2024 Maryland and District of Columbia State Infrastructure Report (January 1, 2024 – December 31, 2024)

June 2025

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Executive Summary

2024 Maryland & D.C. State Infrastructure Report

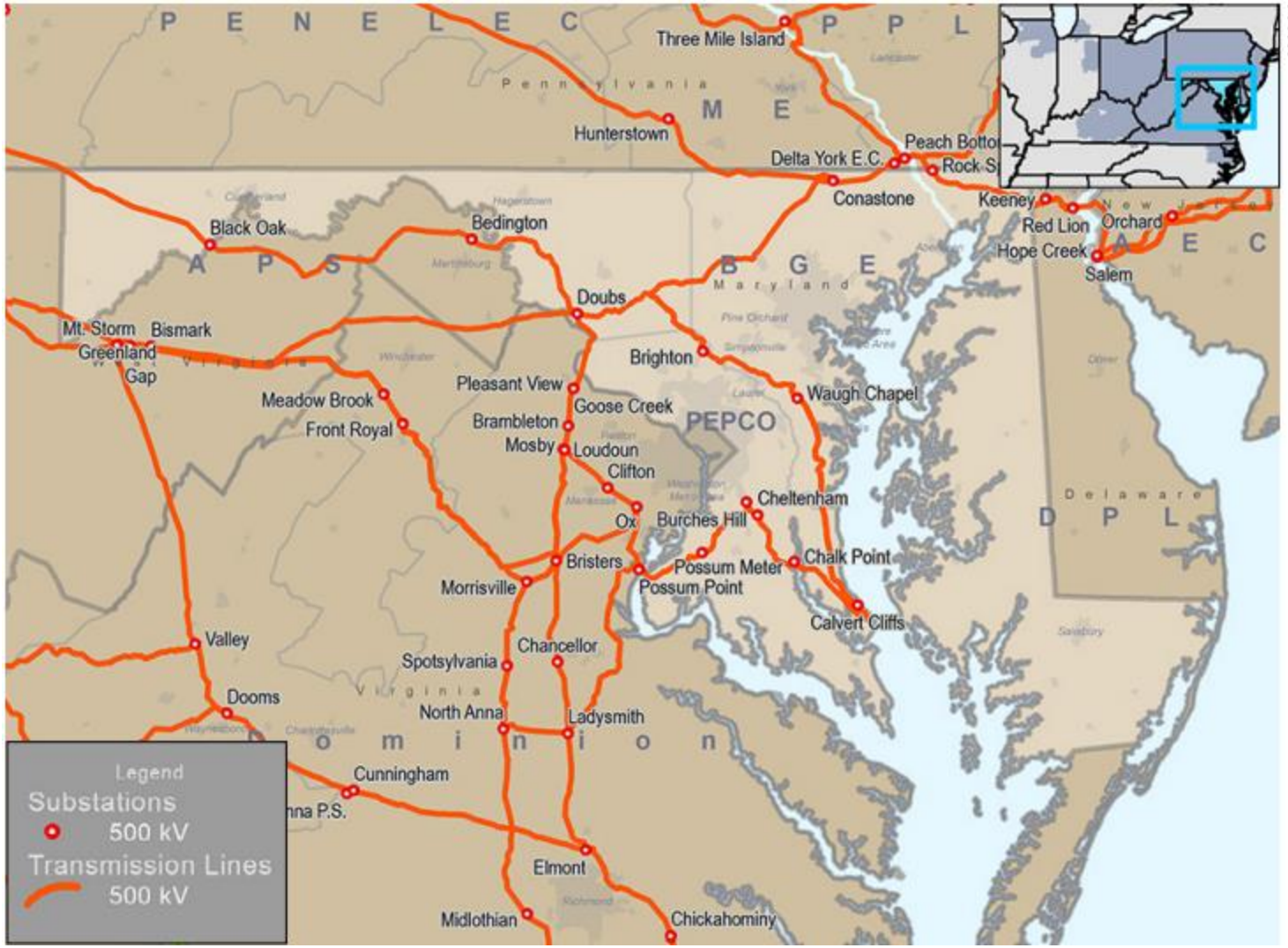
In the Maryland & D.C. service territory:

Existing Capacity:	• In Maryland, natural gas represents 50% of the total installed capacity while nuclear represents 16% and oil 15%, respectively. • In PJM, natural gas and coal are 49% and 21% of total installed capacity, while nuclear represents 18%.
Interconnection Requests:	• Storage represents 53% of new interconnection requests while solar represents 27% of new requests.
Deactivations:	• 239 MW of generation deactivated in 2024. • An additional 108.9 MW of generation announced its intention to deactivate in future years.
RTEP 2024:	Maryland and Washington, D.C.'s 2024 RTEP project total represents approximately $399.11 million in investment.

In the Maryland & D.C. service territory:

Load Forecast:	Maryland and Washington, D.C.'s summer peak load is projected to increase by 0.2% to 9.8% percent annually over the next ten years, while the winter peak is projected to increase by 0.6% to 9.2% percent, depending on the transmission zone.
Capacity Market:	Maryland's service territory cleared at the RTO clearing price, $269.92, and the BGE clearing price, $466.35, for the 2025/2026 Base Residual Auction.
Market Performance:	Maryland and Washington, D.C.'s average hourly LMPs were higher than the PJM average hourly LMP.
Emissions:	Maryland and Washington, D.C.'s average CO_2 emissions increased slightly in 2024 compared to 2023 levels.

PJM Service Area in Maryland/District of Columbia

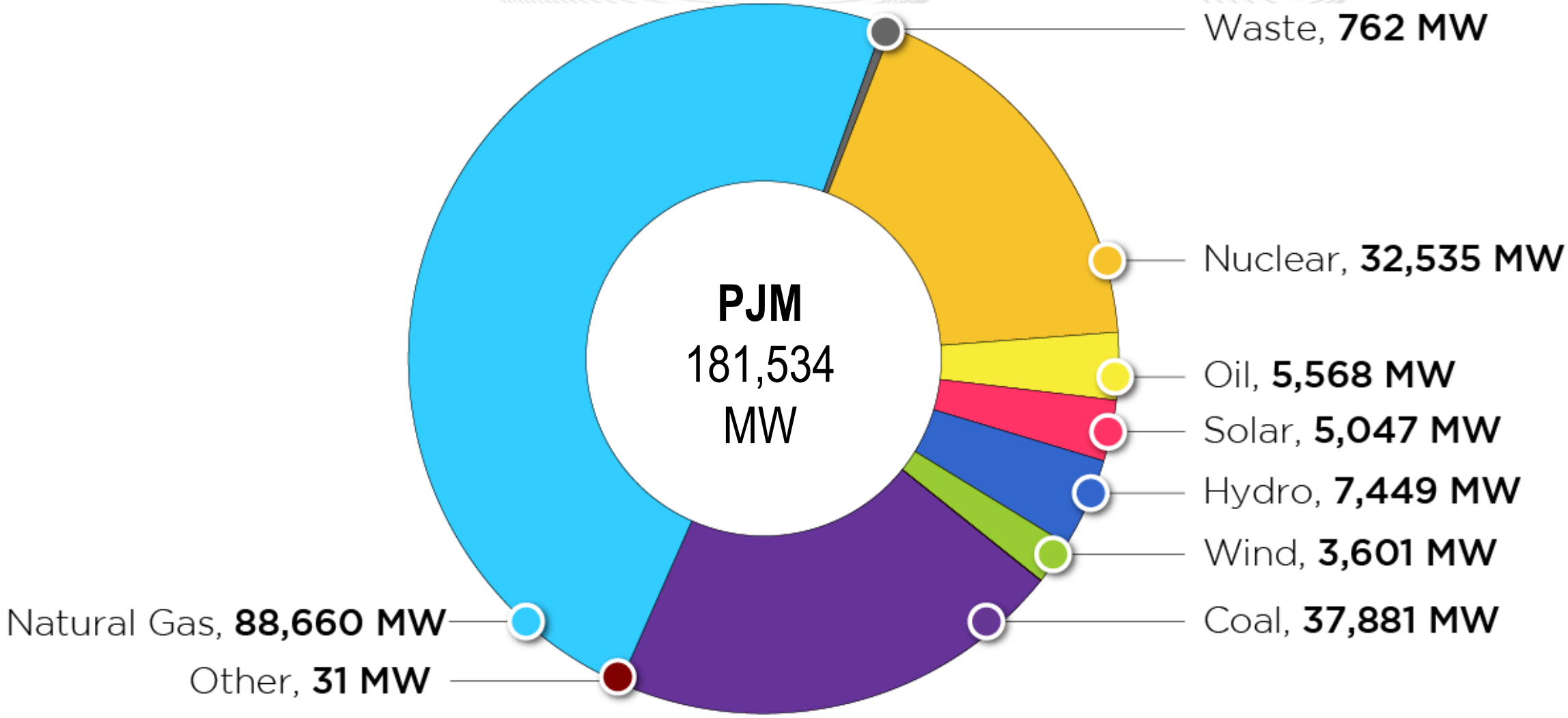


Planning

Generation Portfolio Analysis

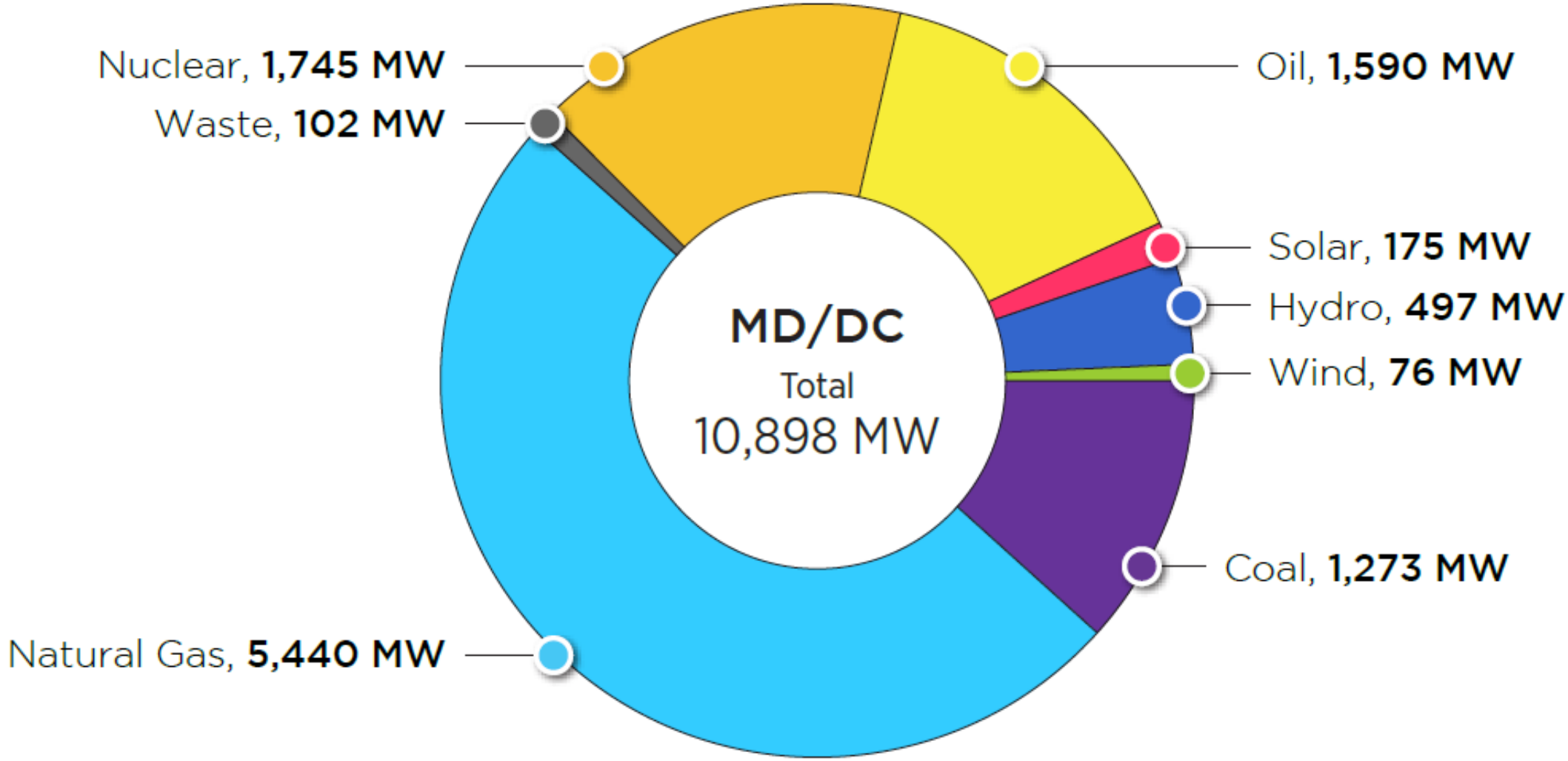
PJM Existing Installed Capacity Mix

(CIRs – as of Dec. 31, 2024)



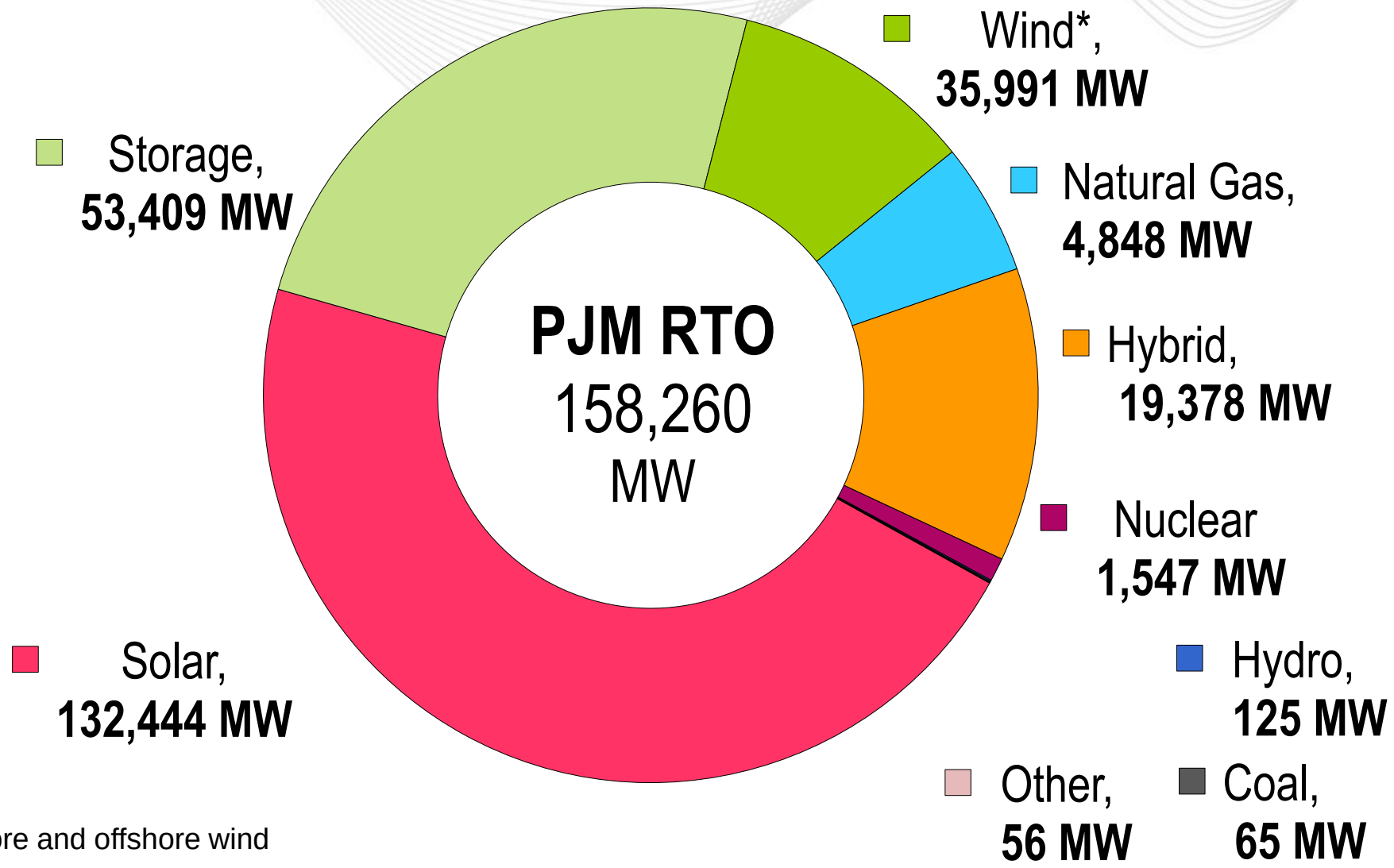
MD/DC – Existing Installed Capacity (MW) by Fuel Type

(CIRs- as of Dec. 31, 2024)



PJM Queued Capacity (Nameplate) by Fuel Type

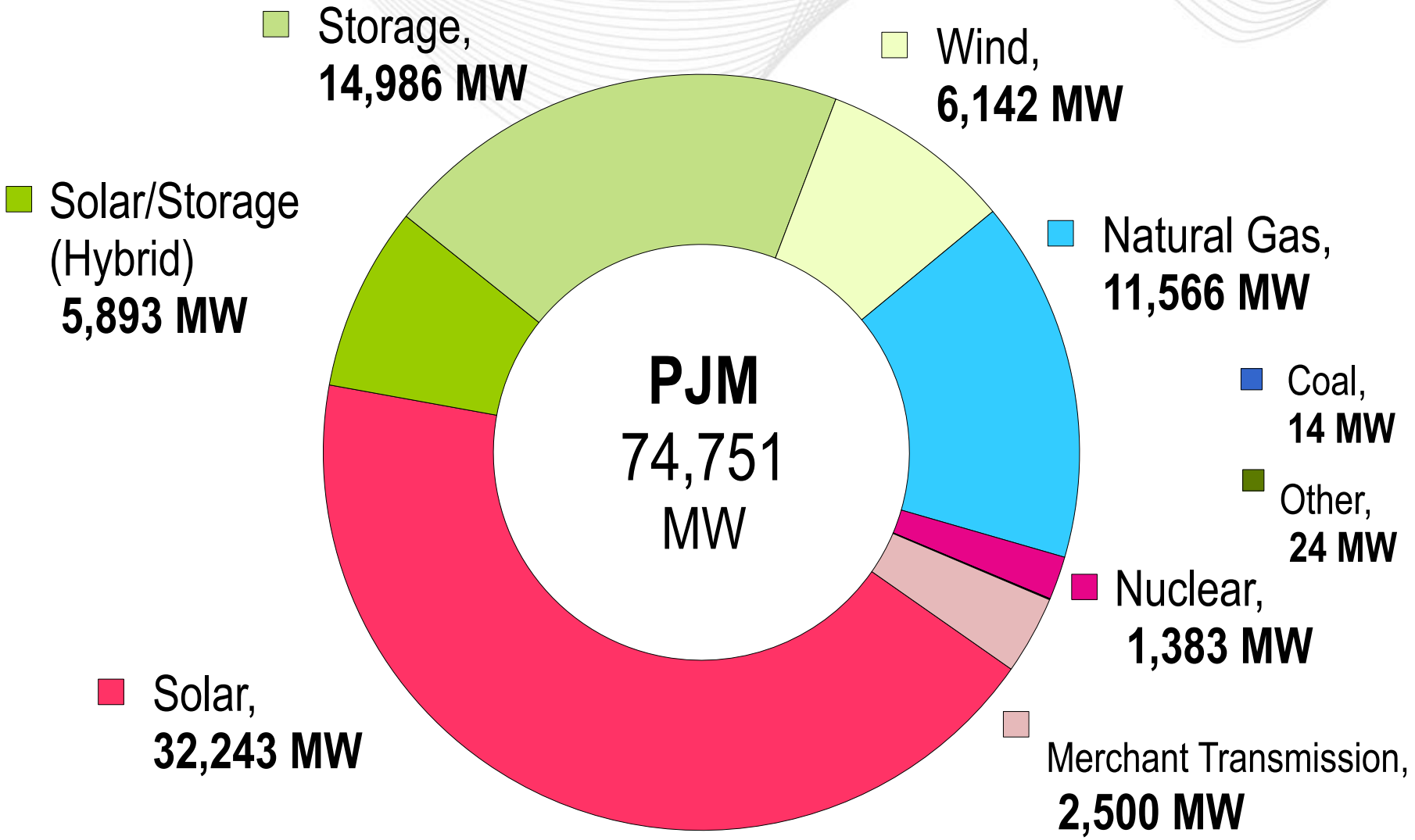
(All “Active” projects and projects with an interconnection agreement but not yet in service, as of May 7, 2025)



*Wind includes both onshore and offshore wind

PJM Interconnection Queue Transition

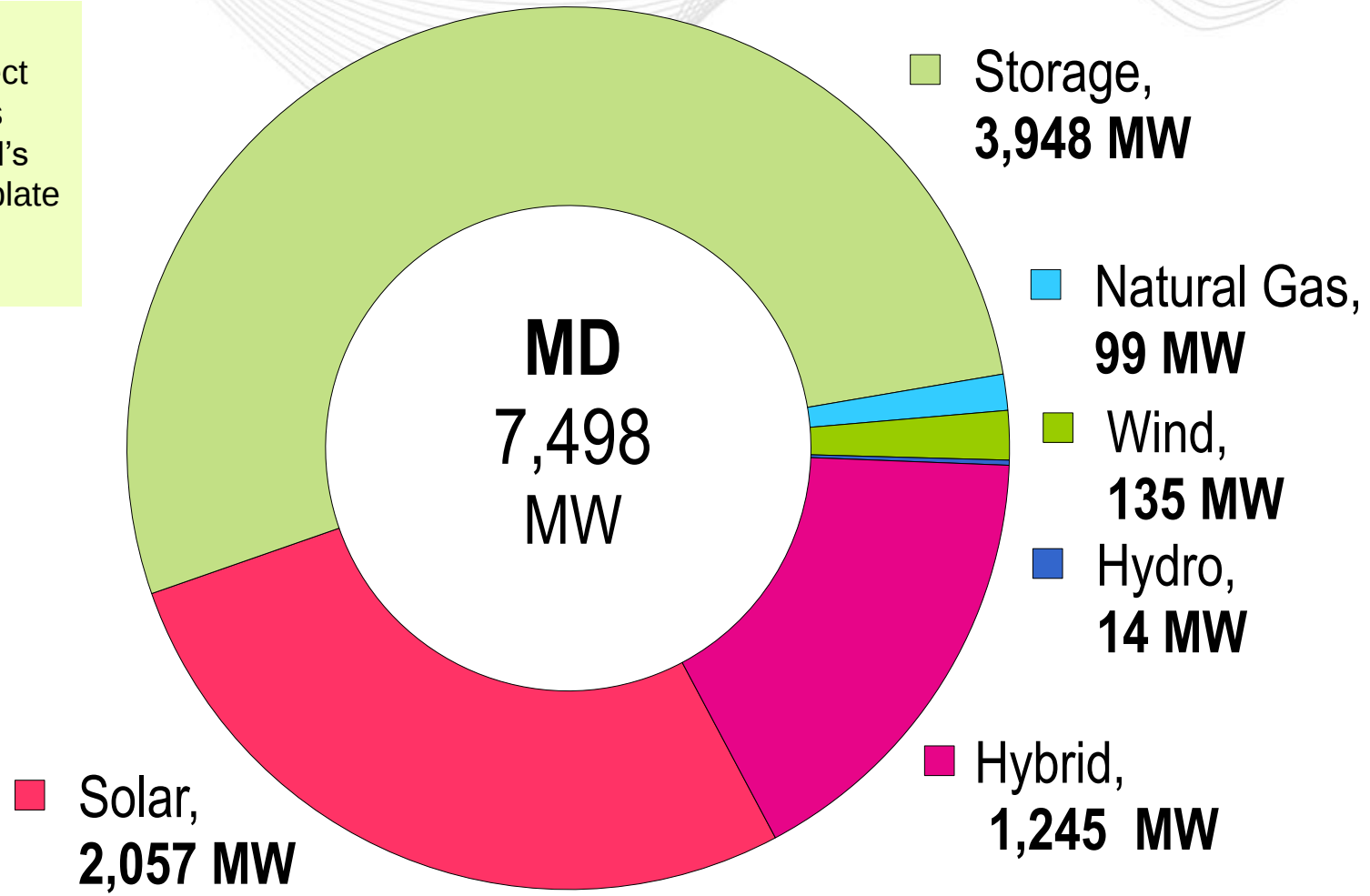
Projects remaining in Transition Cycle 1 and Transition Cycle 2, including projects selected through the Reliability Resource Initiative (June 2025)



Maryland Queued Capacity (Nameplate) by Fuel Type

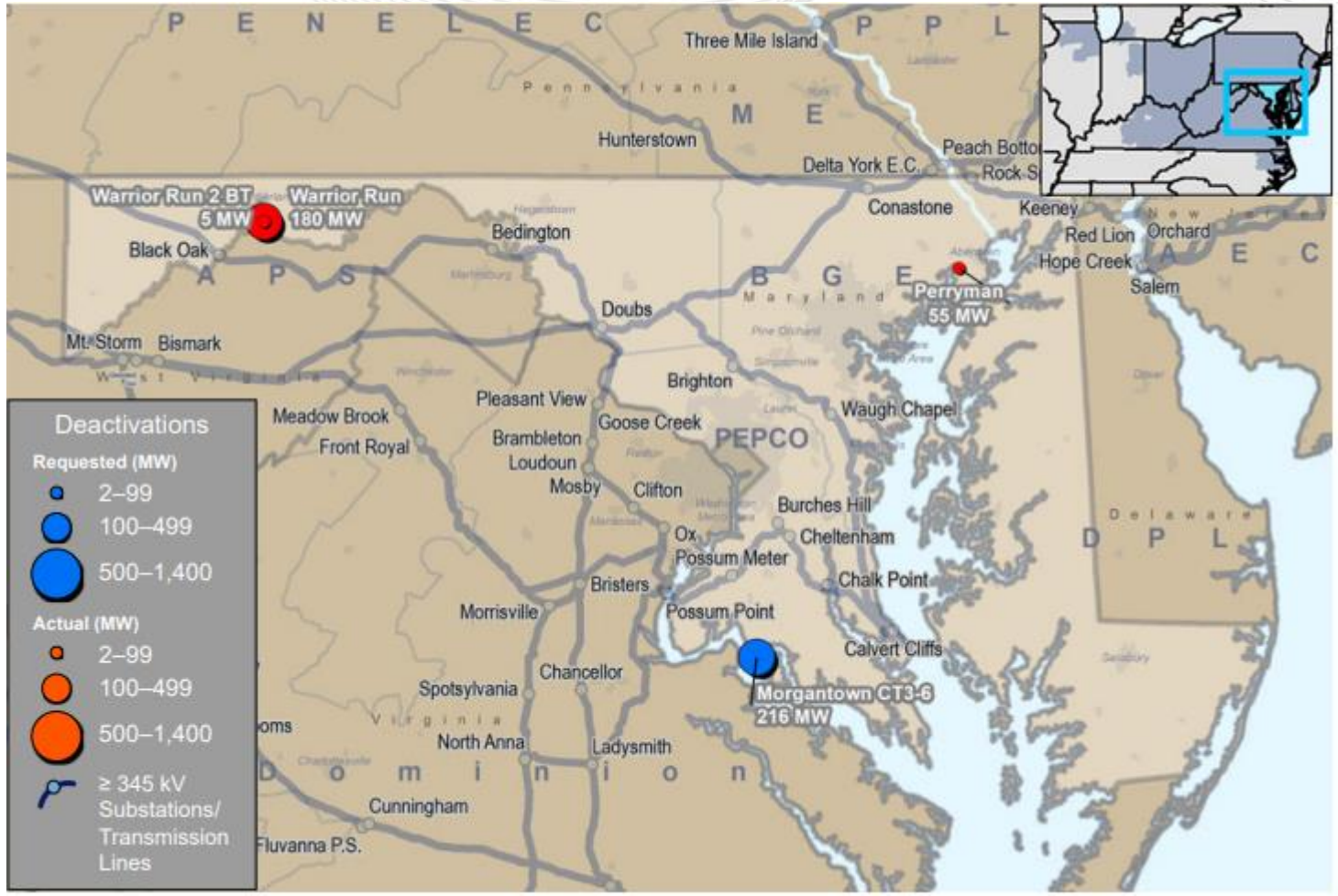
(All “Active” projects and projects with an interconnection agreement but not yet in service, as of May 7, 2025)

Because Maryland’s offshore wind projects are proposed to interconnect into Delaware, they are captured as Delaware’s queued capacity in PJM’s RTEP. There are 772 MW of nameplate offshore wind capacity queued in Delaware.



*Wind includes both onshore and offshore wind

Maryland – 2024 Generator Deactivations



Maryland – 2024 Generator Deactivations

Unit	TO Zone	Fuel Type	Request Received to Deactivate	Actual or Projected Deactivation Date	Age (Years)	Capacity (MW)
Warrior Run 2 BT	AP	Battery	5/31/2024	10/1/2024	22	5
Morgantown CT 6	PEPCO	Oil	12/22/2023	6/1/2024	50	54
Morgantown CT 5						
Warrior Gen1	AP	Coal	9/29/2023		21	180
Perryman 6	BGE	Natural Gas	7/22/2024	5/31/2025	9	54.9
Morgantown CT 4	PEPCO	Oil		6/1/2026	51	54
Morgantown CT 3						

Planning

Transmission Infrastructure Analysis

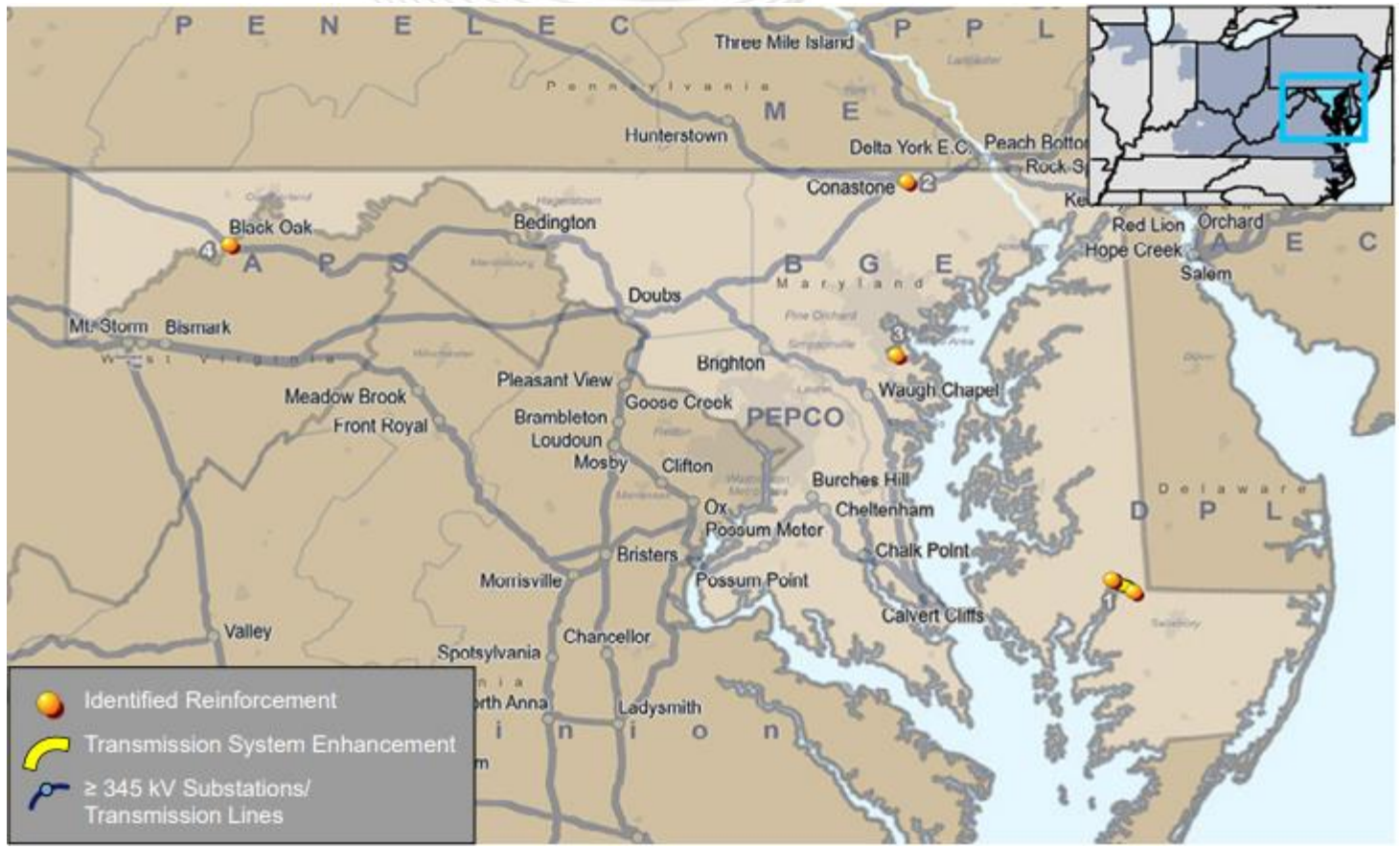
For reporting purposes, the 2024 state infrastructure reports provide maps displaying all baseline, network, and supplemental projects for the respective state. The reports also include aggregated project costs for each type of project within each state. The costs listed in the state infrastructure reports and 2024 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 **2024 Annual RTEP Report** on PJM.com: https://www.pjm.com/-/media/DotCom/library/reports-notices/2024-rtep/2024-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.

Maryland/District of Columbia Baseline Projects

(as of Dec. 31. 2024)

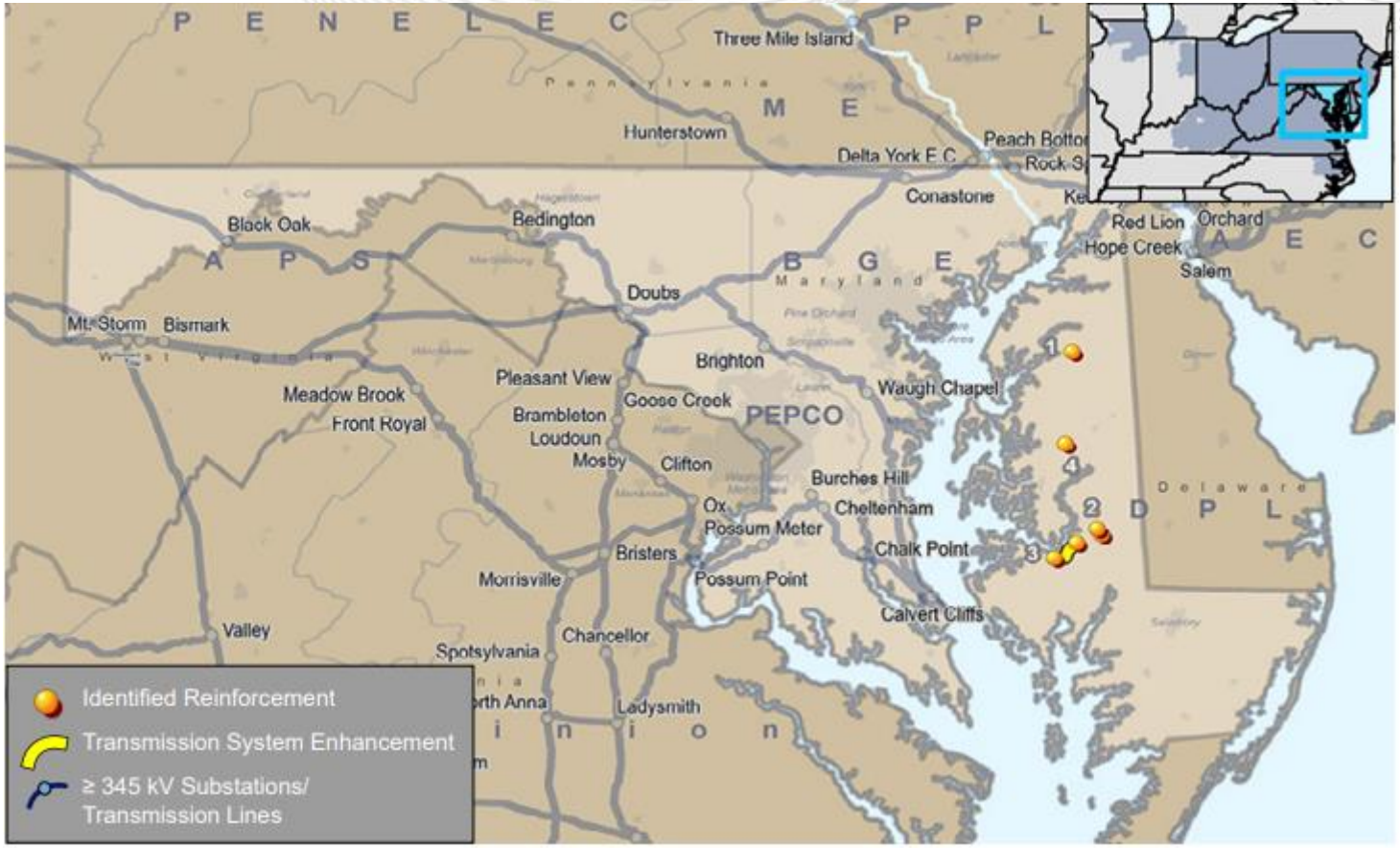


The 2024 RTEP has $150.15 million in baseline projects located in MD/DC.

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.

Maryland/District of Columbia Network Projects

(as of Dec. 31. 2024)

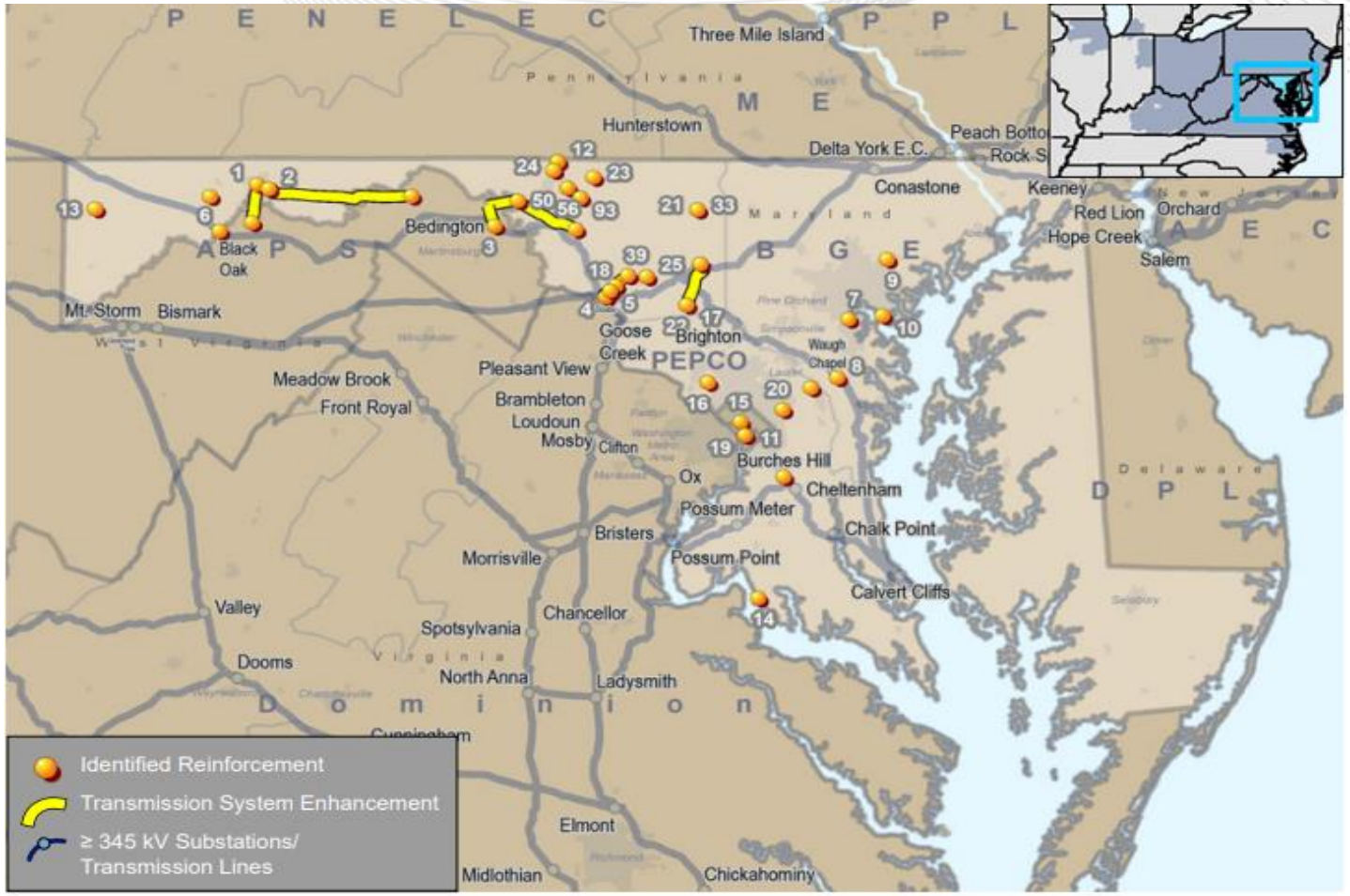


The 2024 RTEP has $26.52 million in network projects located in MD/DC.

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.

Maryland/District of Columbia Supplemental Projects

(as of Dec. 31. 2024)

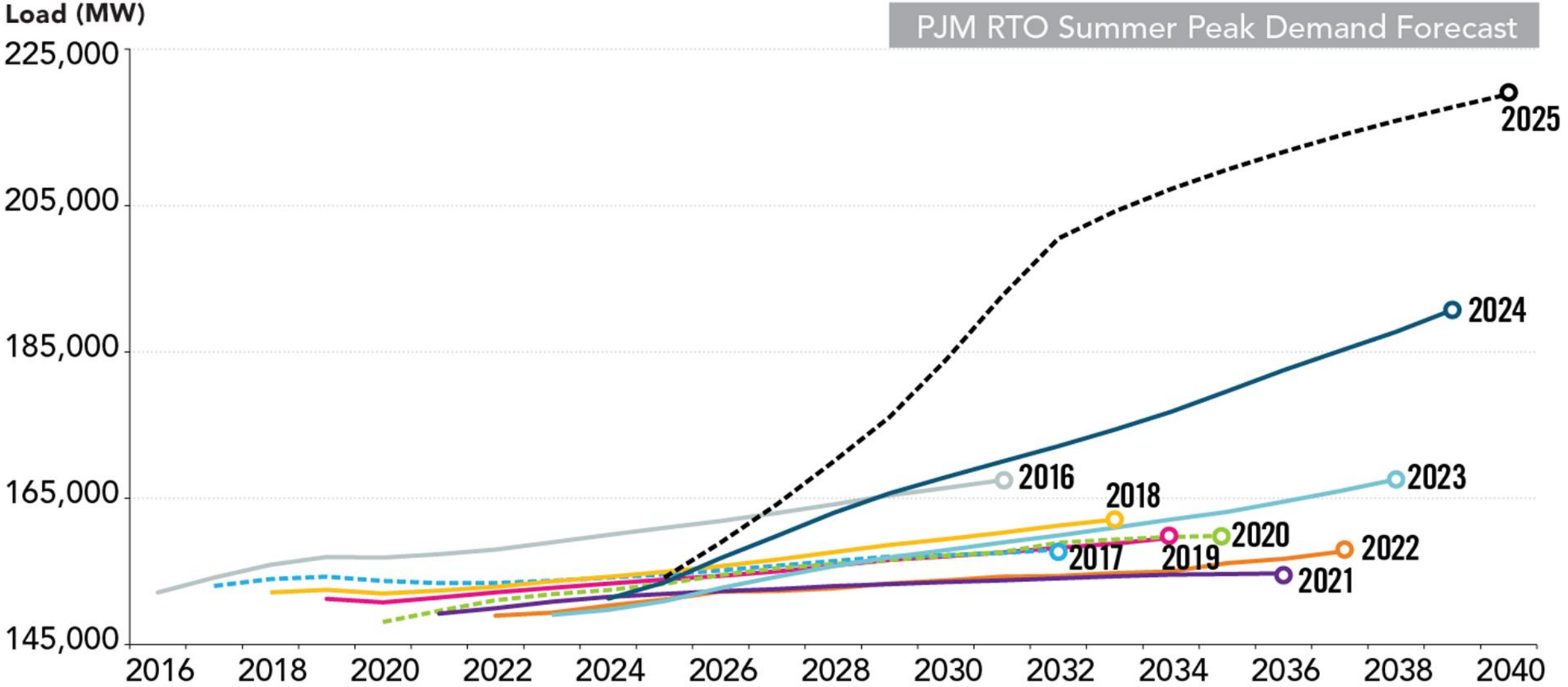


The 2024 RTEP has $222.44 million in baseline projects located in MD/DC.

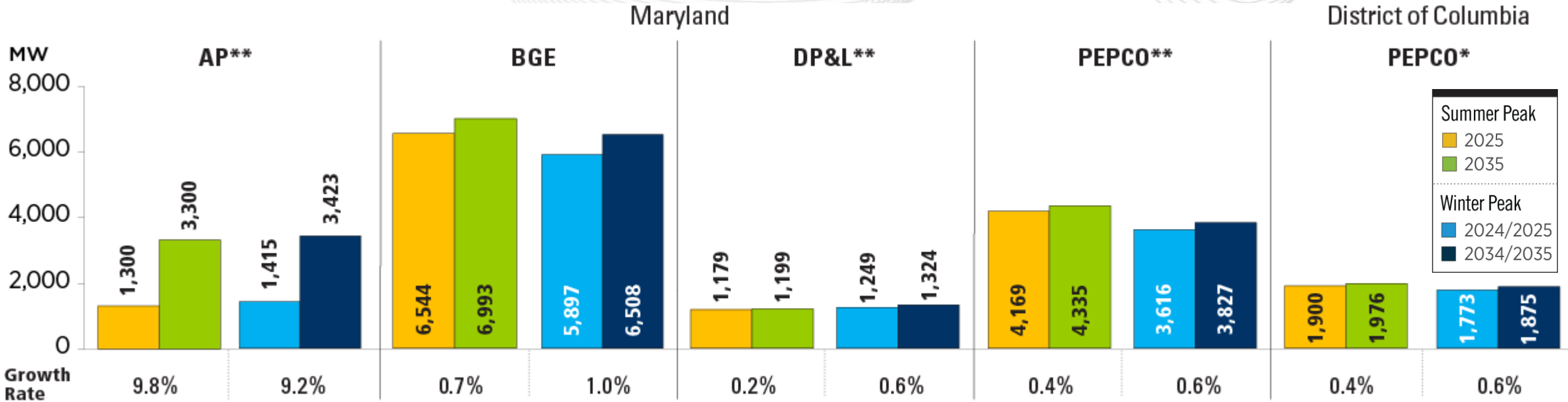
Note: Supplemental projects are transmission expansions or enhancements that are not required for compliance with PJM criteria and are not state public policy projects according to the PJM Operating Agreement. These projects are used as inputs to RTEP models, but are not required for reliability, economic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

Planning
Load Forecast

PJM Electricity Demand Growth



Maryland / D.C. – 2025 Load Forecast Report



**Serves load outside MD; *serves load outside D.C.

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

2025	2035
154,144 MW	209,923 MW

Growth Rate 3.1%

PJM RTO Winter Peak

2024/2025	2034/2035
136,127 MW	198,175 MW

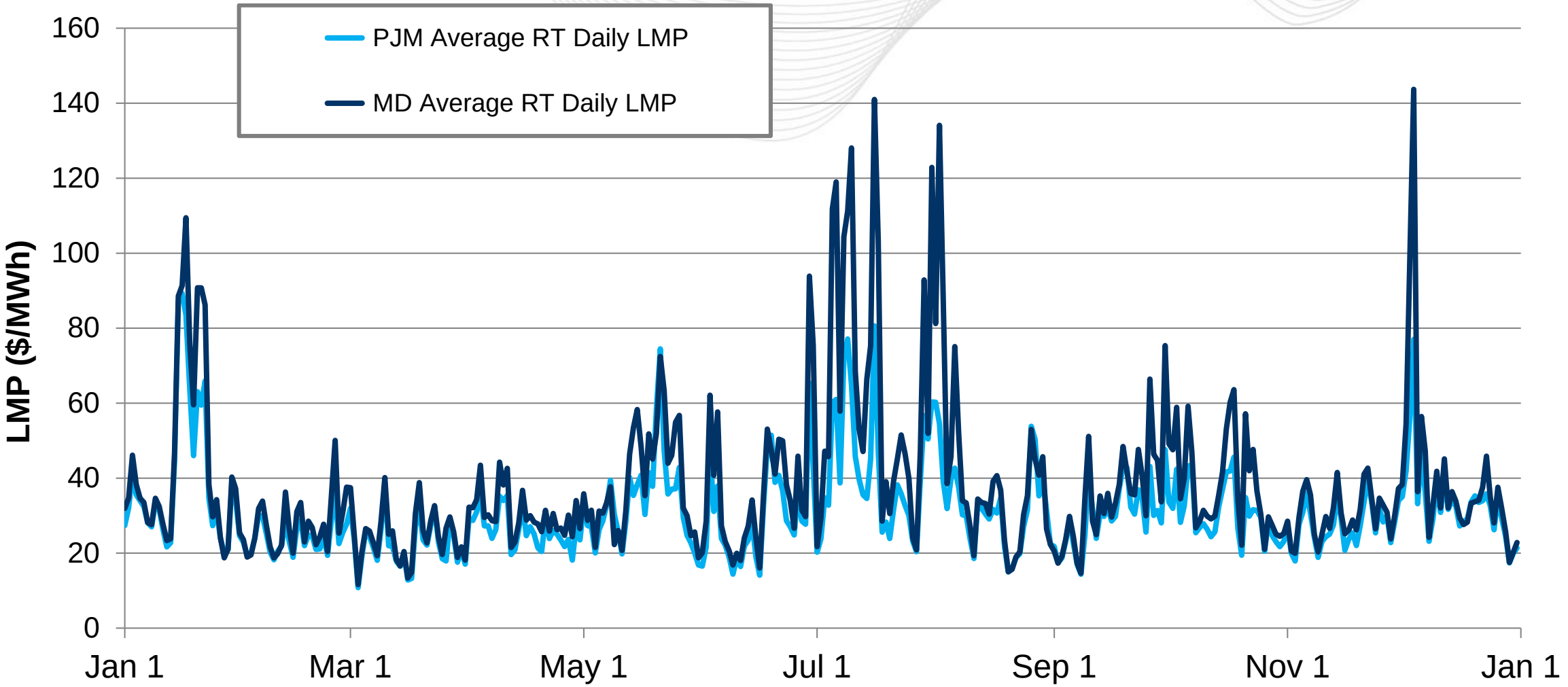
Growth Rate 3.8%

Markets

Market Analysis

Maryland – Average Daily LMP

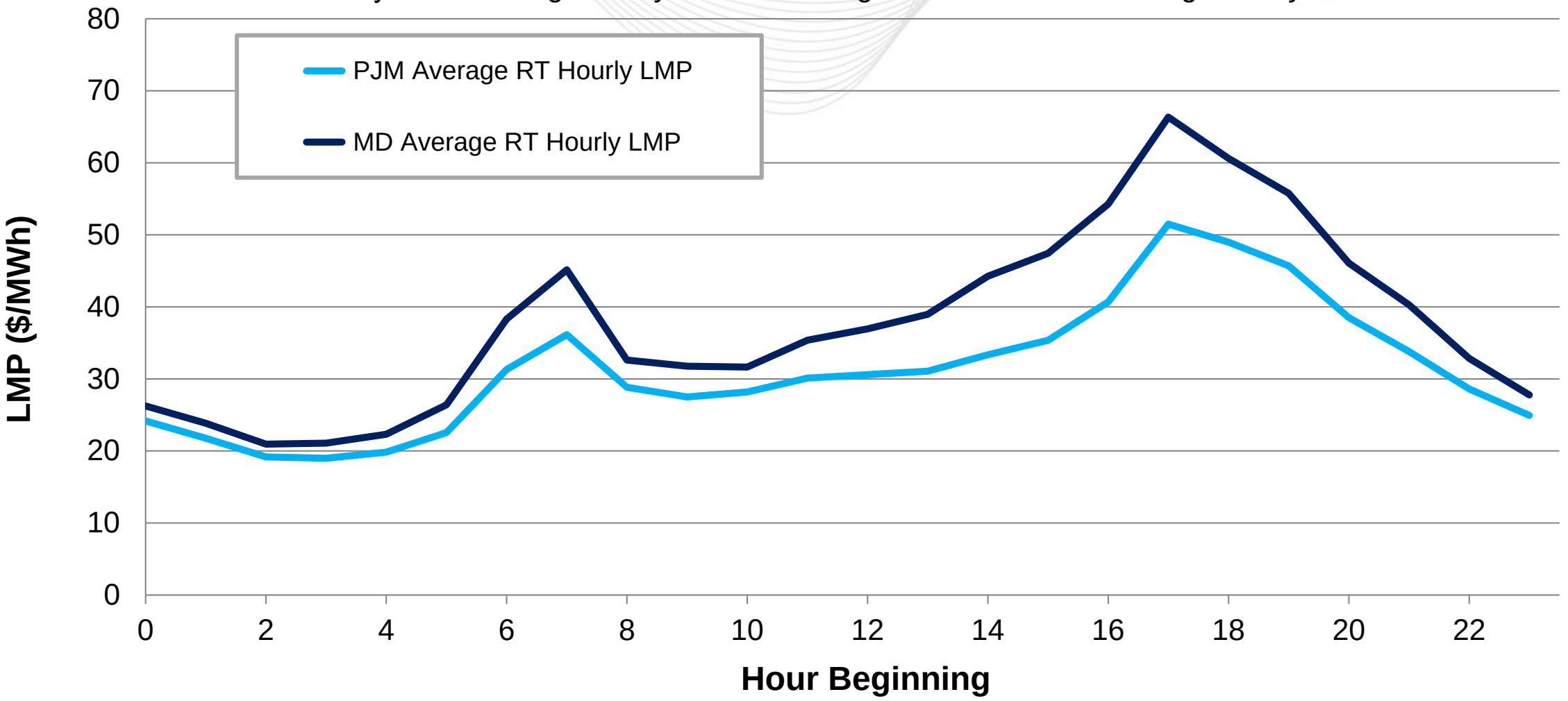
(Jan. 1, 2024 – Dec. 31, 2024)



Maryland – Average Hourly LMP

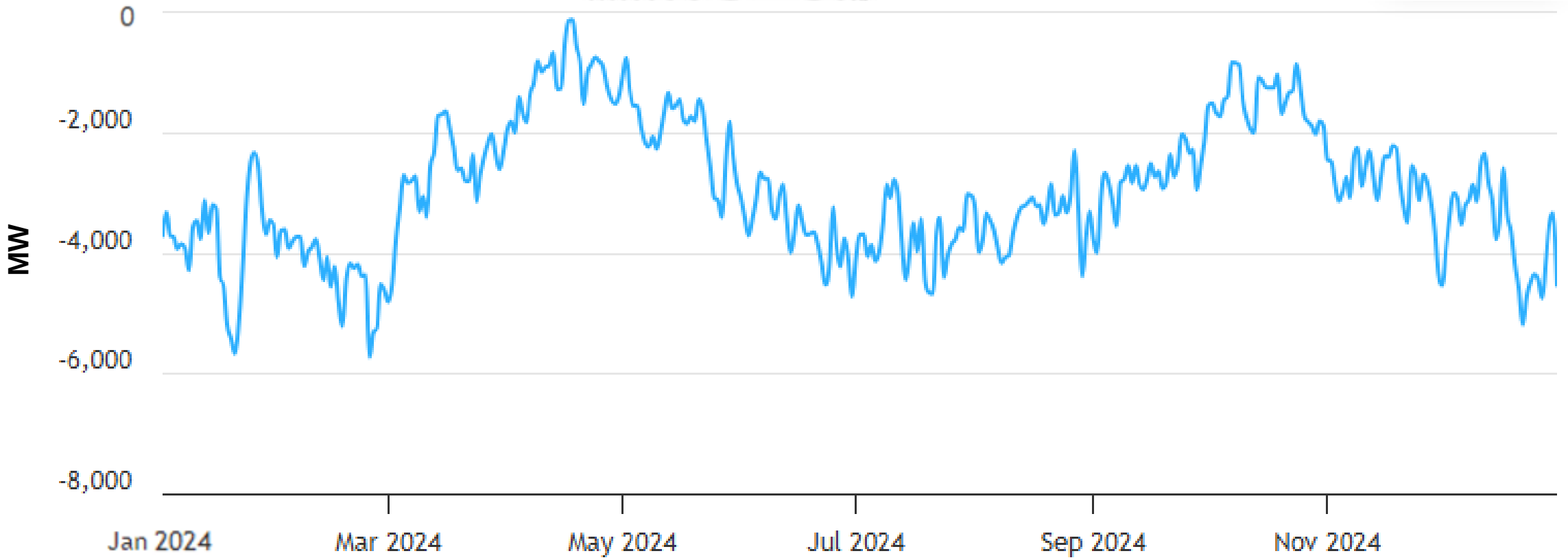
(Jan. 1, 2024 – Dec. 31, 2024)

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



Maryland – Net Energy Import/Export Trend

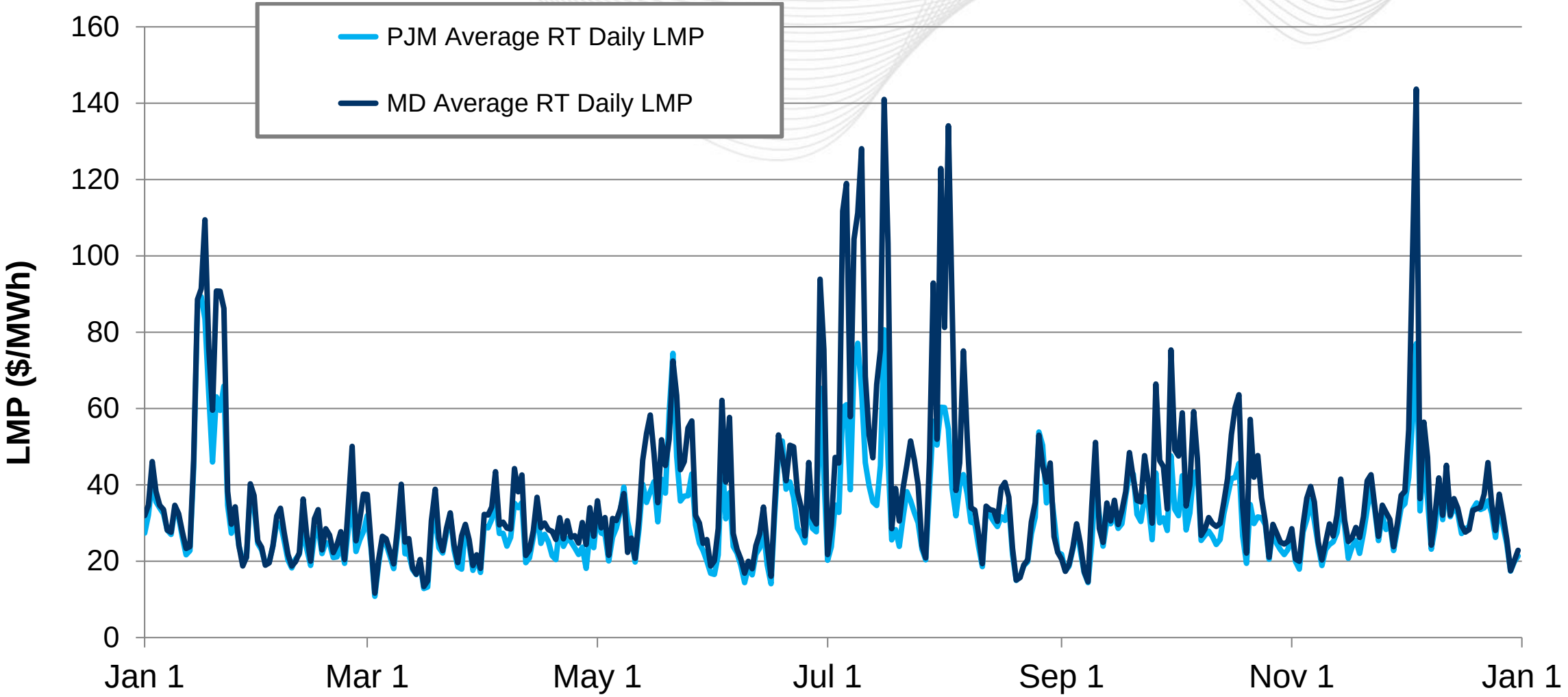
(Jan. 2024 – Dec. 2024)



Positive values represent exports and negative values represent imports.

Washington, D.C. – Average Daily LMP

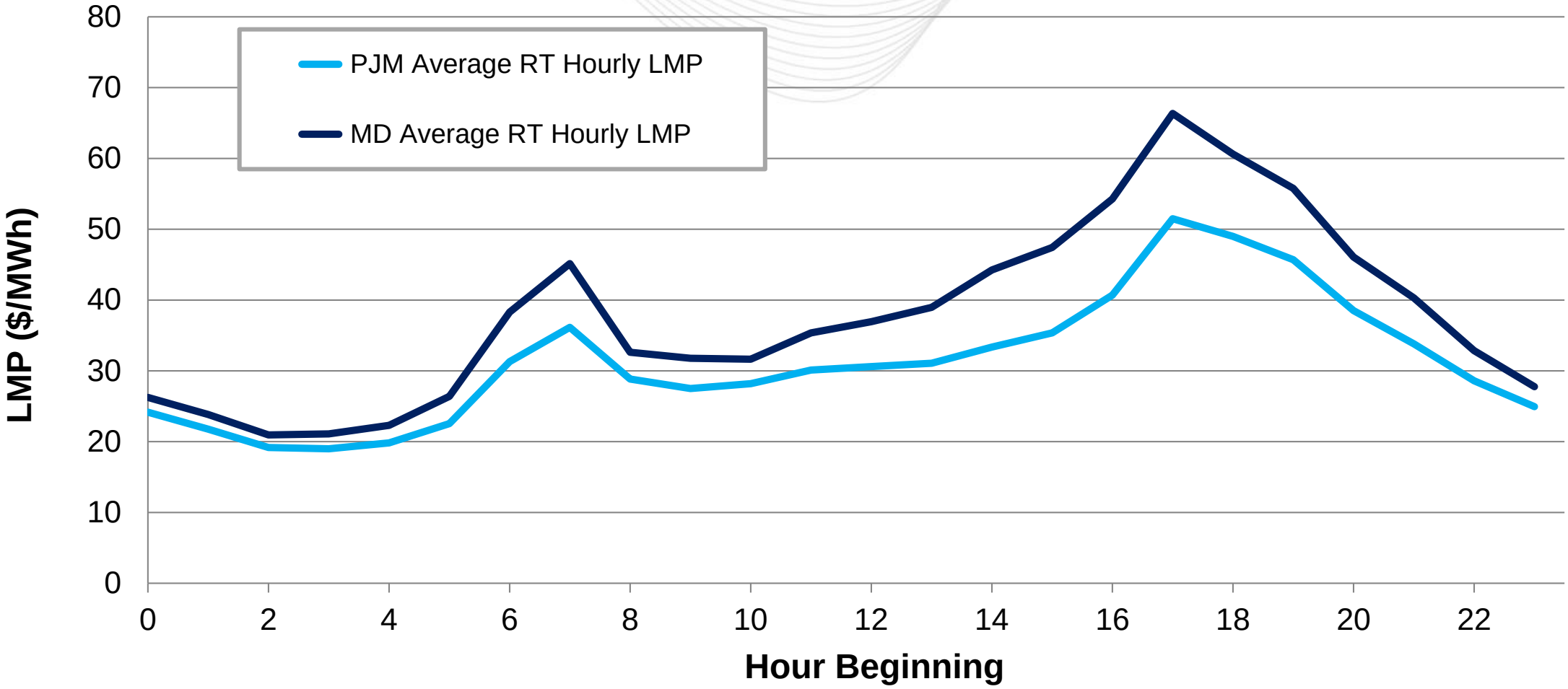
(Jan. 1, 2024 – Dec. 31, 2024)



Washington, D.C. – Average Hourly LMP

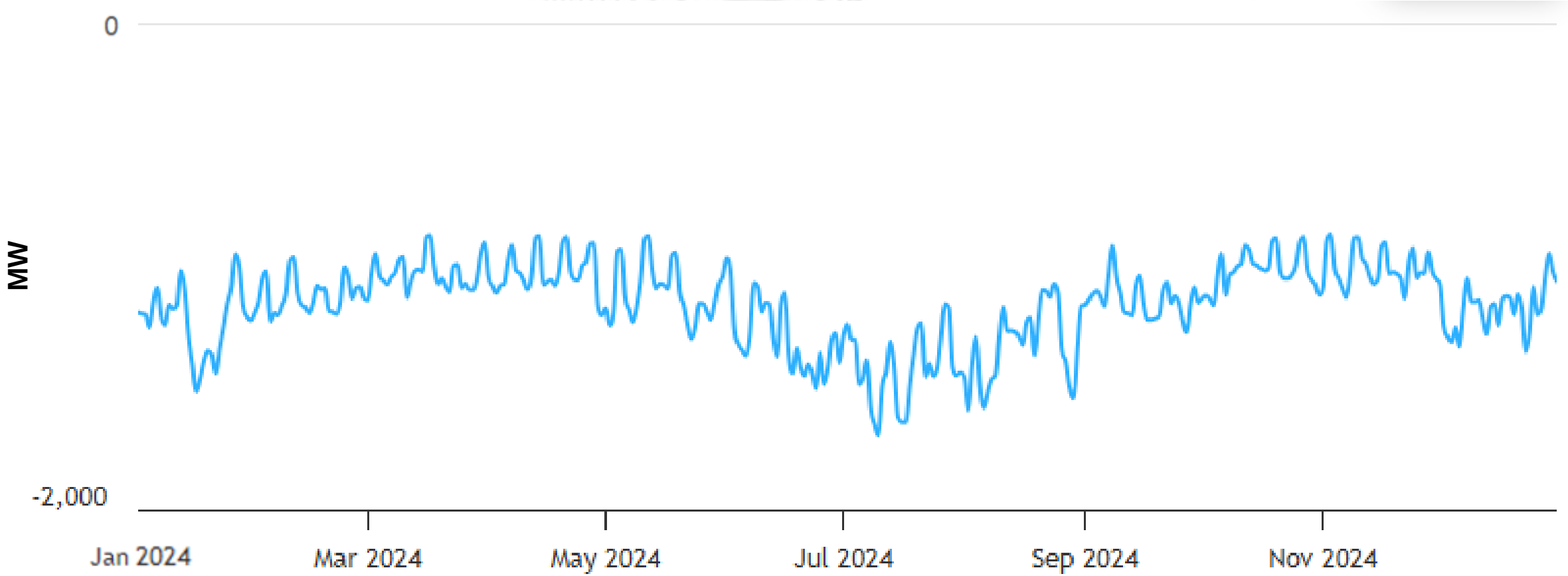
(Jan. 1, 2024 – Dec. 31, 2024)

Washington, D.C's average hourly LMPs were higher than the PJM average hourly LMP.



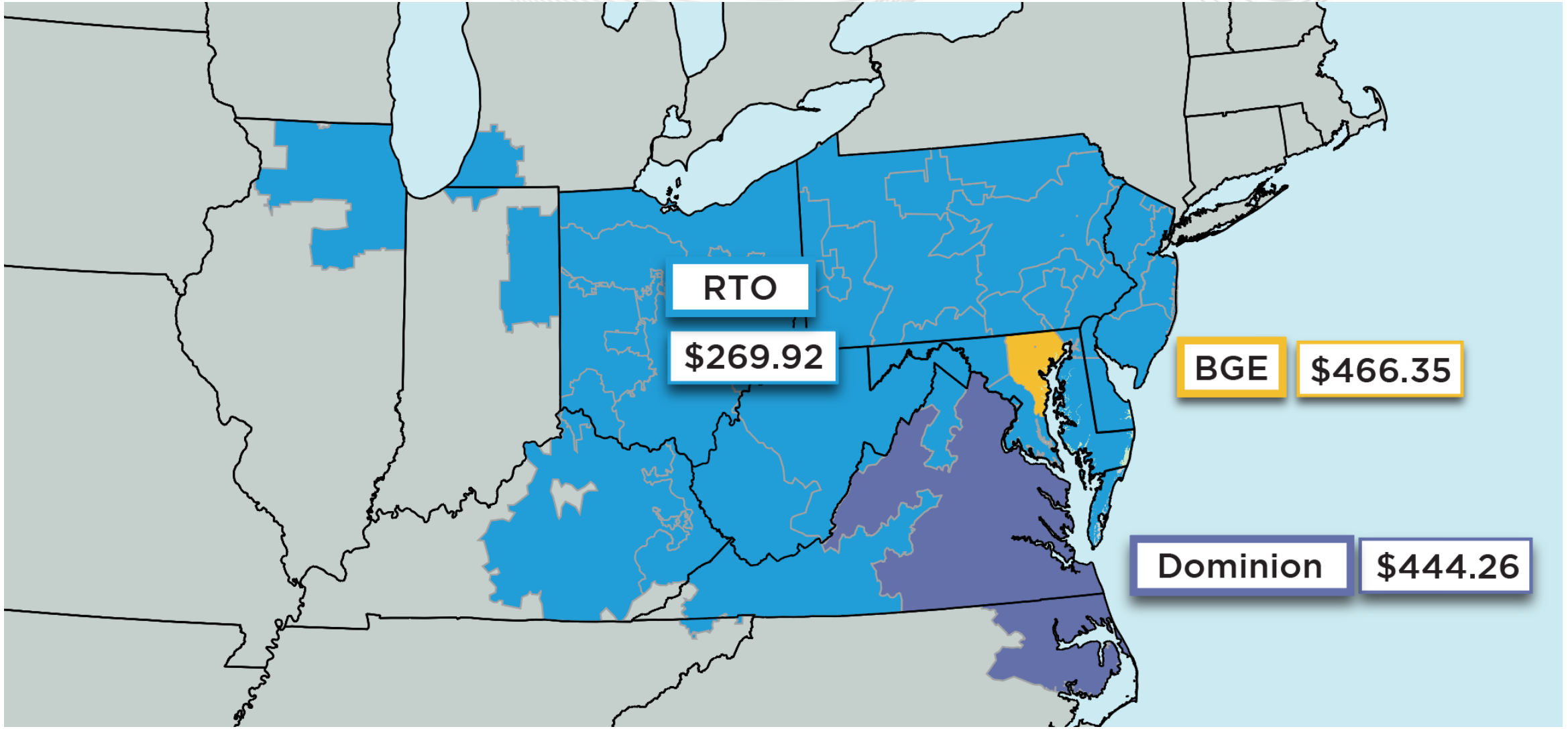
Washington, D.C. – Net Energy Import/Export Trend

(Jan. 2024 – Dec. 2024)



Positive values represent exports and negative values represent imports.

2025/26 Base Residual Auction Clearing Prices ($/MW-Day)



2025/2026 BRA Final Clearing Prices and MW Quantities

(Unforced Capacity)

LDA	Offered MW*	Cleared MW**	Clearing Price
DOM	20,100.2	20,049.6	$444.26
BGE	612.9	606.9	$466.35
RTO	137,152.1	135,684.0	$269.92

** Offered MW values include Annual, Summer-Period, and Winter-Period Capacity Performance sell offers.*

*** Cleared MW values include Annual and matched Seasonal Capacity Performance sell offers within the LDA.*

Locational Price Adder is with respect to the immediate parent LDA

2025/2026 Cleared MW (UCAP) by Resource Type

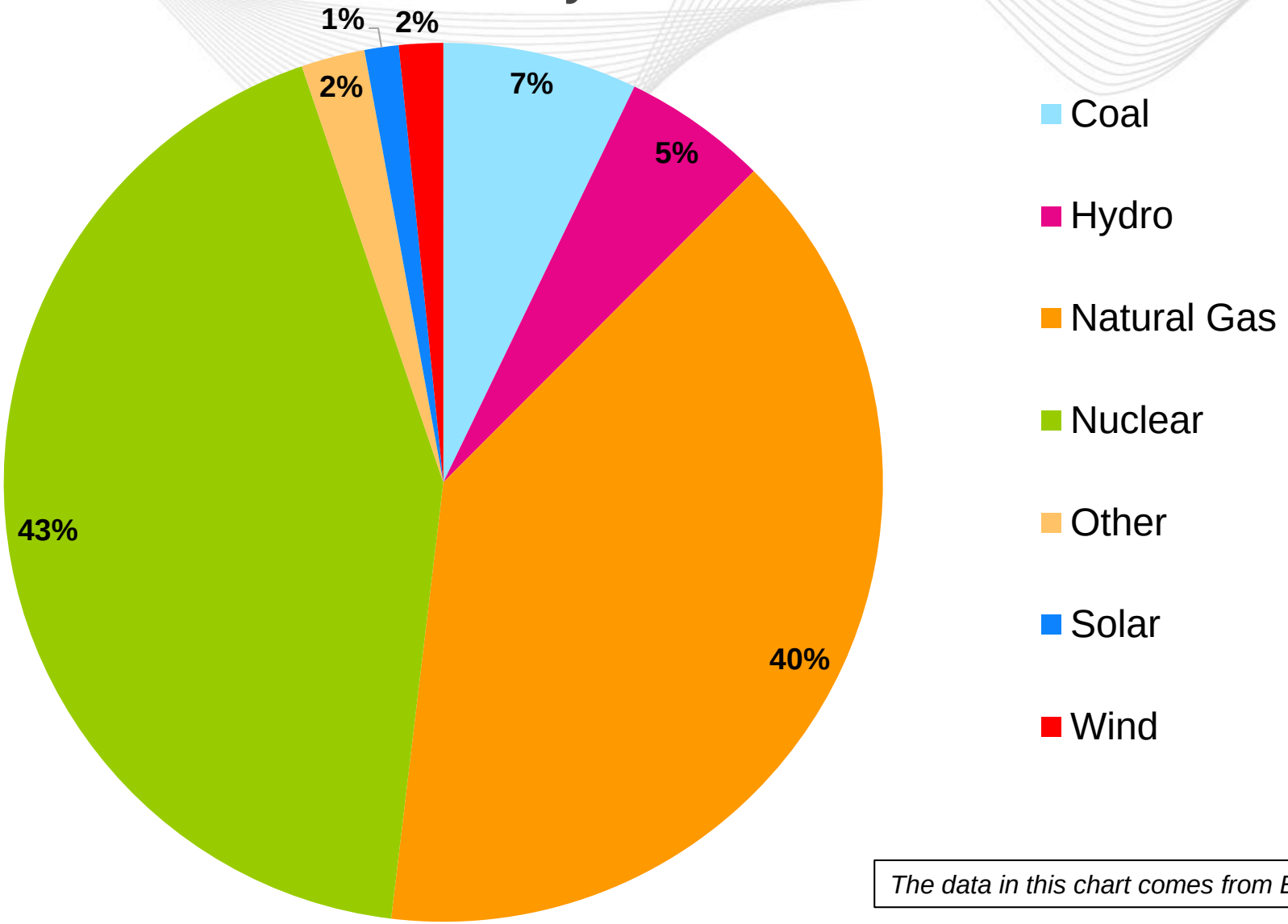
CAPACITY PERFORMANCE

Cleared MW (UCAP)

Resource Type	ANNUAL	SUMMER	WINTER
Generation	128,114.5	45.0	448.0
DR	5,942.4	122.3	-
EE	1,179.1	280.7	-
PRD	210.2	-	-
Total (MW)	**135,446.2**	**448.0**	**448.0**

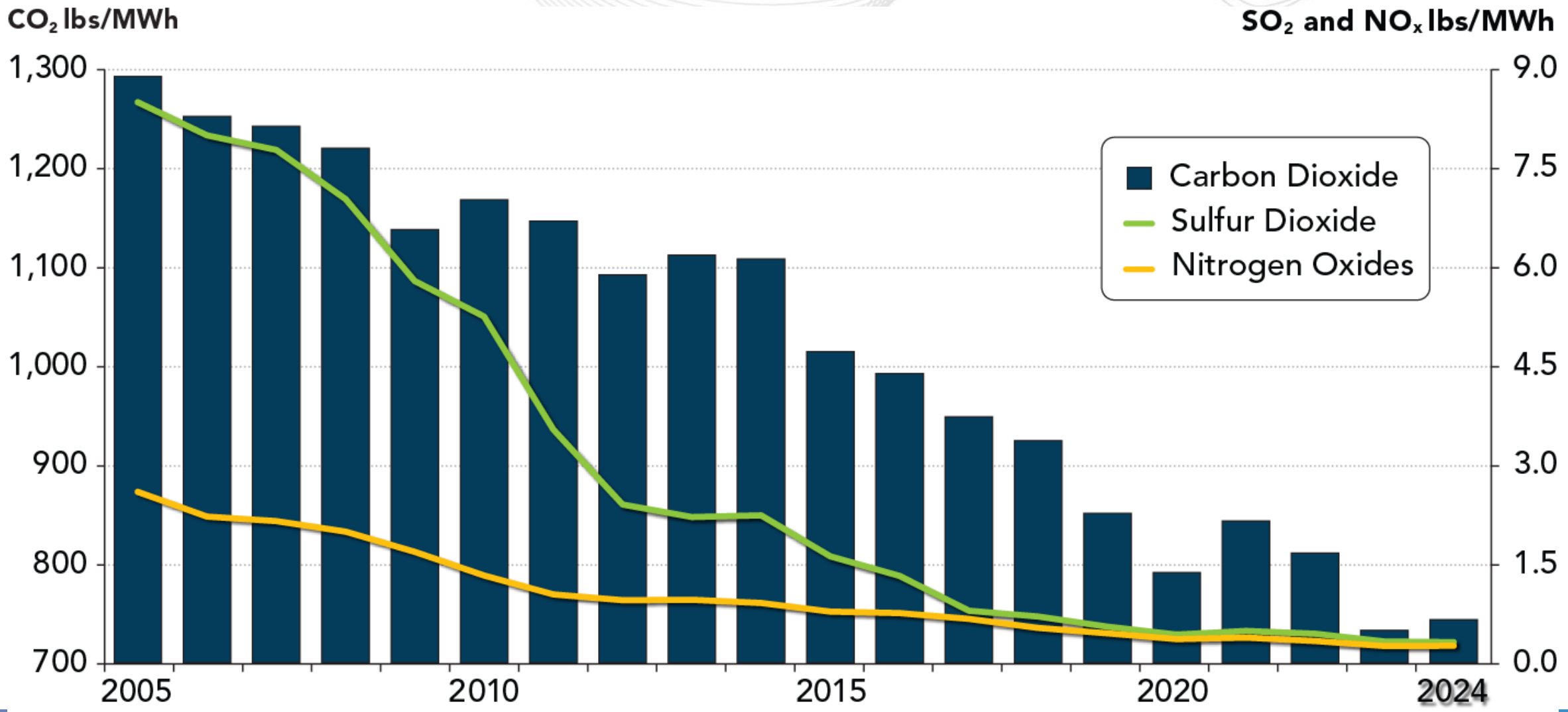
Operations

Maryland – 2024 Generator Production



The data in this chart comes from EIA Form 923 (2024).

PJM System Average Emission Rates



Maryland – Average Emissions (lbs/MWh)

(Feb. 2025)