2025 Pennsylvania State Infrastructure Report (January 1, 2025 – December 31, 2025)

June 2026

(updated August 2026)

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Table of Contents

Planning

- Generation Portfolio Analysis
- Transmission Analysis
- Load Forecast
- Large Load Adjustments

Markets

- Energy Market Analysis
- 2026/27 Base Residual Auction
- 2027/28 Base Residual Auction

Operations

- Generator Production
- Net Energy Import/Export Trend
- Emissions Data

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Executive Summary

2025 Pennsylvania State Infrastructure Report

In the Pennsylvania service territory:

Existing Capacity:	• In Pennsylvania, natural gas represents 54% of the total installed capacity while nuclear represents 20%. • Across PJM, natural gas represents 48% total installed capacity and nuclear represents 18%.
Interconnection Requests:	Pennsylvania currently has 42 GW of capacity under study in Transition Cycle 2 and Cycle 1.
Deactivations:	Pennsylvania had no generators deactivate or give a notice of deactivation in 2025.
RTEP 2025:	Pennsylvania's 2025 RTEP project total represents approximately $3.56 billion in investment.

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In the Pennsylvania service territory:

Load Forecast:	Pennsylvania's summer peak load growth is projected to range between -0.1% and 6.4% annually over the next ten years, while the winter peak is projected to increase by 0% to 6.5% percent, depending on the transmission zone.
Capacity Market:	• The 2026/27 Base Residual Auction cleared at the $329.17 price cap. • The 2027/28 Base Residual Auction cleared at the $333.44 price cap.
Market Performance:	Pennsylvania's average hourly LMPs were lower than the PJM average hourly LMP.
Emissions:	Pennsylvania's average CO_2 emissions slightly increased in 2025 compared to 2024 levels.

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PJM Service Area in Pennsylvania

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Planning

Generation Portfolio Analysis

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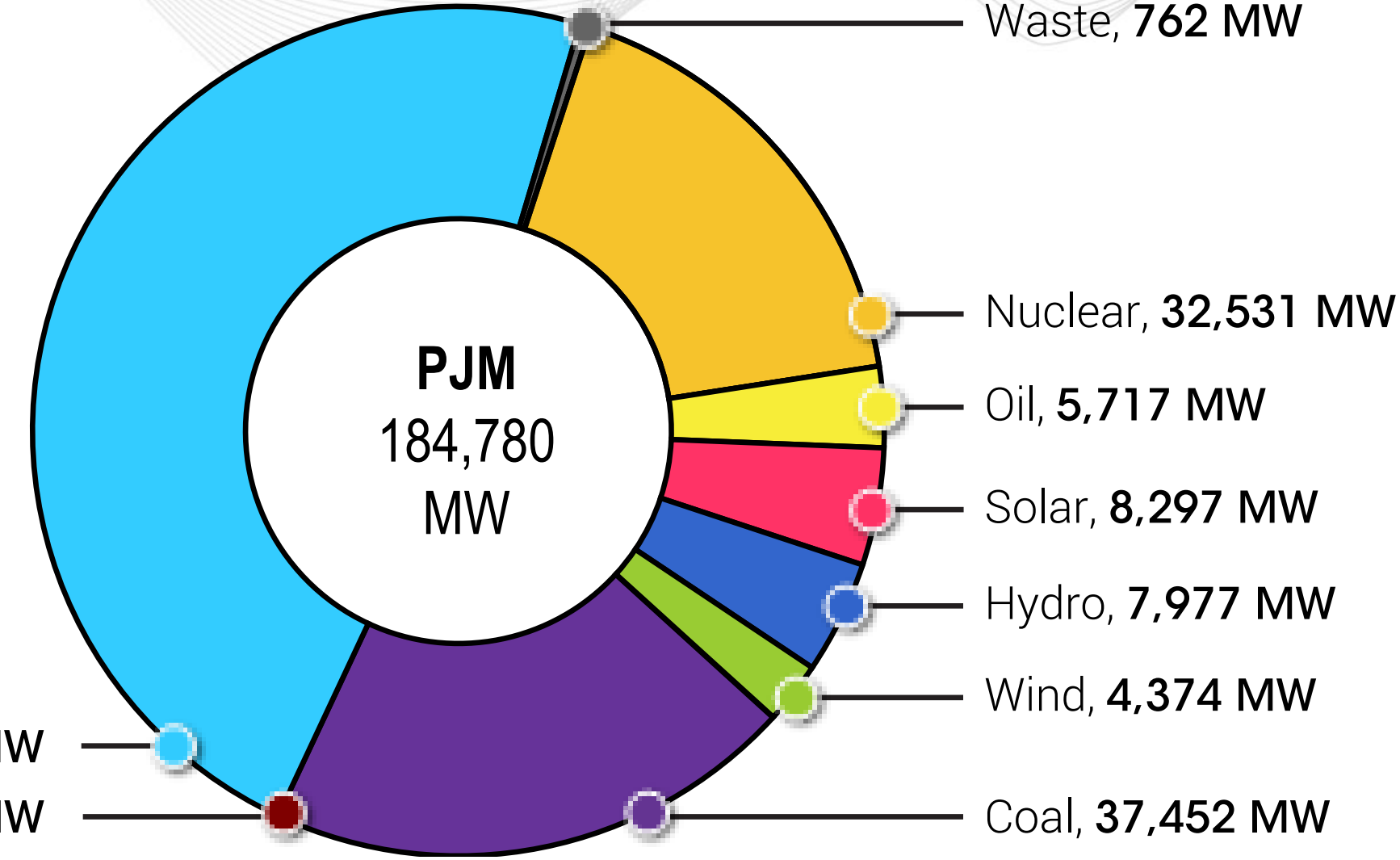
PJM Existing Installed Capacity Mix

(CIRs – as of Dec. 31, 2025)



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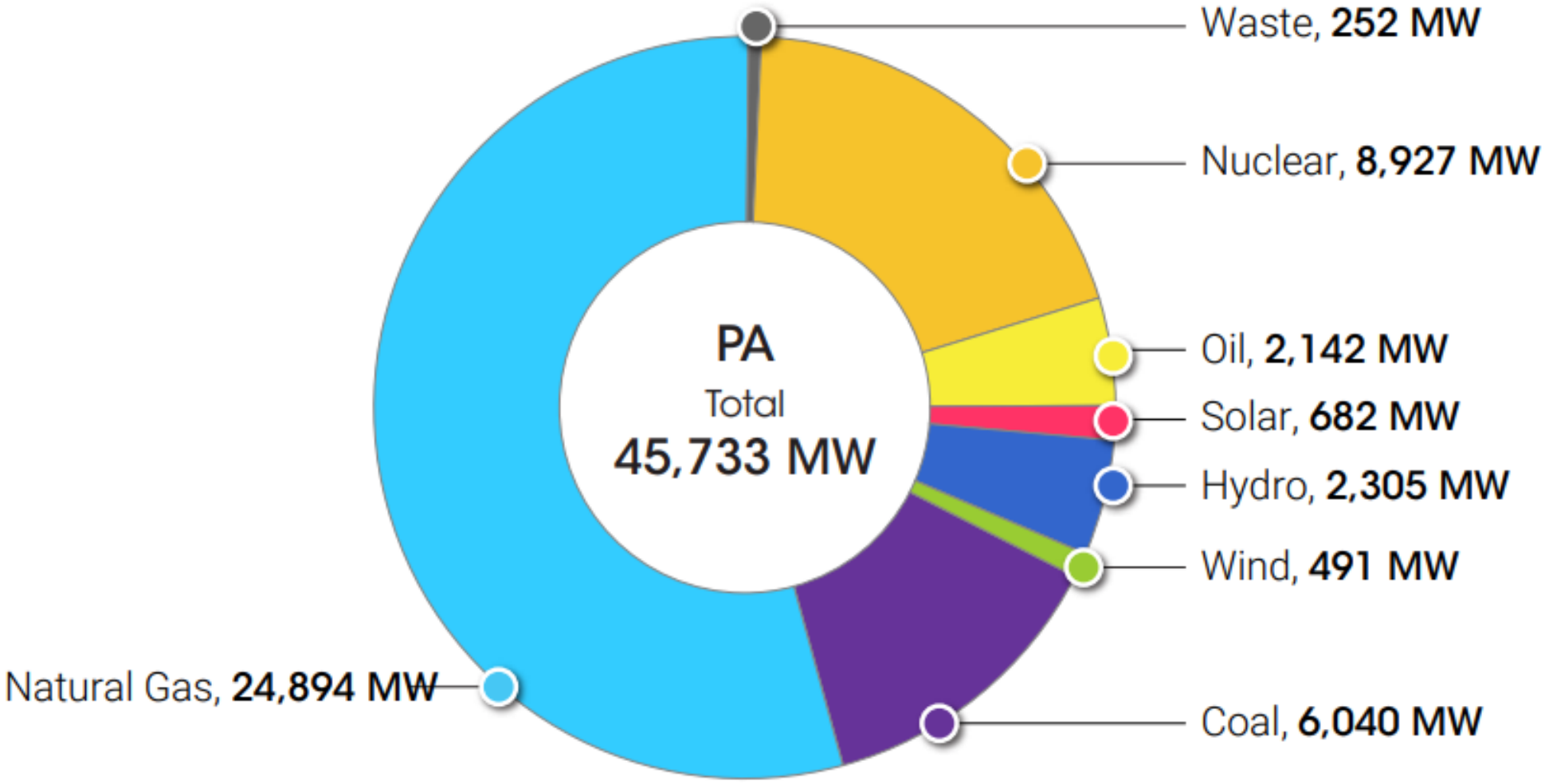
Pennsylvania – Existing Installed Capacity (MW) by Fuel Type

(CIRs - as of Dec. 31, 2025)



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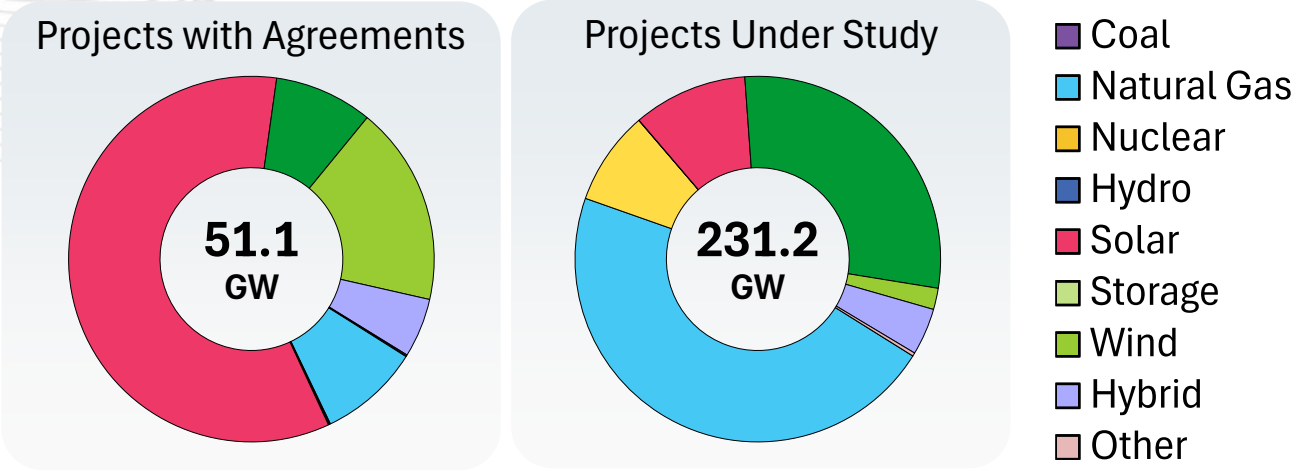
PJM – Queued Capacity (Nameplate) by Fuel Type

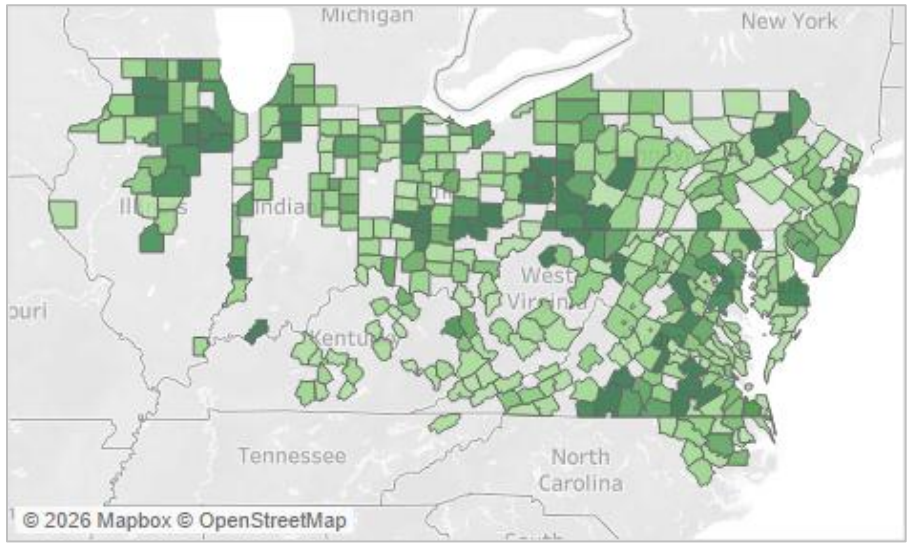
(Projects with agreements and projects under study [“Active”], as of August 3, 2026)

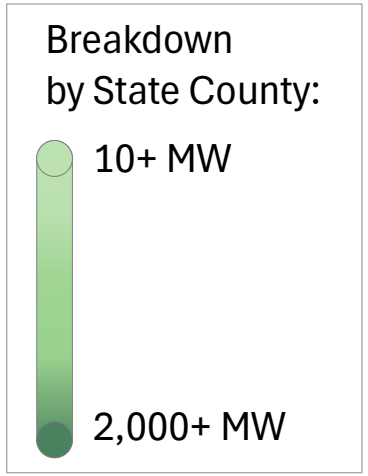
Project Count:

Fuel	Agreements	Studies
Coal	1	5
Natural gas	14	183
Nuclear	1	30
Hydro	1	5
Solar	329	262
Storage	61	371
Wind	34	65
Hybrid	24	57
Other	1	7
Total	**466**	**985**

MW Breakdown:







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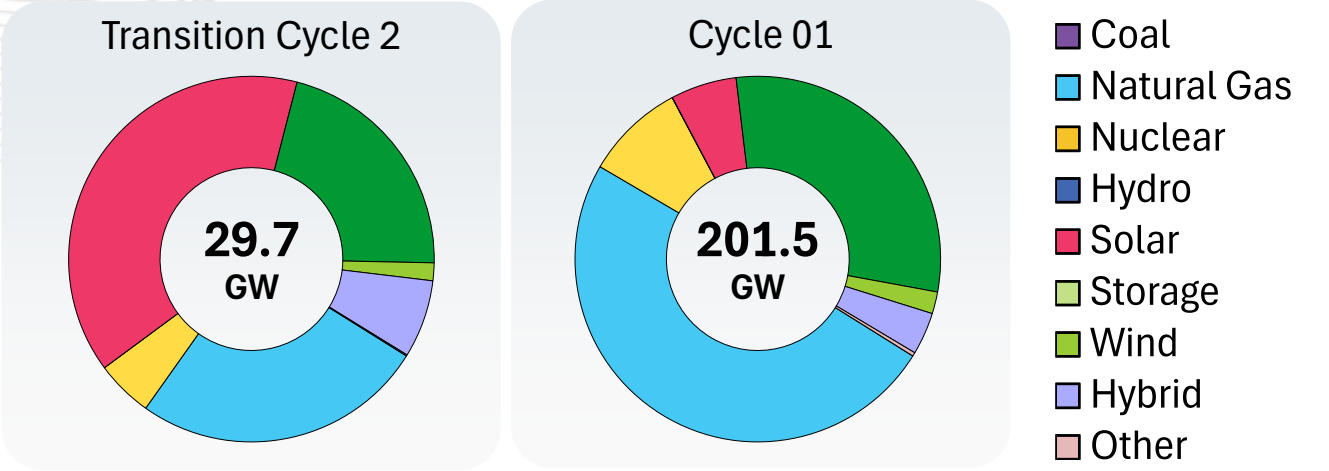
PJM – Queued Capacity (Nameplate) by Fuel Type

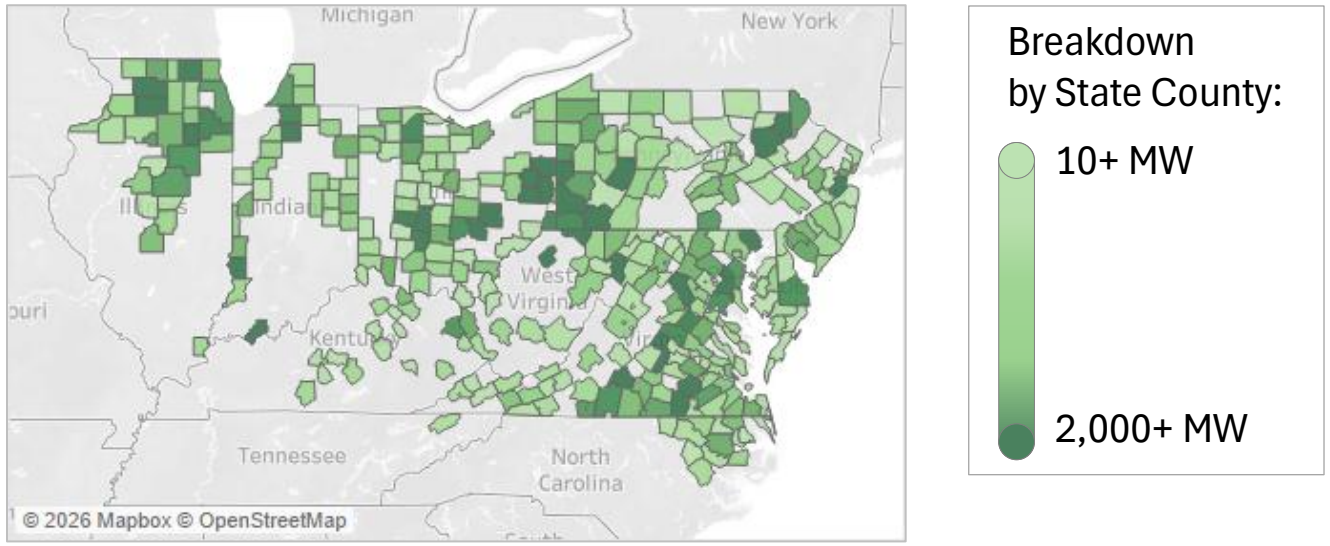
(Projects under study [“Active” in TC2 and Cycle 1], as of August 3, 2026)

Project Count:

Fuel	Transition Cycle 2	Cycle 01
Coal	1	4
Natural gas	36	147
Nuclear	5	25
Hydro	-	5
Solar	145	117
Storage	57	314
Wind	4	61
Hybrid	20	37
Other	2	5
Total	**270**	**715**

MW Breakdown:





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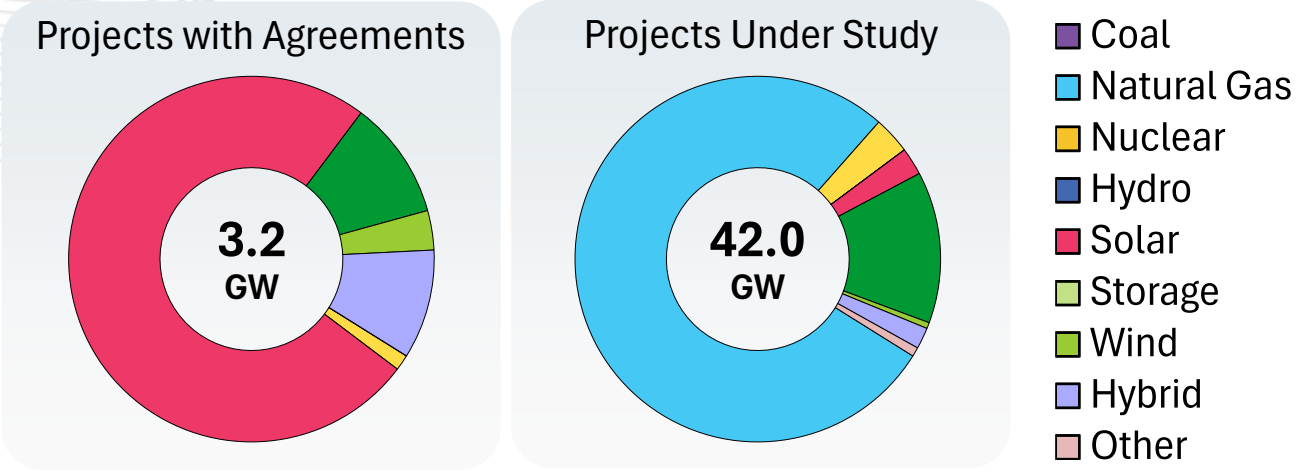
Pennsylvania – Queued Capacity (Nameplate) by Fuel Type

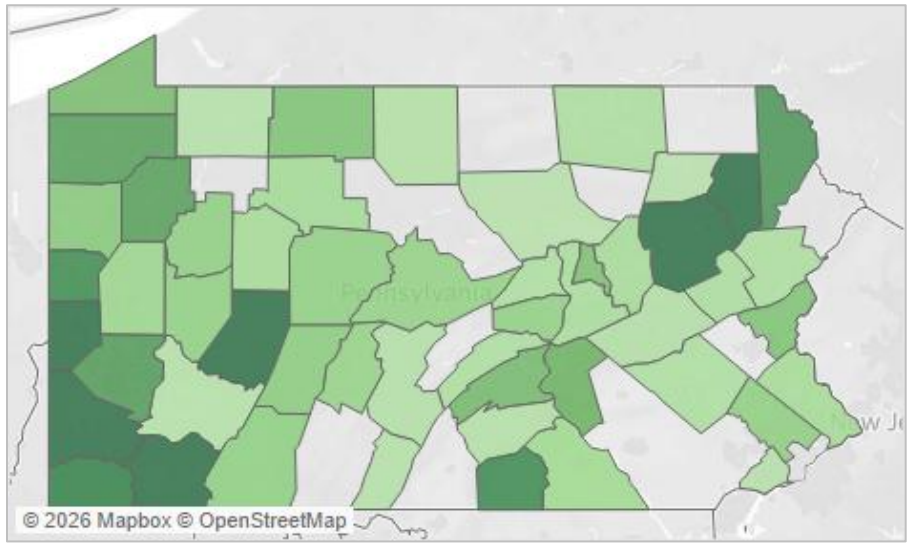
(Projects with agreements and projects under study [“Active”], as of August 3, 2026)

Project Count:

Fuel	Agreements	Studies
Coal	-	-
Natural gas	-	36
Nuclear	1	4
Hydro	-	1
Solar	75	23
Storage	3	25
Wind	1	9
Hybrid	4	7
Other	-	3
Total	**84**	**108**

MW Breakdown:





Breakdown by State County:

10+ MW

2,000+ MW

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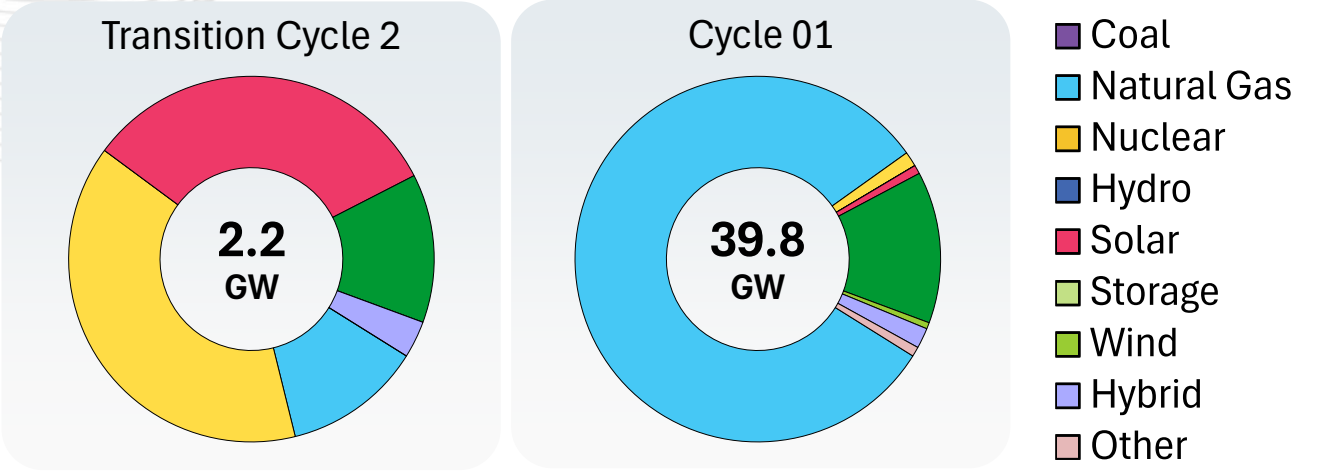
Pennsylvania – Queued Capacity (Nameplate) by Fuel Type

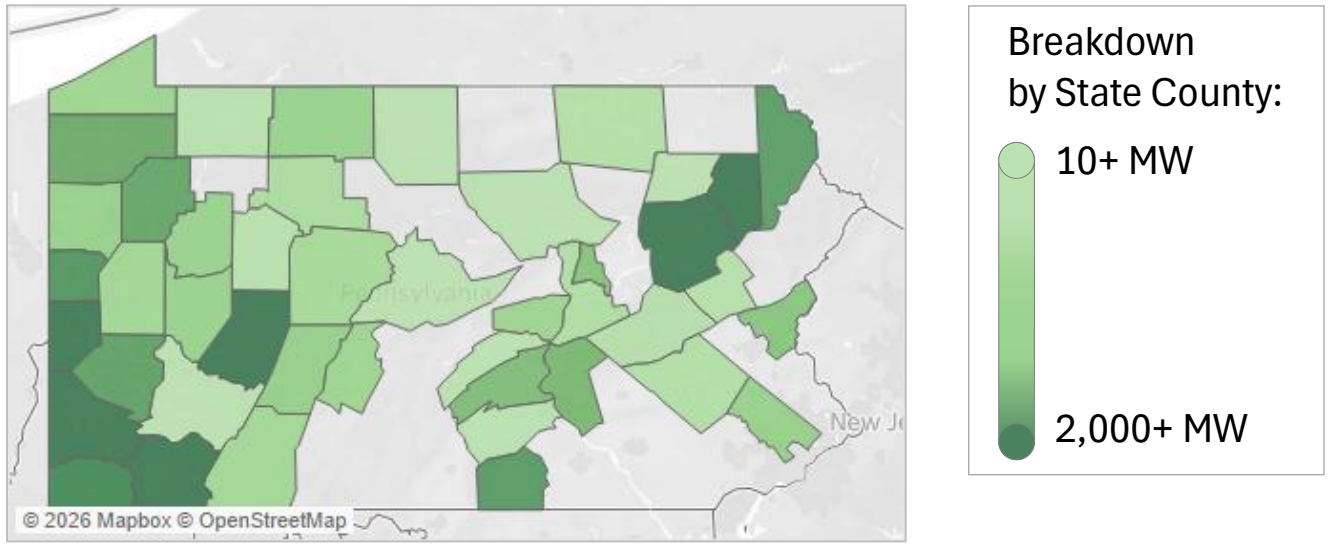
(Projects under study [“Active” in TC2 and Cycle 1], as of August 3, 2026)

Project Count:

Fuel	Transition Cycle 2	Cycle 01
Coal	-	-
Natural gas	1	35
Nuclear	1	3
Hydro	-	1
Solar	18	5
Storage	3	22
Wind	1	8
Hybrid	2	5
Other	-	3
Total	**26**	**82**

MW Breakdown:





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Pennsylvania – 2025 Generator Deactivations

Pennsylvania had no generators deactivate or give a notice of deactivation in 2025.

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Planning

Transmission Infrastructure Analysis

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For reporting purposes, the 2025 state infrastructure reports provide maps displaying all baseline, network, and supplemental projects for the respective state. The reports also include aggregated project costs for each type of project within each state. The costs listed in the state infrastructure reports and 2025 Annual RTEP Report are not indicative of each project's cost allocation.

For a detailed list of each project shown on a state's project map, please see that state's section in the **2025 Annual RTEP Report** on PJM.com: https://www.pjm.com/-/media/DotCom/library/reports-notices/2025-rtep/2025-rtep-report.pdf

The complete list of all RTEP projects in PJM, including those from prior years, can be found at the **RTEP Upgrades & Status – Transmission Construction Status** page on PJM.com: https://www.pjm.com/planning/m/project-construction.

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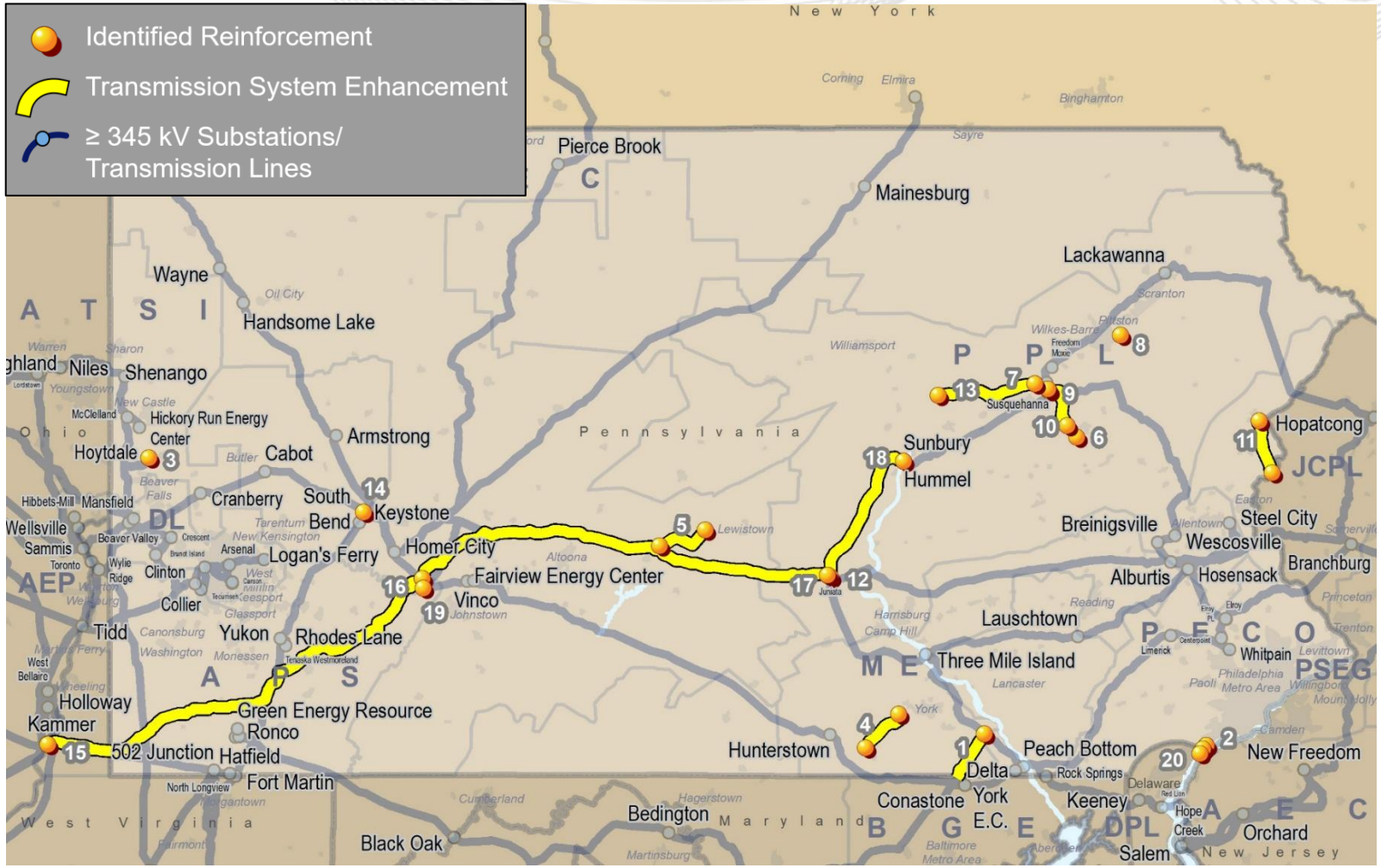
Pennsylvania – RTEP Baseline Projects



The 2025 RTEP has $2.424 billion in baseline projects located in Pennsylvania.

Note: Baseline upgrades are those that resolve a system reliability criteria violation. Baseline projects listed in the annual RTEP report reflect project costs within a specific location and are not indicative of the project's cost allocation.

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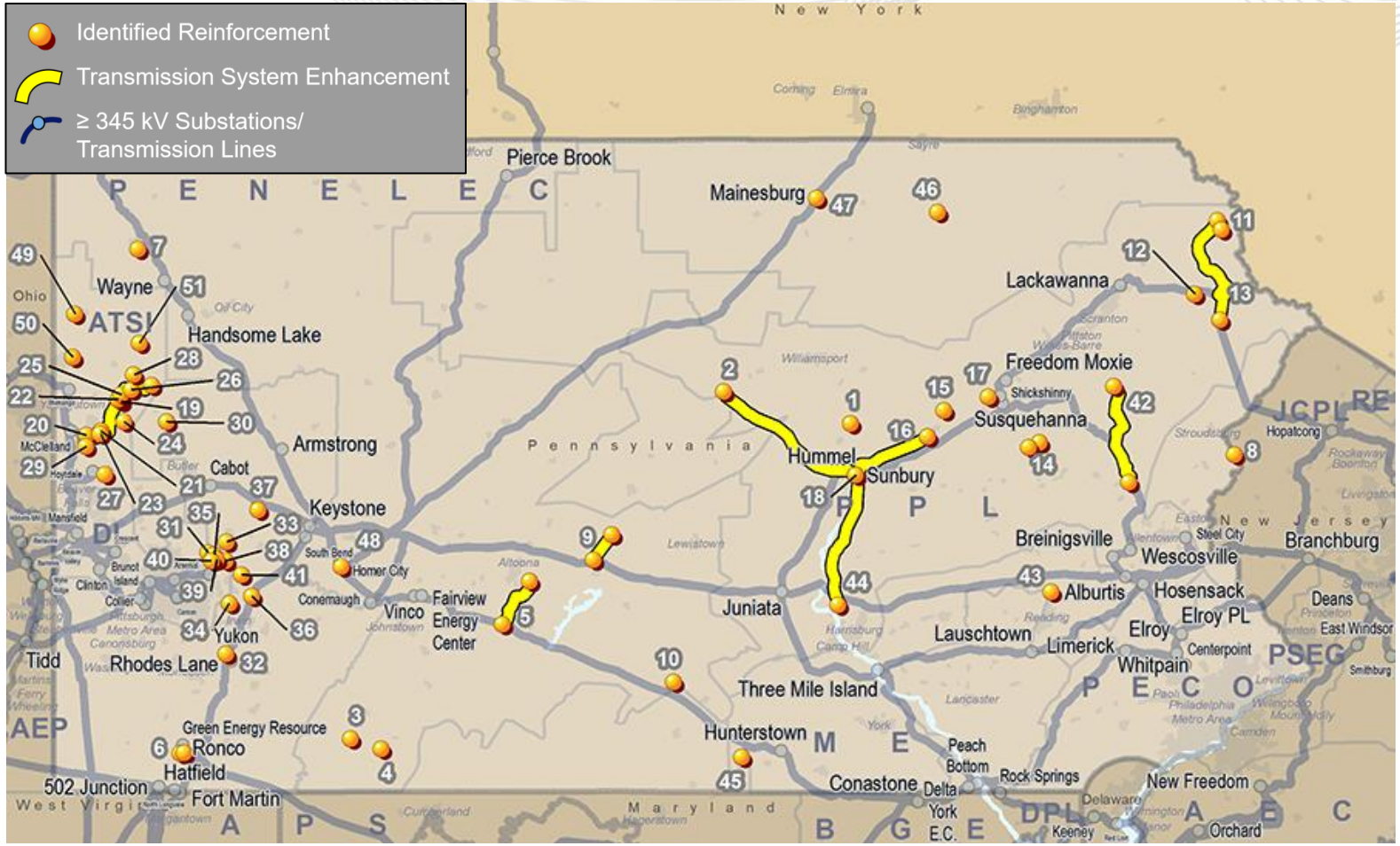
Pennsylvania – RTEP Network Projects



The 2025 RTEP has $22.93 million in network projects located in Pennsylvania.

Note: Network projects are new or upgraded facilities required primarily to eliminate reliability criteria violations caused by proposed generation, merchant transmission or long-term firm transmission service requests, as well as certain direct connection facilities required to interconnect proposed generation projects. The costs of network projects are borne by the interconnection customer.

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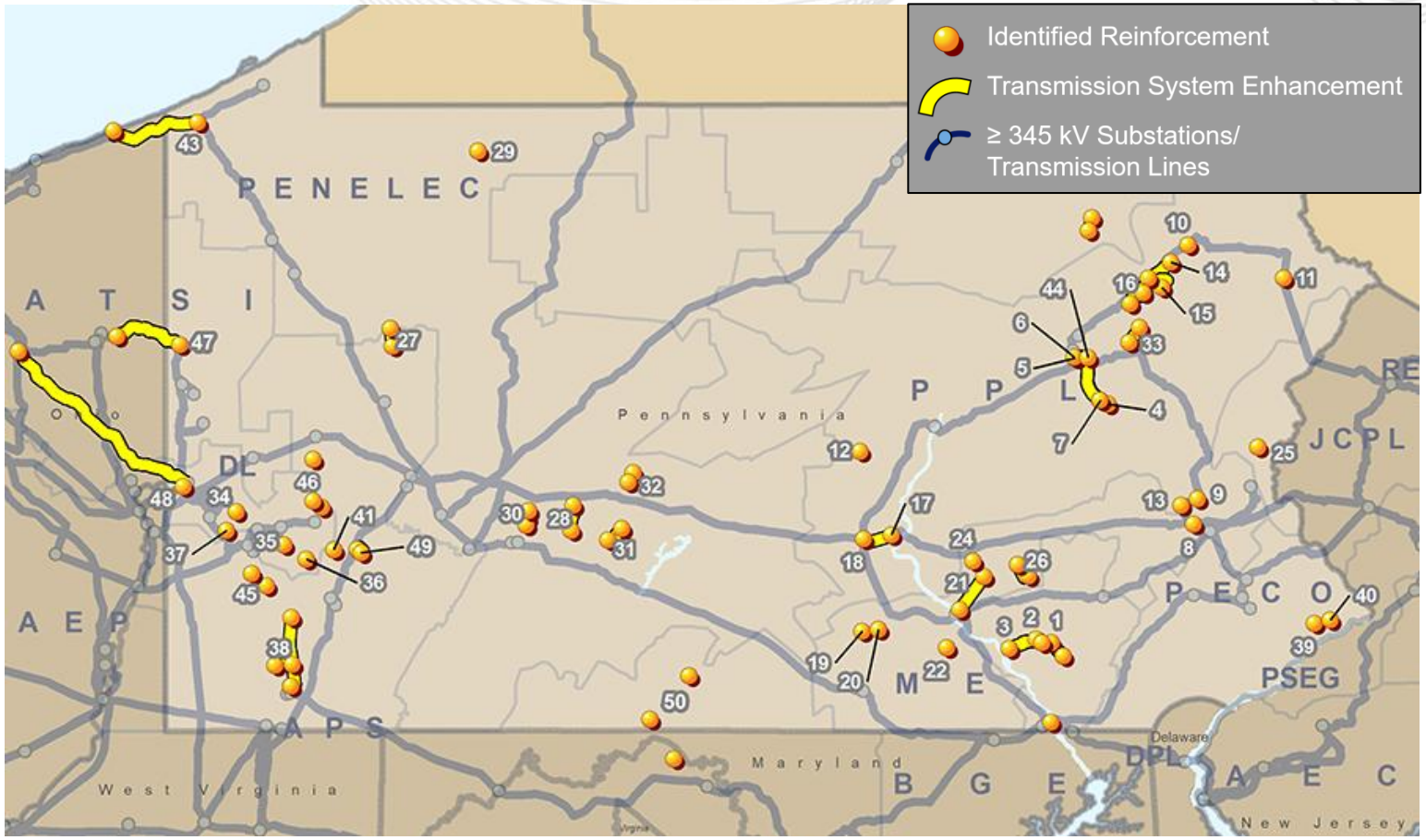
Pennsylvania – TO Supplemental Projects



The 2025 RTEP has $1.109 billion in supplemental projects located in Pennsylvania.

Note: Supplemental projects are transmission expansions or enhancements that are not required for compliance with PJM criteria and are not state public policy projects according to the PJM Operating Agreement. These projects are used as inputs to RTEP models, but are not required for reliability, economic efficiency or operational performance criteria, as determined by PJM.

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Planning
Load Forecast

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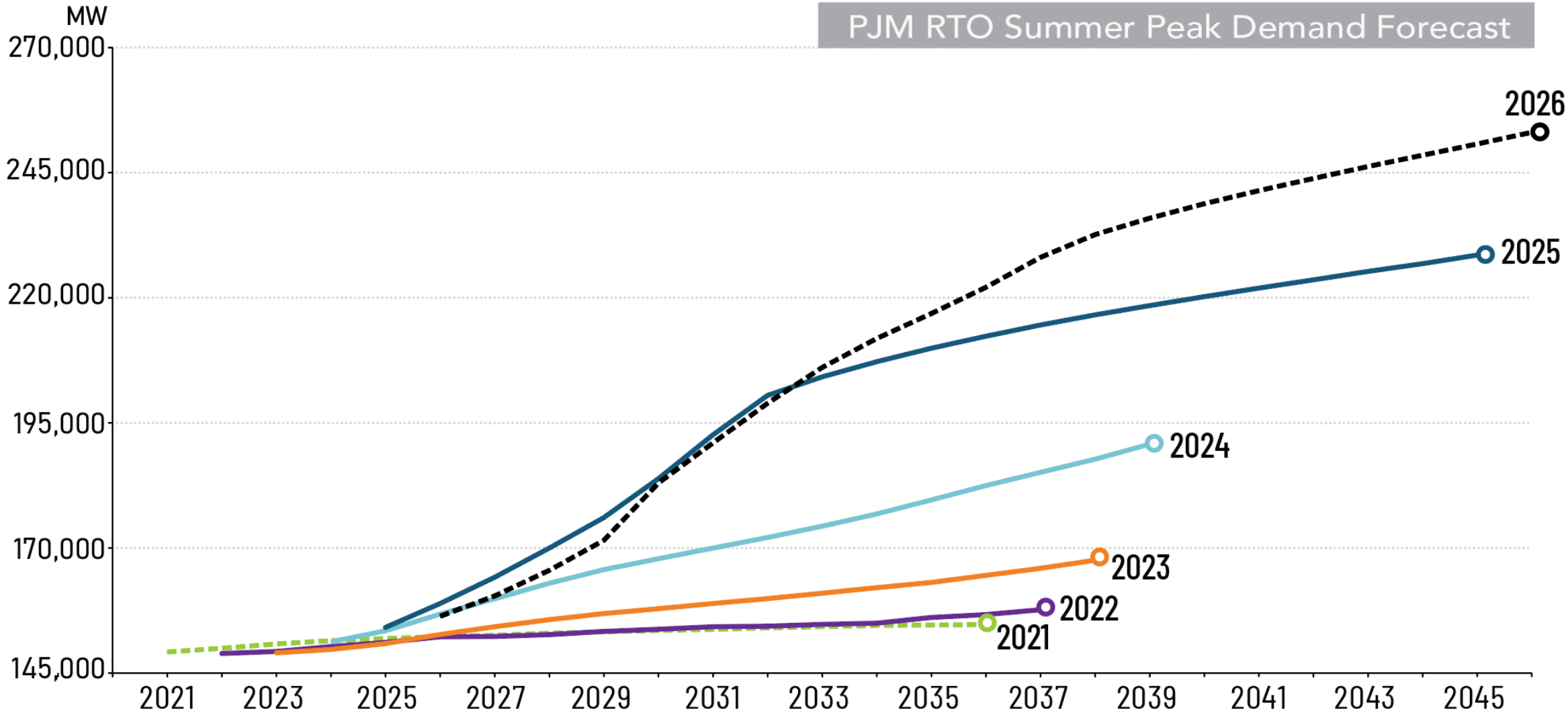
Electricity Demand Growth
(2021–2026)



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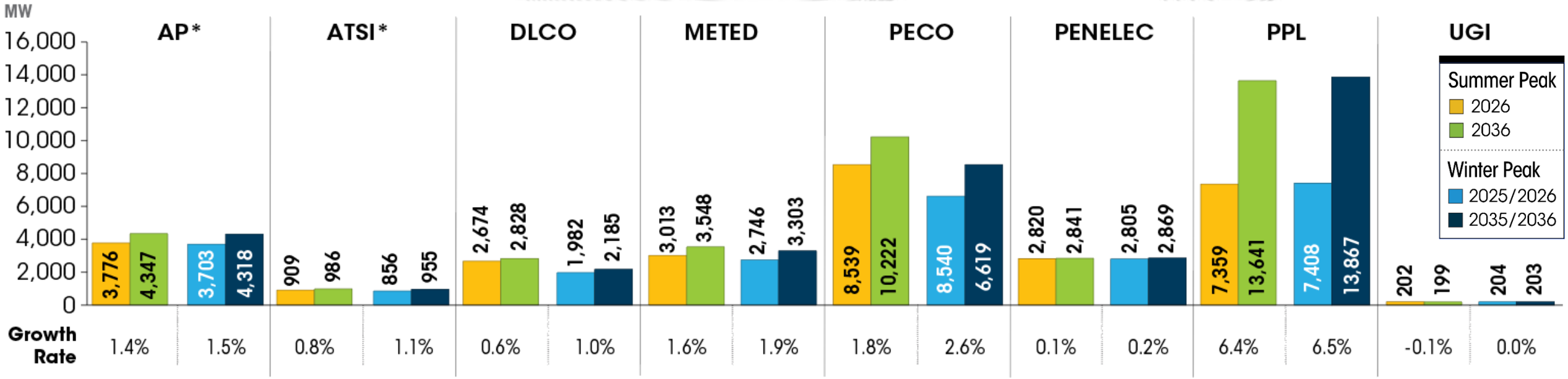
Pennsylvania – 2026 Load Forecast Report



*Serves load outside PA

The summer and winter peak megawatt values reflect the estimated amount of forecast load to be served by each transmission owner in the noted state/district. Estimated amounts were calculated based on the average share of each transmission owner's real-time summer and winter peak load in those areas over the past five years.

PJM RTO Summer Peak

2026	2036
156,373 MW	222,106 MW

Growth Rate 3.6%

PJM RTO Winter Peak

2025/2026	2035/2036
137,670 MW	204,650 MW

Growth Rate 4.0%

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Pennsylvania – Summer Peak Large Load Adjustments

(PJM 2026 Load Forecast)

	Zone	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
PA	AP	-	-	-	-	151	219	367	386	386	386
	ATSI	-	6	18	18	31	45	55	55	55	55
	DLCO	-	-	-	-	46	75	87	87	87	87
	METED	-	-	-	10	75	75	126	187	234	234
	PECO	17	88	281	517	824	1,146	1,414	1,560	1,664	1,698
	PENELEC	-	-	-	-	-	-	-	-	-	-
	PPL	189	394	1,274	1,876	4,996	5,906	6,241	6,285	6,284	6,282
	UGI	-	-	-	-	-	-	-	-	-	-
PA TOTAL (MW)		206	488	1,573	2,421	6,123	7,466	8,290	8,560	8,710	8,742
PJM TOTAL (MW)		11,479	15,866	21,290	27,371	38,815	46,648	53,958	60,267	65,050	68,977

	Zone	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
PA	AP	386	386	386	386	386	386	386	386	386	386
	ATSI	55	55	55	55	55	55	55	55	55	55
	DLCO	87	87	87	87	87	87	87	87	87	87
	METED	233	233	233	233	234	233	233	234	234	234
	PECO	1,697	1,698	1,698	1,698	1,698	1,698	1,699	1,699	1,700	1,701
	PENELEC	-	-	-	-	-	-	-	-	-	-
	PPL	6,279	6,278	6,279	6,280	6,281	6,279	6,279	6,278	6,281	6,283
	UGI	-	-	-	-	-	-	-	-	-	-
PA TOTAL (MW)		8,737	8,737	8,738	8,739	8,741	8,738	8,739	8,739	8,743	8,746
PJM TOTAL (MW)		72,608	77,029	79,982	81,527	82,656	83,609	84,416	85,128	85,818	86,511

Note: The listed total reflects both existing (2025) and forecasted large load adjustments. It does not include large loads that may exist but have not been submitted to PJM's load forecasting process as a large load adjustment.

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Markets

Market Analysis

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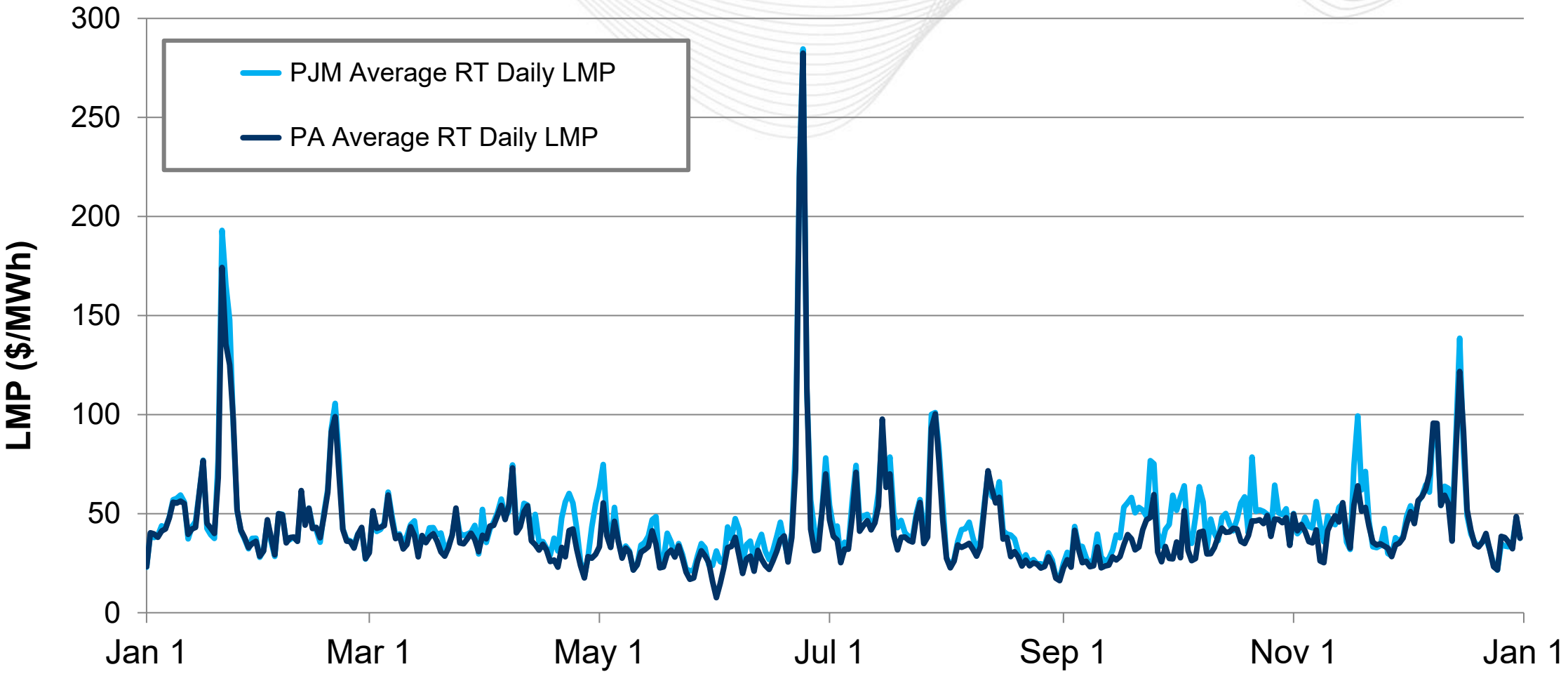
Pennsylvania – Average Daily LMP

(Jan. 1, 2025 – Dec. 31, 2025)



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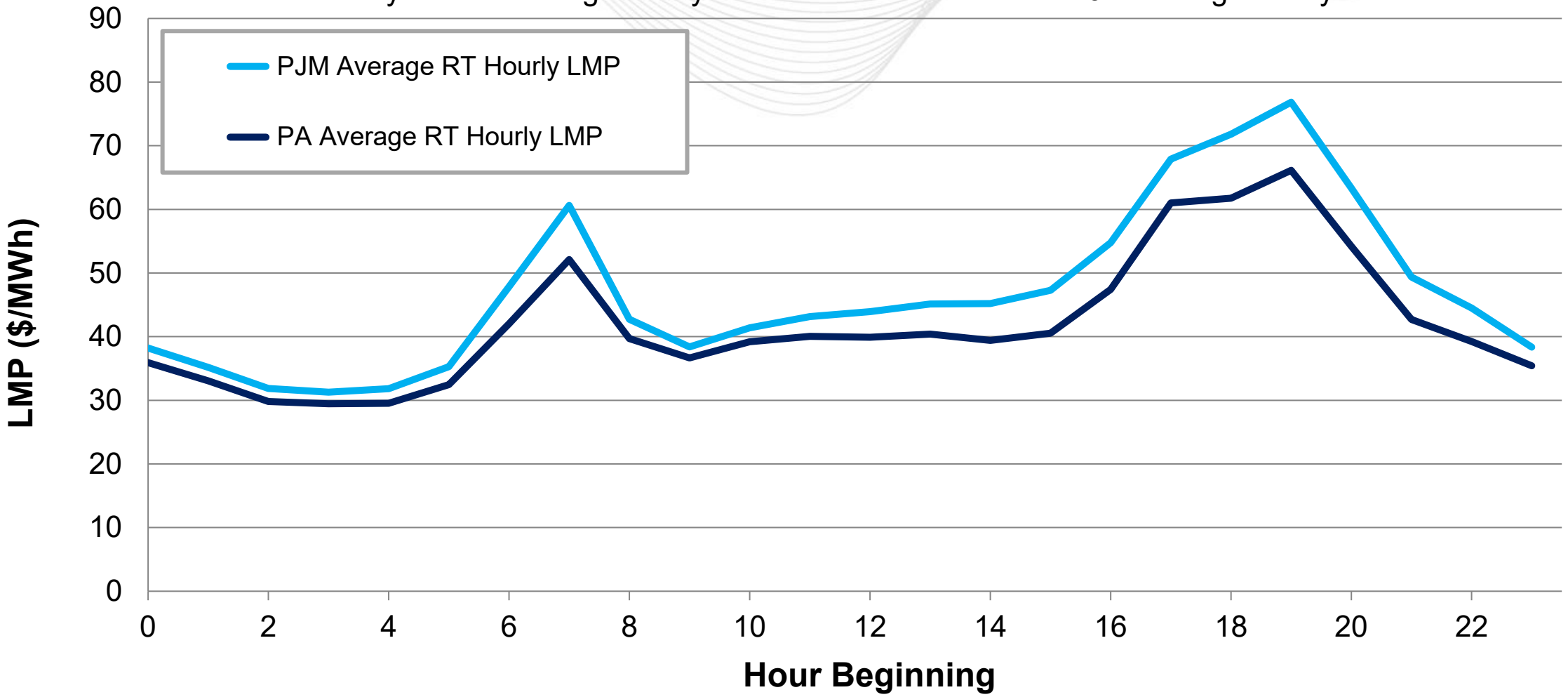
Pennsylvania – Average Hourly LMP

(Jan. 1, 2025– Dec. 31, 2025)

Pennsylvania's average hourly LMPs were lower than the PJM average hourly LMP.



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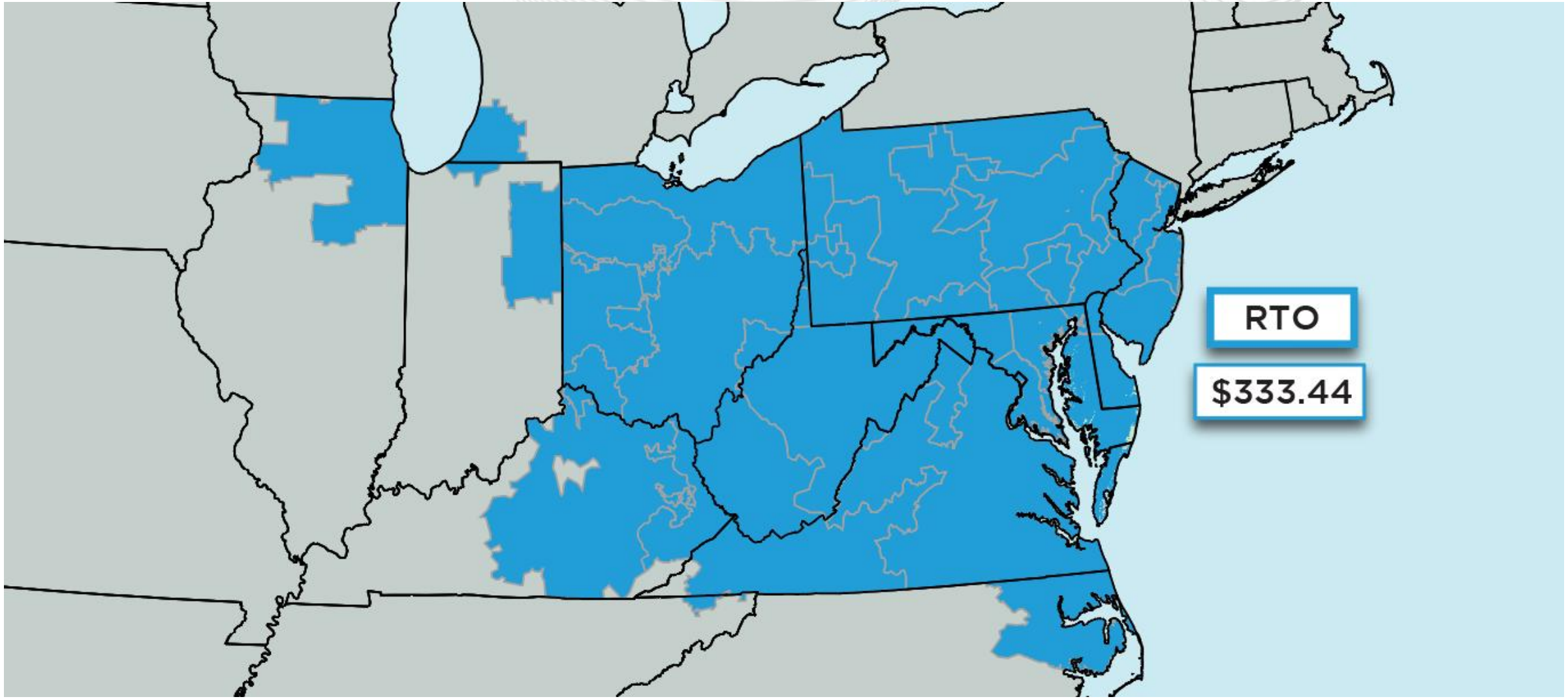
2027/28 Base Residual Auction Clearing Prices ($/MW-Day)



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2027/28 Cleared MW (UCAP) by Resource Type

CAPACITY PERFORMANCE

Cleared MW (UCAP)

Resource Type	ANNUAL	SUMMER	WINTER
Generation	127,179.5	-	268.6
DR	7,030.0	268.6	-
PRD	106.5	-	-
Total (MW)	**134,316.0**	**268.6**	**268.6**

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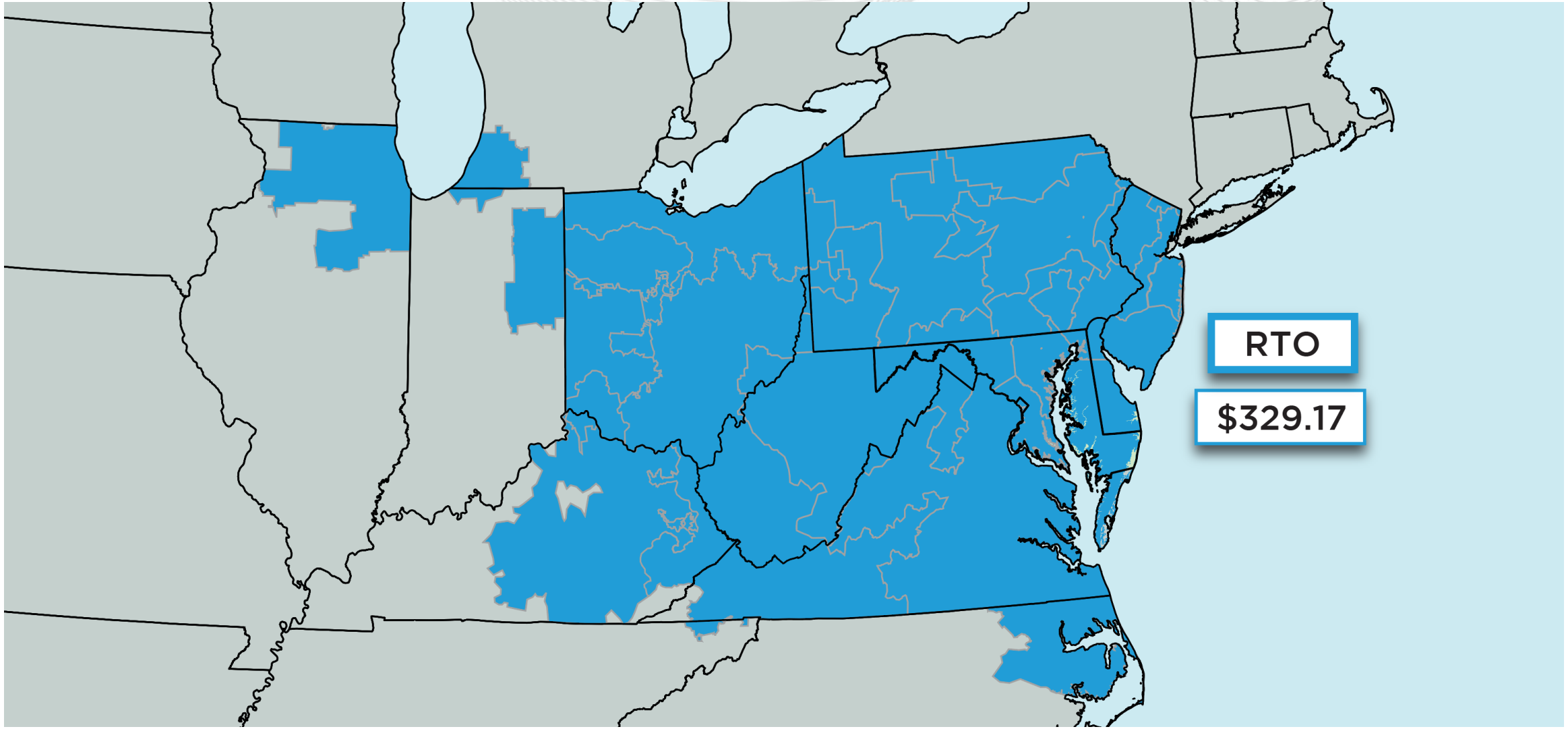
2026/27 Base Residual Auction Clearing Prices ($/MW-Day)



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2026/27 Cleared MW (UCAP) by Resource Type

CAPACITY PERFORMANCE

Cleared MW (UCAP)

Resource Type	ANNUAL	SUMMER	WINTER
Generation	128,674.7	-	170.8
DR	5,359.8	170.8	-
PRD	105.5	-	-
Total (MW)	**134,140.0**	**170.8**	**170.8**

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Operations

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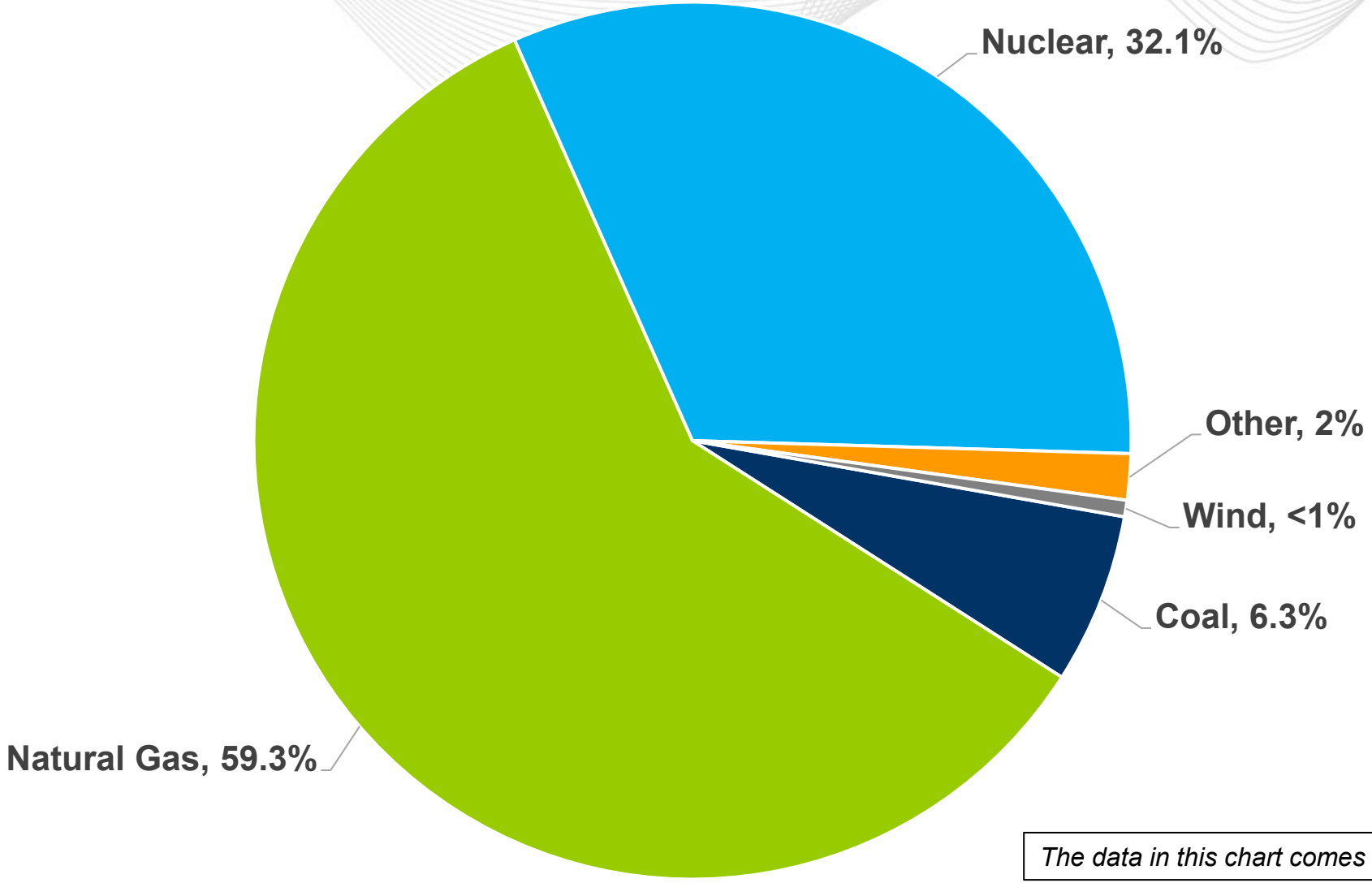
Pennsylvania – 2025 Generator Production



The data in this chart comes from EIA Form 923 (2025).

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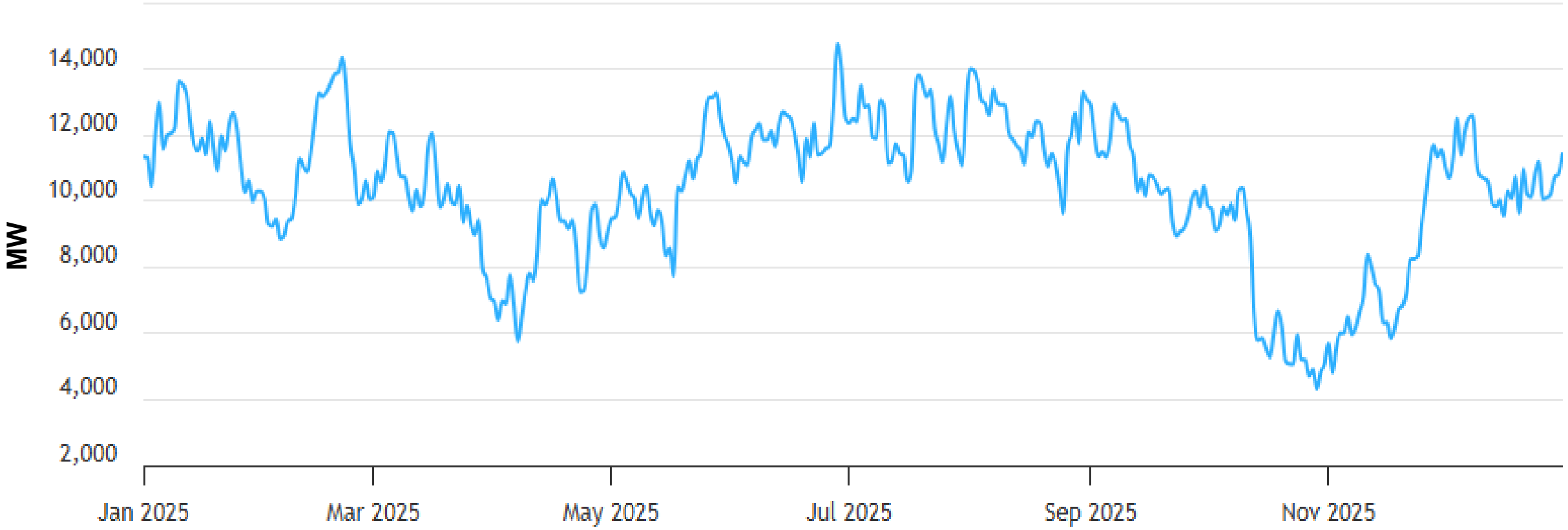
Pennsylvania – Net Energy Import/Export Trend

(Jan. 2025 – Dec. 2025)



Note: Positive values represent exports and negative values represent imports.

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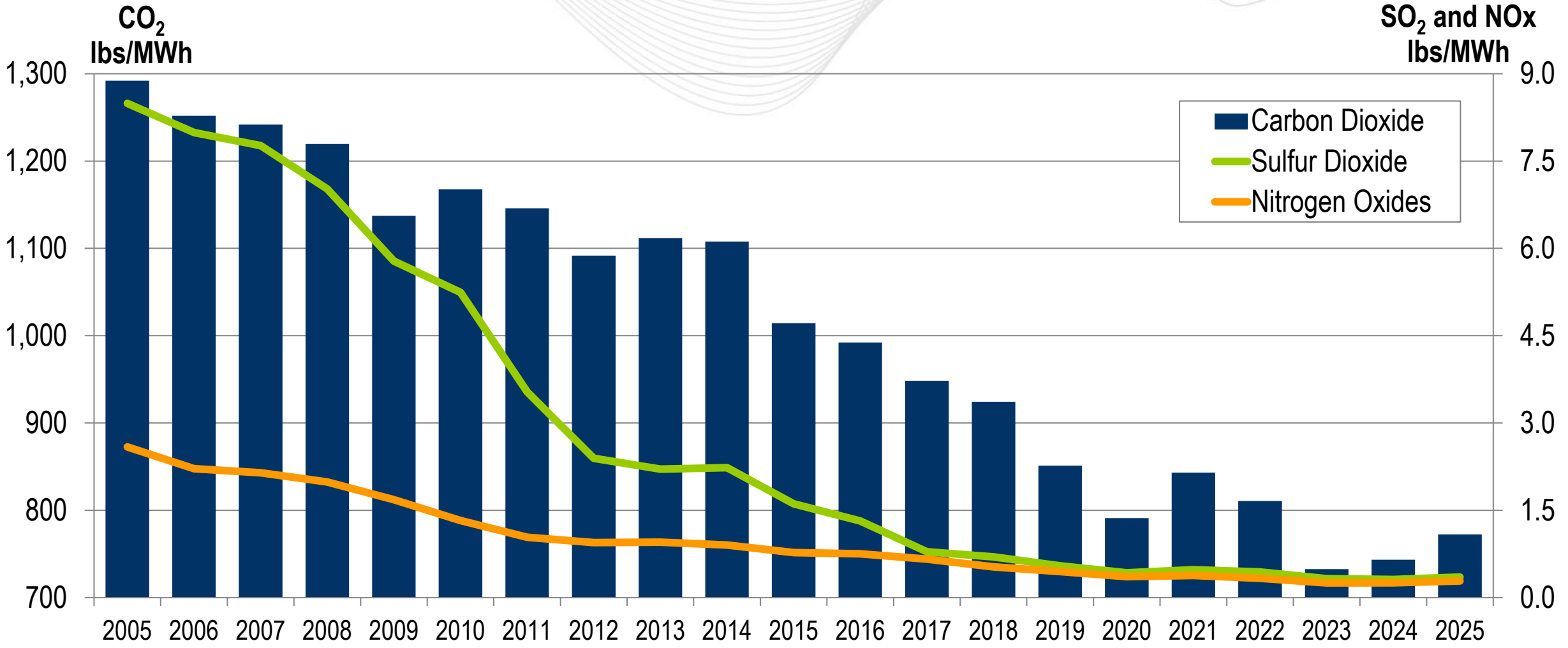
PJM System Average Emission Rates



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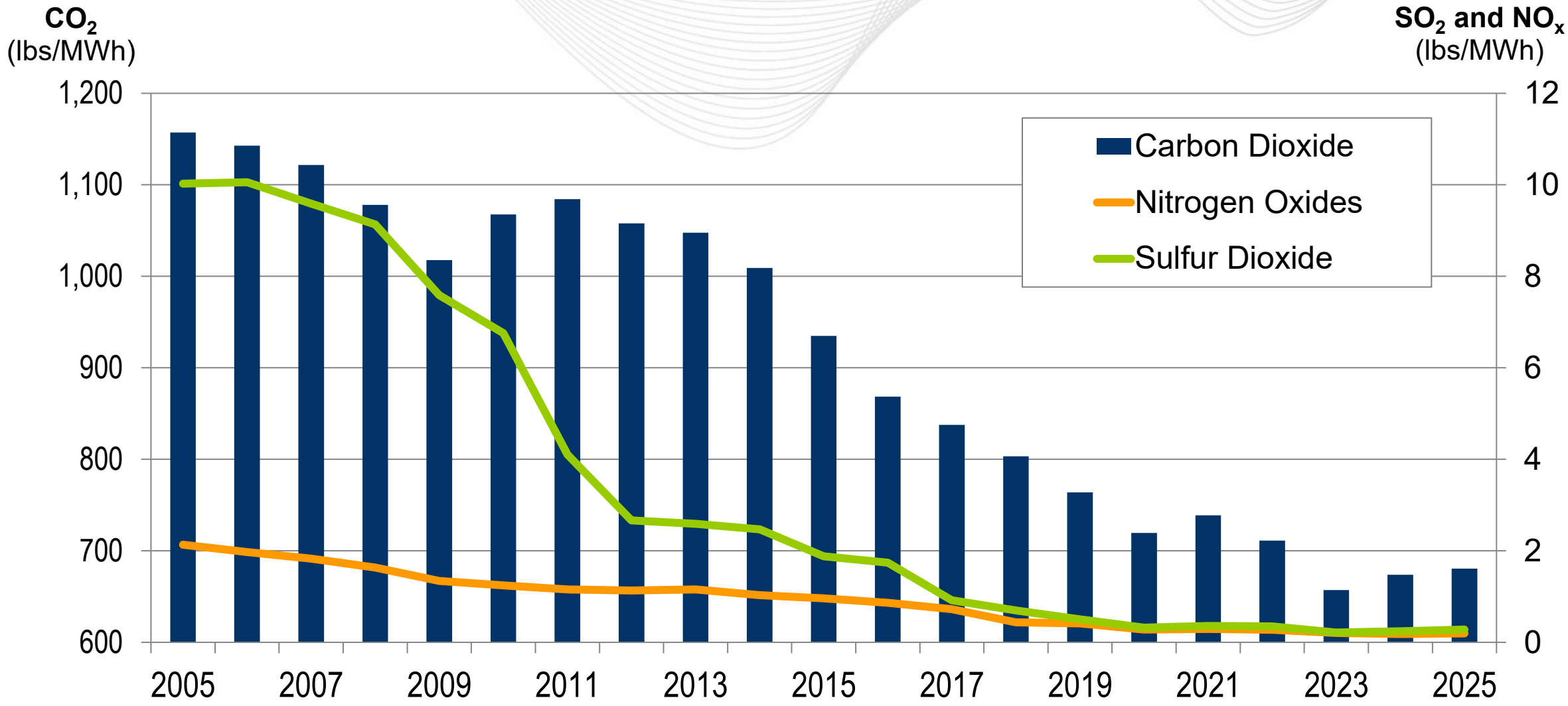
Pennsylvania – Average Emissions (lbs/MWh)

(Feb. 2026)



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Version History

- Version 1 – posted June 16, 2026 (original report)
- Version 2 – posted August 18, 2026 (updated queued capacity data)

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