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

June 2026

(updated August 2026)

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Executive Summary

2025 Virginia State Infrastructure Report

In the Virginia service territory:

Existing Capacity:	• In Virginia, natural gas is the most prominent type of capacity and represents 50% of the total installed capacity, followed by hydro, nuclear, and solar. • Across PJM, natural gas and coal are 48% and 20% of total installed capacity, while nuclear represents 18%.
Interconnection Requests:	Virginia currently has 45.4 GW of capacity under study in Transition Cycle 2 and Cycle 1.
Deactivations:	80 MW deactivated in Virginia in 2025.
RTEP 2025:	Virginia's 2025 RTEP project total represents approximately $7.16 billion in investment.

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Executive Summary

2025 Virginia State Infrastructure Report

In the Virginia service territory:

Load Forecast:	Virginia's summer peak load is projected to increase by 0.0% to 5.6% annually over the next ten years, while the winter peak is projected to increase by 0.1% to 5.3%, 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:	Virginia's average hourly LMPs were above the PJM average hourly LMP.
Emissions:	Virginia's average CO_2 emissions increased in 2025 compared to 2024 levels

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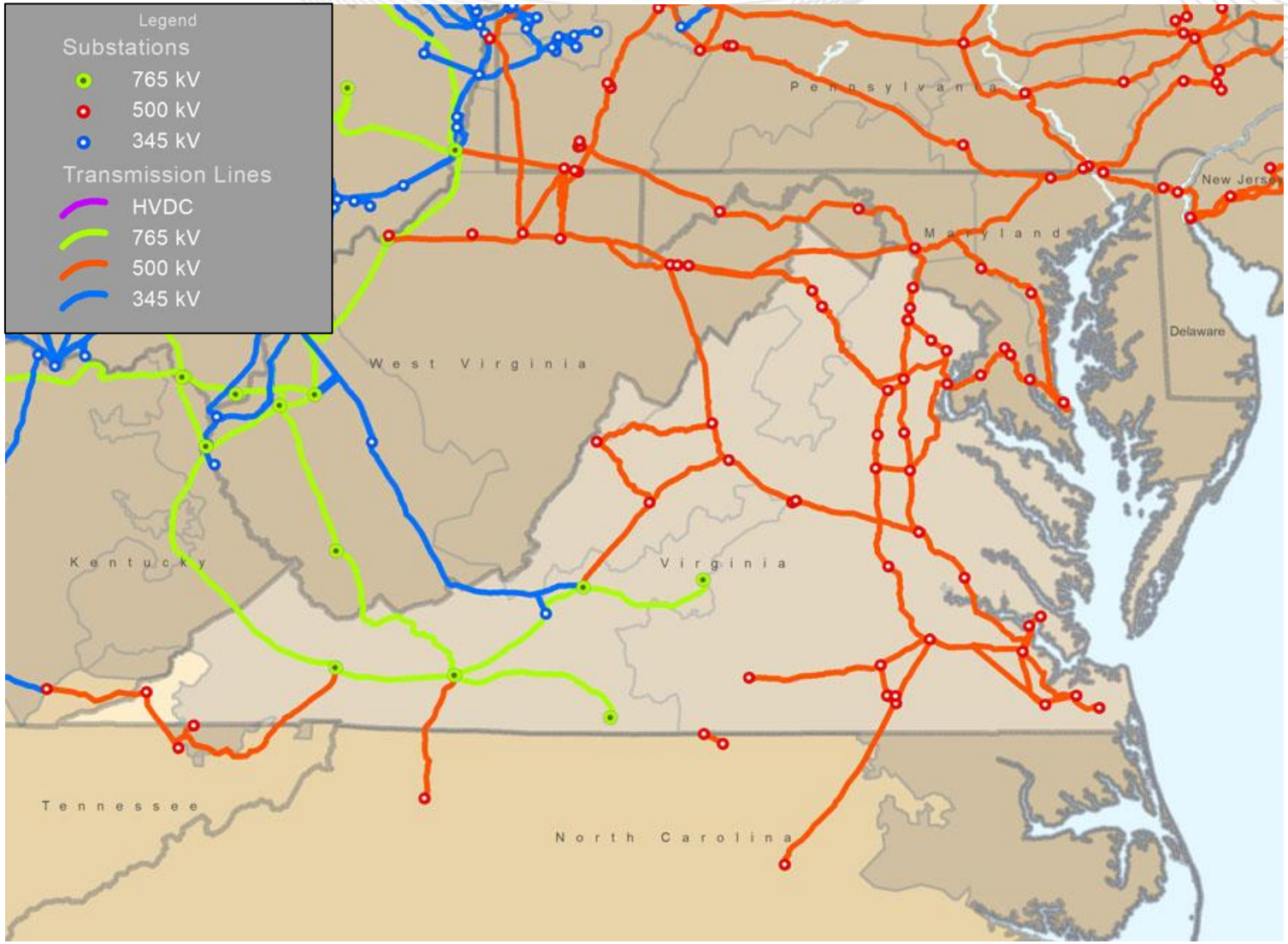
PJM Service Area in Virginia



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Planning

Generation Portfolio Analysis

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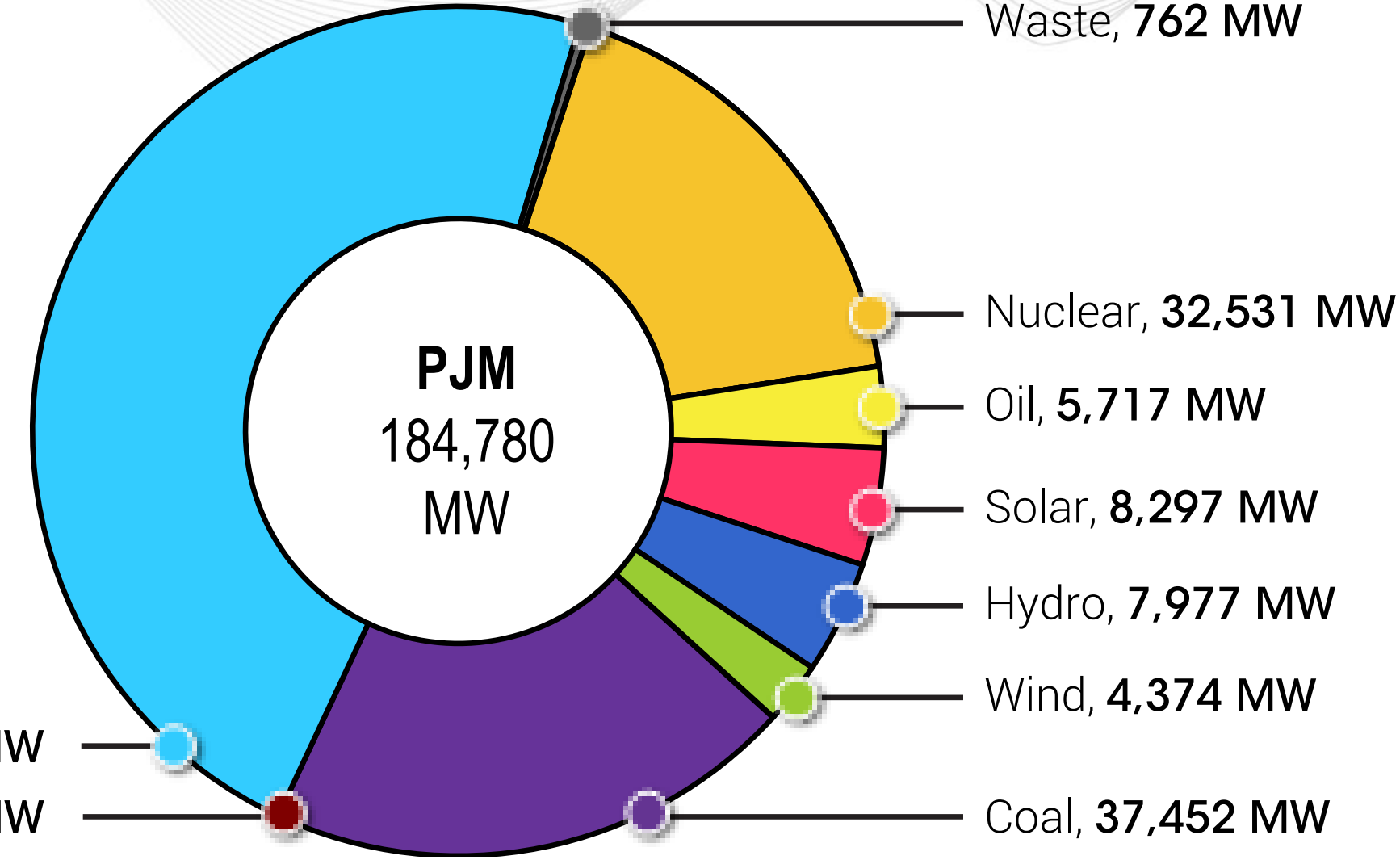
PJM Existing Installed Capacity Mix

(CIRs – as of Dec. 31, 2025)



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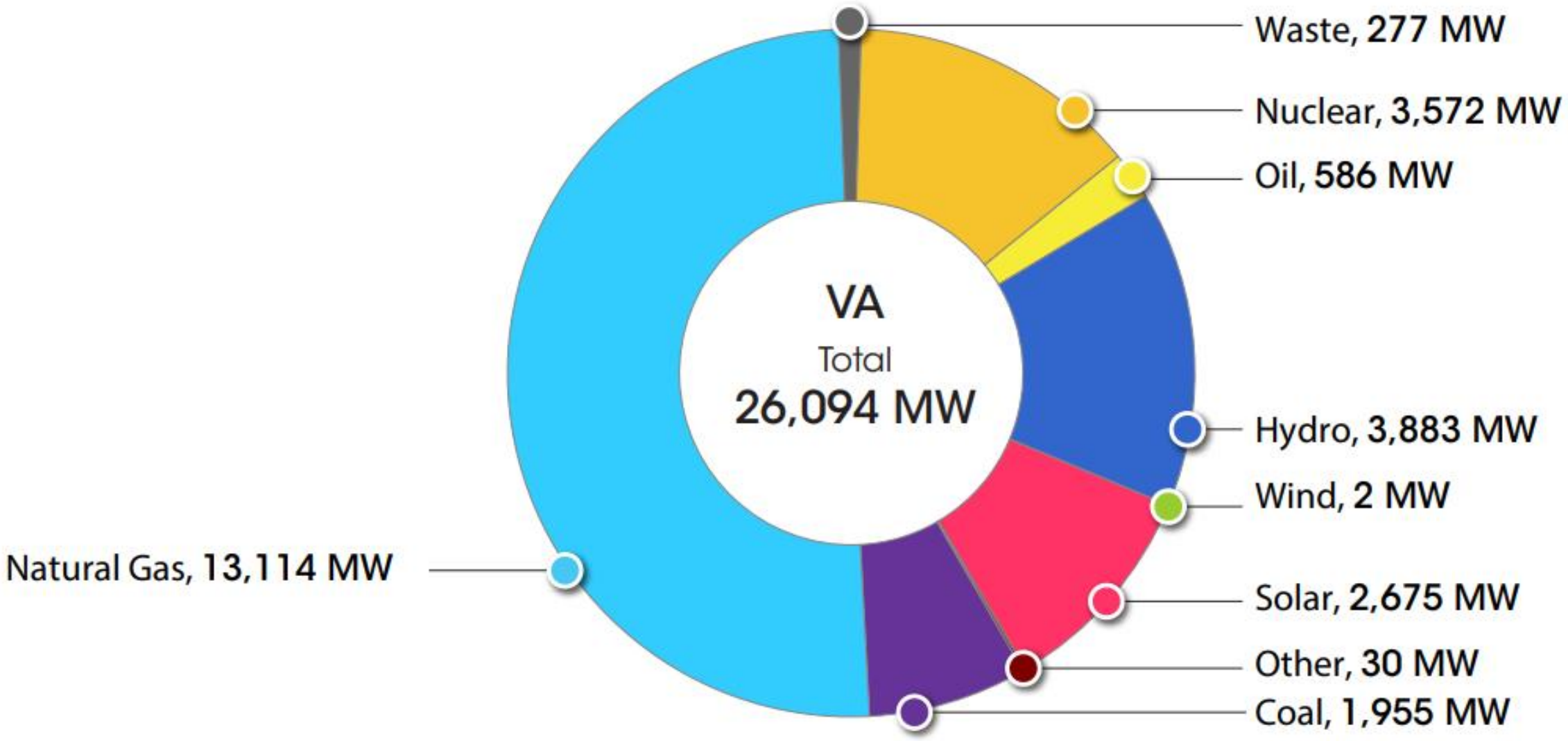
Virginia – Existing Installed Capacity (MW) by Fuel Type

(as of Dec. 31, 2025)



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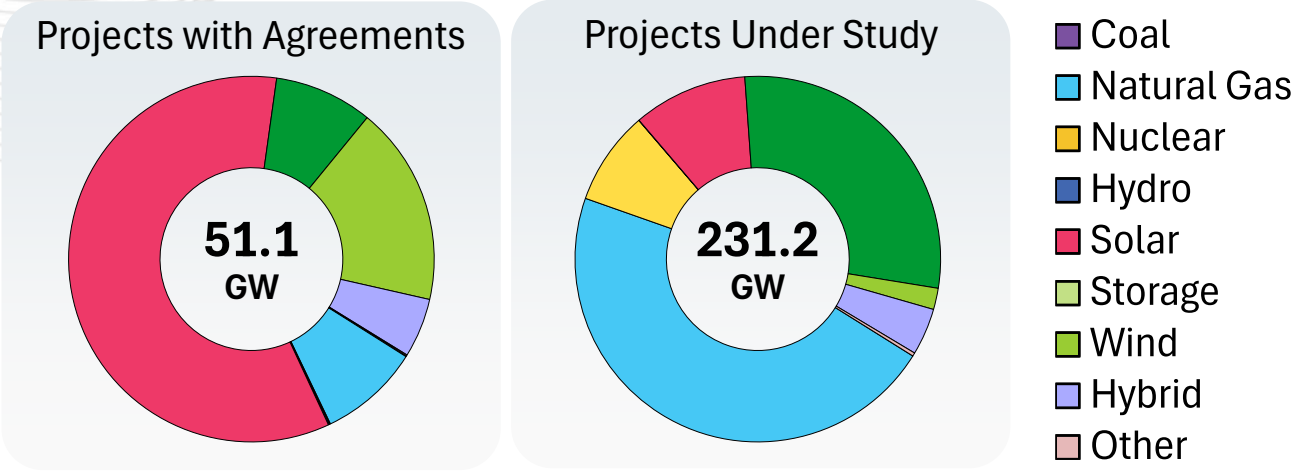
PJM – Queued Capacity (Nameplate) by Fuel Type

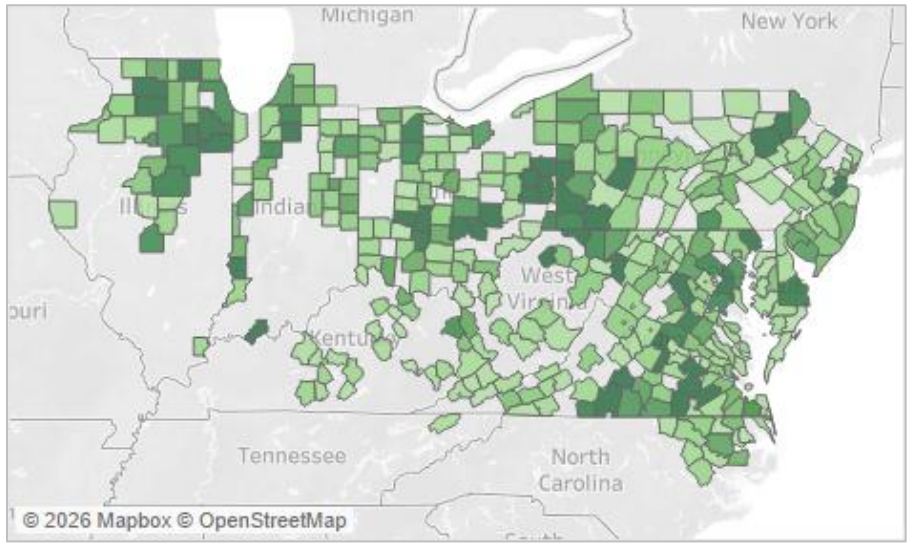
(Projects with agreements and projects under study [“Active”], as of August 3, 2026)

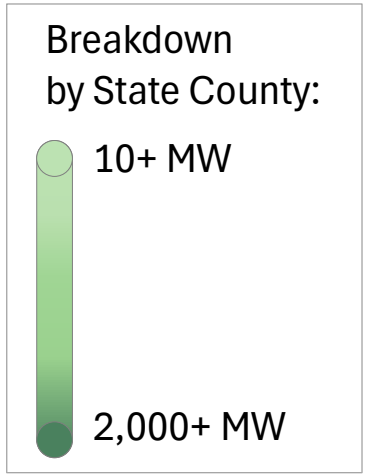
Project Count:

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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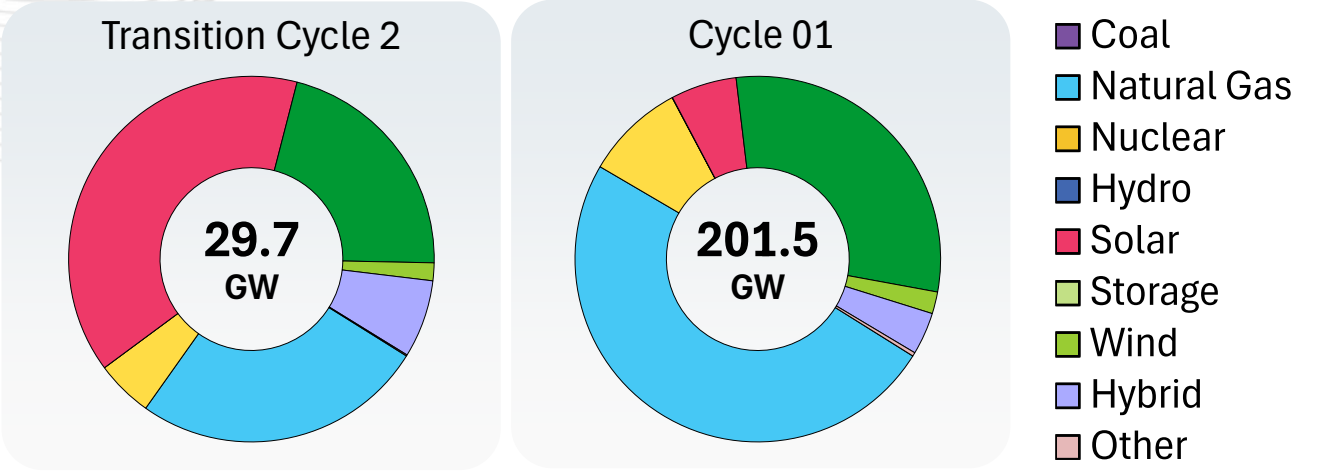
PJM – Queued Capacity (Nameplate) by Fuel Type

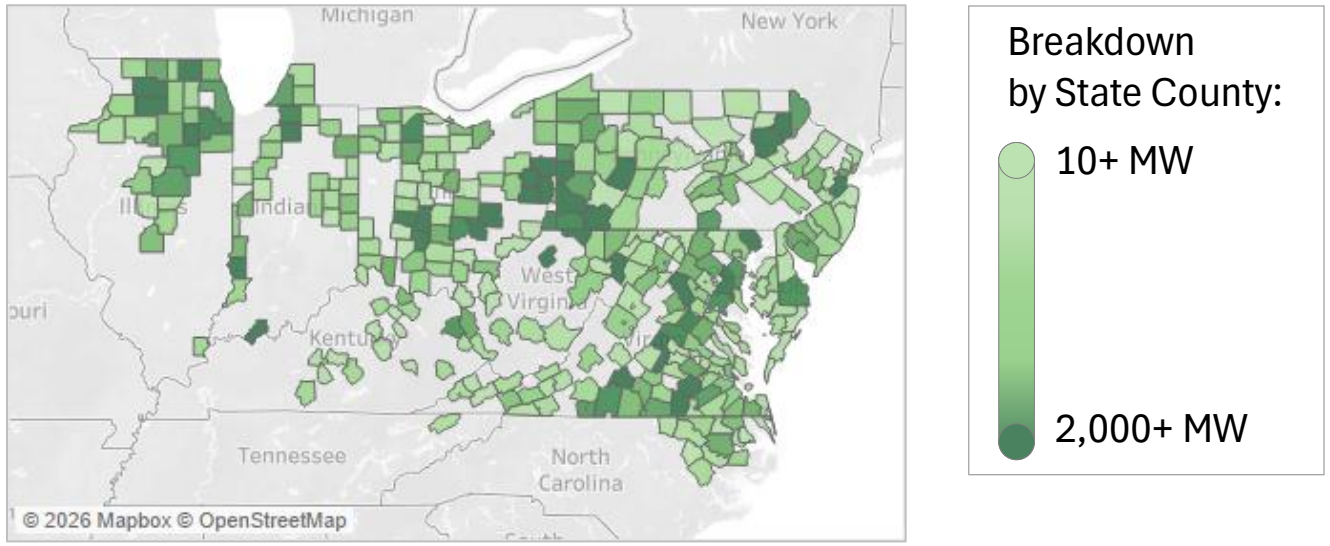
(Projects under study [“Active” in TC2 and Cycle 1], as of August 3, 2026)

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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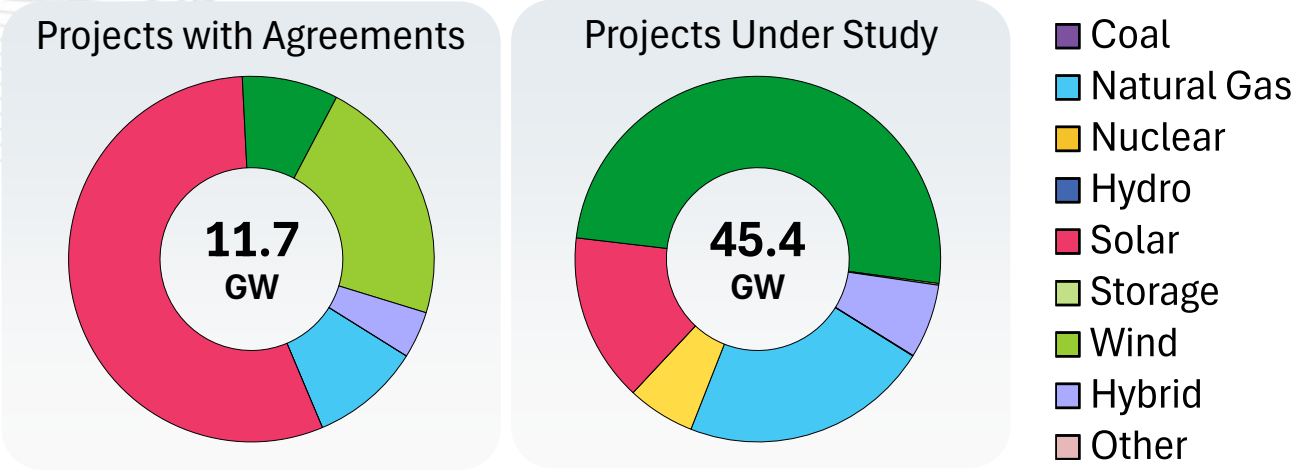
Virginia – Queued Capacity (Nameplate) by Fuel Type

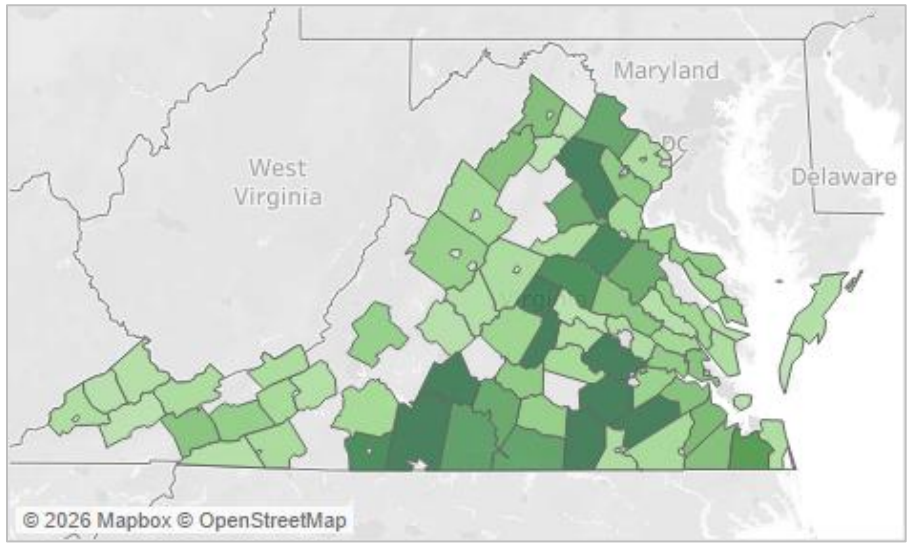
(Projects with agreements and projects under study [“Active”], as of August 3, 2026)

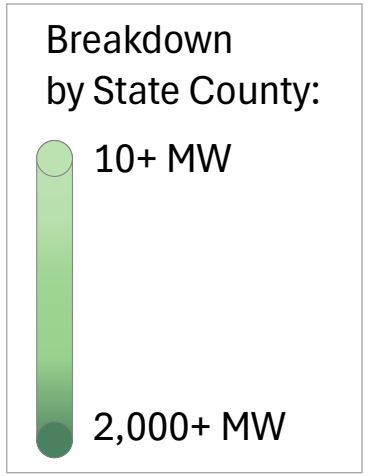
Project Count:

Fuel	Agreements	Studies
Coal	-	-
Natural gas	2	38
Nuclear	-	3
Hydro	-	1
Solar	67	84
Storage	18	128
Wind	4	2
Hybrid	3	15
Other	-	1
Total	**94**	**272**

MW Breakdown:







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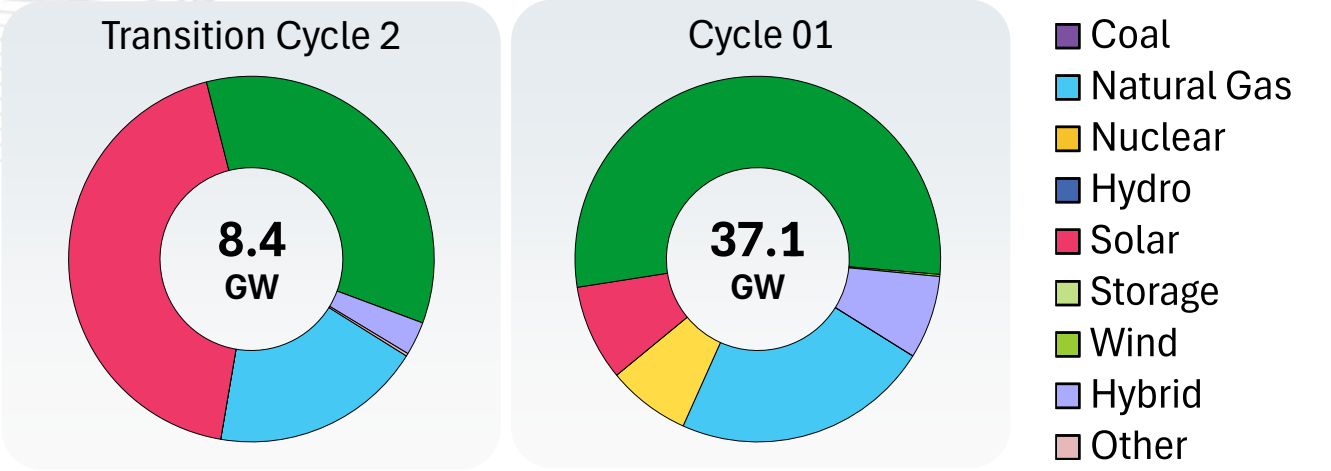
Virginia – Queued Capacity (Nameplate) by Fuel Type

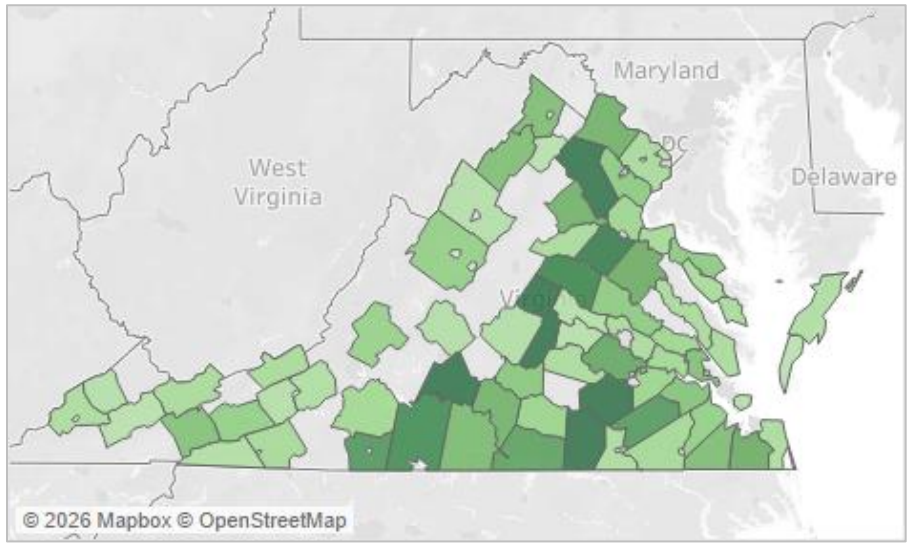
(Projects under study [“Active” in TC2 and Cycle 1], as of August 3, 2026)

Project Count:

Fuel	Transition Cycle 2	Cycle 01
Coal	-	-
Natural gas	17	21
Nuclear	-	3
Hydro	-	1
Solar	43	41
Storage	23	105
Wind	-	2
Hybrid	5	10
Other	1	-
Total	89	183

MW Breakdown:





Breakdown by State County:

10+ MW

2,000+ MW

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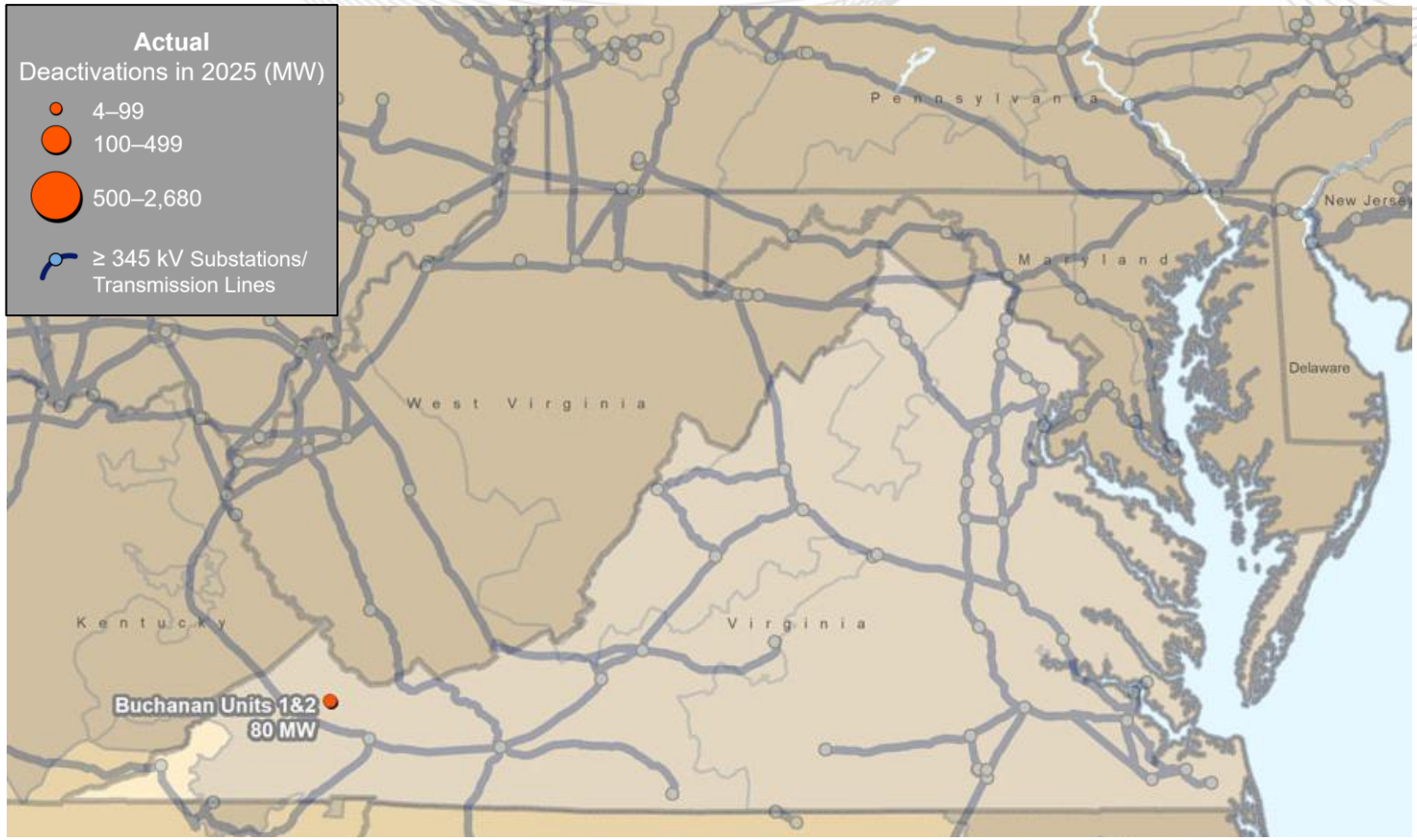
Virginia – 2025 Generator Deactivations



Unit	TO Zone	Fuel Type	Request Received to Deactivate	Actual or Projected Deactivation Date	Age (Years)	Capacity (MW)
Buchanan Unit 1	AEP	Natural Gas	3/14/2025	7/2/2025	23	40
Buchanan Unit 2	AEP	Natural Gas	3/14/2025	7/2/2025	23	40

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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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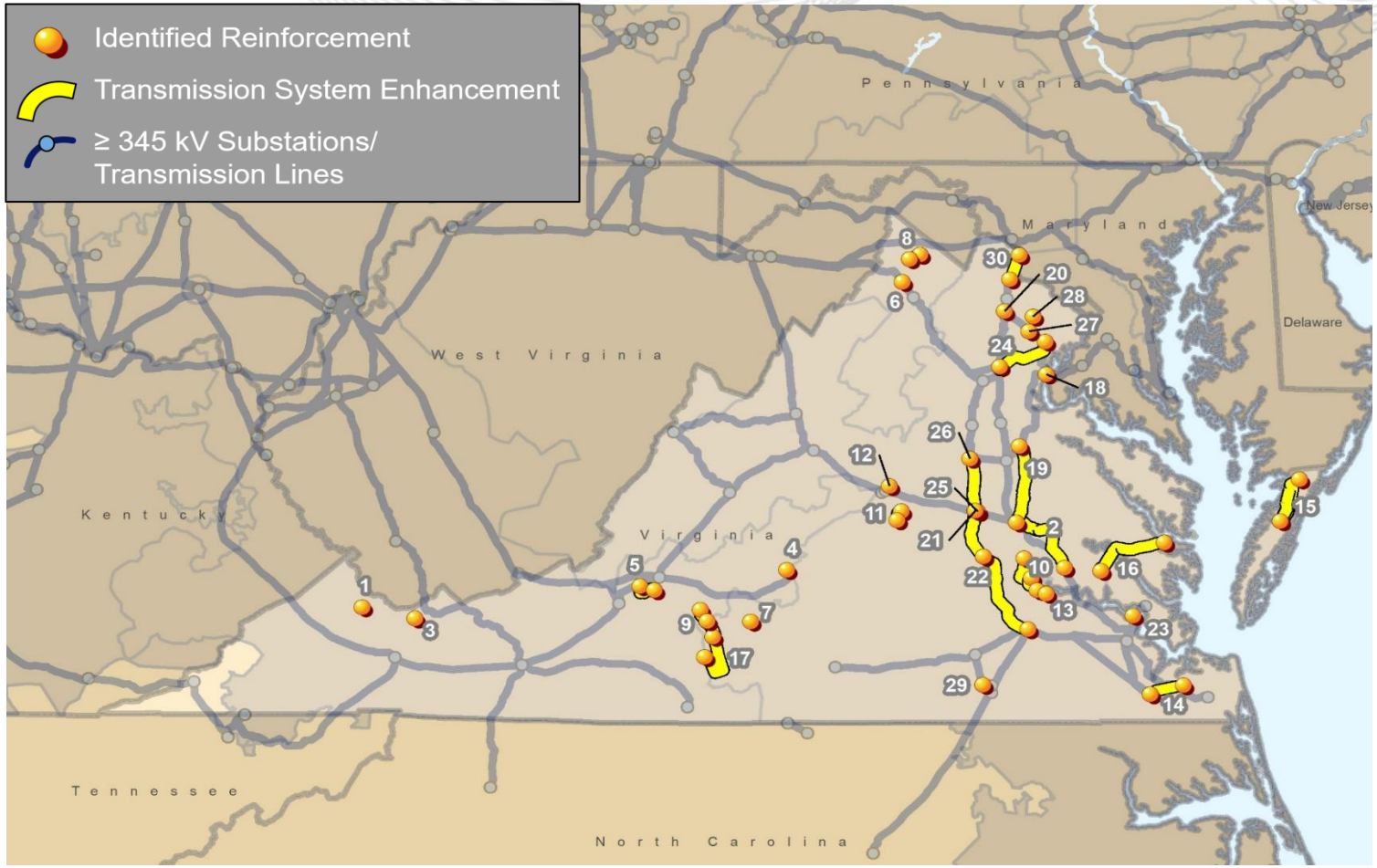
Virginia – RTEP Baseline Projects



The 2025 RTEP has $5.439 billion in baseline projects located in Virginia.

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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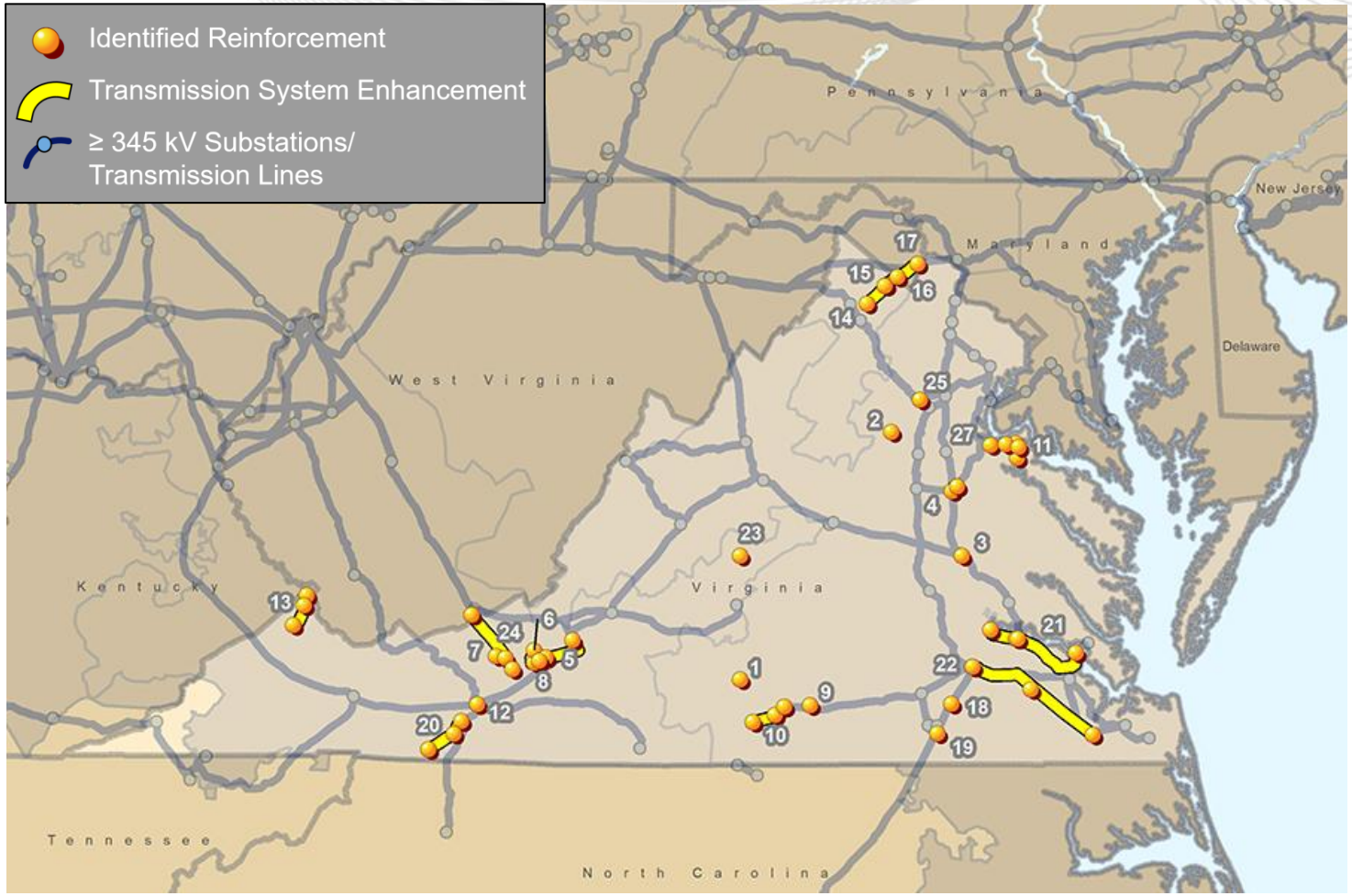
Virginia – RTEP Network Projects



The 2025 RTEP has $177.61 million in network projects located in Virginia.

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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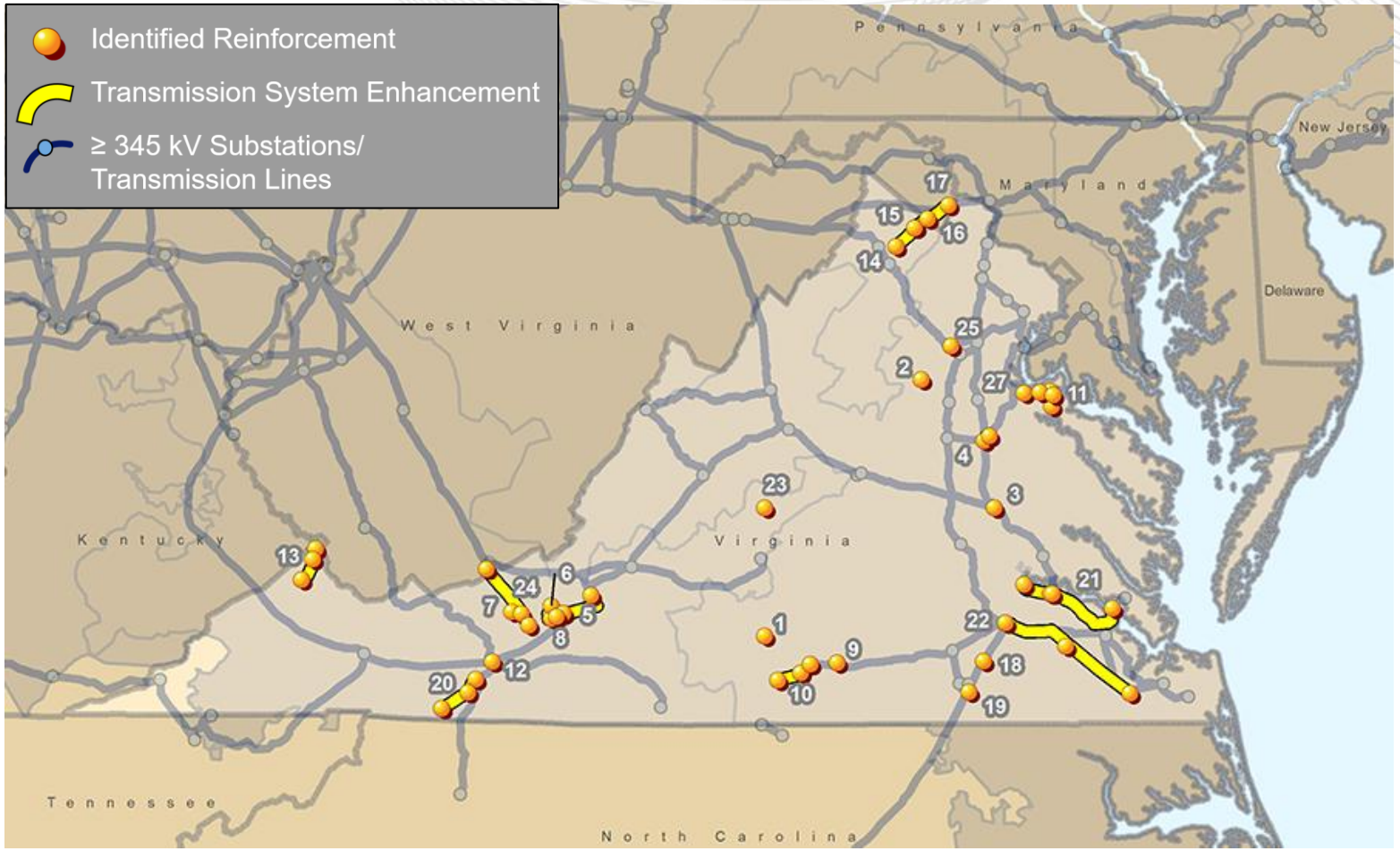
Virginia – TO Supplemental Projects



The 2025 RTEP has $1.541 billion in supplemental projects located in Virginia.

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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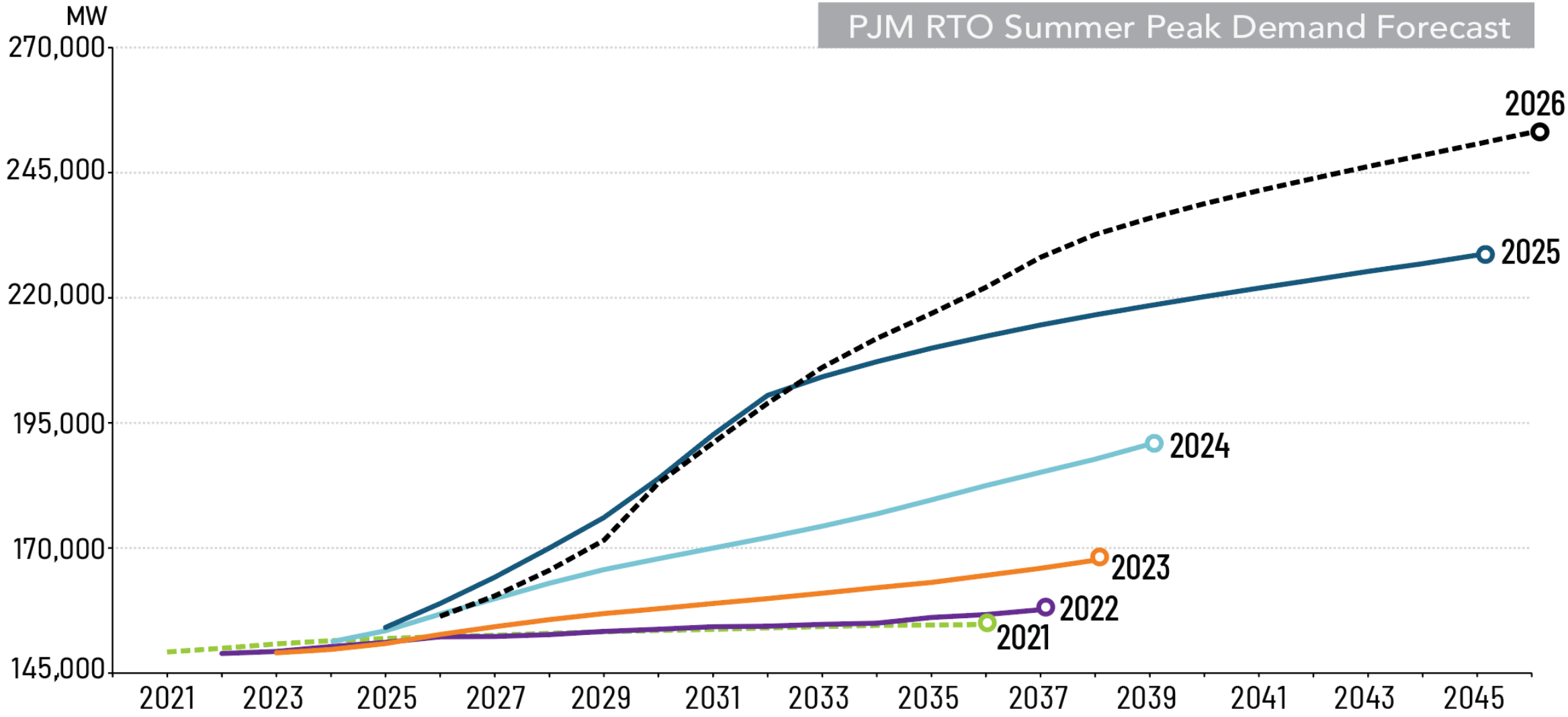
Electricity Demand Growth
(2021–2026)



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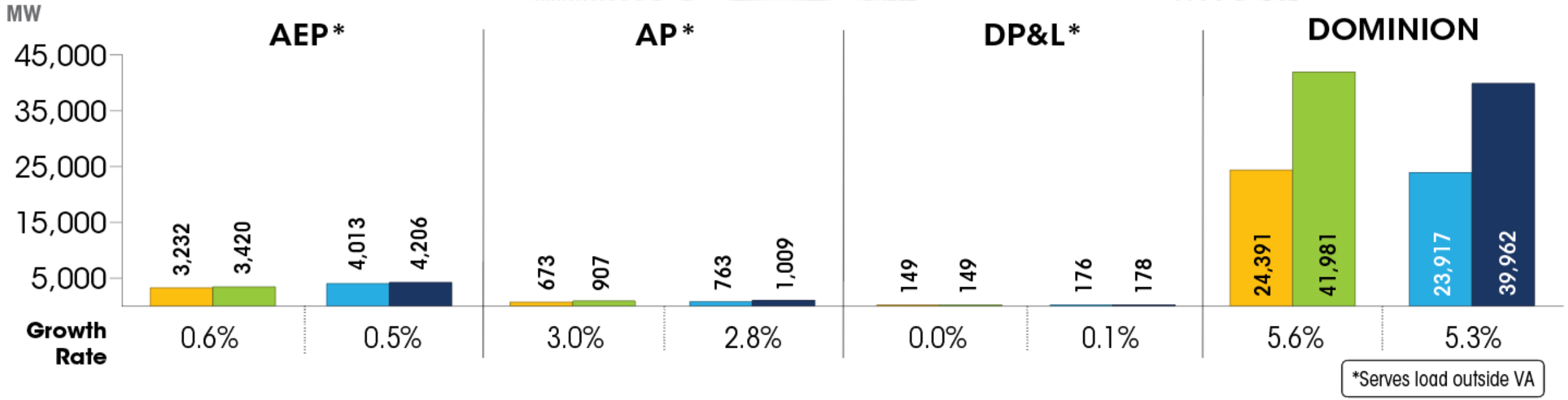
Virginia – 2026 Load Forecast Report



Summer Peak
- 2026
- 2036

Winter Peak
- 2025/2026
- 2035/2036

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%

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.

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Virginia – Summer Peak Large Load Adjustments

(PJM 2026 Load Forecast)

	Zone	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
VA	AEP	-	-	-	-	-	-	-	-	-	-
	APS	-	-	-	-	36	41	100	141	185	202
	DP&L	-	-	-	-	-	-	-	-	-	-
	DOMINION	7,066	8,925	10,615	11,932	13,896	15,829	17,735	19,311	20,734	22,426
VA TOTAL (MW)		7,066	8,925	10,615	11,932	13,932	15,870	17,835	19,452	20,919	22,628
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
VA	AEP	-	-	-	-	-	-	-	-	-	-
	APS	202	202	202	202	202	202	202	202	202	202
	DP&L	-	-	-	-	-	-	-	-	-	-
	DOMINION	24,224	26,618	28,724	30,258	31,350	32,157	32,957	33,669	34,348	35,010
VA TOTAL (MW)		24,426	26,820	28,926	30,460	31,552	32,359	33,159	33,871	34,550	35,212
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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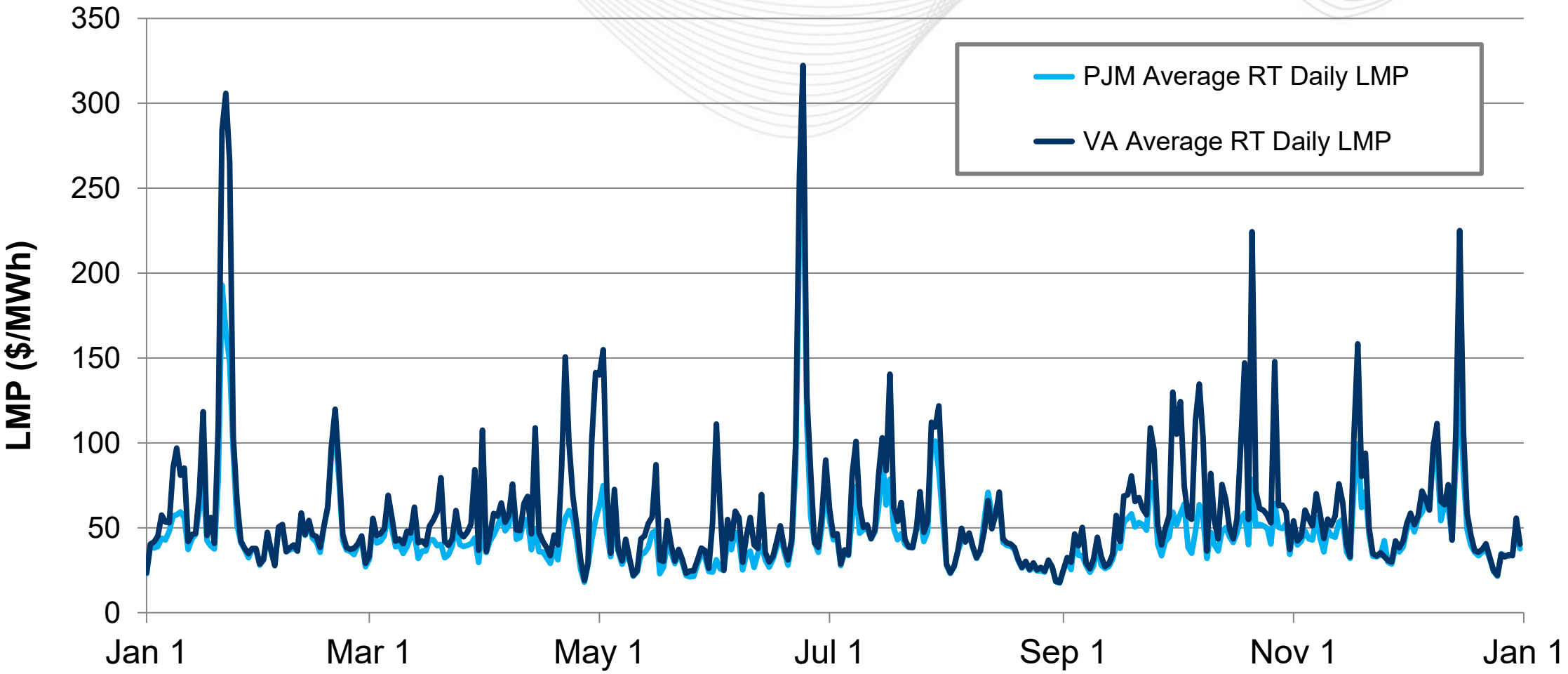
Virginia – Average Daily LMP

(Jan. 1, 2025 – Dec. 31, 2025)



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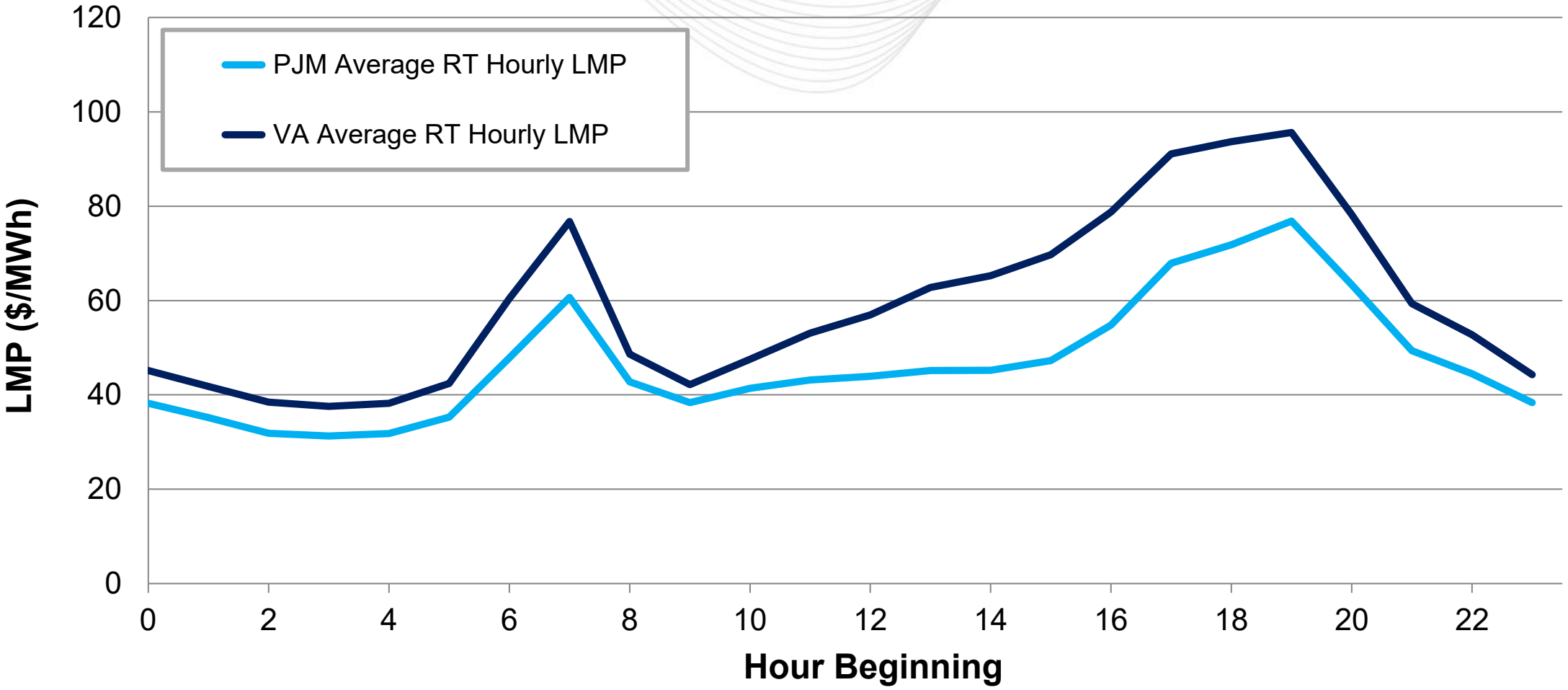
Virginia – Average Hourly LMP

(Jan. 1, 2025– Dec. 31, 2025)

Virginia's average hourly LMPs were higher than the PJM average hourly LMP.



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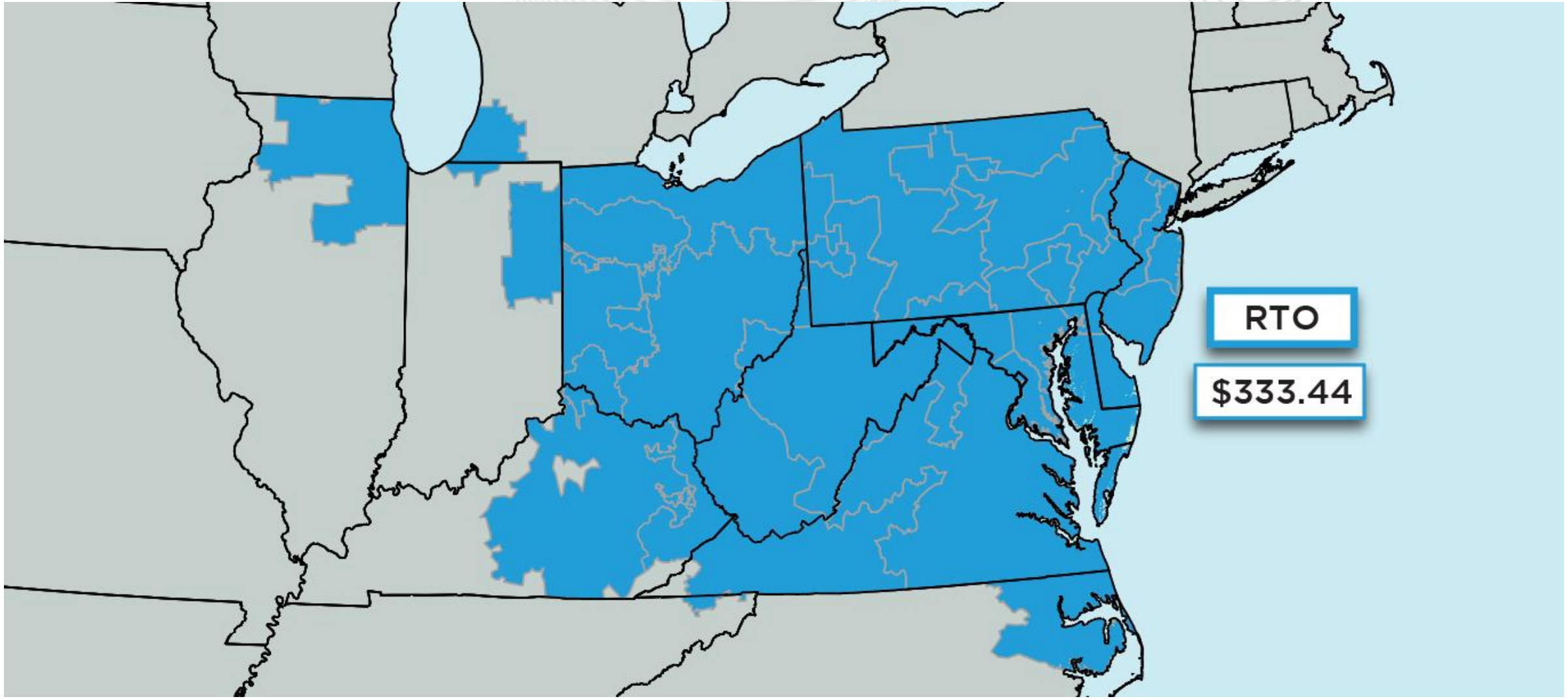
2027/28 Base Residual Auction Clearing Prices ($/MW-Day)



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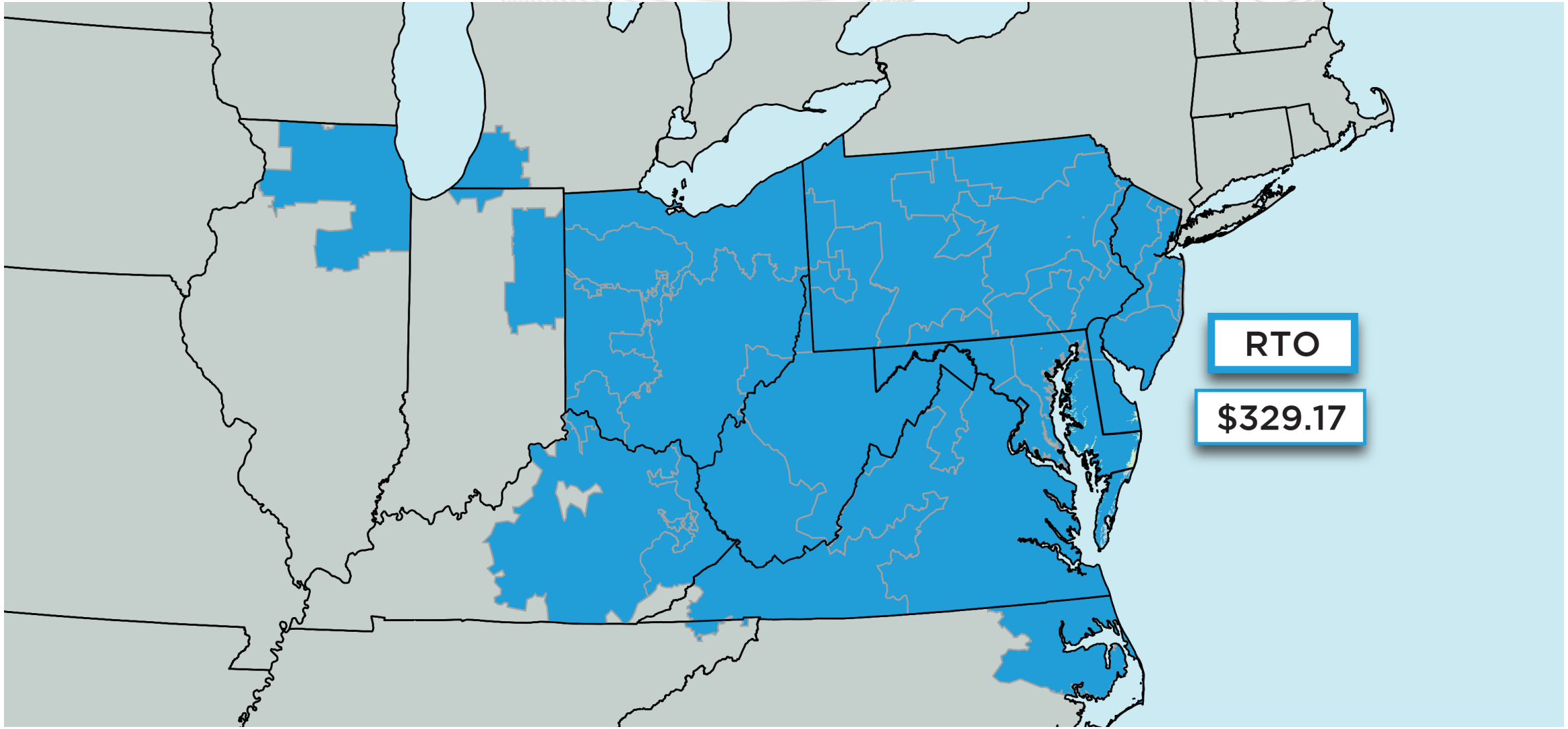
2026/27 Base Residual Auction Clearing Prices ($/MW-Day)



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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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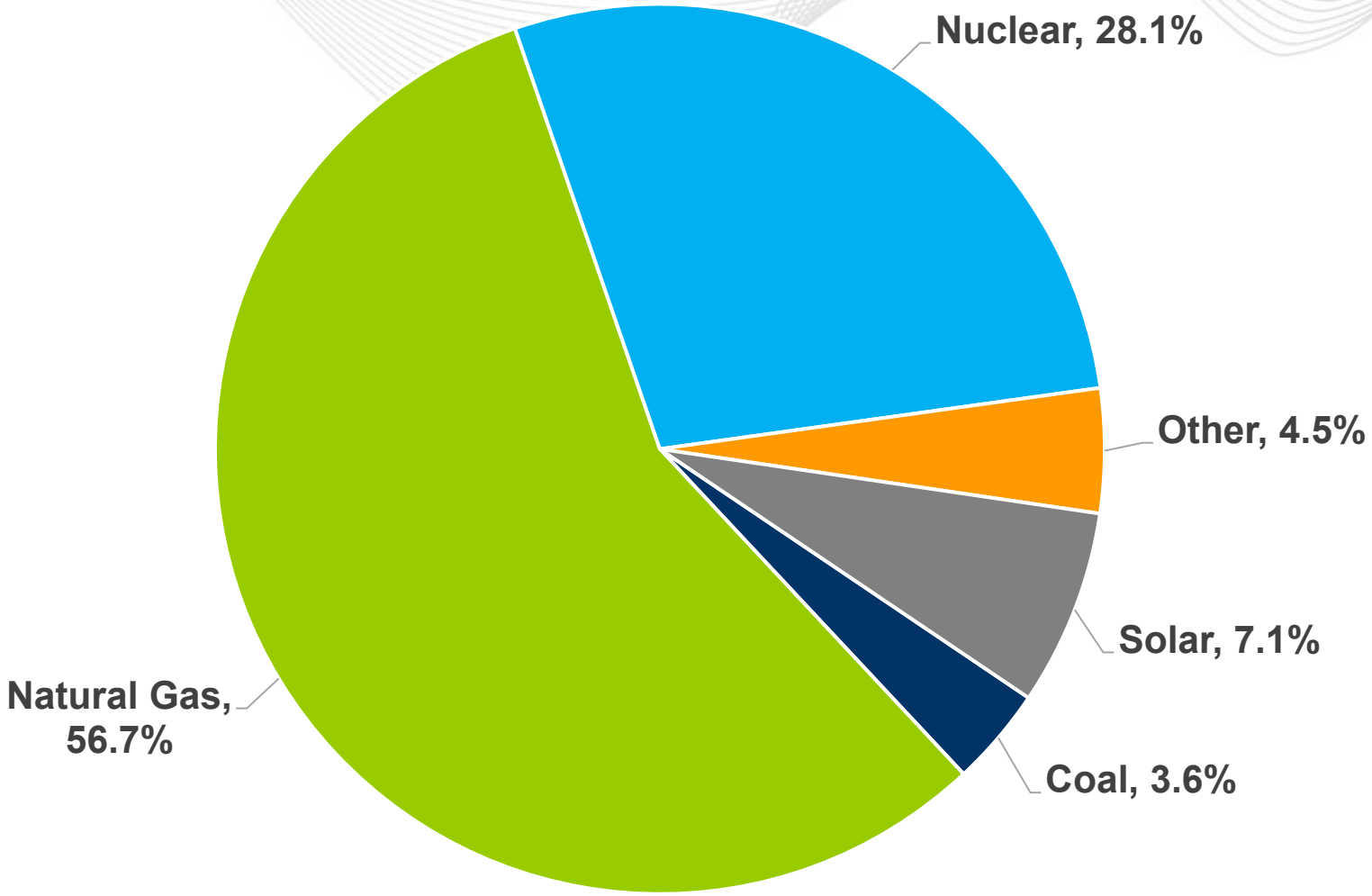
Virginia – 2025 Generator Production



The data in this chart comes from EIA Form 923 (2025) and represents only generators physically located within Virginia.

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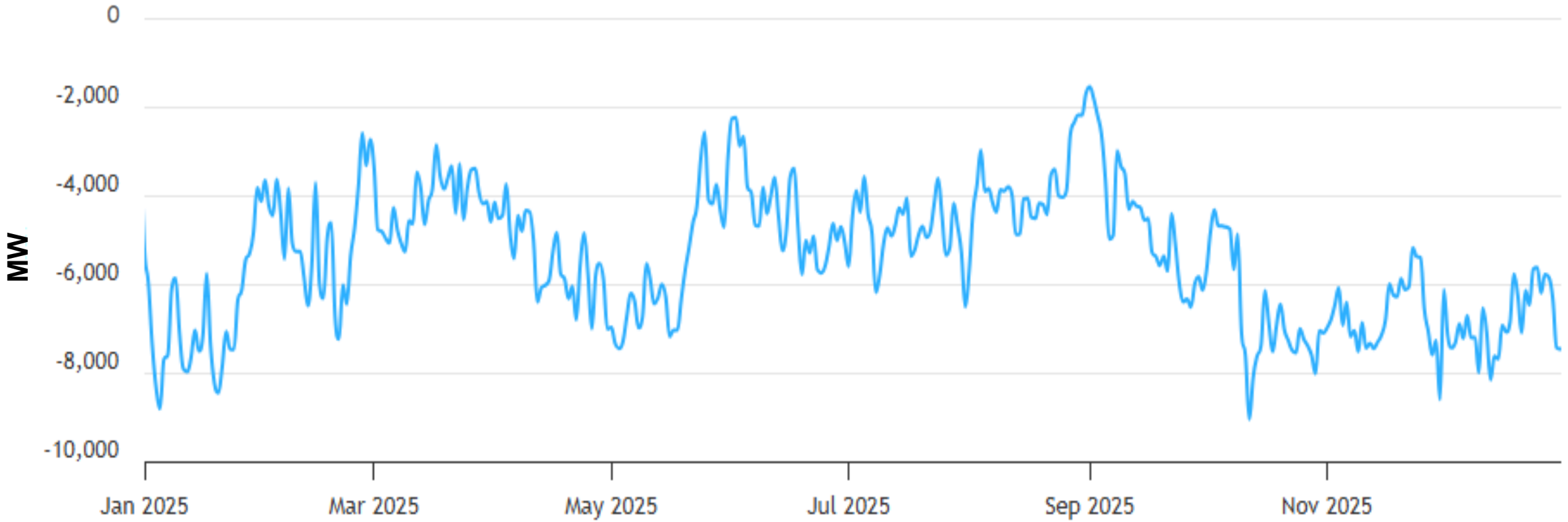
Virginia – Net Energy Import/Export Trend

(Jan. 2025 – Dec. 2025)



Note: This chart reflects the portion of Virginia that PJM operates. Positive values represent exports and negative values represent imports.

A significant amount of generation from units owned by Virginia jurisdictional utilities and included in regulated rates charged to Virginia customers are physically located outside of Virginia. They are categorized as imports in the chart.

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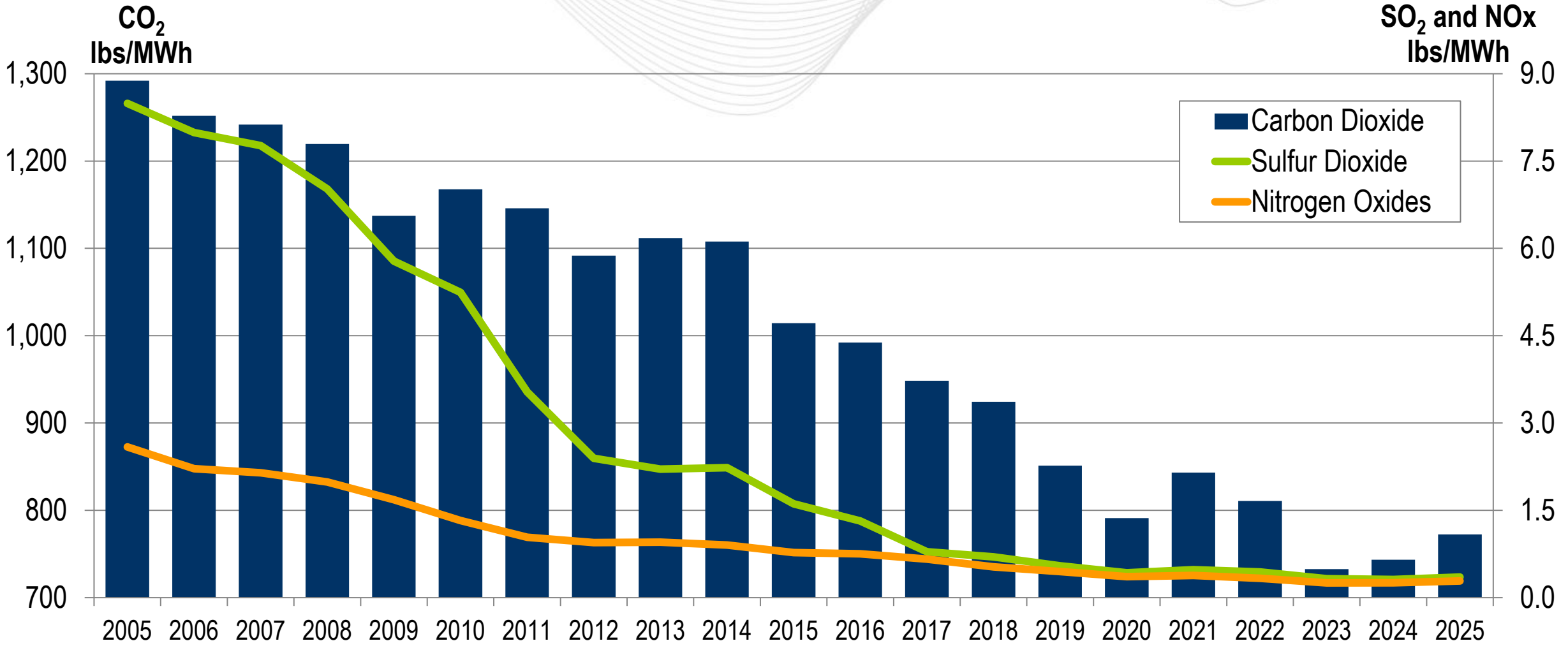
PJM System Average Emission Rates



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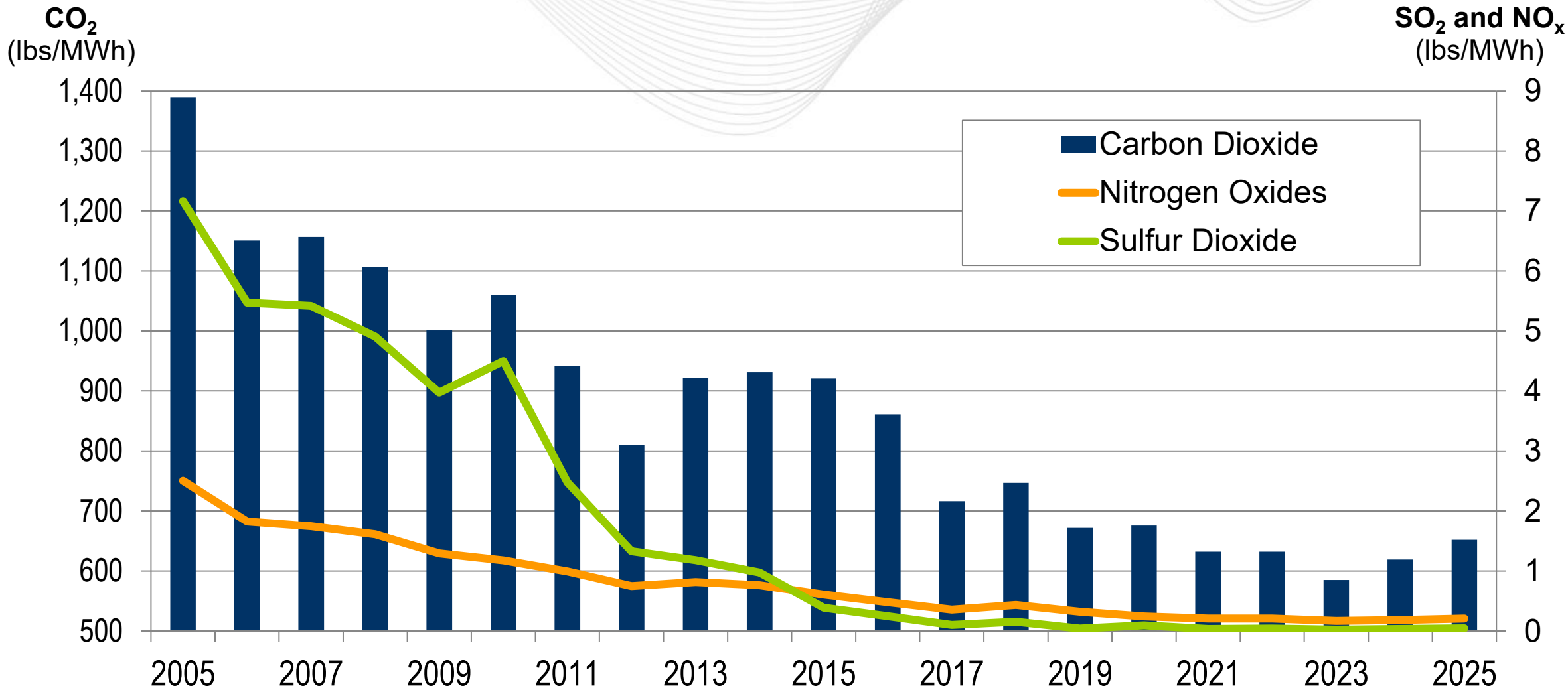
Virginia – Average Emissions (lbs/MWh)

(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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