p>Develop processes and criteria, including enumerated benefits, for selecting transmission facilities to resolve those needs.</p>	<p>Devise and file ex ante cost allocation methods to apportion the cost of the facilities.</p>
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Transmission providers must develop at least three distinct long-term scenarios that utilize enumerated factor categories and a planning horizon of not less than 20 years.

*Long-term scenarios must be reviewed and updated at least once every five years.*

- Enhancing long-term planning is needed to maintain reliability affordably amid unprecedented future changes
- PJM has worked with stakeholders since 2022 on LTRTP

# Order 1920 – State Roles and Interest

## I Long-Term Regional Transmission Planning

A Requirement to participate in Long-Term Regional Transmission Planning

**B** Development of Long-Term Scenarios

**C** Long-Term Scenarios Requirements

**D** Evaluation of the Benefits of Regional Transmission Facilities

**E** Evaluation and Selection of Long-Term Regional Transmission Facilities

F Implementation of LTRTP

**II** Coordination of Regional Transmission Planning and Generator Interconnection Processes

**III** Consideration of Dynamic Line Ratings and Advanced Power Flow Control Devices

**IV** Regional Transmission Cost Allocation

**V** Construction Work in Progress Incentive

**VI** Exercise of a Federal Right of First Refusal in Commission-Jurisdictional Tariffs and Agreements

**VII** Local Transmission Planning Inputs in the Regional Transmission Planning Process

**VIII** Interregional Transmission Coordination

**IX** Compliance Procedures



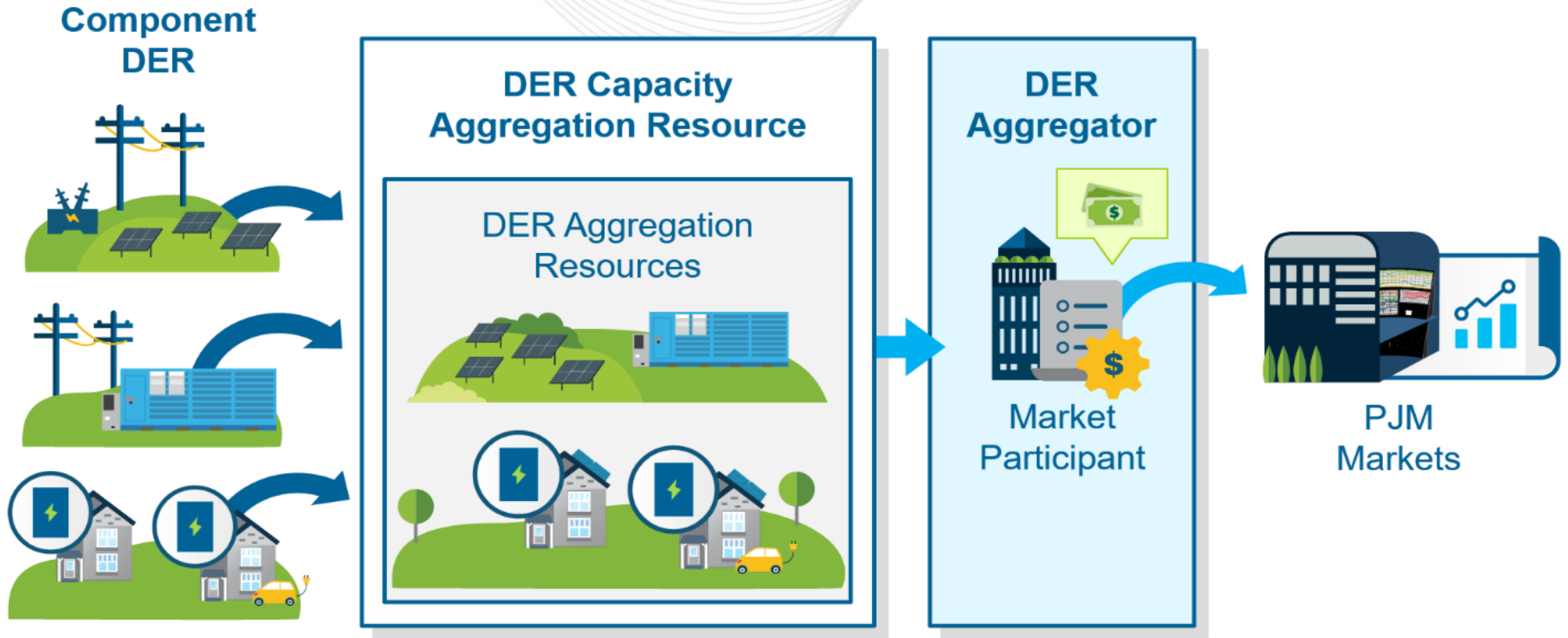
Active Role for States



Interest of States

**FERC in September 2020 issued Order 2222** – directs PJM and other bulk power system operators to create market rules enabling the participation of distributed energy resource aggregations in the wholesale energy, capacity and ancillary services markets.

- Following extensive stakeholder engagement, PJM filed a comprehensive proposal Feb. 1, 2022.
- PJM's proposed effective dates for Order 2222 is February 1, 2026 and July 1, 2025 (capacity market provisions only).



PJM has a dedicated landing page to track various initiatives related to the energy transition occurring at PJM and within the PJM stakeholder community.

“Ensuring a Reliable Energy Transition” can be accessed on the [pjm.com](http://pjm.com) homepage.

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Commission's Energy Resilience and  
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**Member Hotline**

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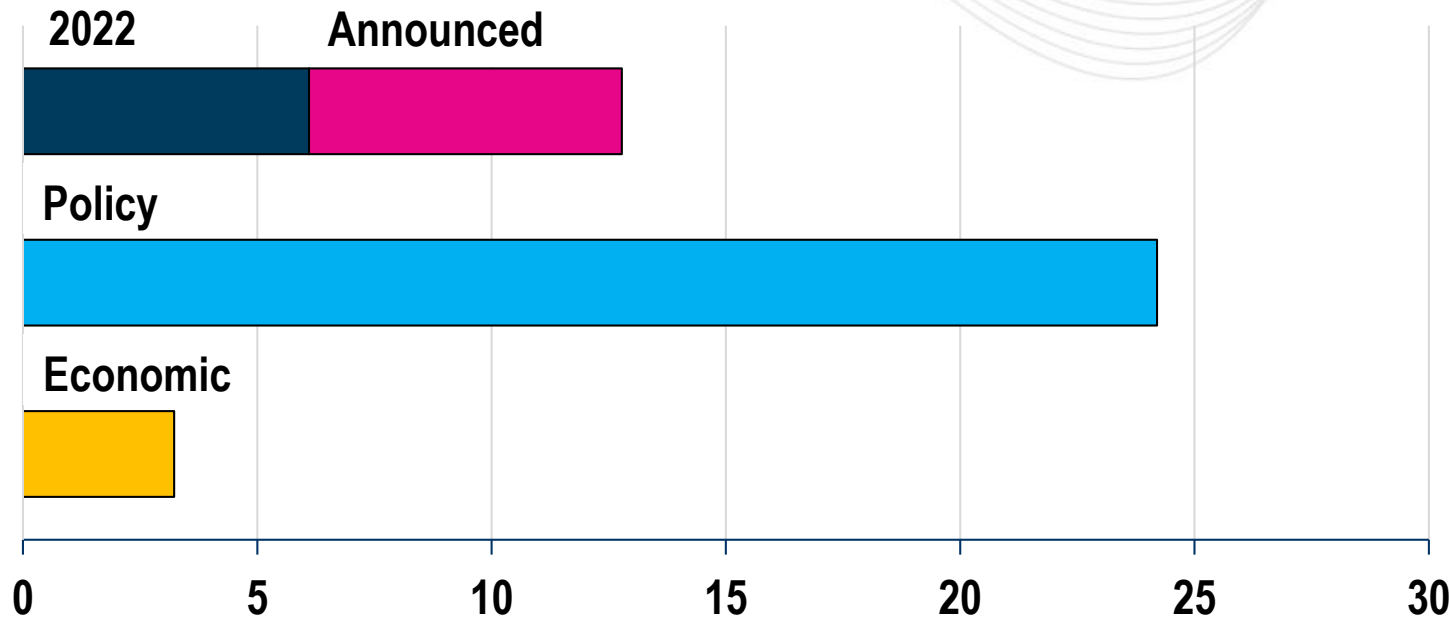
custsvc@pjm.com



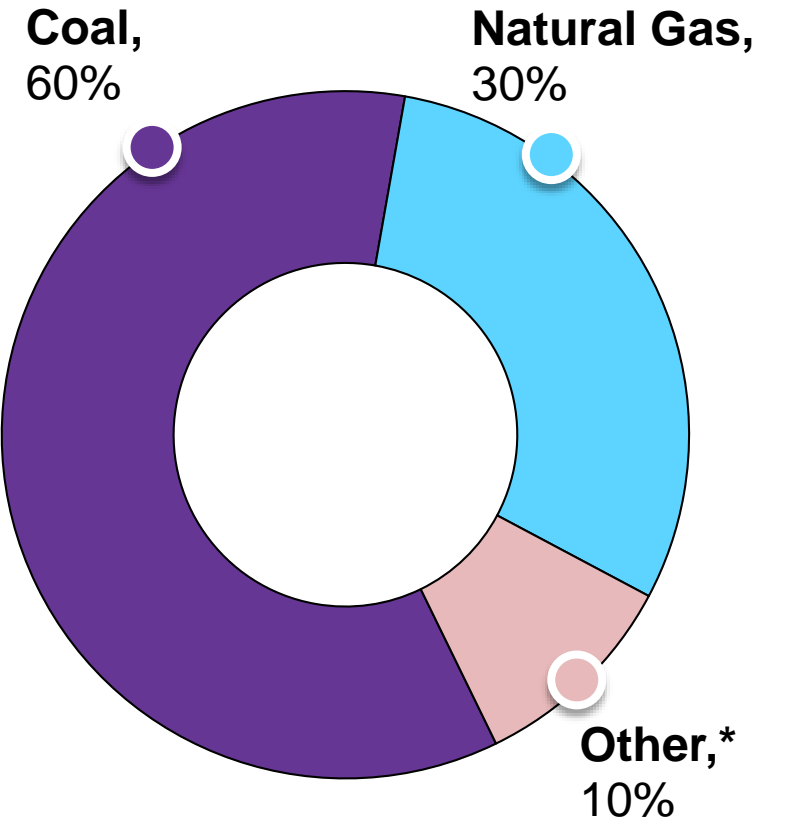
# Appendix

# Forecasted Retirements (2022–2030)

Total Forecasted Retirement Capacity (GW)



This 40 GW represents 21% of PJM's current 192 GW of installed generation



\*Other includes diesel, etc.