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

June 2026

(updated August 2026)



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# Executive Summary

2025 West Virginia State Infrastructure Report

## In the West Virginia service territory:

| | |
|---|---|
| Existing Capacity: | • In West Virginia, coal represents approximately 87% of the total installed capacity while gas represents approximately 8%.<br>• In PJM, natural gas and coal are 48% and 20% of total installed capacity, respectively. |
| Interconnection Requests: | West Virginia currently has 14.8 GW of capacity under study in Transition Cycle 2 and Cycle 1. |
| Deactivations: | One small battery in West Virginia deactivated in 2025. |
| RTEP 2025: | West Virginia's 2025 RTEP project total represents $1.18 billion in investment. |


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## In the West Virginia service territory:

| | |
|---|---|
| **Load Forecast:** | West Virginia's summer peak load is projected to increase by 0.6% to 1.2% annually over the next ten years, while the winter peak is projected to increase by 0.5% to 1.3%, depending on the transmission zone. |
| **Capacity Market:** | • The 2026/27 Base Residual Auction cleared at the $329.17 price cap.<br>• The 2027/28 Base Residual Auction cleared at the $333.44 price cap. |
| **Market Performance:** | West Virginia's average hourly LMPs aligned with the PJM average hourly LMP. |
| **Emissions:** | West Virginia's average $CO_2$ emissions decreased in 2025 compared to 2024 levels. |


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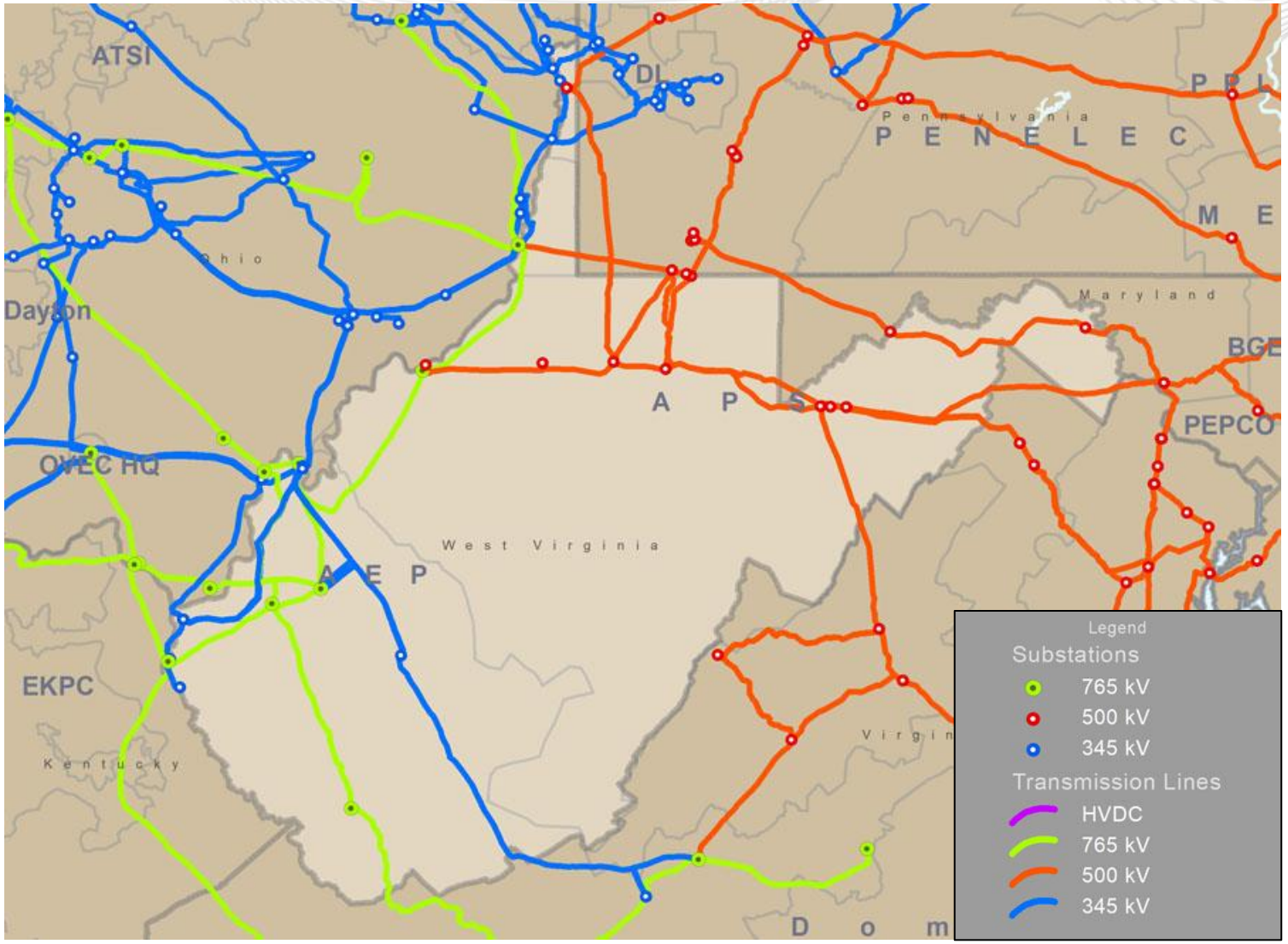
# PJM Service Area in West Virginia





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# Planning

## Generation Portfolio Analysis


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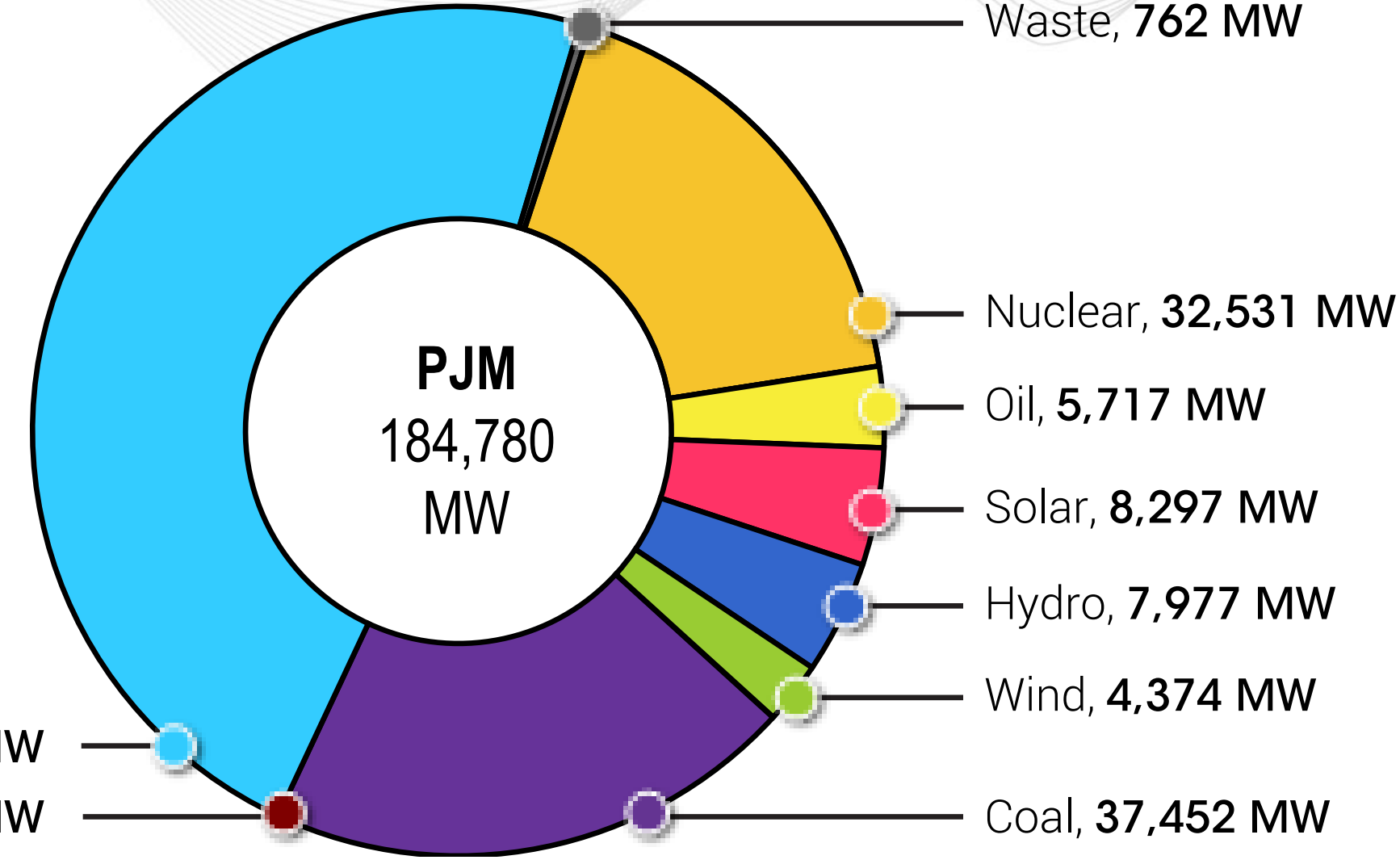
# PJM Existing Installed Capacity Mix

(CIRs – as of Dec. 31, 2025)





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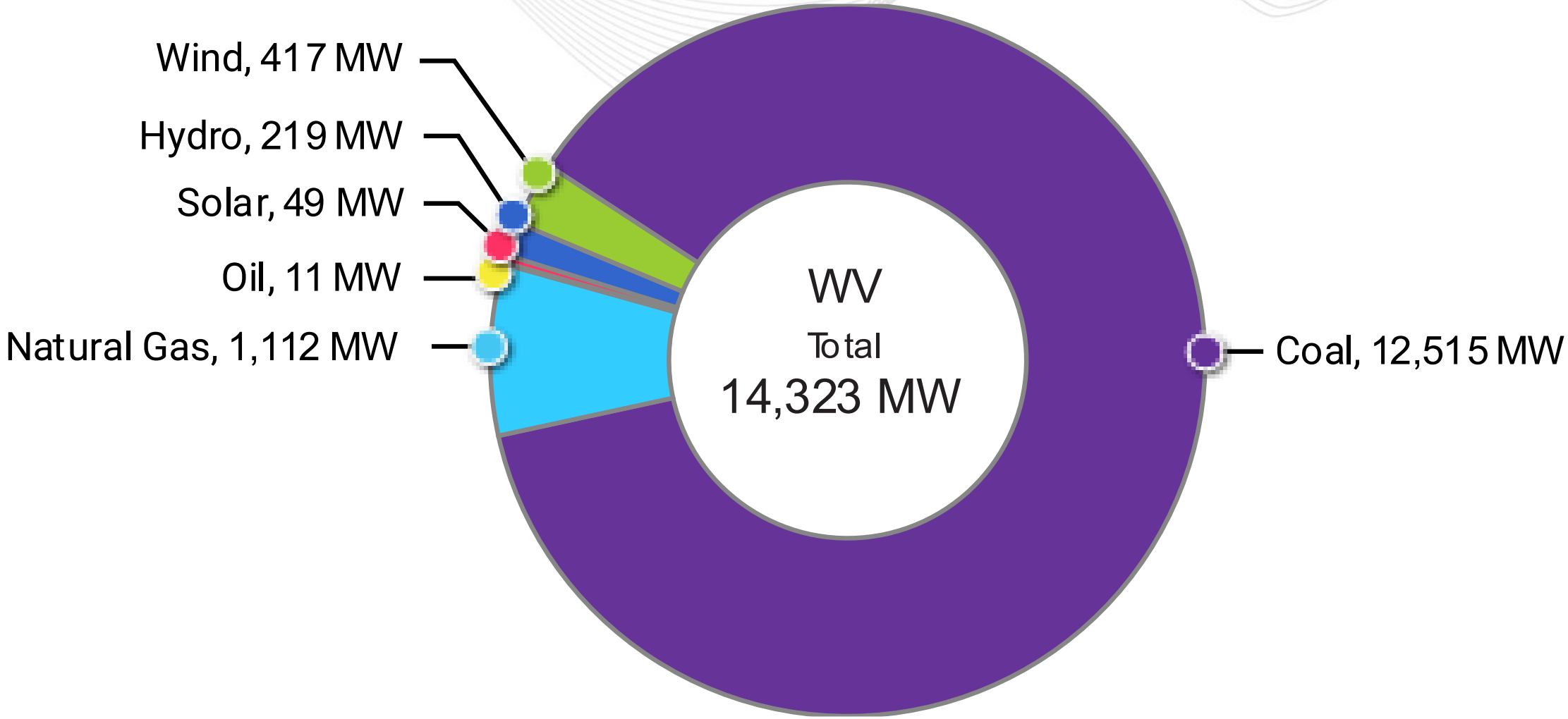
# West Virginia – Existing Installed Capacity (MW) by Fuel Type

(CIRs- as of Dec. 31, 2025)





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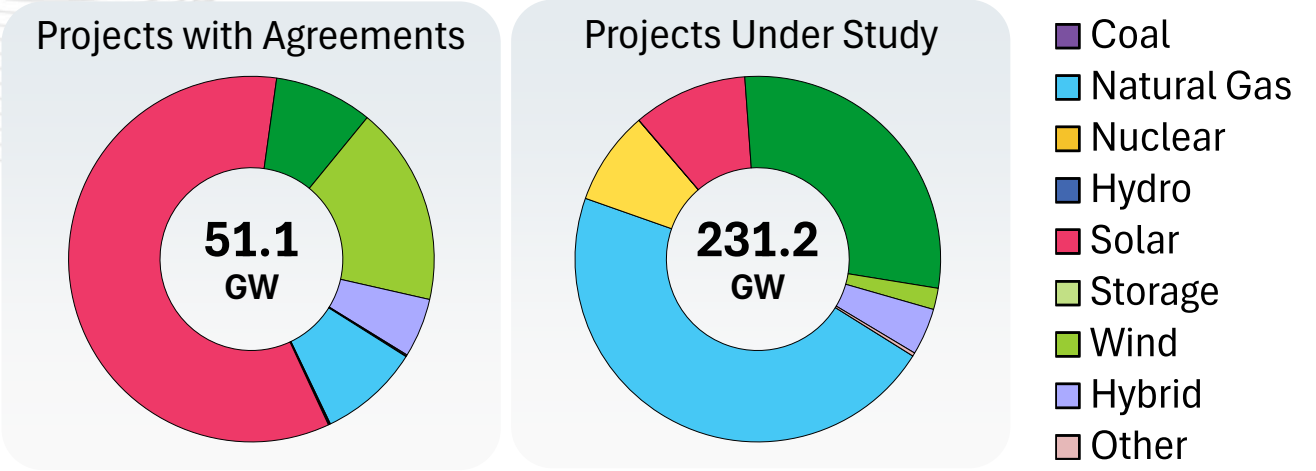
# PJM – Queued Capacity (Nameplate) by Fuel Type

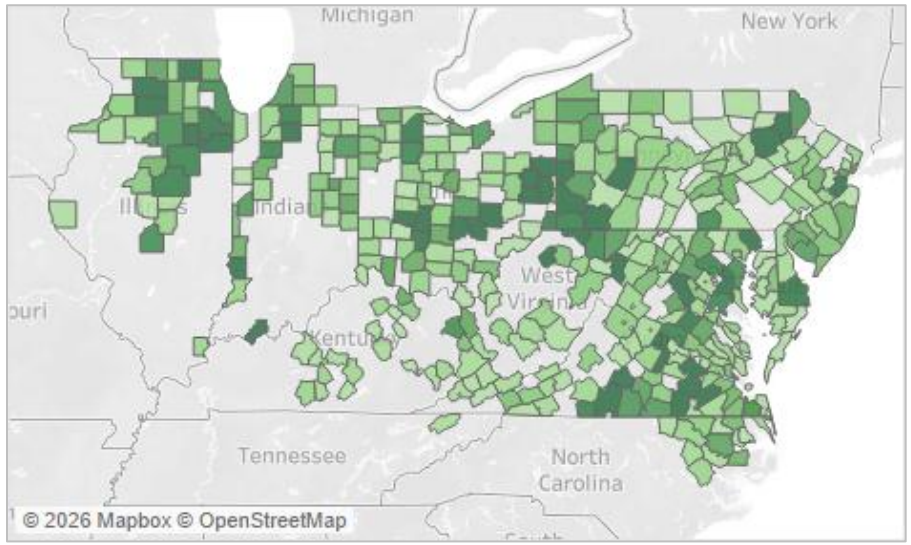
(Projects with agreements and projects under study [“Active”], as of August 3, 2026)

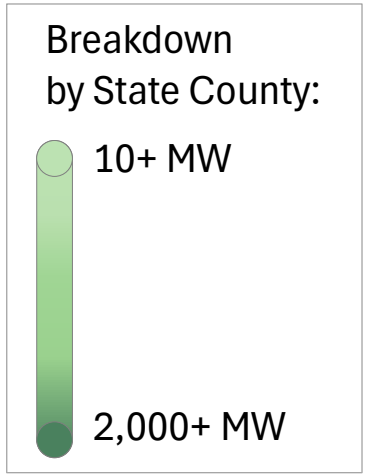
**Project Count:**

| 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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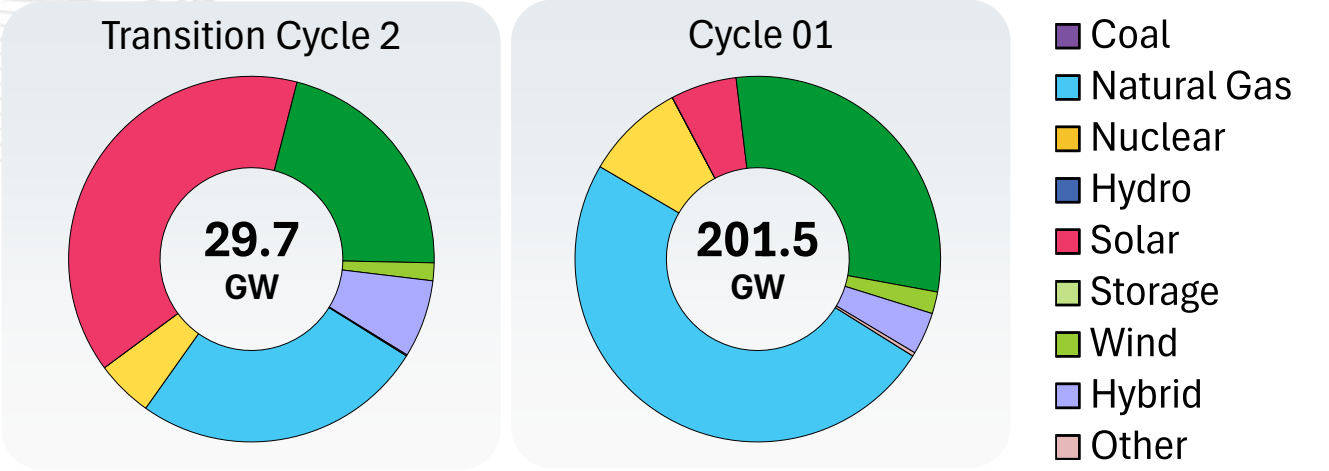
# PJM – Queued Capacity (Nameplate) by Fuel Type

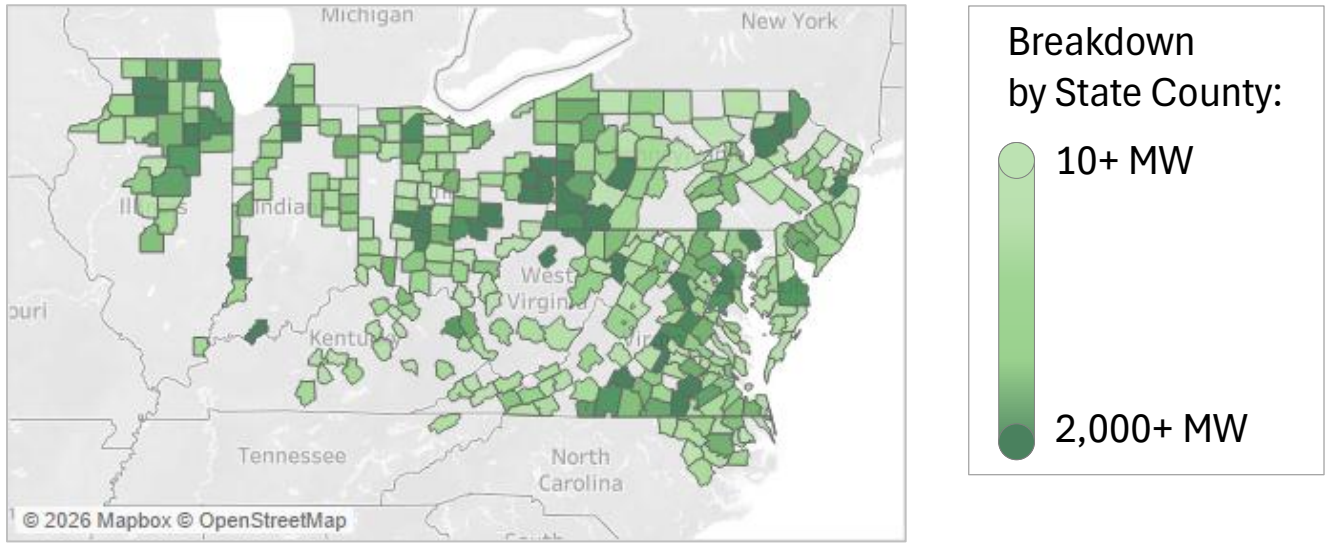
(Projects under study [“Active” in TC2 and Cycle 1], as of August 3, 2026)

**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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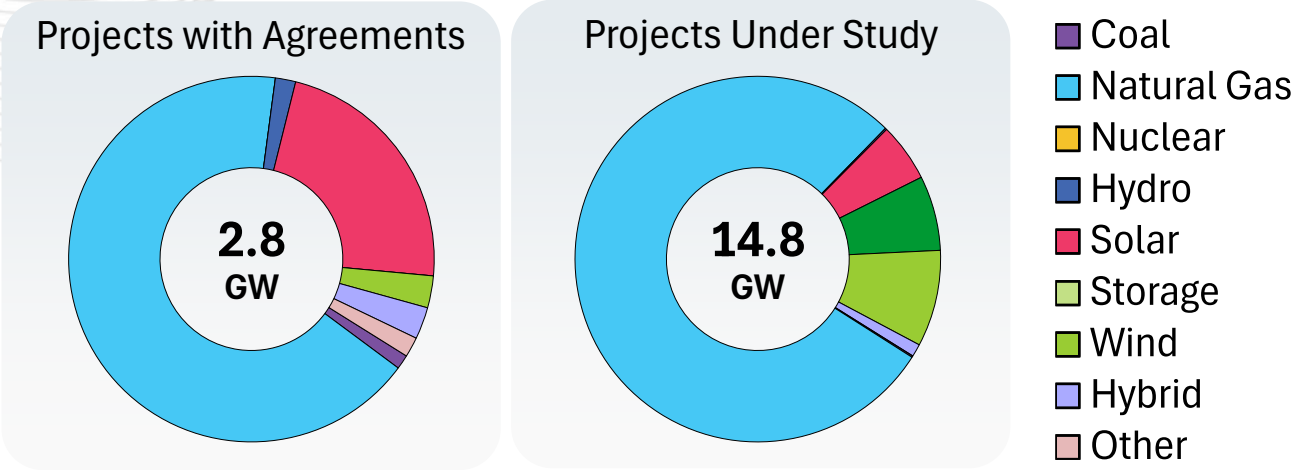
# West Virginia – Queued Capacity (Nameplate) by Fuel Type

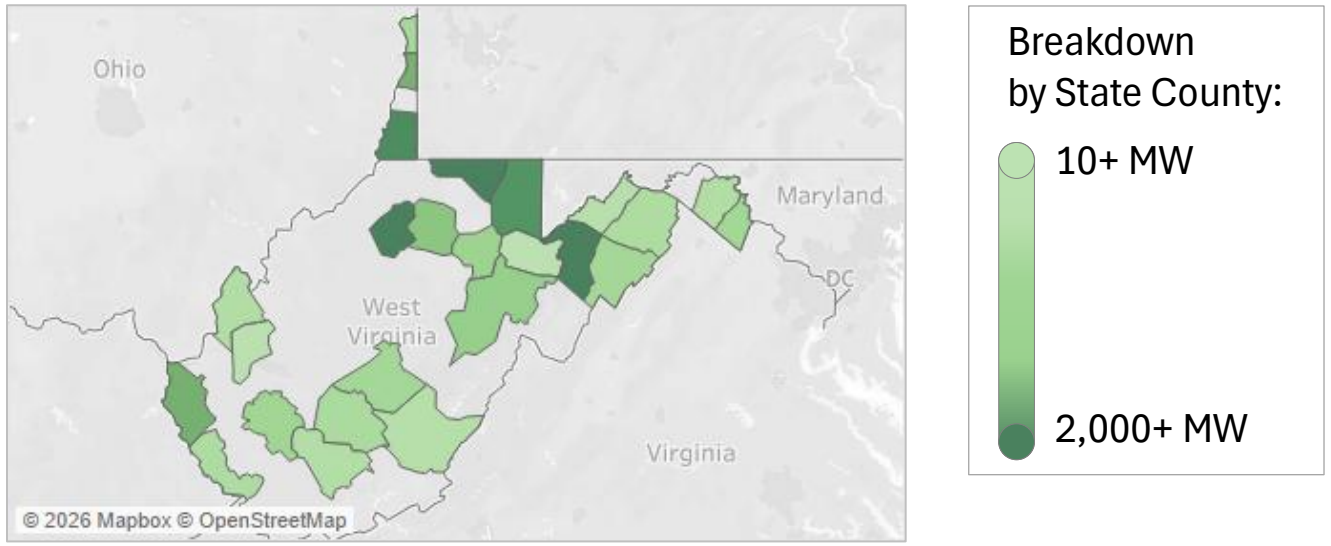
(Projects with agreements and projects under study [“Active”], as of August 3, 2026)

**Project Count:**

| Fuel | Agreements | Studies |
|---|---|---|
| Coal | 1 | 5 |
| Natural gas | 4 | 9 |
| Nuclear | - | - |
| Hydro | 1 | 1 |
| Solar | 6 | 8 |
| Storage | - | 6 |
| Wind | 1 | 10 |
| Hybrid | 1 | 1 |
| Other | 1 | - |
| **Total** | **15** | **40** |

**MW Breakdown:**





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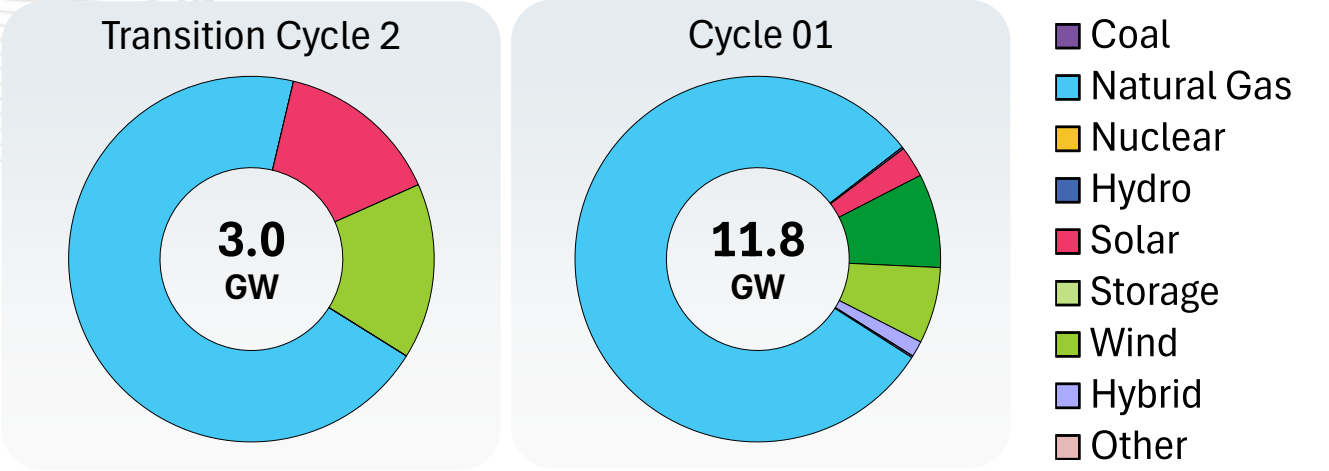
# West Virginia – Queued Capacity (Nameplate) by Fuel Type

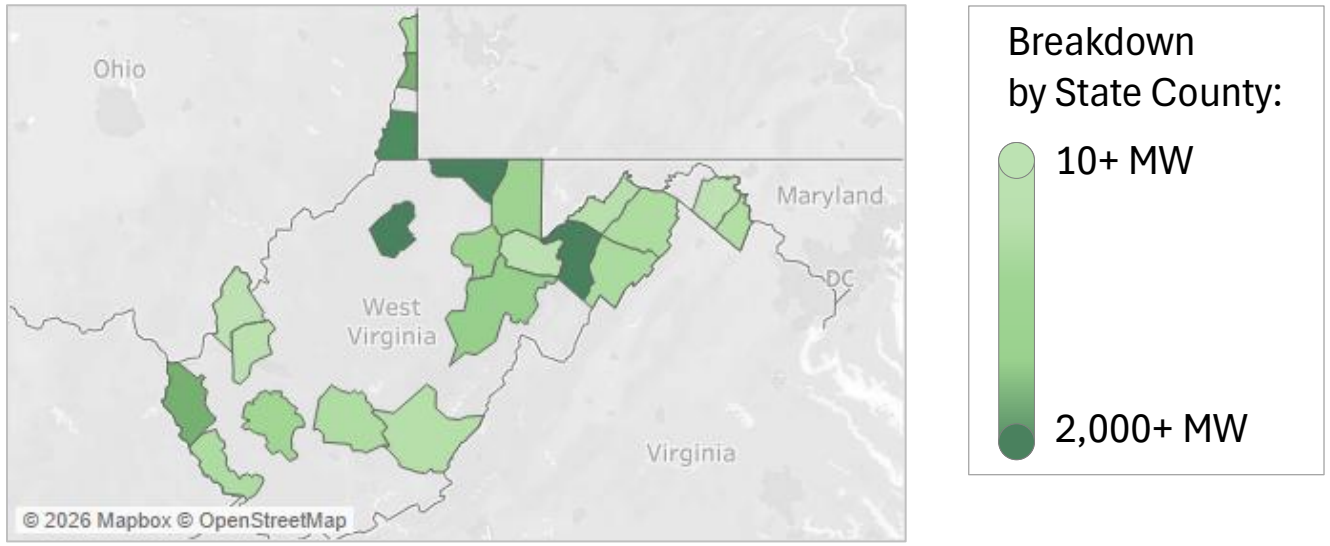
(Projects under study [“Active” in TC2 and Cycle 1], as of August 3, 2026)

**Project Count:**

| Fuel | Transition Cycle 2 | Cycle 01 |
|---|---|---|
| Coal | 1 | 4 |
| Natural gas | 1 | 8 |
| Nuclear | - | - |
| Hydro | - | 1 |
| Solar | 5 | 3 |
| Storage | - | 6 |
| Wind | 3 | 7 |
| Hybrid | - | 1 |
| Other | - | - |
| **Total** | **10** | **30** |

**MW Breakdown:**





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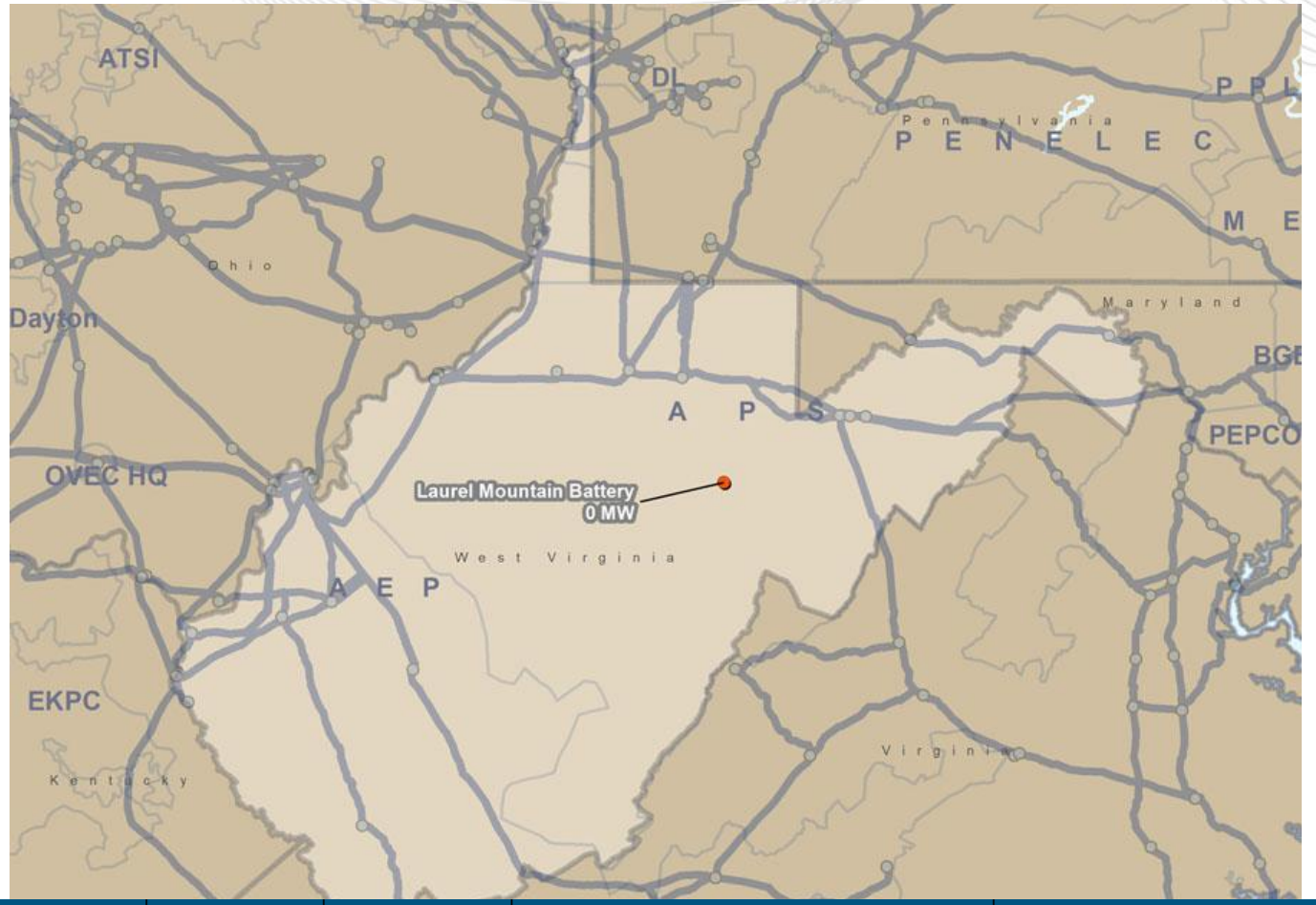
# West Virginia – 2025 Generator Deactivations




**Actual**
Deactivations in 2025 (MW)

- 4–99
- 100–499
- 500–2,680
- ≥ 345 kV Substations/ Transmission Lines

| Unit | TO Zone | Fuel Type | Request Received to Deactivate | Actual or Projected Deactivation Date | Age (Years) | Capacity (MW) |
|---|---|---|---|---|---|---|
| Laurel Mountain Battery | AP | Battery | 4/1/2025 | 7/1/2025 | 14 | 0 |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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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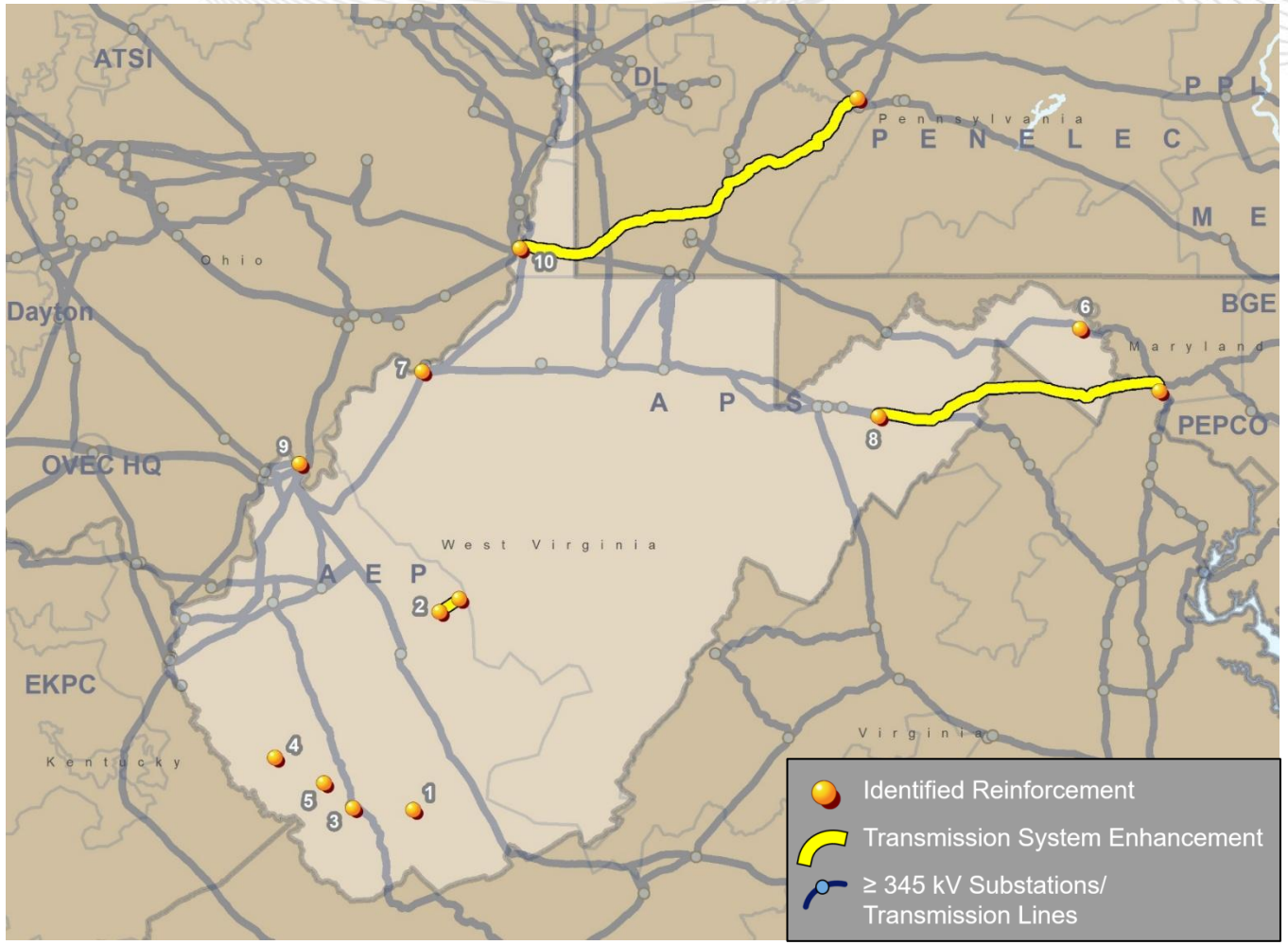
# West Virginia – RTEP Baseline Projects




The 2025 RTEP has $971.78 million in baseline projects located in West 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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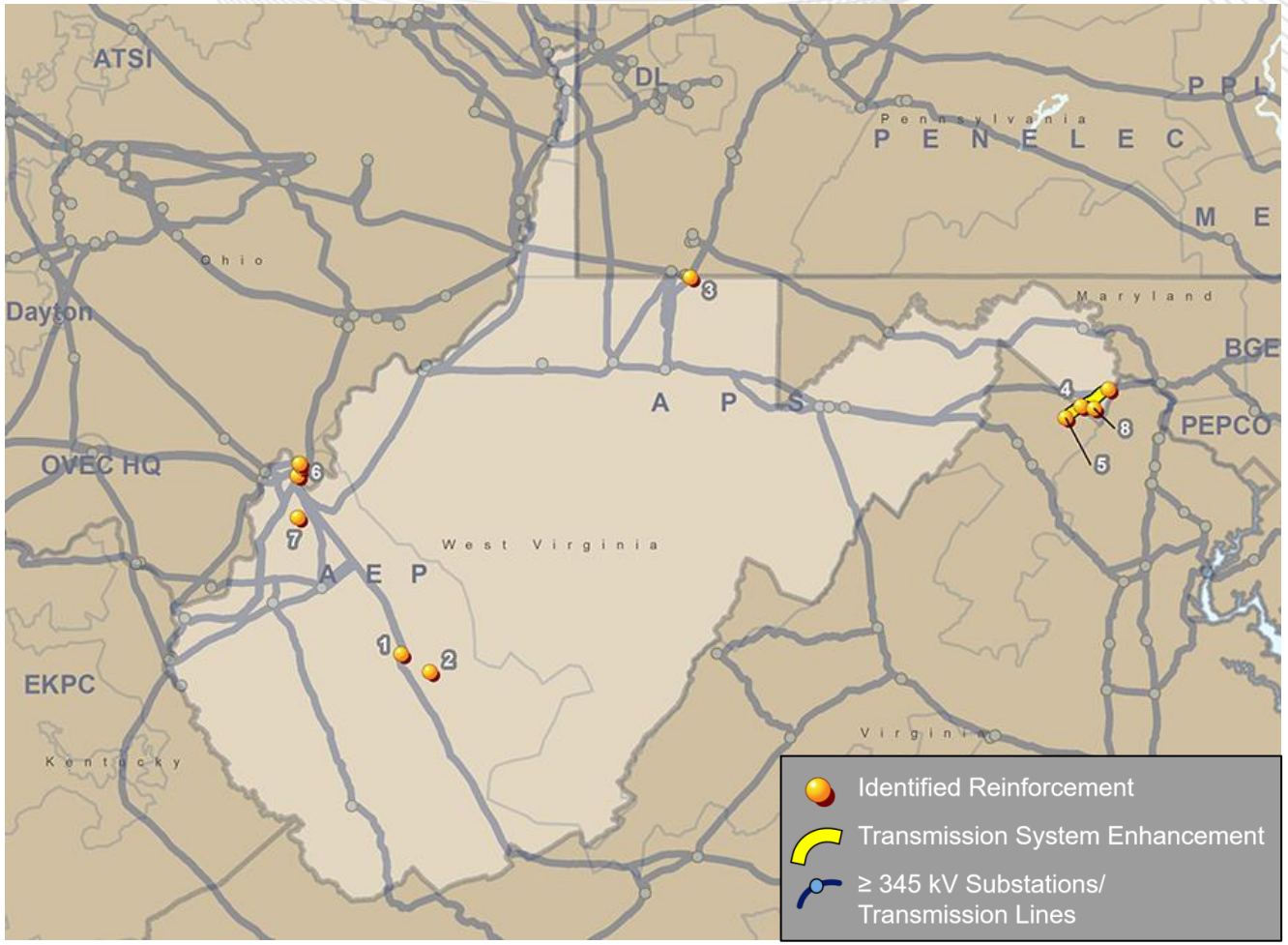
# West Virginia – RTEP Network Projects




The 2025 RTEP has $29.27 million in network projects located in West 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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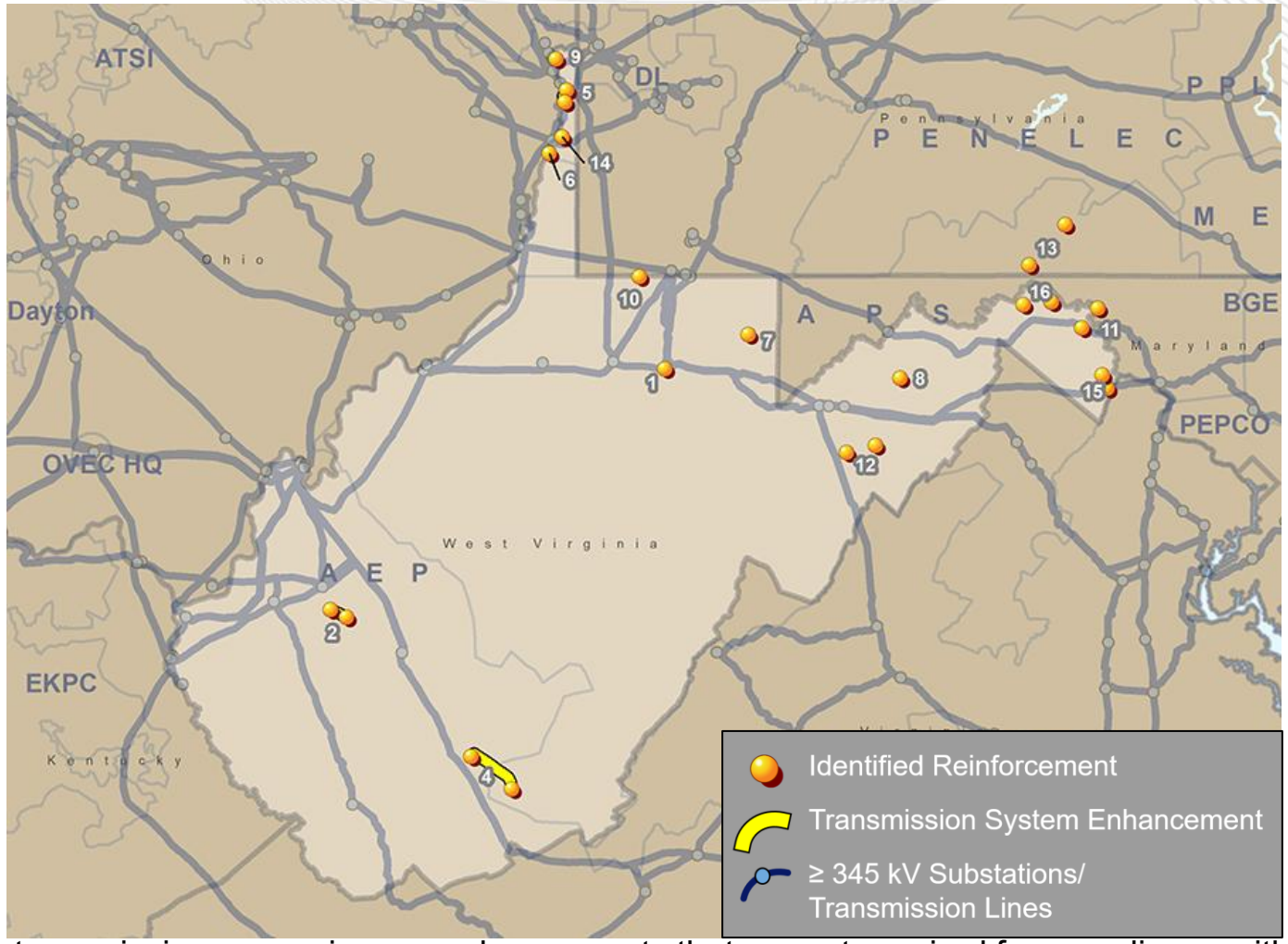
# West Virginia – TO Supplemental Projects




The 2025 RTEP has $183.09 million in supplemental projects located in West 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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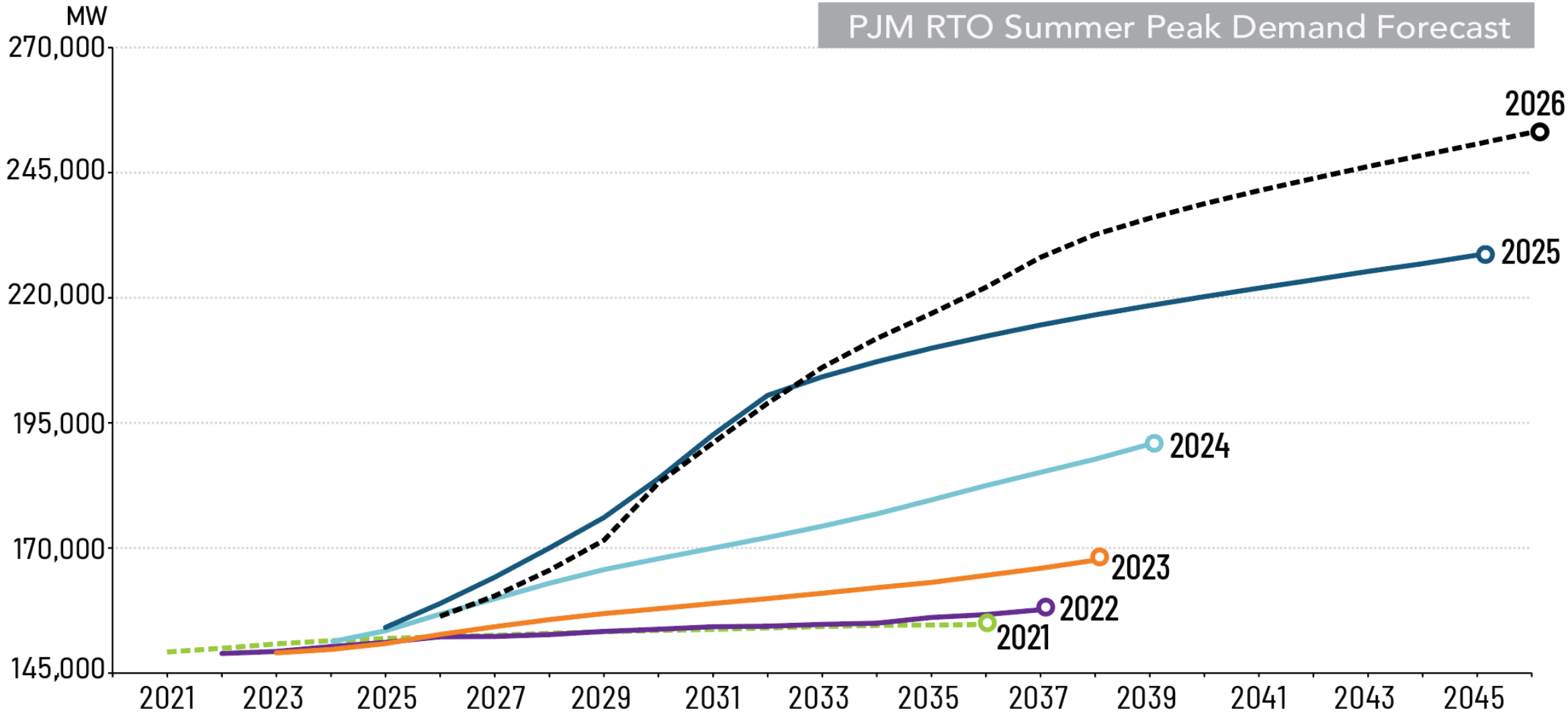
# Electricity Demand Growth
## (2021–2026)





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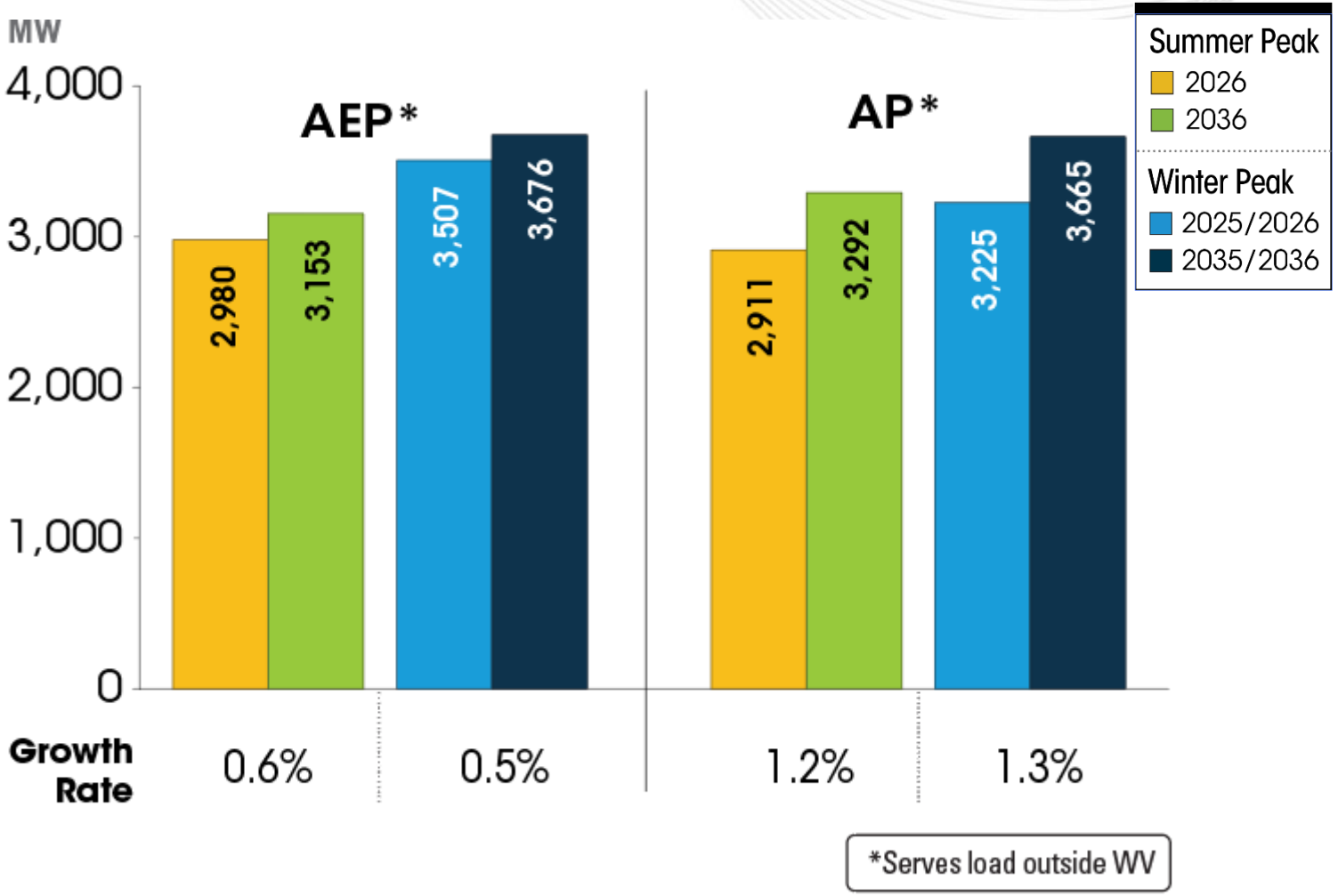
# West Virginia – 2026 Load Forecast Report




**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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# West Virginia – Summer Peak Large Load Adjustments

(PJM 2026 Load Forecast)

| | Zone | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| WV | AEP | - | - | - | - | - | - | - | - | - | - |
| | APS | - | - | - | - | 60 | 111 | 213 | 238 | 238 | 238 |
| **WV TOTAL (MW)** | | - | - | - | - | 60 | 111 | 213 | 238 | 238 | 238 |
| **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 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| WV | AEP | - | - | - | - | - | - | - | - | - | - |
| | APS | 238 | 238 | 238 | 238 | 238 | 238 | 238 | 238 | 238 | 238 |
| **WV TOTAL (MW)** | | 238 | 238 | 238 | 238 | 238 | 238 | 238 | 238 | 238 | 238 |
| **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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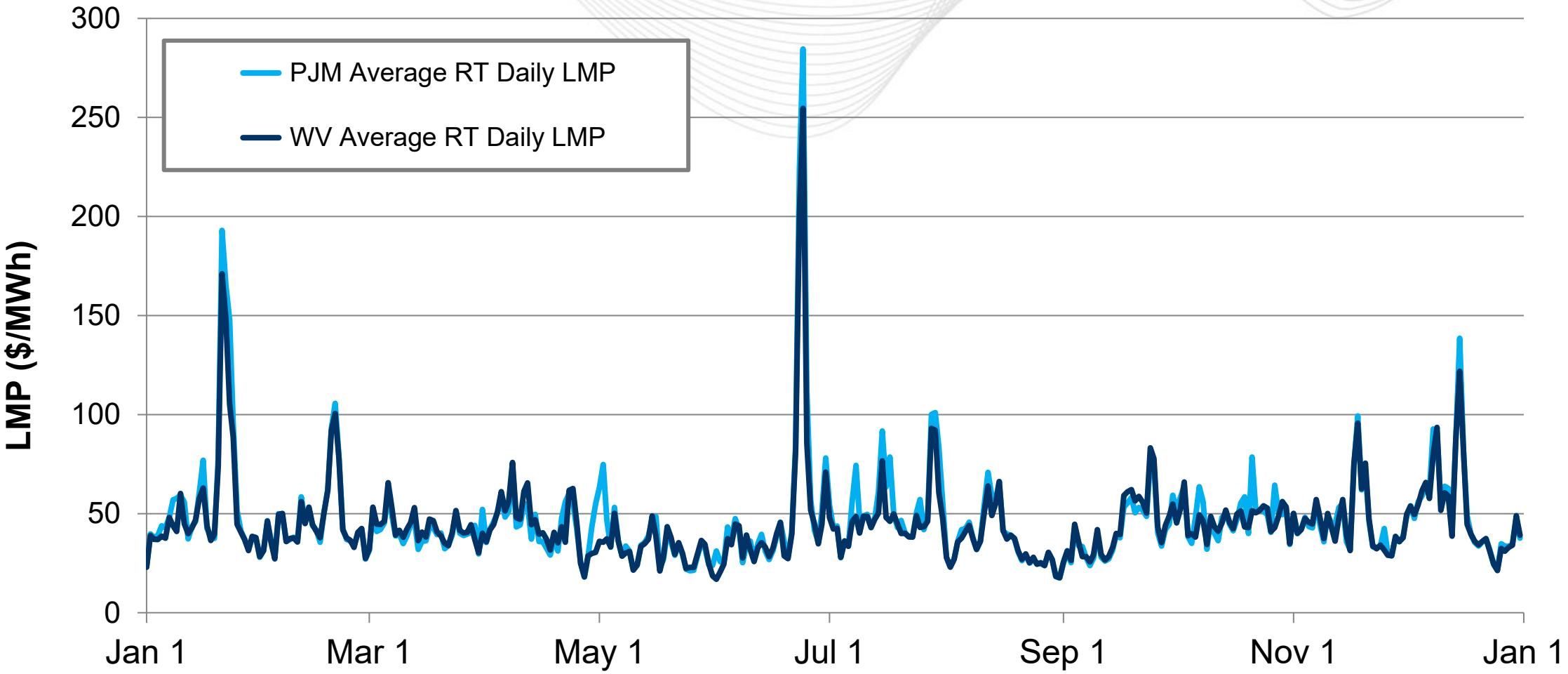
# West Virginia – Average Daily LMP

(Jan. 1, 2025 – Dec. 31, 2025)





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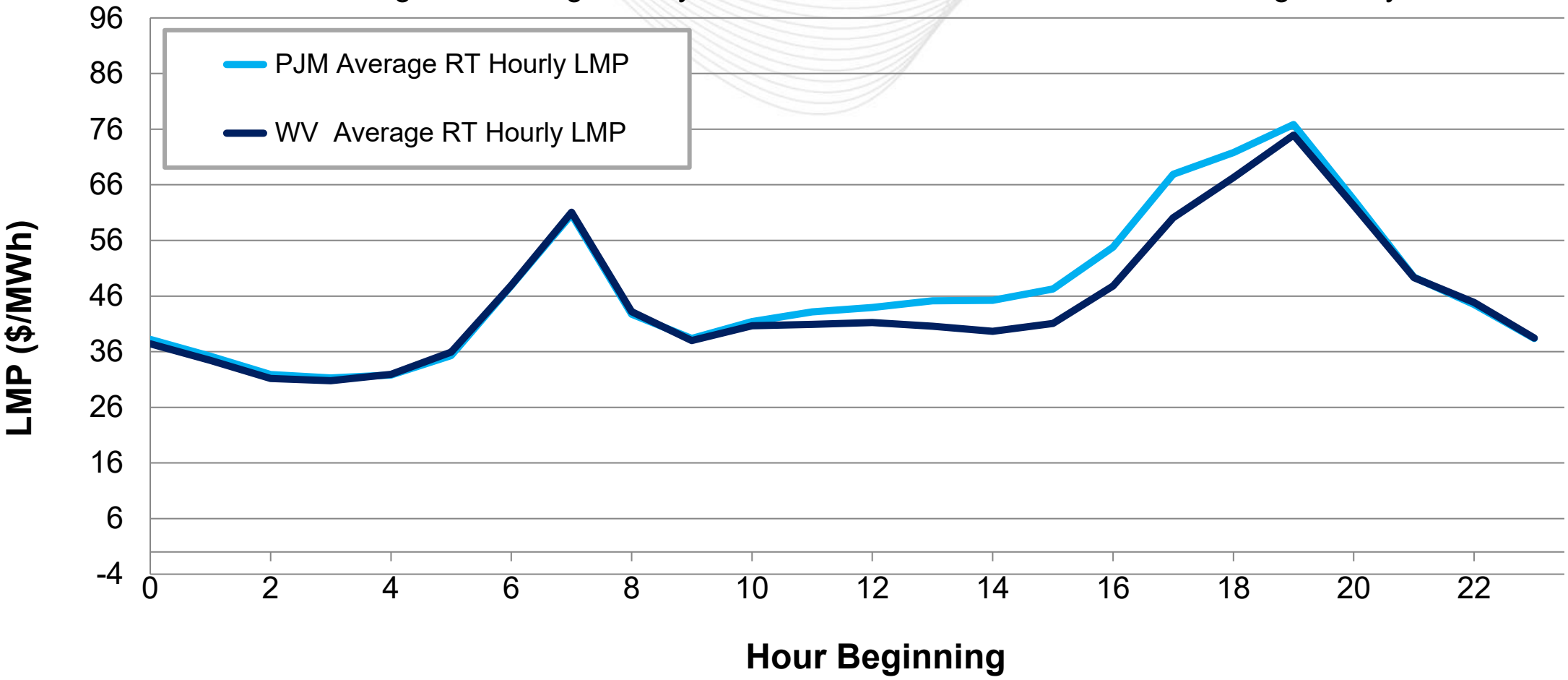
# West Virginia – Average Hourly LMP

(Jan. 1, 2025 – Dec. 31, 2025)

West Virginia's average hourly LMPs were consistent with the PJM average hourly LMP.





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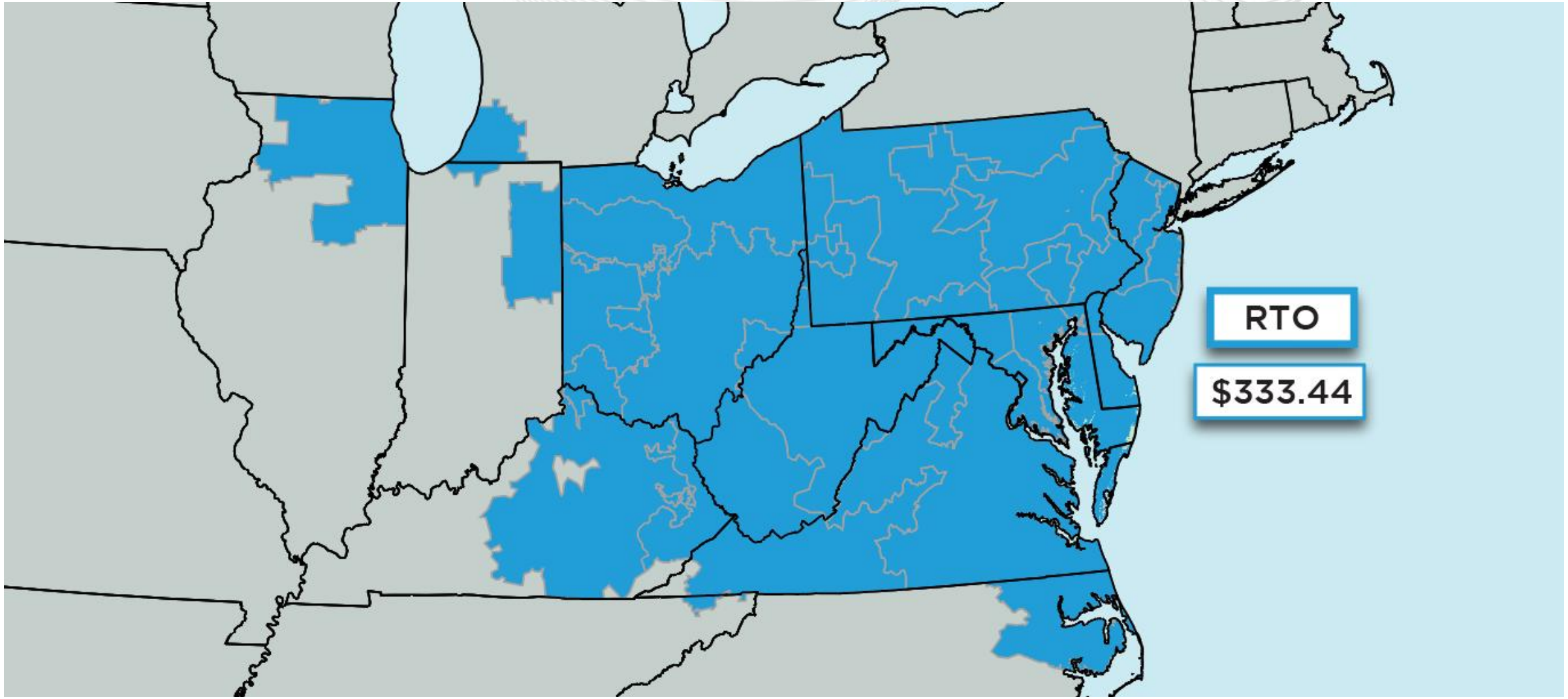
# 2027/28 Base Residual Auction Clearing Prices ($/MW-Day)





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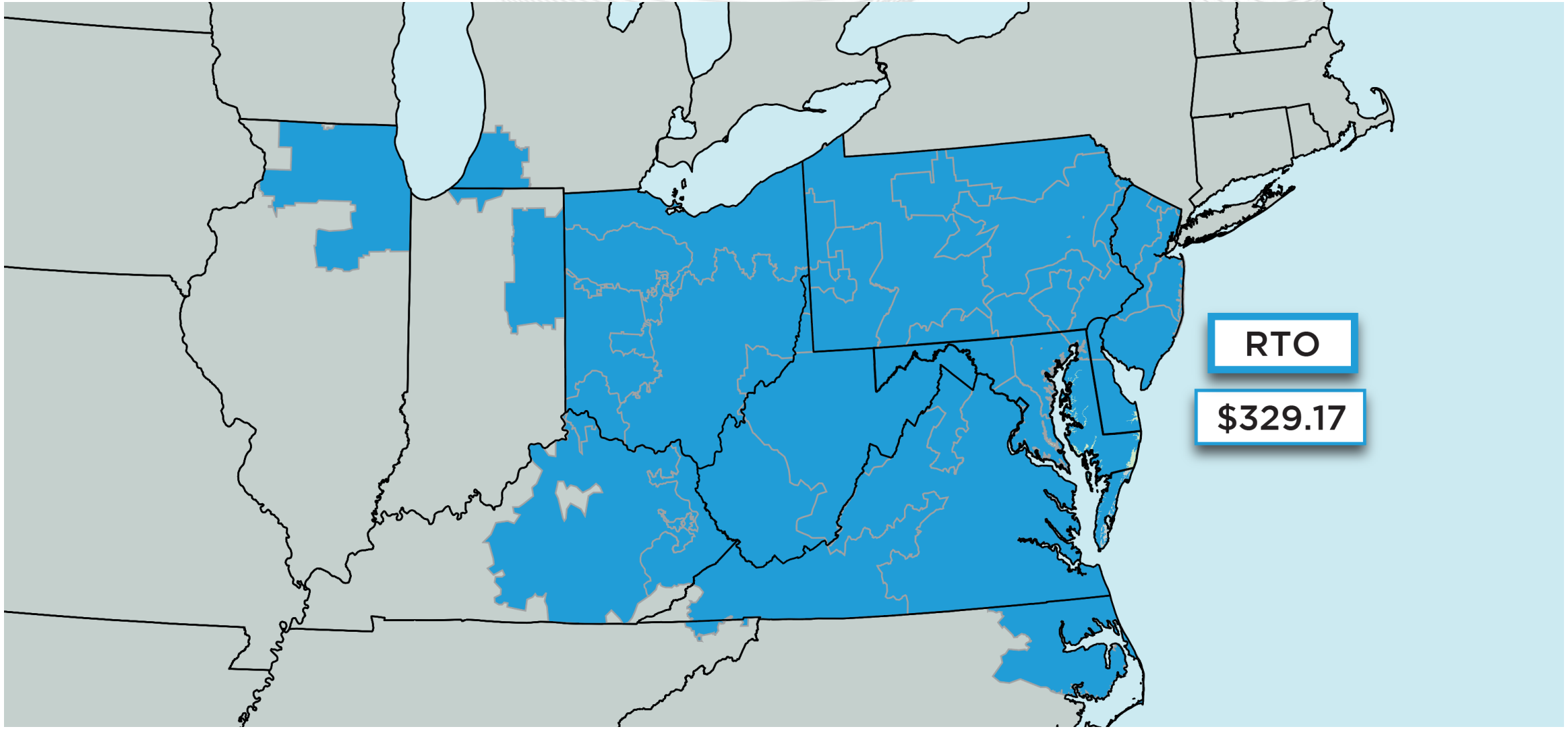
# 2026/27 Base Residual Auction Clearing Prices ($/MW-Day)





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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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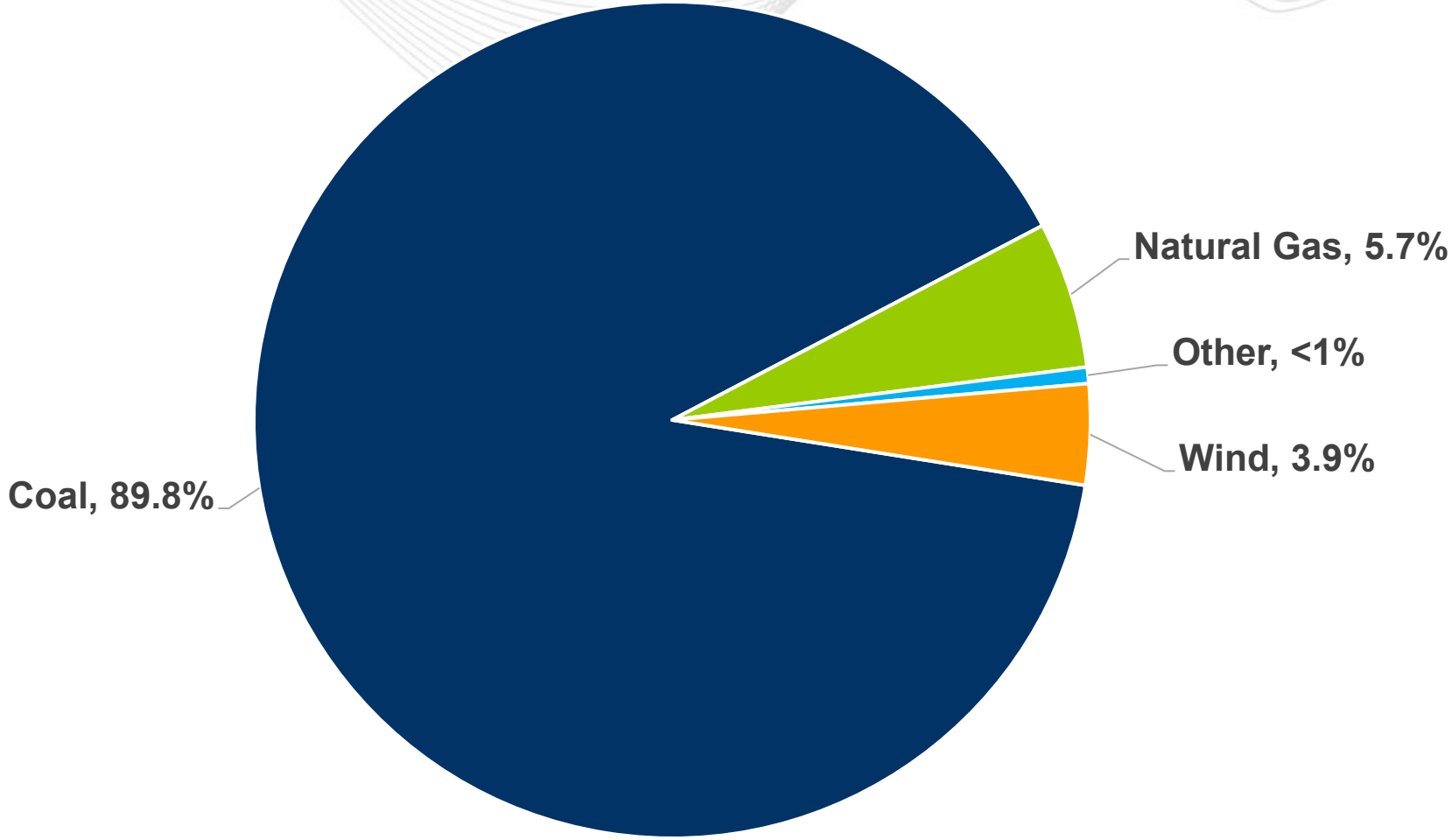
# West Virginia – 2025 Generator Production




*The data in this chart comes from EIA Form 923 (2025).*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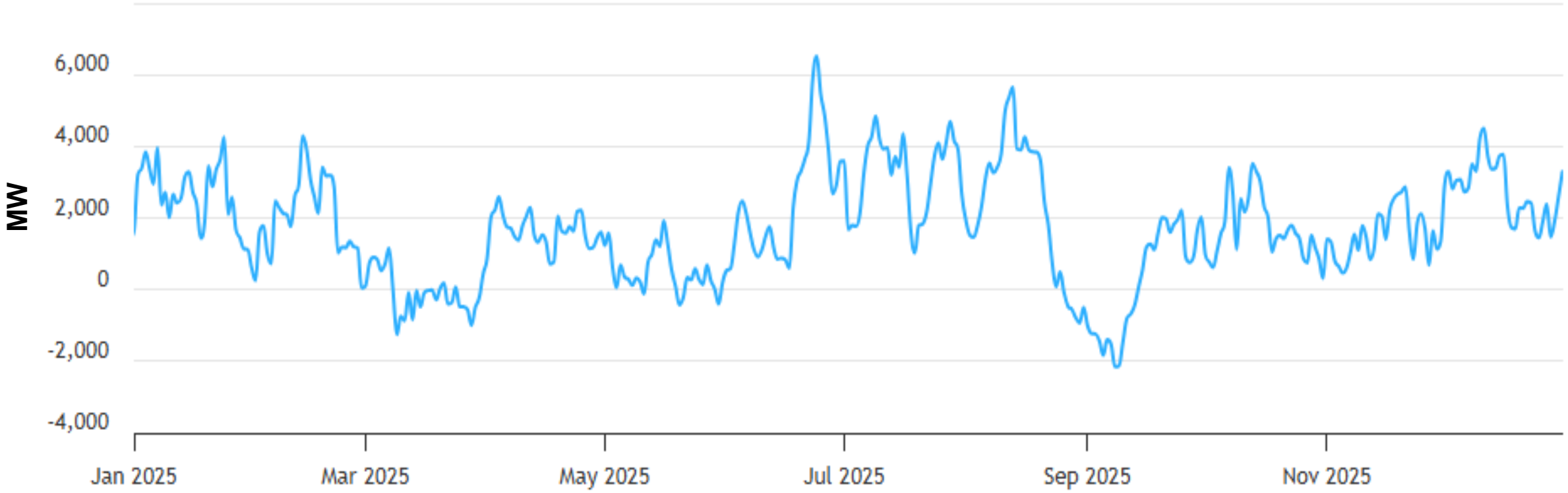
# West Virginia – Net Energy Import/Export Trend

(Jan. 2025 – Dec. 2025)




**Note:** Positive values represent exports and negative values represent imports.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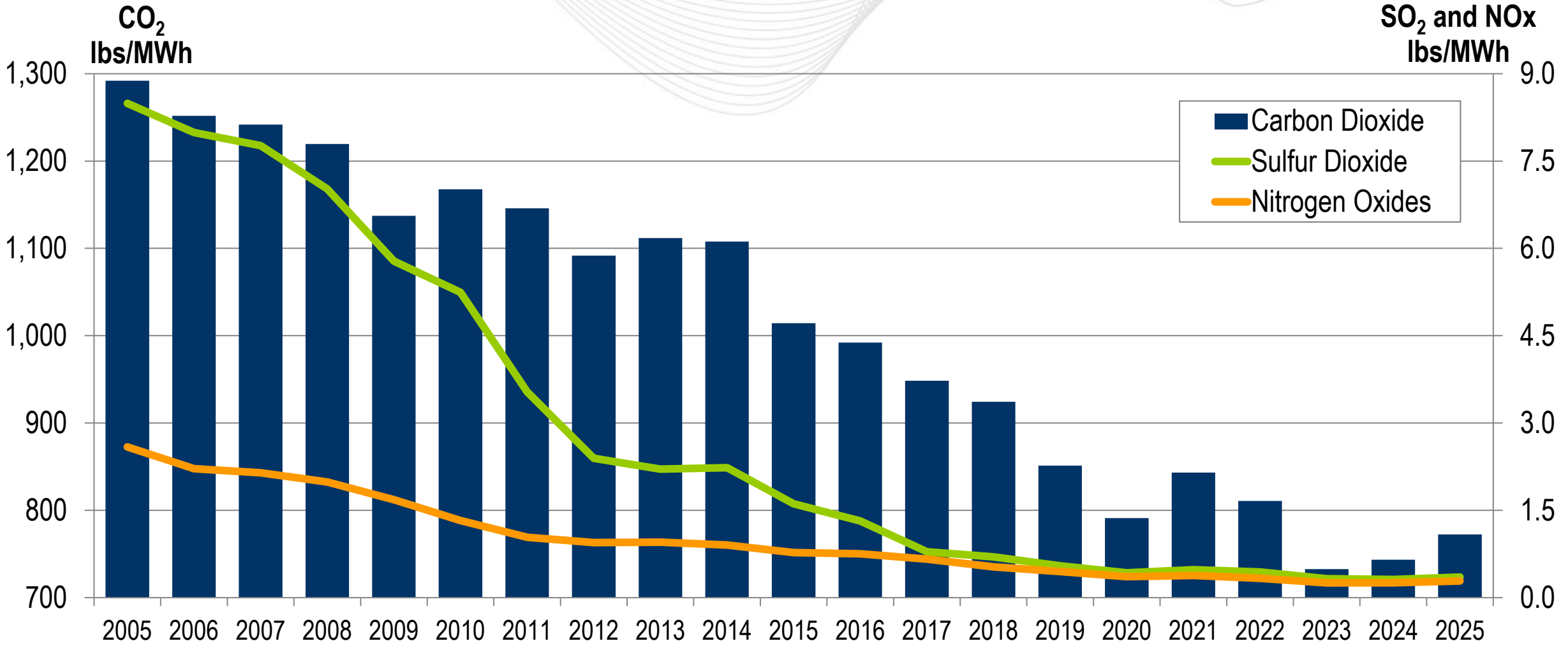
# PJM System Average Emission Rates





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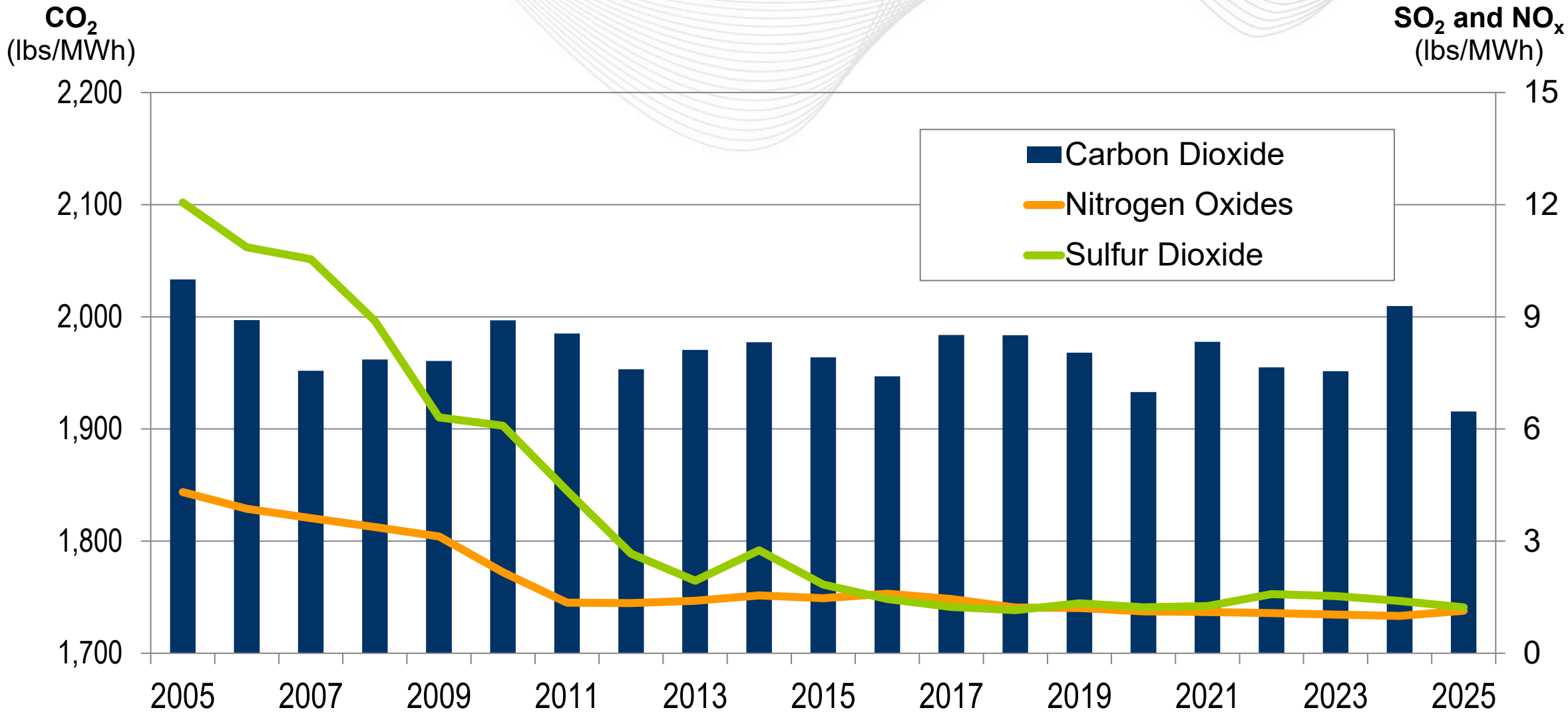
# West Virginia – Average Emissions (lbs/MWh)

(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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