



Multi-TO Project-Outage Coordination (MTOPOC)

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Transmission Operations

November 8, 2024

PJM has unprecedented data center load growth:

~7,500 MW currently forecasted
by 2027–28 in Dominion (Northern Virginia)
and APS (Doubs).

11,100 MW deactivation announced
~ 5,300 MW of retirements occurred
after the 2022 RTEP case was created.

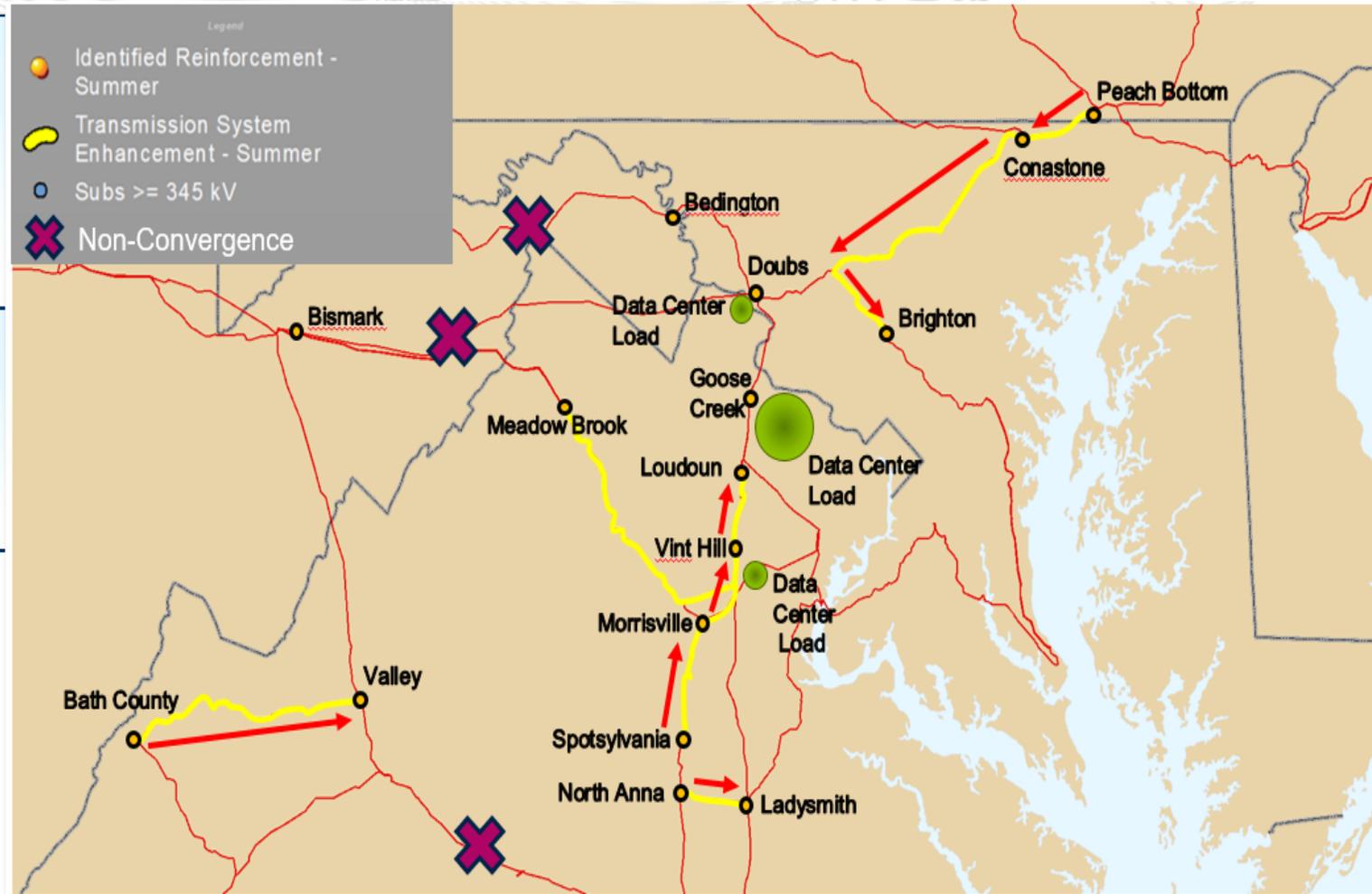
- The vast majority of the new generation with signed ISAs has been solar.

Solar has low availability during the winter period.

- Replacement generation is coming from the region to the east of Peach Bottom as well as west of Doubs to meet

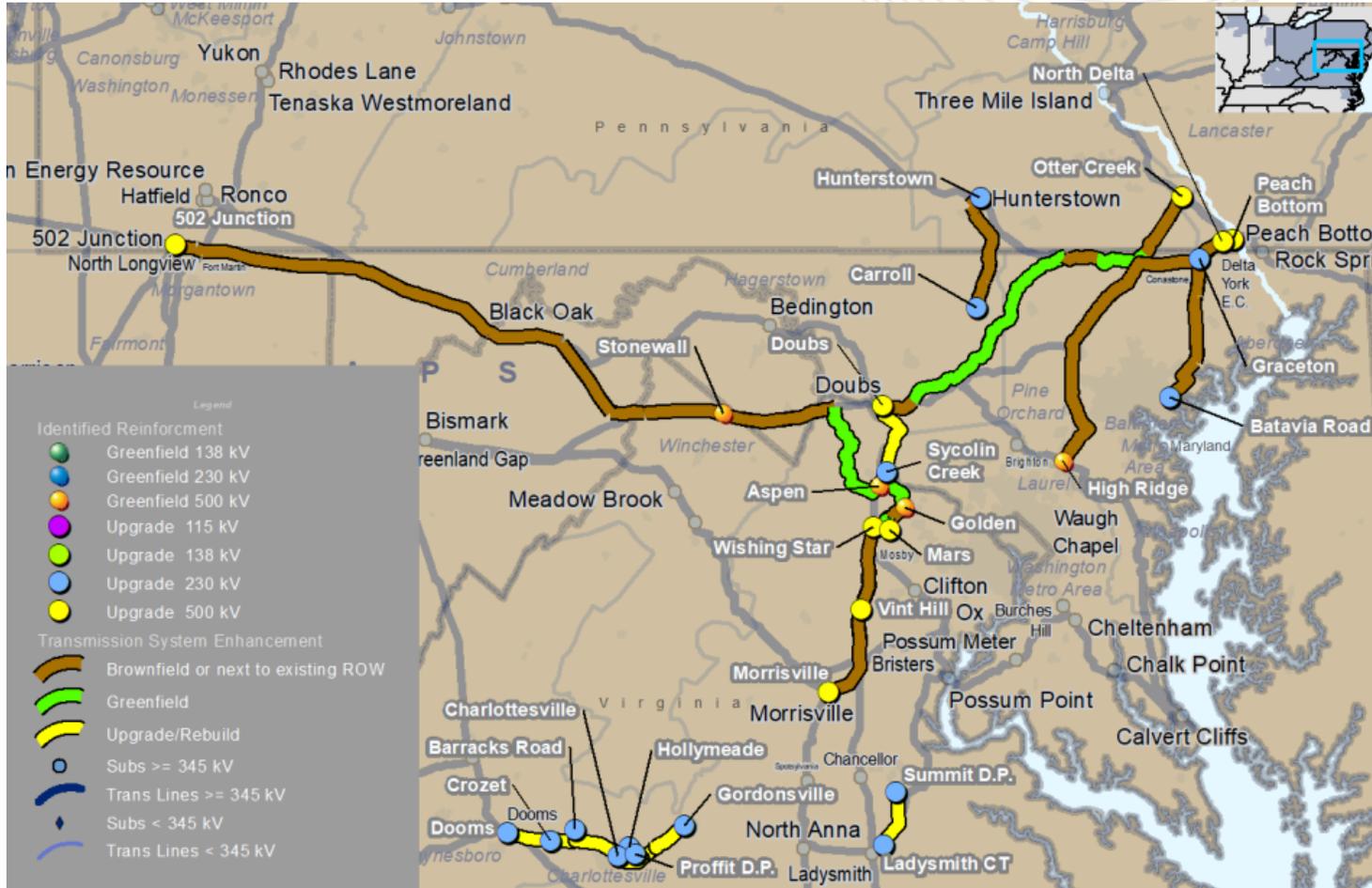
projected load growth.

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Overview of Selected Proposals

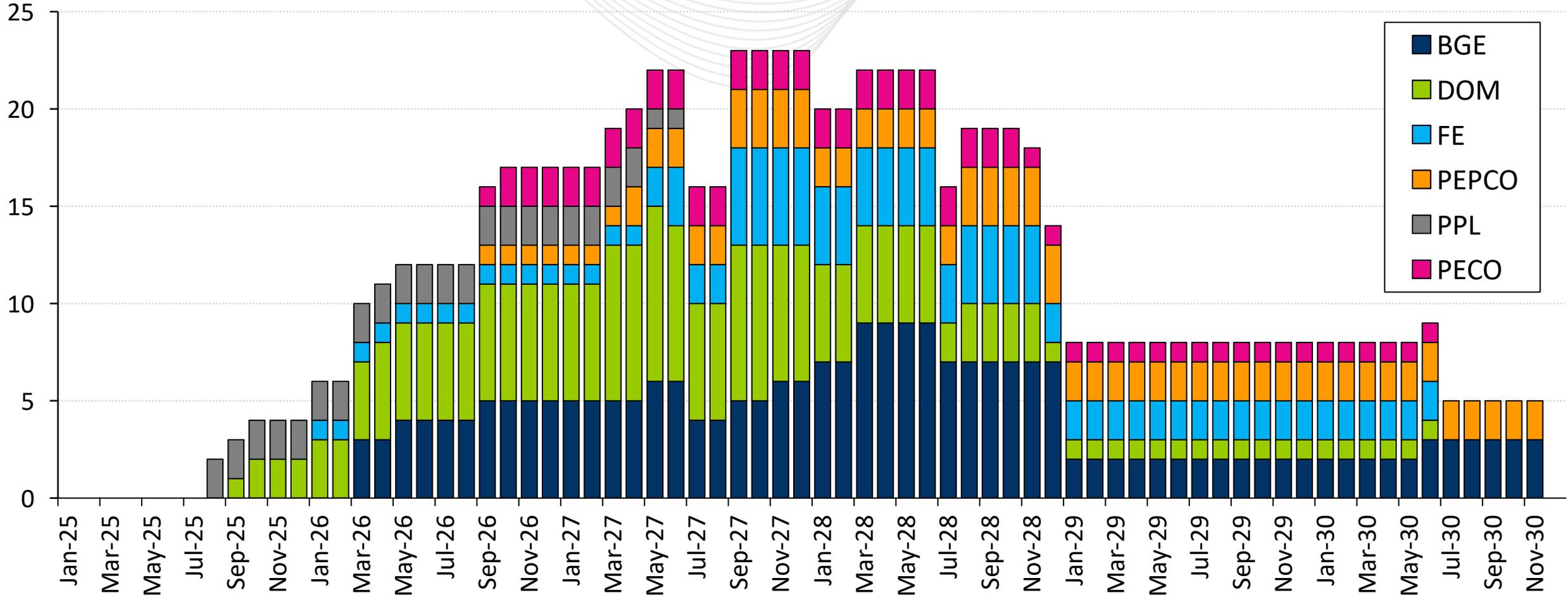


Cluster	Overview	Proposal Cost (\$M)
East	<ul style="list-style-type: none"> ▪ New and upgrade 500 kV lines ▪ New and expanded 500 kV stations 	\$1,443.12
West	<ul style="list-style-type: none"> ▪ New 500 kV line ▪ New 500 kV station ▪ New voltage support devices 	\$940.85
Northern VA	<ul style="list-style-type: none"> ▪ New 500 kV and 230 kV lines ▪ New 500 kV station 	\$1,418.3
South	<ul style="list-style-type: none"> ▪ New and upgraded 500 kV and 230 kV lines ▪ New voltage support devices 	\$1,265.85
Local	Station reconfiguration	\$11.59
Short Circuit	500 kV and 230 KV Breaker replacement	\$63.27
Total		\$5,142.98



Overall Project Distribution

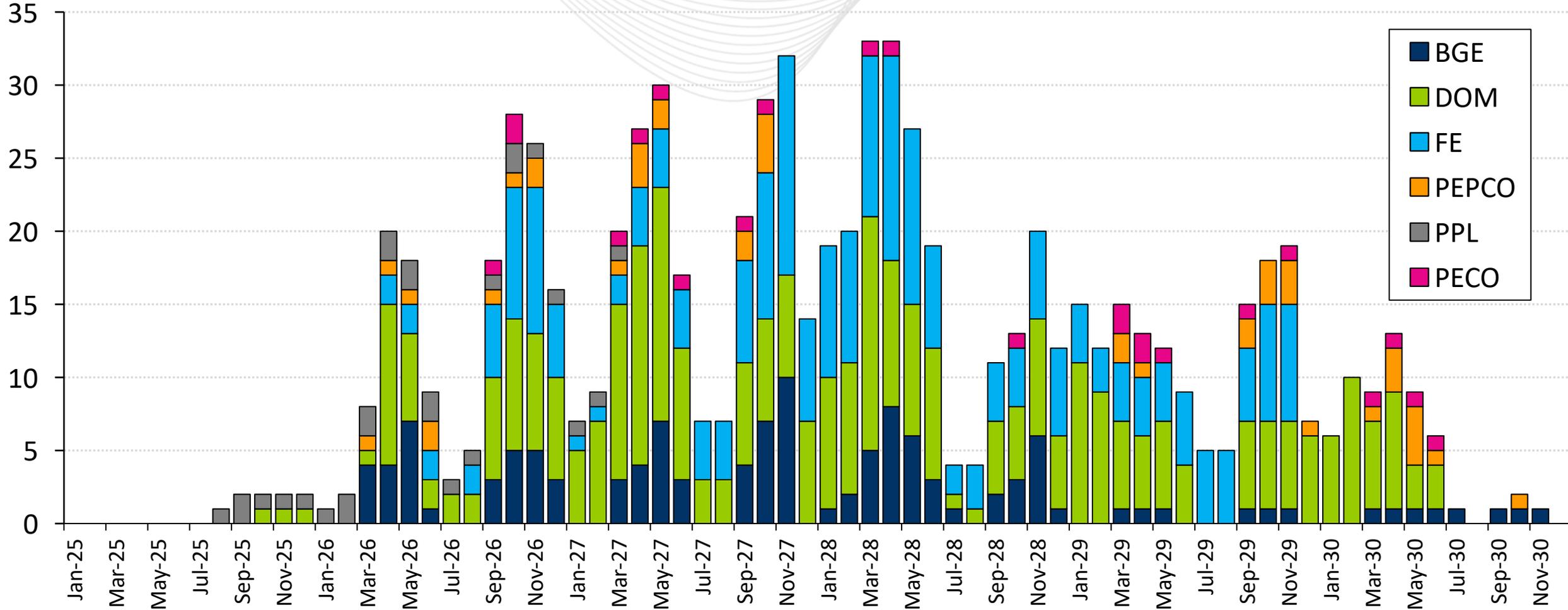
Multi-TO Project-Outage Coordination Projects

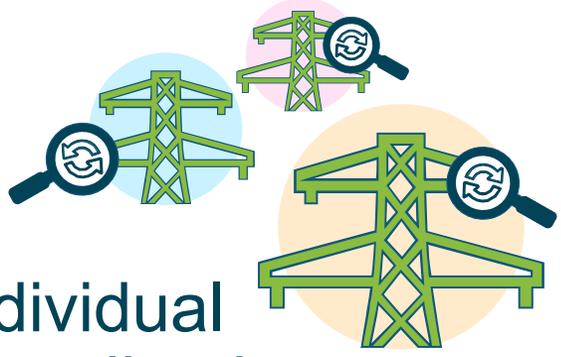




Overall Outage Distribution

Multi-TO Project-Outage Coordination – Outages





Individual Coordination

Transmission Owners

- **Submit** preferred timeline and outage order needed for each project.
- **Identify/resolve** potential outage conflicts *within* your own territories.




Full Coordination

PJM

- **Populate** Prioritization Scoring Matrix.
- **Identify** efficient schedules that minimize conflicting outages *between* TOs.



Transmission Owners

- Convert project sequence to eDart outages based on agreed schedules.
- Keep PJM informed of schedule changes and risks.

PJM

- Share study findings with TOs.
- Ensure open and consistent communication.

Extended Study Timeframe & Tools

6 months to 2 years

PSS/E

INPUTS

- Model On Demand RTEP cases from PJM planning
Available cases are seasonal (Winter/Summer)
- Modify the model and update contingency files
- IDEVS as needed

- 6 Transmission Zones/Owners
 - PSEG, NextEra and TranSource also have projects within these 6 zones
- Quarterly in-person meetings
 - Over 30 member participants in the room, plus more than 60 on the WebEx for last meeting
- PJM SME leads from Transmission Ops

- **Generation Outage Submission**

- Current rules specify at least 30-day notice for generation outages, PJM is requesting Generation Owners in the BGE, PEPCO, Dominion and surrounding areas to enter outages expected to occur in the next 2-3 years as early as possible.
 - NOTE: PJM will not be able to accommodate as many gen outages as we have in the past. Transmission outages related to system upgrades may be given priority

- **Increased Risk Acceptance and Congestion**

- Due to the high volume of reliability upgrades and associated outages, coupled with load growth and generation retirements, there will be increased congestion
- There will also be times that PJM and the Transmission Owners will need to take on more risk in the near term to avoid greater risks in the long term.
 - This may result in an increase in emergency procedures (i.e. PCLLRWs)

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**PROTECT THE
POWER GRID**

**THINK BEFORE
YOU CLICK!**



**BE ALERT TO
MALICIOUS PHISHING
EMAILS**



**Report suspicious email activity to PJM.
Call (610) 666-2244 or email it_ops_ctr_shift@pjm.com**