PUBLIC SERVICE COMMISSION OF MARYLAND

TEN-YEAR PLAN (2024 – 2033) OF ELECTRIC COMPANIES IN MARYLAND

Prepared for the
Maryland Department of Natural Resources
In compliance with Section 7-201
Of the Public Utilities Article, *Annotated Code of Maryland*
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State of Maryland
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I. Introduction

This report constitutes the Maryland Public Service Commission's *Ten-Year Plan (2024-2033) of Electric Companies in Maryland*. The Ten-Year Plan is submitted annually by the Commission to the Secretary of the Department of Natural Resources in compliance with §7-201 of the Public Utilities Article, *Annotated Code of Maryland*. It is a compilation of information pertaining to the long-range plans of Maryland's electric companies. The report also includes discussion of selected developments that may affect these long-range plans. The analysis contained in the Ten-Year Plan uses forecasts provided by Maryland utilities, PJM Interconnection, LLC ("PJM"), and other state and federal agencies.

The 2024-2033 Ten-Year Plan provides a forward-looking analysis of the composition of Maryland's electricity and generation profile and covers topics relevant to Maryland, including load growth forecasts, and the status of the state's generation resources and electric transmission system.

Changes to Maryland's supply and demand profile may necessitate additional infrastructure investment in the state's distribution network to ensure the safe, reliable, and economic supply of electricity to end users. The Commission exercises its statutory and regulatory power to ensure adequate, economical, and efficient delivery of utility services in the state.[1] A record of these proceedings is published in the Commission's annual report.

II. Background

Maryland is geographically divided into 13 electric utility service territories.[2] The four largest, by number of Maryland customers, are served by investor-owned utilities ("IOUs"); four represent electric cooperatives (two of which serve mainly rural areas of Maryland); and five are served by electric municipal operations.[3] PJM sub-regions,

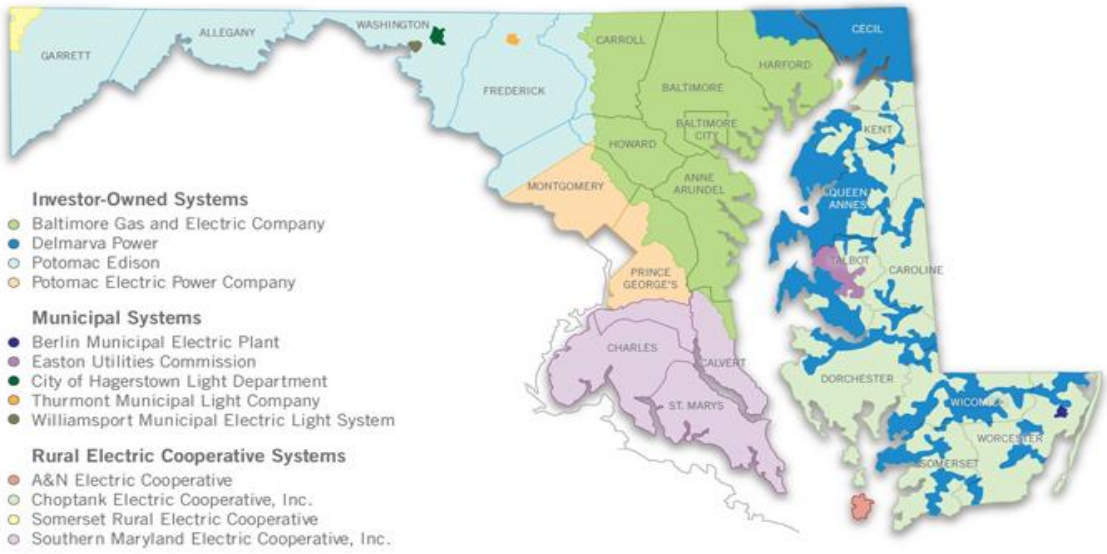
[1] The Maryland Public Service Commission and the Maryland Energy Administration represented Maryland on a 16-state task force on future distribution system planning. This task force started work in 2019 and was funded by the U.S. Department of Energy ("DOE"). The task force was staffed and sponsored by the DOE, the National Association of Regulatory Utility Commissioners ("NARUC"), and the National Association of State Energy Officers ("NASEO"). This work continued through 2020 and produced a report of its findings in February 2021 at https://pubs.naruc.org/pub/14F19AC8-155D-0A36-311F-4002BC140969.

[2] The Maryland utilities: Baltimore Gas and Electric Company ("BGE"), Delmarva Power & Light Company ("DPL"), The Potomac Edison Company ("PE"), Potomac Electric Power Company ("Pepco"), Berlin Municipal Electric Plant ("Berlin"), Easton Utilities Commission ("Easton"), City of Hagerstown Light Department ("Hagerstown"), Thurmont Municipal Light Company ("Thurmont"), Williamsport Municipal Electric Light System ("Williamsport"), A&N Electric Cooperative ("A&N"), Choptank Electric Cooperative, Inc. ("Choptank"), Somerset Rural Electric Cooperative ("Somerset"), and Southern Maryland Electric Cooperative, Inc. ("SMECO").

[3] The Commission regulates all Maryland public service companies, as defined by §1-101(z) of the Public Utilities Article, *Annotated Code of Maryland*.

known as zones, generally correspond with the IOU service territories. PJM zones for three of the four IOUs traverse state boundaries and extend into other jurisdictions.[4] Figure 1 provides a geographic picture of the Maryland utilities' service territories. Figure 2 depicts Maryland's PJM forecast zones.

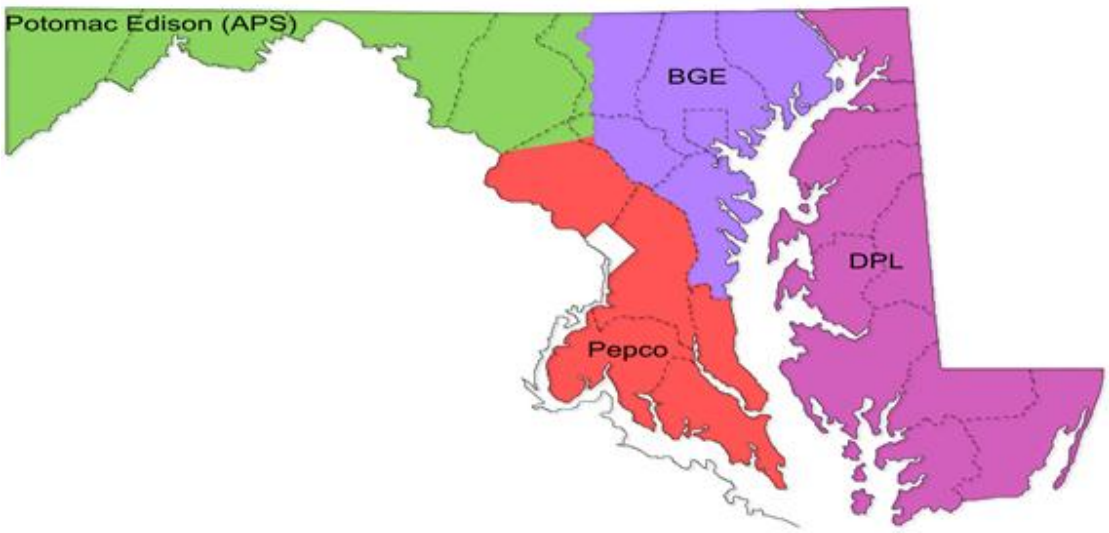
Figure 1: Maryland Utilities and their Service Territories in Maryland[5]



[4] Potomac Electric Power Company, Delmarva Power & Light Company, and The Potomac Edison Company are the three IOUs that extend into other jurisdictions. Pepco, DPL, and PE data are a subset of the PJM zonal data, since PJM's zonal forecasts are not limited to Maryland. The Baltimore Gas and Electric Company zone, alone, resides solely within the State of Maryland.

[5] *Cumulative Environmental Impact Report 18*, Maryland Department of Natural Resources, Figure 2-16, http://www.pprp.info/ceir18/HTML/Report-18-Chapter-2-4.html (last updated September 2018).

Figure 2: PJM Maryland Forecast Zones[6]



III. Maryland Load Growth Forecasts

Each year, PJM presents a Load Forecast Report for each PJM zone, region, and locational deliverability area that is derived in part from an independent economic forecast prepared by Moody's Analytics. The economic analysis includes projections related to the expected annual growth of the gross domestic product ("GDP") and can provide insight into possible trends for regional population growth and household disposable income which in turn can impact energy sector planning.

The PJM forecast contrasts GDP growth projections included in the current (*i.e.* September 2023) load forecast with that of the previous year (*i.e.* September 2022), as depicted below in Table 1. At the outset of the 2024-2033 planning period discussed in this Ten-Year Plan, the projected average GDP growth reflected in the current PJM load forecast is higher than that projected by the previous year's forecast for roughly the same time period. GDP shows a first quarter increase in GDP of 1.3 percent.[7]

Demand forecasts submitted by the Maryland utilities for the 2024-2033 planning period, discussed in this Ten-Year Plan, are comparable to the forecasts provided to the Commission over the last several years. The Maryland utilities' load forecasts indicate a modest amount of projected annual growth in the number of customers, energy sales, and demand throughout the state.

[6] *PJM Load Forecast Report,* PJM, (Jan. 2021), https://www.pjm.com/-/media/library/reports-notices/load-forecast/2021-load-report.ashx.
[7] The current GDP can be found at the Bureau of Economic Analysis, https://www.bea.gov/data/gdp/gross-domestic-product.

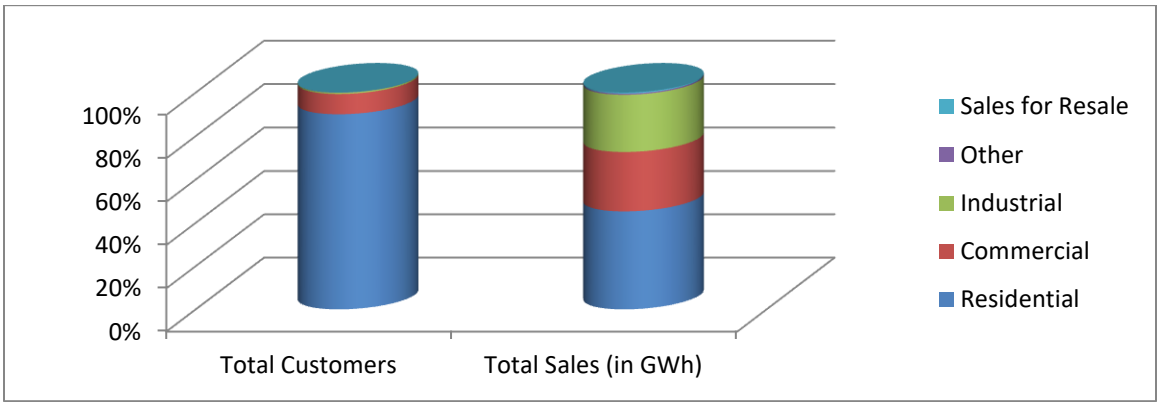
Table 1: Comparison of Compound Annual Growth Rate Projections – 2021, 2022, 2023 and 2024[8]

Forecasts	Ten Year Plan 2021-2030	Ten Year Plan 2022-2031	Ten Year Plan 2023-2032	Ten Year Plan 2024-2033
Customer Growth	0.7%	0.7%	0.6%	0.6%
Energy Sales	0.4%	0.4%	0.3%	1.4%
Summer Peak Demand	1.4%	0.9%	0.7%	1.3%
Winter Peak Demand	0.7%	0.8%	0.4%	1.5%

A. Customer Growth Forecasts[9]

At the close of 2023, approximately 90 percent of utility customers in Maryland were categorized as residential ratepayers; however, residential sales represented only 45 percent of the year's total retail energy sales, as illustrated in Figure 3 below.[10] Conversely, commercial and industrial ("C&I") customers represented just 10 percent of Maryland utility customers but accounted for over half of the total retail energy sales for the state.

Figure 3 Total Customers and Energy Sales (in GWh) by Customer Class for 2023



PJM's process for modeling the load forecast involves creating a series of models where daily load is regressed on calendar, weather, economic and end-use variables. The economic, weather, and end-use variables are compiled into indices which are then treated as independent variables in the final regression.[11]

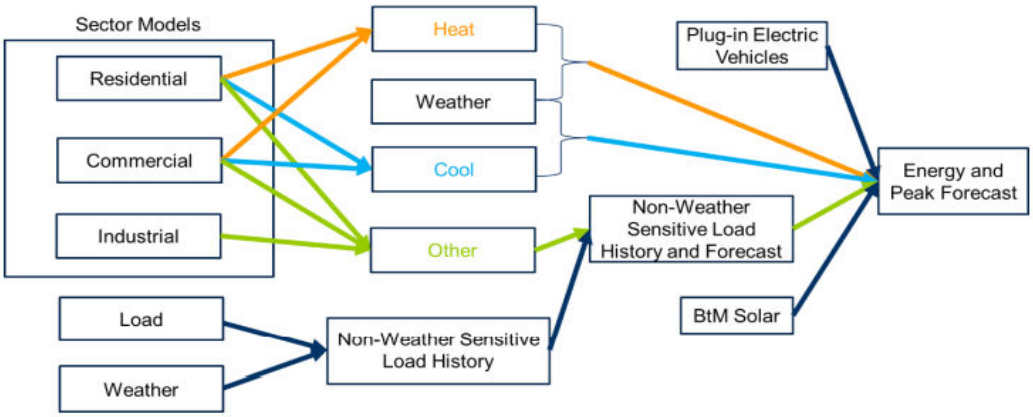
[8] *See* Appendix Tables 1(a)(i), 2(a)(i), 3(a)(i), 3(a)(iii).

[9] *See* Appendix Table 1(a) for a complete list of utility-by-utility customer growth forecasts.

[10] *See* Appendix Tables 1(b)(i) and 1(b)(ii).

[11] *PJM Load Forecast Supplement,* PJM, (Jan. 2024) https://www.pjm.com/-/media/planning/res-adeq/load-forecast/load-forecast-supplement.ashx.

Figure 4 Example of PJM Load Forecast Modeling



As reflected in Table 2 below, the statewide forecasted compound annual growth rate during the planning period is 0.60 percent for all customer classes which translates into a 5.50 percent increase in the total number of Maryland customers by the end of this 10-year planning period.

Table 2: Maryland Customer Forecast (All Customer Classes)[12]

Year	Berlin	BGE	DPL	Easton	Hagers-town	PE	Pepco	SMECO	Thur-mont	William-sport	Total
2024	2,726	1,343,107	219,386	11,045	17,650	290,616	604,592	178,147	2,915	1,023	**2,671,207**
2025	2,735	1,348,135	220,005	11,081	17,691	293,819	608,749	180,341	2,915	1,023	**2,686,494**
2026	2,748	1,353,161	220,624	11,117	17,732	296,937	612,807	182,333	2,915	1,023	**2,701,397**
2027	2,762	1,359,244	221,315	11,153	17,773	299,987	617,110	184,717	2,915	1,023	**2,717,999**
2028	2,776	1,365,713	222,063	11,189	17,814	302,988	621,574	186,598	2,915	1,023	**2,734,653**
2029	2,803	1,372,297	222,814	11,225	17,855	305,942	626,072	188,488	2,915	1,023	**2,751,434**
2030	2,832	1,378,783	223,568	11,261	17,896	308,863	630,605	190,470	2,915	1,023	**2,768,216**
2031	2,860	1,384,824	224,324	11,297	17,938	311,743	635,173	192,451	2,915	1,023	**2,784,548**
2032	2,888	1,391,343	225,082	11,333	17,979	314,554	639,776	194,431	2,915	1,023	**2,801,324**
2033	2,917	1,397,885	225,844	11,369	18,021	317,300	644,414	196,311	2,915	1,023	**2,817,999**
Change (2024-2033)	**191**	**54,778**	**6,457**	**324**	**371**	**26,684**	**39,823**	**18,165**	**0**	**0**	**146,793**
Percent Change (2024-2033)	**7.02%**	**4.08%**	**2.94%**	**2.93%**	**2.10%**	**9.18%**	**6.59%**	**10.20%**	**0.00%**	**0.00%**	**5.50%**
Compound Annual Growth Rate	**0.76%**	**0.45%**	**0.32%**	**0.32%**	**0.23%**	**0.98%**	**0.71%**	**1.08%**	**0.00%**	**0.00%**	**0.60%**

The customer forecasts provided by the utilities are comparable to the forecasts they provided for the 2023-2032 Ten-Year Plan. Overall, the increase in the number of

[12] *See* Appendix Table 1(a)(i). Note that Choptank, A&N, and Somerset did not provide the requested applicable information in response to the Commission's 2024 data request for the Ten-Year Plan.

customers across Maryland is primarily driven by growth in the residential class. Growth in the residential sector is projected to account for an additional 136,626 customers by 2033 or 93 percent of total new customers projected. The largest percentage increase in the number of customers is projected to occur in SMECO's service territory with an increase of 11 percent or 17,400 new residential customers. The largest absolute increase in the number of customers is projected to come from BGE's residential customer base with the addition of 50,000 residential customers forecasted during this planning period.[13] BGE's projected increase in its residential customer base accounts for 37 percent of the total number of new residential customers across all service territories during the 10-year planning period.[14] The increase in residential customers for BGE translates into a compound annual growth rate of 0.45 percent.[15]

Maryland utilities are projecting a slow down in the growth of their customer bases during this planning period. Table 3 below shows that the aggregated utilities' customer forecasts are 0.28 percent lower than the projections provided during the previous planning period. The most significant percentage change observable in the aggregated statewide data between the previous and current Ten-Year Plan forecasts is within the "Commercial" customer class[16] largely attributable to a decreased projection by BGE.

Table 3: Projected Percentage Increase in the Number of Customers by Class, 2024–2033[17]

	All Utilities		
Class	**2023 to 2032**	**2024 to 2033**	**Difference**
Residential	5.93%	5.69%	-0.24%
Commercial	4.21%	3.48%	-0.73%
Industrial	9.34%	9.47%	0.13%
Other	-1.01%	-0.93%	0.08%
Resale	0.00%	0.00%	0.00%
Total Customers	**5.78%**	**5.50%**	**-0.28%**

B. Energy Sales Forecast

[13] *See* Appendix Table 1(a)(ii).
[14] *Id.*
[15] *Id.*
[16] The "Other" rate class refers to customers that do not fall into one of the listed classes; street lighting is an example of a rate class included under "Other." The Resale class refers to Sales for Resale which is energy supplied to other electric utilities, cooperatives, municipalities, and federal and state electric agencies for resale to end use consumers. PE is the only utility with any resale customers; these wholesale customers are Monongahela Power Company, West Penn Power Company, and Old Dominion Electric Cooperative.
[17] *See* Appendix Table 1(a)(i)-(vi) for more information.

The Maryland utilities provide forecasts for energy sales and peak load in terms of "Gross of Demand Side Management ("DSM")" and "Net of DSM."[18] (DSM programs are discussed in greater in Section III.D of this report). In order to provide a more complete look at Maryland energy sales and peak demand forecasts, Sections III.B and III.C discuss the forecasts in "Gross of DSM" terms which reflect the forecasts *before* the impact of DSM programs. Table 4 shows the energy sales forecast within Maryland (Gross of DSM) for the 10-year planning period as provided by the utilities.

Table 4: Maryland Energy Sales Forecast (GWh) (Gross of DSM) [19]

	Berlin	BGE	DPL	Easton	Hagerstown	PE	Pepco	SMECO	Total
Change (2024-2033)	3	804	98	14	7	7,077	346	192	8,541
Percent Change (2024-2033)	7.22%	2.70%	1.93%	6.11%	2.27%	74.41%	2.10%	5.44%	13.13%
Compound Annual Growth Rate	0.78%	0.30%	0.21%	0.66%	0.25%	6.38%	0.23%	0.59%	1.38%

The aggregated forecasts show a compound annual increase of 1.38 percent across all the Maryland service territories for 2024-2033, an increase from the 0.32 percent annual growth rate reported in the 2023-2032 Ten-Year Plan. This result is primarily due to PE's revised projection of a positive energy sales growth rate in the 2024–2033 Ten-Year Plan. The overall growth projected by PE for this 10-year planning period is the highest of any Maryland utility in absolute terms with the company projecting 7,077 GWh more in energy sales by 2033. PE attributes the sizable increase in forecasted Maryland Energy Sales to anticipated data center growth within PE's service territory. The municipalities of Berlin and Easton also forecast somewhat large increases in Maryland energy sales. The Town of Easton attributed the increase to residential load growth and confirmed that data center growth and electrification were not factors in Easton's increase in forecasted energy sales. BGE attributed forecasted Maryland energy sale growth to electric vehicles, growth in residential space heating, and customer growth.

C. Peak Load Forecasts

PJM's 2024 Load Forecast Report includes long-term projections of peak loads for the entire wholesale market region and each PJM zone.[20,21] Due to the fact that the PJM zones can extend outside of Maryland, the utilities submit peak demand forecasts

[18] *See* Appendix Table 2(a)(ii) for the Maryland Energy Sales forecast, Net of DSM programs; Appendix Table 3(a)(ii) for the Maryland Summer Peak Demand Forecast, Net of DSM programs; and Appendix Table 3(a)(iv) for the Maryland Winter Peak Demand Forecast, Net of DSM programs.

[19] *See* Appendix Table 2(a) for utility-by-utility energy sales forecasts for the Maryland service territory available by Gross and Net of DSM. *See* Appendix Table 2(b) for the same information on a system wide basis.

[20] *PJM Load Forecast Report,* PJM, (Jan. 2024) at 33-36, Table B-1, https://www.pjm.com/-/media/library/reports-notices/load-forecast/2024-load-report.ashx.

[21] The four PJM zones spanning the Maryland service territory include APS, BGE, DPL, and PEPCO. *See supra* Figure 2 for a map of the Maryland zones. "APS" represents the Allegheny Power Zone, of which PE is a sub-zone.

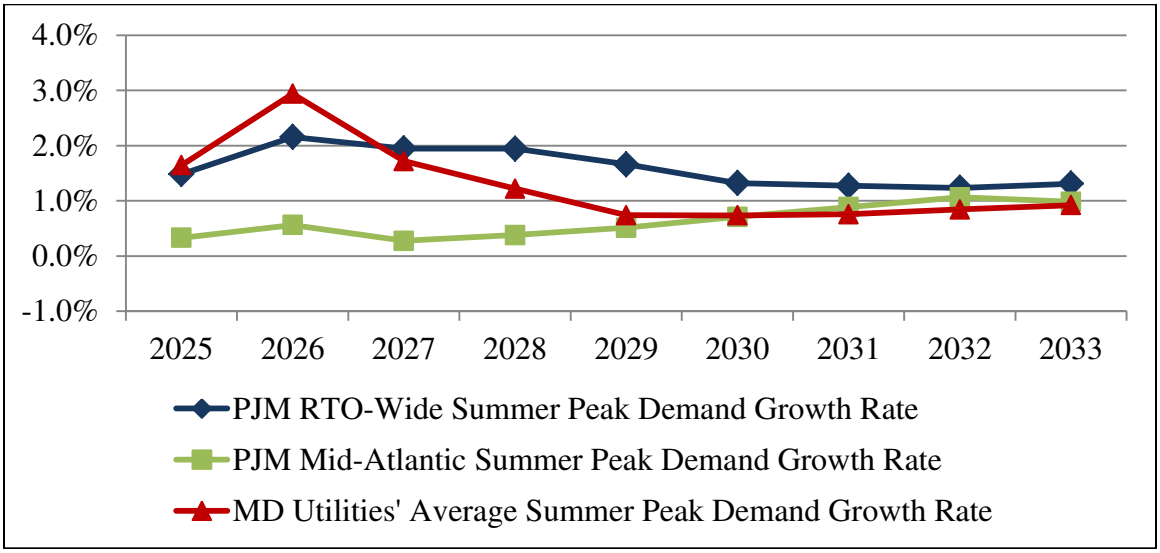
restricted to their Maryland service territories as part of the Ten-Year Plan.[22] According to PJM's 2024 Load Forecast Report, the PJM Regional Transmission Organization ("RTO") will continue to be summer peaking during the next 15 years.[23] In 2024, three of the PJM zones, of which Maryland is comprised, are projected to experience their peak demands during the month of July,[24] the same month as the broader PJM mid-Atlantic region.[25] The APS region is an exception which is projected to experience its peak demands during January.

In contrast to PJM's forecasts, Berlin, DPL, Hagerstown, PE, SMECO, Thurmont, and Williamsport are forecasting their peak demands to occur in the winter in most or all the forecasted years. These utilities have generally peaked in the winter over the past few planning periods for reasons such as: higher concentrations of electric heating; geographical features; and colder temperatures.

Figure 5 compares the average of the Maryland utilities' forecasted summer peak demands for their Maryland service territories with summer forecasts for the PJM mid-Atlantic region and for the PJM RTO as a whole. In the near-term, the Maryland utilities are showing a stronger peak demand growth rate than the PJM RTO and the PJM mid-Atlantic region. Also reflected in Figure 5 is a drop in the summer peak demand growth rates for the Maryland utilities from 2026–2029, after which the rates gradually increase through 2033 and follow a similar path to the PJM RTO and the PJM mid-Atlantic region.

[22] *See* Appendix Table 3(a) for more information on in-state peak demand forecasts for Maryland utilities, available for summer and winter, and by gross and net of DSM programs. *See* Appendix Table 3(b) for the same information presented as system wide data for utilities operating in Maryland.
[23] *PJM Load Forecast Report,* PJM, (Jan. 2024) at 1-2, https://www.pjm.com/-/media/library/reports-notices/load-forecast/2024-load-report.ashx.
[24] *Id.* at 45-46, Table B-5.
[25] *Id.* Three of the Maryland PJM zones (BGE, DPL, and Pepco) are part of the PJM Mid-Atlantic Region. The fourth Maryland PJM zone (APS) is part of the PJM Western Region data set.

Figure 5 Average of Utilities' Projected Summer Peak Demand Growth Rates (Gross of DSM) Compared to Projected Summer Peak Demand Growth Rates for PJM Mid-Atlantic and PJM RTO[26,27]



The Maryland utilities also provided peak demand forecasts for the winter season in response to the Ten-Year Plan data request. Figure 6 below depicts an average of the Maryland utilities' forecasted winter peak demands contrasted with winter peak demand forecasts for the PJM mid-Atlantic region and for the PJM RTO.

[26] *PJM Load Forecast Report,* PJM, (Jan. 2024) at 33-36, Table B-1, https://www.pjm.com/-/media/library/reports-notices/load-forecast/2024-load-report.ashx.
[27] *See* Appendix Table 3(a)(i).

Figure 6 Average of Utilities' Projected Winter Peak Demand Growth Rates (Gross of DSM) Compared to Projected Winter Peak Demand Growth Rates for PJM Mid-Atlantic and PJM RTO[28,29]

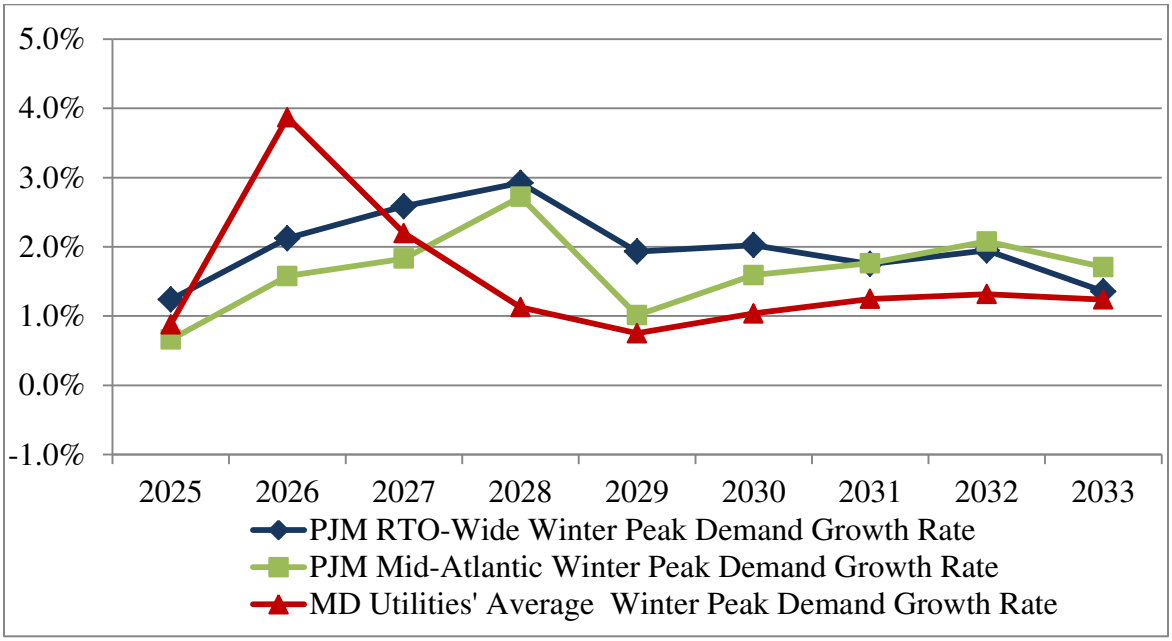
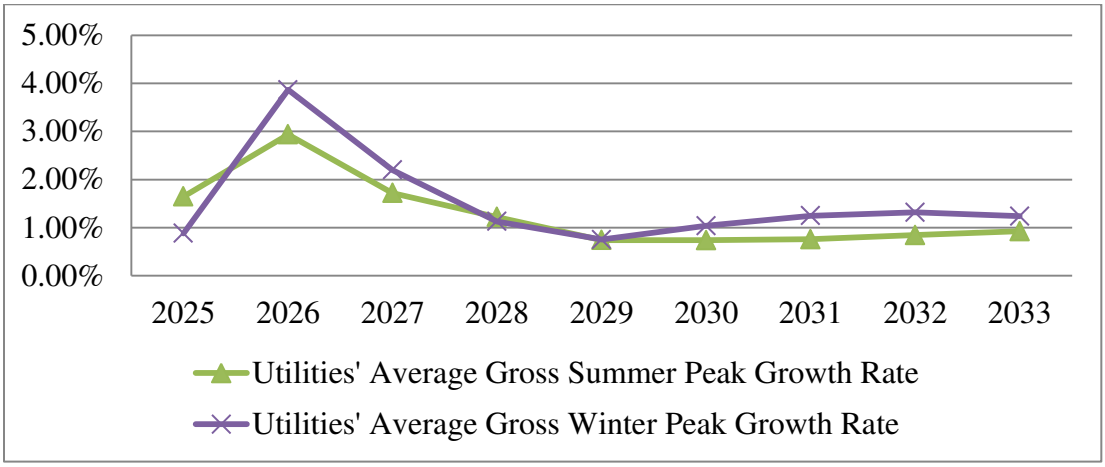


Figure 7 shows that the utilities' average gross winter peak growth rate rises substantially from 2025 to 2026, plummets until 2029, and stabilizes through 2033. The utilities' average gross summer peak growth rate follows the same general pattern as the winter growth rate albeit more gradually.

Figure 7 Utilities' Projected Summer Peak Demand Growth Rates (Gross of DSM) Compared to Utilities' Projected Winter Peak Demand Growth Rates (Gross of DSM)

[28]. *See* Appendix Table 3(a)(iii).

[29] *PJM Load Forecast Report,* PJM, (Jan. 2024) at 37-40, Table B-2, https://www.pjm.com/-/media/library/reports-notices/load-forecast/2024-load-report.ashx.



As shown in Table 5 and Table 6 below, the 10-year forecasted Maryland growth rates of summer and winter peak demand (gross of DSM) are 1.28 percent and 1.51 percent, respectively.[30] In 2033, at the end of this planning timeframe, these growth rates translate into an expected summer peak demand load (gross of DSM) for the Maryland service territory of 17,935 MW and an expected winter peak demand load (gross of DSM) for Maryland of 14,979 MW.[31]

Table 5: Maryland Summer Peak Demand Forecast (MW) (Gross of DSM)[32,33]

	Berlin	BGE	DPL	Easton	Hagerstown	PE	Pepco	SMECO	Total
Change (2024-2033)	1	261	104	3	1	1,158	441	(32)	1,937
Percent Change (2024-2033)	6.69%	3.73%	9.44%	5.07%	2.27%	62.96%	8.93%	-3.30%	12.11%
Compound Annual Growth Rate	0.72%	0.41%	1.01%	0.55%	0.25%	5.58%	0.96%	-0.37%	1.28%

Table 6: Maryland Winter Peak Demand Forecast (MW) (Gross of DSM)[34, 35]

	Berlin	BGE	DPL	Easton	Hagerstown	PE	Pepco	SMECO	Total
Change (2024-2033)	6	366	69	3	1	1,071	223	155	1,894
Percent Change (2024-2033)	34.95%	6.19%	6.05%	4.81%	2.27%	54.96%	7.31%	17.90%	14.48%

[30] *See* Appendix Table 3(a).
[31] *See* Appendix Tables 3(a)(i) and 3(a)(iii).
[32] *Id.*
[33] Thurmont and Williamsport were not included in this table because the companies do not have any changes in their peak demand forecasts over the 10-year period.
[34] *See* Appendix Tables 3(a)(i) and 3(a)(iii).
[35] Thurmont and Williamsport were not included in this table because the companies do not have any changes in their peak demand forecasts over the 10-year period.

Compound Annual Growth Rate	**3.39%**	**0.67%**	**0.66%**	**0.52%**	**0.25%**	**4.99%**	**0.79%**	**1.85%**	**1.51%**

D. Impact of Demand Side Management

DSM programs result in lower growth of both energy sales and peak demand. To evaluate the impact of DSM programs, this section reflects the Maryland utilities' energy sales forecasts *after* the benefits of DSM programs are included ("net of DSM"). For purposes of this section, only the five utilities participating in EmPOWER Maryland are evaluated: BGE, DPL, PE, Pepco, and SMECO.[36] According to the participating utilities' Ten-Year Plan forecasts, the DSM programs will save a total of 35,393 GWh over the planning period. These savings will be achieved by reducing the annual rate of growth in energy sales and peak demand.

The tables below compare the growth in DSM savings across the participating utilities from 2024 to 2027. The forecasted savings post-2026, however, fluctuate in method and amount across the participating utilities given that Commission-approved plans for utility-implemented energy efficiency and conservation (EE&C) programs pertain only to the 2024-2026 program cycle.[37] Table 7 shows the growth in demand savings from DSM programs due to EE&C portfolios while Table 8 shows the growth in total demand savings attributable to DSM programs as a whole. The variation in the magnitude of impact of the EE&C and DSM programs by utility are due to the different sizes of the programs offered and the way in which the data was forecasted by the participating utilities. Also, the Commission notes that demand savings projections later in the 2024-2033 planning horizon may be affected by future iterations of EmPOWER Maryland program cycle proposals as well as pending changes to the capacity market as a result of PJM's Capacity Performance Construct.

Table 7: Average Annual Increase in Demand Savings due to DSM Programs from 2024 to 2027 for EE&C Programs[38]

Description	BGE	DPL	PE	Pepco	SMECO
Average Annual MW Savings Change due to DSM Programs	-9.8%	14.1%	12.6%	8.9%	24.6%

[36] *See* The EmPOWER Maryland Report to the General Assembly for more information on the energy efficiency and demand response programs associated with EmPOWER Maryland, *available at:* https://www.psc.state.md.us/wp-content/uploads/2024-EmPOWER-Maryland-Energy-Efficiency-Act-Standard-Report-Final.pdf.

[37] Because the Commission has only approved plans pertaining to the 2024-2026 program cycle at this date, BGE did not include any EE&C savings projections after 2026. The other participating utilities assume a level of savings post-2026.

[38] Responses to the Commission's Ten-Year Plan data requests.

Table 8: Average Annual Increase in Demand Savings due to DSM Programs from 2024 to 2027 for All DSM Programs[39]

Description	BGE	DPL	PE	Pepco	SMECO
Average Annual MW Savings Change due to DSM Programs	-6.1%	13.0%	12.5%	3.5%	0.0%

BGE does not forecast increases in average demand savings attributable to demand-side management programs beyond 2026, with the exception of the Residential Demand Response program. Using the 2024-2026 data for which there are projections, BGE's forecasted average increase in demand savings is 0.2% for EE&C programs and 0.65% for all DSM programs. Due to this lack of projection past 2026, the DSM forecast decreases from 2024–2027 at the rate shown in the table.

[39] *Id.*

IV. Transmission, Supply, and Generation

To ensure a safe, reliable, and economic supply of electricity in Maryland, an appropriate balance of generation, DSM, imports, and transmission must be achieved. While importation and DSM offer ancillary benefits to managing the power supply, it is critical that local generation is established and maintained to mitigate the risk to Maryland's long-term reliability.

For purposes of the Ten-Year Plan, the congestion costs and the role of transmission infrastructure in planning processes are discussed in Section IV.A; Section IV.B focuses on the state-specific impact of Maryland's status as a net importer of electricity. Information related to the capacity, composition, and advanced age of Maryland's current generation profile is discussed in Section IV.C.

Maryland depends on PJM to operate the regional transmission system and to schedule the flows of power around the state (including importing power from other areas into Maryland). All load serving entities in PJM are required to ensure that they have sufficient capacity contracts to provide reliable electric service during periods of peak demand. As of 2022, Maryland's net summer generating capacity was 11,908 MW.[40] Maryland's peak demand forecast for 2024, net of utility demand-side management and energy conservation measures, is approximately 13,682 MW.[41] Maryland had the capability to meet over 99.8 percent of its summer peak demand with in-state generation in 2023.[42] Notwithstanding the ability to meet peak capacity, Maryland still imports a significant portion of its electricity needs as discussed in more detail in Part B of this section.

A. Regional Transmission [43]

In its 2023 Regional Transmission Expansion Plan ("RTEP"), PJM authorized about $6.6 billion in system transmission improvement projects. The development of the RTEP considers the total effects of system trends which are often driven by federal and state policy decisions. The planning process applies the North American Electric Reliability Corporation ("NERC") Planning Standard through the application of a wide range of reliability analyses (including load and generation deliverability tests) over a 15-year planning horizon.[44]

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[40] The U.S. Energy Information Administration ("EIA"), State Electricity Profile: Maryland; http://www.eia.gov/electricity/state/Maryland/. The EIA's most recent data available is from 2022. The next anticipated release date is listed as November 2024.

[41] *See* Appendix Table 3(a)(ii).

[42] The peak demand net of DSM programs for the summer of 2023 was 11,935 MW according to the 2023-2032 Ten-Year Plan. 11,908/11,935 = 99.8%.

[43] *See* Appendix Table 4 for a full list of transmission enhancements proposed by Maryland utilities.

[44] *2023 Regional Transmission Expansion Plan.* PJM, (March 7, 2024) at 4, https://www.pjm.com/-/media/library/reports-notices/2023-rtep/2023-rtep-report.ashx.

1. Regional Transmission Congestion

This section of the Ten-Year Report discusses congestion in PJM and the Maryland Control Zones. Congestion reflects the underlying characteristics of the power system, including the nature and capability of transmission facilities as well as the cost and geographical distribution of facilities. Congestion occurs when available, least-cost energy cannot be delivered to all loads because of inadequate transmission facilities, thereby causing the price of energy in the constrained area to be higher than in an unconstrained area. PJM's Locational Marginal Pricing ("LMP") system is designed to reflect the value of energy at a specific location and time of delivery, thus measuring the impact of congestion throughout the PJM system. Total congestion costs for the PJM RTO decreased by 57.3 percent ($1.43 billion) between 2022 and 2023.[45]

2. Regional Transmission Upgrades

The Commission recognizes the need to maintain and improve the transmission system within Maryland in order to ensure safe, reliable, and economic electric service to the state's ratepayers. As with increases in local generating capacity and the reduction of system load, transmission expansions and improvements can reduce congestion and LMP differences among zones; such improvements may also support reliability requirements and mitigate economic concerns. PJM's 2023 RTEP authorized 30 transmission upgrades for Maryland for approximately $2.0 billion, up from seven authorized transmission upgrades for Maryland for $36.6 million in PJM's 2022 RTEP.[46]

Appendix 4 lists all transmission enhancements identified by the Maryland utilities in response to data requests for the Ten-Year Plan. Together, the 17 identified transmission enhancements in Appendix Table 4 account for 98 miles of upgrades.

B. Electricity Imports

Maryland continues to be a net importer of electricity, similar to many other states in PJM.[47] As of 2022, 27 percent of the electricity consumed in the state is imported from

[45] Monitoring Analytics, *State of the Market Report for PJM - 2023*, PJM, (March 14, 2024) at 617, https://www.monitoringanalytics.com/reports/PJM_State_of_the_Market/2023/2023-som-pjm-sec11.pdf.

[46] 2023 Maryland and District of Columbia State Infrastructure Report, PJM, at 15-17, (June 2024), *https://www.pjm.com/-/media/library/reports-notices/state-specific-reports/2023/maryland-and-dc.ashx.*

[47] PJM operates, but does not own, the transmission systems in: (1) Maryland; (2) all or part of 12 other states; and (3) the District of Columbia. With FERC approval, PJM undertakes the task of coordinating the movement of wholesale electricity and provides access to the transmission grid for utility and non-utility users alike. Within the PJM region, power plants are dispatched to meet load requirements without regard to operating company boundaries. Generally, adjacent utility service territories import or export wholesale electricity as needed to reduce the total amount of capacity required by balancing retail load and generation capacity.

other states and internationally.[48] Nine of the 13 PJM states plus the District of Columbia are net importers of electricity. In a nationwide comparison, Maryland is the fifth largest electricity importer based on percentage of electricity sales.[49] Only the District of Columbia, Massachusetts, Delaware, and Idaho exceed Maryland in the percentage of electricity sales that are imported. In contrast, as of 2022, the states within the PJM region that exported more electricity in aggregate than consumed within each state are: Illinois, Pennsylvania, Michigan, and West Virginia.[50]

Maryland continues to be a net importer as in-state generation has declined in recent years. In 2009, Maryland resources generated over 43 million MWh in electricity. By 2022, however, in-state resources generated slightly over 37 million MWh.[51] The EmPOWER Maryland program, together with other energy efficiency efforts across the state, contributes to a decrease in the peak demand, which reduces the need to increase capacity and generation capabilities both in Maryland and throughout the PJM region. According to EIA, Maryland is ranked 43rd in the country for per capita energy consumption.[52]

C. Maryland Capacity and Generation Profiles

The capacity and generation profiles of in-state resources must be comprehensively analyzed for both short-term and long-term reliability planning purposes, due to the uncertain future of coal-fired generation.[53] In Case No. 9214, the Commission observed that the state's reliability risk is further heightened because neighboring states that export electricity into Maryland also have at-risk coal-fired generation.[54]

1. Conventional Capacity and Generation Profiles

Coal-fired power plants represent 12.2 percent of the electric generating capacity in Maryland, of which 67 percent of such capacity is aged 31 years or older. Table 9 and Table 10 below depict the electric generating capacity in Maryland as well as the age of plants by fuel type.[55]

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[48] *State Electricity Profiles 2022*, U.S. Energy Information Administration, (November 2, 2023) at Table 10, https://www.eia.gov/electricity/state/maryland/xls/md.xlsx.

[49] *State Electricity Profiles 2022*, U.S. Energy Information Administration, (November 2, 2023), at Table 10, (for each state, https://www.eia.gov/electricity/state/index.php).

[50] *Id.*

[51] *State Electricity Profiles 2022*, U.S. Energy Information Administration, (November 2, 2023) at Table 5, https://www.eia.gov/electricity/state/maryland/state_tables.php.

[52] *Maryland State Energy Profile*, U.S. Energy Information Administration (December 21, 2023). https://www.eia.gov/state/print.php?sid=MD.

[53] The uncertainty stems from the economic pressure on coal because of decreasing natural gas prices, as well as from regulations promulgated by the U.S. Environmental Protection Agency.

[54] Case No. 9214, *In the Matter of Whether New Generating Facilities Are Needed to Meet Long-Term Demand for Standard Offer Service.* Order No. 84815 (April 12, 2012) at 19.

[55] *See* Appendix Table 5 for a list of Maryland generation capacity in 2023.

Table 9: Maryland Summer Peak Capacity Profile, 2023

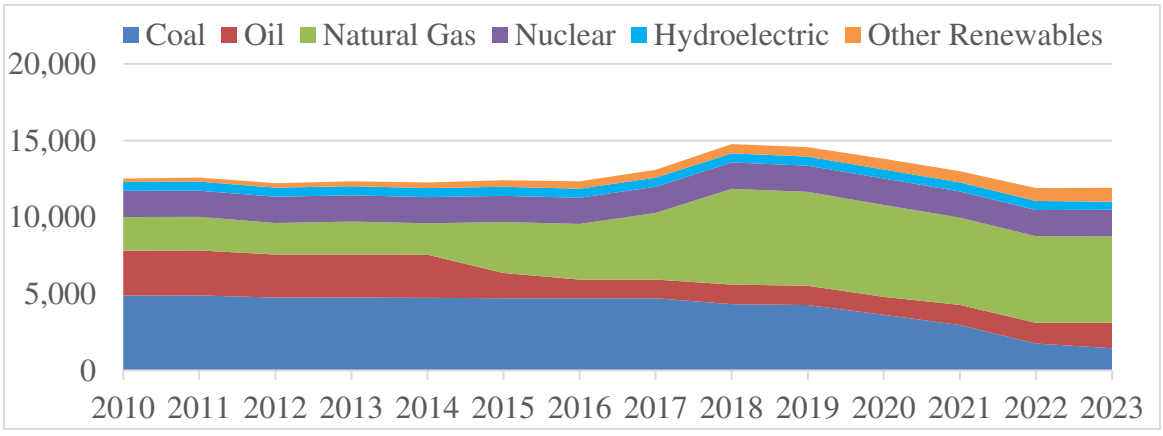
Primary Fuel Type	Capacity	
	Summer (MW)	Percent of Total
Coal	1,453.0	12.2%
Oil	1,656.3	13.9%
Natural Gas	5,632.7	47.3%
Nuclear	1,745.2	14.6%
Hydroelectric	514.9	4.3%
Other and Renewables	912.5	7.7%
Total	**11,914.6**	**100.0%**

Table 10: Age of Maryland Generation by Fuel Type, 2023

Primary Fuel Type	Age of Plants, By Percent			
	1-10 Years	11-20 Years	21-30 Years	31+ Years
Coal	0%	0%	33%	67%
Oil	6%	6%	10%	78%
Natural Gas	43%	27%	14%	16%
Nuclear	0%	0%	0%	100%
Hydroelectric	0%	0%	0%	100%
Other and Renewables	74%	21%	1%	4%

Maryland's summer peak capacity profile increased by 16 MW in 2023 compared to 2022, as illustrated in Figure 8. The slightly increased capacity in 2023 can be largely attributed to increases in oil.

Figure 8 Maryland Summer Capacity Profile (MW), 2010 – 2023[56]



[56] U.S. Energy Information Administration, Form EIA-923, "Power Plant Operations Report."

Maryland's generating profile differs from its capacity profile. Coal and nuclear facilities typically generate an overwhelming majority of all electricity produced in Maryland, even though these resources represent a little under half of in-state capacity.[57] Conversely, oil and certain natural gas facilities, which operate as mid-merit or peaking units that come on-line when needed, generate 38 percent of the electric energy produced in Maryland while representing 61 percent of in-state capacity. Table 11 summarizes Maryland's 2022 in-state generation profile according to fuel source.

Table 11: Maryland Generation Profile, 2022[58]

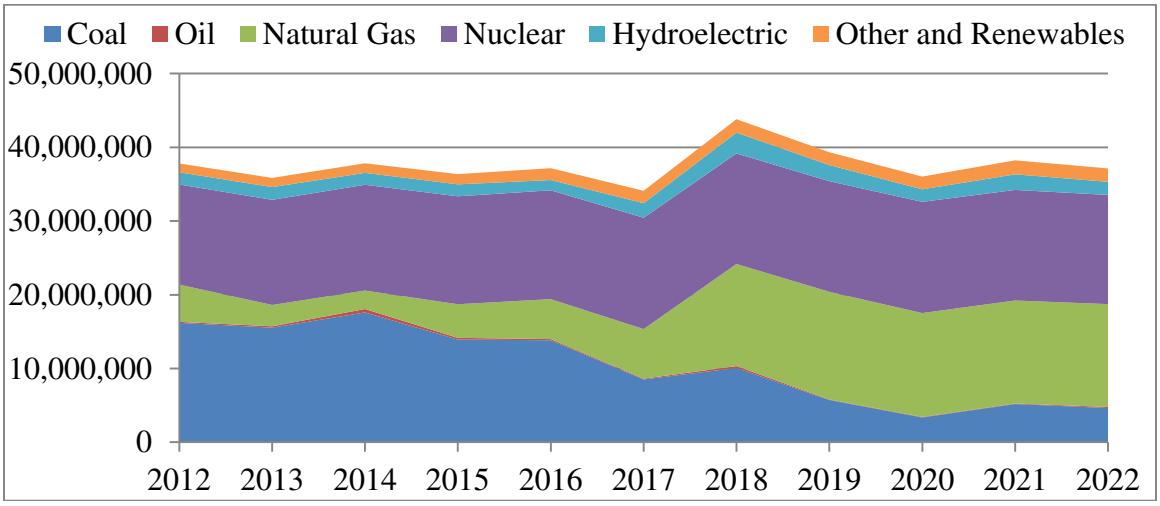
Primary Fuel Source	Generation	
	Annual (MWh)	Percent of Total
Coal	4,639,314	12.5%
Oil	142,864	0.4%
Gas	13,949,642	37.6%
Nuclear	14,810,684	39.9%
Hydroelectric	1,779,682	4.8%
Other & Renewables	1,817,180	4.9%
Total	**37,139,366**	**100.0%**

Unlike the stability historically exhibited by Maryland's summer capacity profile, the percentage of in-state generation derived from various fuel sources continues to evolve as illustrated in Figure 9 below. Between 2012 and 2022, in-state coal generation decreased by 11,545 GWhs. The percentage of coal generation has dropped from 43 percent in 2012 to 12 percent in 2022. The decrease in in-state generation can be largely attributed to a drop in coal generation which decreased by 10 percent in 2022 compared to 2021.

[57] *See supra* Table 9. Coal facilities represented 12.2 percent of the in-state capacity in 2023 while nuclear facilities represented 14.6 percent of capacity. Therefore, coal and nuclear facilities combined for 26.8 percent of Maryland's generating capacity profile in 2023.

[58] *State Electricity Profiles 2022*, U.S. Energy Information Administration, (November 2, 2023) at Table 5, https://www.eia.gov/electricity/state/maryland/state_tables.php.

Figure 9 Maryland Generation Profile, 2012–2022[59]



The standard life expectancy for coal generation facilities is approximately 40 years, though extensions can often be granted for up to 60 years.

PJM lists one plant as retired in 2023: a diesel-powered plant totaling 2 MW in capacity.[60] There are nine pending deactivation requests - six in BGE's service territory, two in DPL's service territory, and one in PE's service territory. The Maryland generators pending deactivation combine for an aggregate capacity of 2,294.9 MWs; while PJM currently registers 5.3 GW of capacity resources requesting deactivation within the RTO.[61]

2. Proposed Conventional Generation Additions[62]

The construction of new generation, both conventional and renewable, is a way to address the in-state capacity and electricity import issues discussed in previous sections. As of the date of this report, there were 6,370 MWs of proposed new generation active in the PJM queue with 41 percent consisting of solar projects.[63]

3. Renewable Generation and Proposed Additions

The Commission recognizes the importance renewable generation plays in meeting Maryland's energy needs while also addressing environmental concerns. Based on the PJM queue, Maryland's renewable generation capacity is planned to increase by

[59] *Id.*
[60] Generation Deactivations, PJM, *https://www.pjm.com/planning/service-requests/gen-deactivations.aspx*.
[61] *Id.*
[62] *See* Appendix Table 6 for a complete list of new renewable generation proposed in Maryland.
[63] Serial Service Request Status, PJM (July 2024), https://www.pjm.com/planning/service-requests/serial-service-request-status.

an estimated 2,711 MW over the next several years as shown in Table 12 below. This does not, however, account for smaller renewable generators, notably residential solar; these smaller renewable generators are not required to obtain PJM interconnection status, but rather require interconnection with the local utility.

Table 12: Proposed New Renewable Generation in Maryland

Utility	Fuel Type	In-Service Date Range	Total Capacity (MW)
PE (APS)	Solar	2022-2026	439.6
	Hydro	2023	15.0
	Wind	2021-2024	59.7
BGE	Solar	2022-2024	72.7
DPL	Solar	2021-2028	800.7
Pepco	Solar	2023-2025	1292.0
PPL	Solar	2022	12.0
SMECO	Solar	2023-2026	19.6
		Total (MW):	**2,711.3**

The amount of solar resources in Maryland will continue to increase due to a suite of state policy initiatives: the requirement that the Renewable Portfolio Standard ("RPS") solar carve-out be interconnected to the distribution network serving Maryland; net metering incentives; tax incentives; the community solar pilot program (now a permanent program); Solar Renewable Energy Credit (SREC) incentives; and grants administered by the Maryland Energy Administration.

On December 17, 2021, the Commission approved two offshore wind projects in compliance with the Clean Energy Jobs Act of 2019 (CEJA).[64] On January 25, 2024, Skipjack Offshore Energy, LLC withdrew the Skipjack Wind Phase 1 and Phase 2 projects under the Commission's existing OREC orders.[65] US Wind, Inc. applied on July 30, 2024, to rebid for the relinquished ORECs. US Wind, Inc.'s proposed Maryland Offshore Wind Project ("MD OSW") would generate 1.68 million MWhs annually after its Phase 1 completion at the end of 2028. The generation would rise to almost 7 million MWhs annually beginning in December 2030 after completion of the rest of the project's phases.[66] MD OSW is currently working with the Bureau of Ocean Energy Management ("BOEM"), the federal agency responsible for overseeing the development of energy projects located offshore in federal waters, for approval to begin construction.

[64] Case No. 9666, *Skipjack Offshore Energy, LLC and US Wind, Inc.'s Offshore Wind Applications under the Clean Energy Jobs Act of 2019.* Order No. 90011, at 149 (December 17, 2021).
[65] Case No. 9666, *Skipjack Offshore Energy, LLC and US Wind, Inc.'s Offshore Wind Applications under the Clean Energy Jobs Act of 2019.* Skipjack Letter Withdrawing from OREC Orders (January 25, 2024).
[66] Case No. 9666, *Skipjack Offshore Energy, LLC and US Wind, Inc.'s Offshore Wind Applications under the Clean Energy Jobs Act of 2019.* Rebid Application Pursuant to Public Utilities Article, §7-704.1(l), at 6 (July 30, 2024).

Specifically, MD OSW has completed five of the nine required authorizations in the Environmental Review phase of BOEM's authorization process.[67] The Construction and Operations Plan, Marine Mammal Protection Act Incidental Take Authorization, Section 10 Rivers and Harbors Act of 1899 and Section 404 Clean Water Act, and Section 408 Permit are the authorizations that remain pending for MD OSW's BOEM review. The increasing renewable generation penetration may have the potential to impact the grid and the Commission will continue to monitor the successful integration of these renewables.

4. Nuclear Generation

The Commission also recognizes the important role nuclear generation plays in meeting Maryland's energy needs. Nuclear generation has been an integral part of Maryland's energy resources for decades in addition to being a source without significant emissions. Nuclear energy provides reliability and resiliency to the grid while assisting Maryland in reaching its Regional Greenhouse Gas Initiative ("RGGI") commitments and its goals under the Greenhouse Gas Emissions Reduction Act. CEJA also required DNR to conduct an additional study on the relevancy and outlook for nuclear capacity on Maryland's generating portfolio both currently and in the future.

5. Storage

The Energy Storage—Targets and Maryland Energy Storage Program—Establishment Act was passed in 2023 and requires the Commission to establish targets for the cost-effective deployment of new energy storage devices in the State with a goal of achieving 3,000 MW cumulative energy storage capacity by the end of delivery year 2033. There are also several storage projects in the PJM queue that are projected to begin operating in the near future as illustrated in Table 13 below.

Table 13 Proposed New Storage Generation in Maryland PJM Queue Effective Date: June 2024

Transmission Owner	Project Name	County Location	PJM Queue Status	PJM Queue #	Project Capacity (MW)	Projected In-Service Date
APS	Black Oak-Hatfield 500 kV	Garrett	Active	AG1-363	220.0	12/31/2024
APS	Cumberland 138 kV	Allegany	Active	AG2-308	100.0	12/31/2025
APS	Catoctin-Carroll 138 kV	Frederick	Active	AH2-262	10.2	3/1/2026
APS	Ringgold 138 kV II	Washington	Active	AI2-311	30.0	1/11/2025
BGE	Waugh Chapel 230 kV	Anne Arundel	Active	AG1-104	120.0	6/1/2024
BGE	Brandon Shores 230 kV	Anne Arundel	Active	AG2-207	110.0	3/31/2023

[67] Maryland Offshore Wind Project, Permitting Dashboard | Federal Infrastructure Projects, *https://www.permits.performance.gov/permitting-project/fast-41-covered-projects/maryland-offshore-wind-project* (March 28, 2022).

BGE	Wagner 115 kV	Anne Arundel	Active	AG2-225	46.0	12/31/2022
BGE	Brandon Shores 230 kV	Anne Arundel	Active	AG2-319	150.0	12/31/2025
BGE	East Point - Golden Ring 115kV	Baltimore County	Active	AH1-261	135.0	6/30/2025
BGE	Northeast-CP Crane 115kV	Baltimore County	Active	AH2-162	200.0	3/1/2026
BGE	Northeast-CP Crane 115kV	Baltimore County	Active	AI1-130	75.0	9/7/2026
BGE	TBD 115 kV	Baltimore County	Active	AI1-131	75.0	9/7/2026
BGE	Northeast - Windy Edge 115 kV	Baltimore County	Active	AI1-189	110.0	12/31/2027
BGE	Northeast - CP Crane 115 kV	Baltimore County	Active	AJ1-037	300.0	10/1/2028
DPL	Airey-Vienna 69 kV II	Dorchester	Active	AG1-450 - moved to TC1	25	12/31/2022
DPL	Church 138 kV	Queen Anne's	Active	AG2-281	50	5/1/2024
DPL	Easton - Steele 138 kV III	Talbot	Active	AG2-379	20	9/15/2023
DPL	Carville 138 kV IV	Queen Anne's	Active	AG2-380	20	9/15/2023
DPL	Church - Oil City 138 kV II	Caroline	Active	AG2-381	20	9/15/2023
DPL	3 Bridges Rd 34.5 kV	Caroline	Active	AG2-419	20	5/31/2023
DPL	Kings Creek 138kV	Somerset	Active	AH1-356	30	9/30/2023
DPL	Crisfield 69kV	Somerset	Active	AH2-049	20	6/2/2025
DPL	Talbot 69 kV	Worcester	Active	AH2-337	80	2/27/2026
DPL	Rock Springs 500 kV	Cecil	Active	AI2-054	0	6/1/2028
DPL	Colora 230 kV	Cecil	Active	AI2-307	60.48	9/10/2026
DPL	Bishopville – Worcester 138 kV	Worcester	Active	AJ1-018	39	12/29/2028
PEPCO	Dickerson 230 kV	Montgomery	Active	AG1-483 - moved to TC1	542.5	6/1/2024
PEPCO	Morgantown 230 kV	Charles	Active	AG2-301	150	12/31/2023
PEPCO	Dickerson 230 kV	Montgomery	Active	AG2-302	150	12/31/2023
PEPCO	Chalk Point 230kV	Prince George's	Active	AH1-552	670.2	6/1/2025
PEPCO	Oak Grove - Hawkins Gate 230kV	Charles	Active	AH2-265	200	3/1/2026
PEPCO	Talbert 230kV	Prince George's	Active	AH2-332	115	12/31/2025
PEPCO	Morgantown 230 kV	Charles	Active	AI2-457	1122	10/1/2027
SMECO	Sollers 230kV	Calvert	Active	AH2-423	180	12/31/2025
				Total	**5,195.4**	

D. PJM's Reliability Pricing Model

As a means of ensuring reliability of the electric system in the RTO, PJM annually conducts a long-term planning process that compares the potential available generation capacity located within the RTO and the import capability of the RTO against the estimated demand of customers within the RTO. Consequently, the model projects the amount of generation and transmission required to maintain the reliability of the electric

grid within PJM. The amount of capacity procured in PJM's Reliability Pricing Model ("RPM") is roughly based upon a forecast of the peak load projected by PJM for a particular year, plus a reserve margin. The RPM works in conjunction with PJM's RTEP to ensure reliability in the PJM region for future years. Locational constraints are also identified for a delivery year in the PJM Regional Transmission Expansion Planning Process ("RTEPP") prior to each Base Residual Auction ("BRA"). Locational constraints are capacity import capability limitations that are caused by transmission facility limitations or voltage limitations. Resources in the unconstrained Locational Deliverability Areas ("LDA") (and capacity imported into constrained LDAs) are paid the Unconstrained (lower) Resource Clearing Price.

Using this information, PJM evaluates offers from resources three years in advance to be available for a one-year delivery period running from June through May (up to three years for new generation) through the BRA.[68] Once PJM completes its RTEPP and conducts the BRA, PJM is in a position to evaluate the reliability of its system. PJM must operate the transmission system to meet reliability criteria established by the Federal Energy Regulatory Commission ("FERC") and administered by NERC.

The Mid-Atlantic Advisory Council ("MAAC") LDA[69] has experienced significant volatility in Net Zonal Load[70] capacity prices as a result of the past 10 BRAs. The historical pattern suggests that future BRA results could vary significantly from year to year and must be closely monitored by PJM.

The BRA results for the 2025/2026 Delivery Year are all outliers with respect to each utility's set of delivery year results from 2015–2026, according to Tukey's Fences method for outlier detection.[71] PJM mainly attributed the unusually high auction prices for 2025/2026 to decreased supply offers resulting from generator retirements, increases in projected peak load, and FERC-approved market reforms such as improvements to reliability risk modeling.[72]

The Commission has concerns about the increasing volatility in PJM, particularly in the MAAC. The RPM is intended to incentivize new energy resources and retain existing, cost-effective resources. However, external factors, in addition to failures within the RPM structure are leading to increasing numbers of hurried revisions to the

[68] PJM Manual 18: PJM Capacity Market, Section 1: Overview of the PJM Capacity Market Reliability Pricing Model, PJM Markets & Operations (last revised June 27, 2024), https://www.pjm.com/directory/manuals/m18/index.html#Sections/Section%201%20Overview%20of%20the%20PJM%20Capacity%20Market.html.

[69] MAAC includes the South-West MAAC ("SWMAAC") which is the zone serving central Maryland.

[70] The Zonal Net Load capacity price reflects the BRA resource clearing price and credits from any transmission capacity transfer rights.

[71] John Tukey's Fences method prescribes that an outlier is any point in a dataset that is less than a lower fence of 1.5-fold the interquartile range subtracted from the 25th percentile, or greater than an upper fence of 1.5-fold the interquartile range added to the 75th percentile.

[72] *PJM Capacity Auction Procures Sufficient Resources to Meet RTO Reliability Requirement*, PJM (July 30, 2024), https://www.pjm.com/-/media/about-pjm/newsroom/2024-releases/20240730-pjm-capacity-auction-procures-sufficient-resources-to-meet-rto-reliability-requirement.ashx

RTEP and the need for "immediate needs" transmission projects. External factors include a congested interconnection queue that prevents new resources from entering the markets and deficiencies in recognizing state policies in long-term transmission planning that would open the grid to interconnecting state-preferred resources. Given the increasing costs these factors are having on wholesale electric rates, the Commission separately and through its membership in the Organization of PJM States continues to work diligently with PJM and FERC—PJM's Federal regulator—to find solutions to remedy these factors. In October 2024, the Commission docketed Public Conference 66 (PC66) to study and find solutions to how the State can facilitate resource adequacy and promote transmission and distribution system planning to advance State objectives. PC66 is discussed in further detail in the section titled: "Commission Planning Efforts".

Table 14 PJM BRA Capacity Prices by Zone[73]

Delivery Year	APS ($/MW-day)	BGE ($/MW-day)	DPL($/MW-day)	PEPCO ($/MW-day)	RTO Price ($/MW-day)
2015/2016	$134.62	$165.78	$165.78	$165.78	$136.00
2016/2017	$59.37	$119.13	$119.13	$119.13	$59.37
2017/2018	$120.00	$120.00	$120.00	$120.00	$120.00
2018/2019	$164.77	$164.77	$225.42	$164.77	$164.77
2019/2020	$100.00	$100.30	$119.77	$100.00	$100.00
2020/2021	$76.53	$86.04	$187.87	$86.04	$76.53
2021/2022	$140.00	$200.30	$165.73	$140.00	$140.00
2022/2023	$50.00	$126.50	$97.86	$95.79	$50.00
2023/2024	$34.13	$69.95	$69.95	$49.49	$34.13
2024/2025	$28.92	$73.00	$90.64	$49.49	$28.92
2025/2026	$269.92	$466.35	$269.92	$269.92	$269.92

E. Commission Planning Efforts

This section documents the efforts that the Commission has been engaged in related to electricity grid planning.

Internally, the Commission created a work group on distribution system planning under its grid modernization proceeding, Public Conference 44 ("PC44") and Case No. 9665. The PC44 Distribution System Planning Work Group is facilitated by the Commission's Chief Public Utility Law Judge and is reviewing the current planning processes in Maryland, related state policies, and existing utility programs that interface

[73] *PJM RPM Auction User Information: Delivery Year*, PJM Markets & Operations (Delivery Years 2015-2026), https://www.pjm.com/markets-and-operations/rpm.aspx.

with distribution system planning. The Commission will review progress and recommendations from the work group at the end of the year.

On October 10, 2024, the Commission docketed Public Conference 66 on resource adequacy. The Commission asked parties to file comments providing advice, suggestions, and innovative approaches regarding how to bring the capacity market back into equilibrium. After receiving public comments from parties in early November, the Commission set the matter for a Technical Conference, which is set to convene on December 3, 2024.

V. Conclusion

Electricity sector planning will continue to be affected by several different issues over the next 10 years, including projections regarding Maryland utility customers, energy sales, and in-state capacity and generation profiles. Other factors that will play a significant role in the planning process will be Maryland's data center development and electrification.[74] The Maryland utilities' load forecasts indicate an annual growth in energy sales and peak demand throughout the state during the 2024-2033 planning horizon.

[74] FirstEnergy, Dominion Energy, American Electric Power Reach Joint Planning Agreement to Propose Regional Transmission Projects Across PJM Footprint, FirstEnergy (October 7, 2024), https://investors.firstenergycorp.com/investor-materials/news-releases/news-details/2024/FirstEnergy-Dominion-Energy-American-Electric-Power-reach-joint-planning-agreement-to-propose-regional-transmission-projects-across-PJM-footprint/default.aspx.

Appendices to the Public Service Commission of Maryland's Ten-Year Plan (2024-2033) of Electric Companies in Maryland

*Data in Appendices 1-4 was derived from the Utilities' responses to Staff's Data Request

Appendix 1(a): Maryland Customer Forecasts

Appendix Table 1(a)(i): All Customer Classes (number of customers)

Year	Berlin	BGE	DPL	Easton	Hagers-town	PE	Pepco	SMECO	Thurmont	Williamsport	Total
2024	2,726	1,343,107	219,386	11,045	17,650	290,616	604,592	178,147	2,915	1,023	**2,671,206**
2025	2,735	1,348,135	220,005	11,081	17,691	293,819	608,749	180,341	2,915	1,023	**2,686,494**
2026	2,748	1,353,161	220,624	11,117	17,732	296,937	612,807	182,333	2,915	1,023	**2,701,396**
2027	2,762	1,359,244	221,315	11,153	17,773	299,987	617,110	184,717	2,915	1,023	**2,717,998**
2028	2,776	1,365,713	222,063	11,189	17,814	302,988	621,574	186,598	2,915	1,023	**2,734,652**
2029	2,803	1,372,297	222,814	11,225	17,855	305,942	626,072	188,488	2,915	1,023	**2,751,435**
2030	2,832	1,378,783	223,568	11,261	17,896	308,863	630,605	190,470	2,915	1,023	**2,768,216**
2031	2,860	1,384,824	224,324	11,297	17,938	311,743	635,173	192,451	2,915	1,023	**2,784,548**
2032	2,888	1,391,343	225,082	11,333	17,979	314,554	639,776	194,431	2,915	1,023	**2,801,326**
2033	2,917	1,397,885	225,844	11,369	18,021	317,300	644,414	196,311	2,915	1,023	**2,817,999**
Change (2024-2033)	**191**	**54,778**	**6,457**	**324**	**371**	**26,684**	**39,823**	**18,165**	**0**	**0**	**146,794**
Percent Change (2024-2033)	**7.02%**	**4.08%**	**2.94%**	**2.93%**	**2.10%**	**9.18%**	**6.59%**	**10.20%**	**0.00%**	**0.00%**	**5.50%**
Compound Annual Growth Rate	**0.76%**	**0.45%**	**0.32%**	**0.32%**	**0.23%**	**0.98%**	**0.71%**	**1.08%**	**0.00%**	**0.00%**	**0.60%**

Note: A&N, Choptank, and Somerset did not report applicable information for this table.

Appendix Table 1(a)(ii): Residential (number of customers)

Year	Berlin	BGE	DPL	Easton	Hagers-town	PE	Pepco	SMECO	Thurmont	Williamsport	Total
2024	2,241	1,213,756	185,388	8,641	15,021	256,007	553,416	161,800	2,527	862	**2,399,659**
2025	2,249	1,218,254	185,914	8,666	15,059	258,893	557,532	163,900	2,527	862	**2,413,855**
2026	2,260	1,222,750	186,438	8,691	15,096	261,692	561,546	165,800	2,527	862	**2,427,662**
2027	2,272	1,228,303	187,022	8,716	15,134	264,423	565,790	168,100	2,527	862	**2,443,148**
2028	2,283	1,234,240	187,652	8,741	15,172	267,104	570,184	169,900	2,527	862	**2,458,664**
2029	2,306	1,240,294	188,285	8,766	15,210	269,737	574,611	171,700	2,527	862	**2,474,297**
2030	2,329	1,246,248	188,920	8,791	15,248	272,336	579,073	173,600	2,527	862	**2,489,934**
2031	2,352	1,251,758	189,557	8,816	15,286	274,894	583,570	175,500	2,527	862	**2,505,121**
2032	2,376	1,257,746	190,196	8,841	15,324	277,383	588,101	177,400	2,527	862	**2,520,756**
2033	2,399	1,263,757	190,838	8,866	15,362	279,806	592,668	179,200	2,527	862	**2,536,285**
Change (2024-2033)	**158**	**50,000**	**5,450**	**225**	**341**	**23,799**	**39,253**	**17,400**	**0**	**0**	**136,626**
Percent Change (2024-2033)	**7.07%**	**4.12%**	**2.94%**	**2.60%**	**2.27%**	**9.30%**	**7.09%**	**10.75%**	**0.00%**	**0.00%**	**5.69%**
Compound Annual Growth Rate	**0.76%**	**0.45%**	**0.32%**	**0.29%**	**0.25%**	**0.99%**	**0.76%**	**1.14%**	**0.00%**	**0.00%**	**0.62%**

Note: A&N, Choptank, and Somerset did not report applicable information for this table.

Appendix 1(a) (Continued): Maryland Customer Forecasts

Appendix Table 1(a)(iii): Commercial (number of customers)

Year	Berlin	BGE	DPL	Easton	Hagers -town	PE	Pepco	SMECO	Thurmont	Williamsport	Total
2024	325	116,005	29,598	2,404	2,580	31,752	49,948	15,822	344	145	**248,922**
2025	325	116,359	29,688	2,415	2,583	32,084	49,994	15,916	344	145	**249,854**
2026	327	116,712	29,781	2,426	2,586	32,416	50,042	16,008	344	145	**250,787**
2027	328	117,066	29,886	2,437	2,590	32,746	50,106	16,092	344	145	**251,740**
2028	330	117,419	30,001	2,448	2,593	33,077	50,182	16,173	344	145	**252,713**
2029	333	117,772	30,117	2,459	2,596	33,407	50,258	16,263	344	145	**253,696**
2030	337	118,126	30,234	2,470	2,599	33,738	50,334	16,345	344	145	**254,671**
2031	340	118,479	30,350	2,481	2,603	34,068	50,410	16,426	344	145	**255,647**
2032	343	118,833	30,468	2,492	2,606	34,398	50,486	16,506	344	145	**256,621**
2033	347	119,186	30,585	2,503	2,609	34,727	50,562	16,586	344	145	**257,596**
Change (2024-2033)	**22**	**3,181**	**988**	**99**	**29**	**2,975**	**615**	**765**	**0**	**0**	**8,674**
Percent Change (2024-2033)	**6.85%**	**2.74%**	**3.34%**	**4.12%**	**1.13%**	**9.37%**	**1.23%**	**4.83%**	**0.00%**	**0.00%**	**3.48%**
Compound Annual Growth Rate	**0.74%**	**0.30%**	**0.37%**	**0.45%**	**0.12%**	**1.00%**	**0.14%**	**0.53%**	**0.00%**	**0.00%**	**0.38%**

Note: A&N, Choptank, and Somerset did not report applicable information for this table.

Appendix Table 1(a)(iv): Industrial (number of customers)

Year	Berlin	BGE	DPL	Easton	Hagers -town	PE	Pepco	SMECO	Thurmont	Williamsport	Total
2024	134	13,082	536	0	49	2,560	0	7	9	8	**16,385**
2025	135	13,261	538	0	49	2,546	0	7	9	8	**16,553**
2026	135	13,441	540	0	49	2,533	0	7	9	8	**16,722**
2027	136	13,620	542	0	49	2,522	0	7	9	8	**16,892**
2028	137	13,799	544	0	49	2,511	0	7	9	8	**17,064**
2029	138	13,978	547	0	49	2,501	0	7	9	8	**17,237**
2030	139	14,157	549	0	49	2,493	0	7	9	8	**17,411**
2031	141	14,336	551	0	49	2,485	0	7	9	8	**17,586**
2032	142	14,515	554	0	49	2,477	0	7	9	8	**17,761**
2033	143	14,695	556	0	49	2,470	0	7	9	8	**17,937**
Change (2024-2033)	**9**	**1,612**	**20**	**0**	**0**	**(90)**	**0**	**0**	**0**	**0**	**1,552**
Percent Change (2024-2033)	**6.82%**	**12.32 %**	**3.76 %**	**N/A**	**0.00%**	**-3.51%**	**N/A**	**0.00%**	**0.00%**	**0.00%**	**9.47%**
Compound Annual Growth Rate	**0.74%**	**1.30%**	**0.41 %**	**N/A**	**0.00%**	**-0.40%**	**N/A**	**0.00%**	**0.00%**	**0.00%**	**1.01%**

Note: A&N, Choptank, and Somerset did not report applicable information for this table.

Appendix 1(a) (Continued): Maryland Customer Forecasts

Appendix Table 1(a)(v): Other (number of customers)

Year	Berlin	BGE	DPL	Easton	Hagerstown	PE	Pepco	SMECO	Thurmont	Williamsport	Total
2024	26	263	3,865	0	0	293	1,229	518	35	8	**6,237**
2025	26	261	3,865	0	0	293	1,223	518	35	8	**6,229**
2026	26	259	3,865	0	0	293	1,218	518	35	8	**6,222**
2027	26	257	3,865	0	0	293	1,213	518	35	8	**6,215**
2028	26	255	3,865	0	0	293	1,208	518	35	8	**6,209**
2029	27	253	3,865	0	0	293	1,203	518	35	8	**6,202**
2030	27	252	3,865	0	0	293	1,198	518	35	8	**6,196**
2031	27	250	3,865	0	0	293	1,193	518	35	8	**6,190**
2032	27	249	3,865	0	0	293	1,188	518	35	8	**6,184**
2033	28	248	3,865	0	0	293	1,184	518	35	8	**6,178**
Change (2024-2033)	**2**	**(15)**	**0**	**0**	**0**	**0**	**(45)**	**0**	**0**	**0**	**(58)**
Percent Change (2024-2033)	**6.69%**	**-5.67%**	**0.00 %**	**N/A**	**N/A**	**0.00 %**	**- 3.66%**	**0.00%**	**0.00%**	**0.00%**	**- 0.93%**
Compound Annual Growth Rate	**0.72%**	**-0.65%**	**0.00 %**	**N/A**	**N/A**	**0.00 %**	**- 0.41%**	**0.00%**	**0.00%**	**0.00%**	**- 0.10%**

Note: A&N, Choptank, and Somerset did not report applicable information for this table.
Note: The "Other" rate class refers to customers that do not fall into one of the listed classes, for example street lighting.

Appendix Table 1(a)(vi): Resale (number of customers)

Year	Berlin	BGE	DPL	Easton	Hagerstown	PE	Pepco	SMECO	Thurmont	Williamsport	Total
2024	0	0	0	0	0	3	0	0	0	0	**3**
2025	0	0	0	0	0	3	0	0	0	0	**3**
2026	0	0	0	0	0	3	0	0	0	0	**3**
2027	0	0	0	0	0	3	0	0	0	0	**3**
2028	0	0	0	0	0	3	0	0	0	0	**3**
2029	0	0	0	0	0	3	0	0	0	0	**3**
2030	0	0	0	0	0	3	0	0	0	0	**3**
2031	0	0	0	0	0	3	0	0	0	0	**3**
2032	0	0	0	0	0	3	0	0	0	0	**3**
2033	0	0	0	0	0	3	0	0	0	0	**3**
Change (2024-2033)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Percent Change (2024-2033)	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**0.00%**	**N/A**	**N/A**	**N/A**	**N/A**	**0.00%**
Compound Annual Growth Rate	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**0.00%**	**N/A**	**N/A**	**N/A**	**N/A**	**0.00%**

Note: A&N, Choptank, and Somerset did not report applicable information for this table.
Note: The "Resale" class refers to "Sales for Resale," which is energy supplied to other electric utilities, cooperatives, municipalities, and federal and state electric agencies for resale to end-use consumers. PE is the only utility with any resale customers.

Appendix 1(b): 2023 Customer Numbers and Energy Sales

Appendix Table 1(b)(i): Customer Class Breakdown as of December 31, 2023 (number of customers)

	System Wide						Maryland					
Utility	**Residential**	**Commercial**	**Industrial**	**Other**	**Sales for Resale**	**Total**	**Residential**	**Commercial**	**Industrial**	**Other**	**Sales for Resale**	**Total**
Berlin	2,221	322	133	26	0	**2,702**	2,221	322	133	26	0	**2,702**
BGE	1,207,932	115,686	12,910	265	0	**1,336,792**	1,207,932	115,686	12,910	265	0	**1,336,792**
DPL	483,949	64,948	254	594	0	**549,745**	184,814	28,102	142	257	0	**213,315**
Easton	8,602	2,400	0	0	0	**11,002**	8,602	2,400	0	0	0	**11,002**
Hagerstown	15,054	2,579	49	0	0	**17,682**	15,054	2,579	49	0	0	**17,682**
PE	385,795	50,029	4,364	592	5	**440,785**	253,213	30,972	2,553	297	3	**287,038**
PEPCO	912,341	78,532	0	200	0	**991,073**	548,022	50,694	0	173	0	**598,888**
SMECO	158,836	15,650	7	511	0	**175,005**	158,836	15,650	7	511	0	**175,005**
Thurmont	2,506	343	9	35	0	**2,893**	2,506	343	9	35	0	**2,893**
Williamsport	862	145	8	8	0	**1,023**	862	145	8	8	0	**1,023**
Total	**3,178,098**	**330,633**	**17,734**	**2,231**	**5**	**3,528,701**	**2,382,062**	**246,892**	**15,811**	**1,572**	**3**	**2,646,339**

Note: A&N, Choptank, and Somerset did not report applicable information for this table.
Note: "System wide" includes the entire distribution system of a utility, which may extend beyond the Maryland service territory into Washington, D.C.; Delaware; and parts of West Virginia. The affected utilities include DPL, PE, and Pepco.

Appendix Table 1(b)(ii): Utilities' 2023 Energy Sales by Customer Class (GWh)

	System Wide						Maryland					
Utility	**Residential**	**Commercial**	**Industrial**	**Other**	**Sales for Resale**	**Total**	**Residential**	**Commercial**	**Industrial**	**Other**	**Sales for Resale**	**Total**
Berlin	25	3	15	0	0	**43**	25	3	15	0	0	**43**
BGE	12,102	2,697	12,801	209	0	**27,807**	12,102	2,697	12,801	209	0	**27,807**
DPL	5,101	5,010	1,448	44	0	**11,603**	2,056	1,630	334	11	0	**4,031**
Easton	103	131	0	0	0	**234**	103	131	0	0	0	**234**
Hagerstown	158	83	59	0	0	**300**	158	83	59	0	0	**300**
PE	5,152	2,785	2,330	22	287	**10,576**	3,253	1,993	1,351	16	257	**6,869**
PEPCO	7,638	14,674	0	133	0	**22,445**	5,273	7,460	0	56	0	**12,790**
SMECO	2,095	1,168	25	7	0	**3,295**	2,095	1,168	25	7	0	**3,295**
Thurmont	36	15	20	1	0	**71**	36	15	20	1	0	**71**
Williamsport	9	3	7	0	0	**20**	9	3	7	0	0	**20**
Total	**32,418**	**26,570**	**16,703**	**417**	**287**	**76,395**	**25,110**	**15,183**	**14,611**	**301**	**257**	**55,461**

Note: A&N, Choptank, and Somerset did not report applicable information for this table.
Note: "System wide" includes the entire distribution system of a utility which may extend beyond the Maryland service territory into Washington, D.C.; Delaware; and parts of West Virginia. The affected utilities include DPL, PE, and Pepco.

Appendix 2(a): Energy Sales Forecast by Utility (Maryland Service Territory Only)

Appendix Table 2(a)(i): Maryland Energy Sales Forecast, Gross of DSM (GWh)

Year	Berlin	BGE	DPL	Easton	Hagerstown	PE	Pepco	SMECO	Thurmont	Williamsport	Total
2024	47	29,818	5,087	236	302	9,512	16,451	3,524	73	20	**65,070**
2025	47	29,823	5,124	237	303	12,175	16,528	3,562	73	20	**67,892**
2026	48	29,995	5,163	239	304	13,916	16,618	3,569	73	20	**69,943**
2027	48	29,492	5,208	241	304	14,549	16,750	3,585	73	20	**70,270**
2028	48	29,733	5,264	242	305	15,398	16,932	3,616	73	20	**71,631**
2029	48	29,778	5,248	244	306	15,642	16,905	3,635	73	20	**71,900**
2030	49	29,974	5,232	245	307	15,876	16,878	3,658	73	20	**72,313**
2031	49	30,188	5,217	247	307	16,108	16,851	3,675	73	20	**72,736**
2032	50	30,518	5,201	249	308	16,357	16,824	3,698	73	20	**73,298**
2033	50	30,622	5,185	250	309	16,589	16,798	3,716	73	20	**73,612**
Change (2024-2033)	**3**	**804**	**98**	**14**	**7**	**7,077**	**346**	**192**	**0**	**0**	**8,542**
Percent Change (2024-2033)	**7.22%**	**2.70%**	**1.93%**	**6.11%**	**2.27%**	**74.41%**	**2.10%**	**5.44%**	**0.00%**	**0.00%**	**13.13%**
Compound Annual Growth Rate	**0.78%**	**0.30%**	**0.21%**	**0.66%**	**0.25%**	**6.38%**	**0.23%**	**0.59%**	**0.00%**	**0.00%**	**1.38%**

Note: A&N, Choptank, and Somerset did not report applicable information for this table.

Appendix Table 2(a)(ii): Maryland Energy Sales Forecast, Net of DSM (GWh)

Year	Berlin	BGE	DPL	Easton	Hagerstown	PE	Pepco	SMECO	Thurmont	Williamsport	Total
2024	47	29,173	4,139	236	302	8,146	13,130	3,450	73	20	**58,716**
2025	47	29,119	4,105	237	303	10,685	12,992	3,473	73	20	**61,054**
2026	48	29,262	4,071	239	304	12,301	12,871	3,503	73	20	**62,691**
2027	48	29,332	4,045	241	304	12,791	12,793	3,519	73	20	**63,165**
2028	48	29,573	4,029	242	305	13,501	12,766	3,550	73	20	**64,106**
2029	48	29,618	4,013	244	306	13,606	12,739	3,569	73	20	**64,237**
2030	49	29,814	3,997	245	307	13,702	12,712	3,592	73	20	**64,511**
2031	49	30,028	3,981	247	307	13,795	12,685	3,609	73	20	**64,795**
2032	50	30,358	3,966	249	308	13,905	12,659	3,632	73	20	**65,219**
2033	50	30,462	3,950	250	309	13,999	12,632	3,650	73	20	**65,395**
Change (2024-2033)	**3**	**1,289**	**(189)**	**14**	**7**	**5,852**	**(498)**	**200**	**0**	**0**	**6,679**
Percent Change (2024-2033)	**7.22%**	**4.42%**	**-4.57%**	**6.11%**	**2.27%**	**71.84%**	**-3.79%**	**5.79%**	**0.00%**	**0.00%**	**11.38%**
Compound Annual Growth Rate	**0.78%**	**0.48%**	**-0.52%**	**0.66%**	**0.25%**	**6.20%**	**-0.43%**	**0.63%**	**0.00%**	**0.00%**	**1.20%**

Note: A&N, Choptank, and Somerset did not report applicable information for this table.

Appendix 2(b): Energy Sales Forecast by Utility (System Wide)

Appendix Table 2(b)(i): System Wide Energy Sales Forecast, Gross of DSM (GWh)

Year	Berlin	BGE	DPL	Easton	Hagerstown	PE	Pepco	SMECO	Thurmont	Williamsport	Total
2024	47	29,818	13,130	236	302	17,219	27,788	3,524	73	20	**92,157**
2025	47	29,823	13,130	237	303	19,988	27,863	3,562	73	20	**95,047**
2026	48	29,995	13,145	239	304	21,728	27,954	3,569	73	20	**97,074**
2027	48	29,492	13,180	241	304	22,500	28,094	3,585	73	20	**97,537**
2028	48	29,733	13,270	242	305	23,465	28,280	3,616	73	20	**99,051**
2029	48	29,778	13,277	244	306	23,769	28,088	3,635	73	20	**99,238**
2030	49	29,974	13,284	245	307	24,069	27,899	3,658	73	20	**99,579**
2031	49	30,188	13,292	247	307	24,368	27,712	3,675	73	20	**99,932**
2032	50	30,518	13,299	249	308	24,696	27,529	3,698	73	20	**100,440**
2033	50	30,622	13,307	250	309	24,989	27,348	3,716	73	20	**100,684**
Change (2024-2033)	**3**	**804**	**177**	**14**	**7**	**7,769**	**(439)**	**192**	**0**	**0**	**8,527**
Percent Change (2024-2033)	**7.22%**	**2.70%**	**1.35%**	**6.11%**	**2.27%**	**45.12%**	**-1.58%**	**5.44%**	**0.00%**	**0.00%**	**9.25%**
Compound Annual Growth Rate	**0.78%**	**0.30%**	**0.15%**	**0.66%**	**0.25%**	**4.22%**	**-0.18%**	**0.59%**	**0.00%**	**0.00%**	**0.99%**

Note: A&N, Choptank, and Somerset did not report applicable information for this table.
Note: "System wide" includes the entire distribution system of a utility, which may extend beyond the Maryland service territory into Washington, D.C., Delaware, and parts of West Virginia. The affected utilities include DPL, PE, and Pepco.

Appendix Table 2(b)(ii): System Wide Energy Sales Forecast, Net of DSM (GWh)

Year	Berlin	BGE	DPL	Easton	Hagerstown	PE	Pepco	SMECO	Thurmont	Williamsport	Total
2024	47	29,173	12,001	236	302	15,793	23,335	3,450	73	20	**84,430**
2025	47	29,119	11,920	237	303	18,437	23,053	3,473	73	20	**86,682**
2026	48	29,262	11,852	239	304	20,052	22,771	3,503	73	20	**88,123**
2027	48	29,332	11,805	241	304	20,681	22,528	3,519	73	20	**88,549**
2028	48	29,573	11,812	242	305	21,507	22,333	3,550	73	20	**89,462**
2029	48	29,618	11,819	244	306	21,672	22,141	3,569	73	20	**89,510**
2030	49	29,814	11,826	245	307	21,834	21,952	3,592	73	20	**89,712**
2031	49	30,028	11,834	247	307	21,994	21,765	3,609	73	20	**89,927**
2032	50	30,358	11,841	249	308	22,183	21,582	3,632	73	20	**90,296**
2033	50	30,462	11,849	250	309	22,337	21,401	3,650	73	20	**90,402**
Change (2024-2033)	**3**	**1,289**	**(152)**	**14**	**7**	**6,544**	**(1,934)**	**200**	**0**	**0**	**5,972**
Percent Change (2024-2033)	**7.22%**	**4.42%**	**-1.27%**	**6.11%**	**2.27%**	**41.44%**	**-8.29%**	**5.79%**	**0.00%**	**0.00%**	**7.07%**
Compound Annual Growth Rate	**0.78%**	**0.48%**	**-0.14%**	**0.66%**	**0.25%**	**3.93%**	**-0.96%**	**0.63%**	**0.00%**	**0.00%**	**0.76%**

Note: A&N, Choptank, and Somerset did not report applicable information for this table.
Note: "System wide" includes the entire distribution system of a utility which may extend beyond the Maryland service territory into Washington, D.C.; Delaware; and parts of West Virginia. The affected utilities include DPL, PE, and Pepco.

Appendix 3(a): Peak Demand Forecasts (Maryland Service Territory Only)

Appendix Table 3(a)(i): Maryland Summer, Gross of DSM Programs (MW)

Year	Berlin	BGE	DPL	Easton	Hagerstown	PE	Pepco	SMECO	Thurmont	Williamsport	Total
2024	11	7,014	1,098	57	59	1,840	4,940	959	15	4	**15,997**
2025	11	7,037	1,115	57	60	2,020	5,015	926	15	4	**16,260**
2026	11	7,053	1,134	57	60	2,406	5,088	911	15	4	**16,738**
2027	11	6,981	1,152	58	60	2,678	5,154	914	15	4	**17,026**
2028	11	7,019	1,173	58	60	2,748	5,231	916	15	4	**17,234**
2029	11	7,063	1,177	58	60	2,797	5,259	918	15	4	**17,362**
2030	11	7,103	1,181	59	60	2,847	5,289	921	15	4	**17,489**
2031	11	7,146	1,187	59	60	2,896	5,321	923	15	4	**17,622**
2032	11	7,208	1,193	59	61	2,947	5,347	926	15	4	**17,770**
2033	11	7,276	1,202	60	61	2,998	5,382	927	15	4	**17,935**
Change (2024-2033)	**1**	**261**	**104**	**3**	**1**	**1,158**	**441**	**(32)**	**0**	**0**	**1,938**
Percent Change (2024-2033)	**6.69 %**	**3.73%**	**9.44 %**	**5.07%**	**2.27%**	**62.96 %**	**8.93%**	**-3.30%**	**0.00%**	**0.00%**	**12.11 %**
Compound Annual Growth Rate	**0.72 %**	**0.41%**	**1.01 %**	**0.55%**	**0.25%**	**5.58%**	**0.96%**	**-0.37%**	**0.00%**	**0.00%**	**1.28%**

Note: A&N, Choptank, and Somerset did not report applicable information for this table.

Appendix Table 3(a)(ii): Maryland Summer, Net of DSM Programs (MW)

Year	Berlin	BGE	DPL	Easton	Hagerstown	PE	Pepco	SMECO	Thurmont	Williamsport	Total
2024	5	6,491	974	57	59	1,605	3,655	817	15	4	**13,682**
2025	5	6,507	973	57	60	1,754	3,688	816	15	4	**13,879**
2026	5	6,523	973	57	60	2,110	3,712	819	15	4	**14,278**
2027	5	6,554	973	58	60	2,344	3,728	822	15	4	**14,563**
2028	5	6,592	975	58	60	2,381	3,755	824	15	4	**14,670**
2029	6	6,636	979	58	60	2,398	3,784	826	15	4	**14,765**
2030	6	6,676	983	59	60	2,414	3,814	829	15	4	**14,860**
2031	6	6,719	990	59	60	2,431	3,845	831	15	4	**14,960**
2032	6	6,781	995	59	61	2,449	3,872	834	15	4	**15,075**
2033	6	6,849	1,004	60	61	2,467	3,906	835	15	4	**15,207**
Change (2024-2033)	**1**	**358**	**30**	**3**	**1**	**862**	**251**	**18**	**0**	**0**	**1,525**
Percent Change (2024-2033)	**13.90 %**	**5.52 %**	**3.09 %**	**5.07%**	**2.27%**	**53.71 %**	**6.87 %**	**2.20%**	**0.00%**	**0.00%**	**11.14 %**
Compound Annual Growth Rate	**1.46%**	**0.60 %**	**0.34 %**	**0.55%**	**0.25%**	**4.89%**	**0.74 %**	**0.24%**	**0.00%**	**0.00%**	**1.18%**

Note: A&N, Choptank, and Somerset did not report applicable information for this table.

Appendix 3(a) (Continued): Peak Demand Forecasts (Maryland Service Territory Only)

Appendix Table 3(a)(iii): Maryland Winter, Gross of DSM Programs (MW)

Year	Berlin	BGE	DPL	Easton	Hagerstown	PE	Pepco	SMECO	Thurmont	Williamsport	Total
2024	17	5,918	1,145	52	60	1,949	3,054	864	19	5	**13,084**
2025	17	5,933	1,146	53	61	1,992	3,058	916	19	5	**13,199**
2026	18	5,952	1,156	53	61	2,411	3,084	951	19	5	**13,710**
2027	19	5,941	1,164	53	61	2,684	3,107	959	19	5	**14,011**
2028	19	5,989	1,179	54	61	2,746	3,133	964	19	5	**14,169**
2029	20	6,015	1,178	54	61	2,798	3,152	974	19	5	**14,275**
2030	21	6,062	1,183	54	61	2,852	3,180	986	19	5	**14,424**
2031	21	6,134	1,192	54	61	2,906	3,213	997	19	5	**14,604**
2032	22	6,204	1,206	55	62	2,963	3,251	1,009	19	5	**14,796**
2033	23	6,284	1,214	55	62	3,021	3,278	1,019	19	5	**14,979**
Change (2024-2033)	**6**	**366**	**69**	**3**	**1**	**1,071**	**223**	**155**	**0**	**0**	**1,895**
Percent Change (2024-2033)	**34.95 %**	**6.19 %**	**6.05 %**	**4.81%**	**2.27%**	**54.96 %**	**7.31 %**	**17.90%**	**0.00%**	**0.00%**	**14.48 %**
Compound Annual Growth Rate	**3.39%**	**0.67 %**	**0.66 %**	**0.52%**	**0.25%**	**4.99%**	**0.79 %**	**1.85%**	**0.00%**	**0.00%**	**1.51%**

Note: A&N, Choptank, and Somerset did not report applicable information for this table.

Appendix Table 3(a)(iv): Maryland Winter, Net of DSM Programs (MW)

Year	Berlin	BGE	DPL	Easton	Hagerstown	PE	Pepco	SMECO	Thurmont	Williamsport	Total
2024	17	5,827	1,145	52	60	1,724	3,054	864	19	5	**12,768**
2025	17	5,836	1,146	53	61	1,736	3,058	916	19	5	**12,846**
2026	18	5,855	1,156	53	61	2,126	3,084	951	19	5	**13,328**
2027	19	5,899	1,164	53	61	2,362	3,107	959	19	5	**13,647**
2028	19	5,947	1,179	54	61	2,393	3,133	964	19	5	**13,774**
2029	20	5,973	1,178	54	61	2,413	3,152	974	19	5	**13,848**
2030	21	6,020	1,183	54	61	2,435	3,180	986	19	5	**13,964**
2031	21	6,092	1,192	54	61	2,457	3,213	997	19	5	**14,112**
2032	22	6,162	1,206	55	62	2,483	3,251	1,009	19	5	**14,273**
2033	23	6,242	1,214	55	62	2,508	3,278	1,019	19	5	**14,424**
Change (2024-2033)	**6**	**415**	**69**	**3**	**1**	**784**	**223**	**155**	**0**	**0**	**1,656**
Percent Change (2024-2033)	**34.95 %**	**7.12 %**	**6.05 %**	**4.81%**	**2.27%**	**45.48 %**	**7.31 %**	**17.90%**	**0.00%**	**0.00%**	**12.97 %**
Compound Annual Growth Rate	**3.39%**	**0.77 %**	**0.66 %**	**0.52%**	**0.25%**	**4.25%**	**0.79 %**	**1.85%**	**0.00%**	**0.00%**	**1.36%**

Note: A&N, Choptank, and Somerset did not report applicable information for this table

Appendix 3(b): Peak Demand Forecasts (System Wide)

Appendix Table 3(b)(i): System Wide Summer, Gross of DSM (MW)

Year	Berlin	BGE	DPL	Easton	Hagerstown	PE	Pepco	SMECO	Thurmont	Williamsport	Total
2024	11	7,014	4,080	57	59	3,214	7,437	959	15	4	**22,850**
2025	11	7,037	4,095	57	60	3,390	7,543	926	15	4	**23,137**
2026	11	7,053	4,113	57	60	3,751	7,645	911	15	4	**23,620**
2027	11	6,981	4,133	58	60	4,050	7,736	914	15	4	**23,962**
2028	11	7,019	4,160	58	60	4,124	7,846	916	15	4	**24,212**
2029	11	7,063	4,175	58	60	4,174	7,893	918	15	4	**24,371**
2030	11	7,103	4,193	59	60	4,226	7,943	921	15	4	**24,534**
2031	11	7,146	4,218	59	60	4,278	7,995	923	15	4	**24,709**
2032	11	7,208	4,240	59	61	4,333	8,039	926	15	4	**24,895**
2033	12	7,276	4,276	60	61	4,385	8,096	927	15	4	**25,110**
Change (2024-2033)	**1**	**261**	**196**	**3**	**1**	**1,171**	**658**	**(32)**	**0**	**0**	**2,259**
Percent Change (2024-2033)	**6.69%**	**3.73%**	**4.80%**	**5.07%**	**2.27%**	**36.43%**	**8.85%**	**-3.30%**	**0.00%**	**0.00%**	**9.89%**
Compound Annual Growth Rate	**0.72%**	**0.41%**	**0.52%**	**0.55%**	**0.25%**	**3.51%**	**0.95%**	**-0.37%**	**0.00%**	**0.00%**	**1.05%**

Note: A&N, Choptank, and Somerset did not report applicable information for this table.
Note: "System wide" includes the entire distribution system of a utility which may extend beyond the Maryland service territory into Washington, D.C.; Delaware; and parts of West Virginia. The affected utilities include DPL, PE, and Pepco.

Appendix Table 3(b)(ii): System Wide Summer, Net of DSM (MW)

Year	Berlin	BGE	DPL	Easton	Hagerstown	PE	Pepco	SMECO	Thurmont	Williamsport	Total
2024	5	6,491	3,945	57	59	2,972	6,053	817	15	4	**20,417**
2025	5	6,507	3,941	57	60	3,115	6,108	816	15	4	**20,628**
2026	5	6,523	3,941	57	60	3,447	6,147	819	15	4	**21,018**
2027	5	6,554	3,943	58	60	3,709	6,174	822	15	4	**21,343**
2028	6	6,592	3,951	58	60	3,749	6,219	824	15	4	**21,477**
2029	6	6,636	3,966	58	60	3,767	6,266	826	15	4	**21,604**
2030	6	6,676	3,984	59	60	3,786	6,316	829	15	4	**21,734**
2031	6	6,719	4,009	59	60	3,805	6,368	831	15	4	**21,876**
2032	6	6,781	4,031	59	61	3,827	6,412	834	15	4	**22,029**
2033	6	6,849	4,067	60	61	3,846	6,469	835	15	4	**22,211**
Change (2024-2033)	**1**	**358**	**122**	**3**	**1**	**875**	**416**	**18**	**0**	**0.00%**	**1,794**
Percent Change (2024-2033)	**13.90%**	**5.52%**	**3.09%**	**5.07%**	**2.27%**	**29.44%**	**6.87%**	**2.20%**	**0.00%**	**0.00%**	**8.79%**
Compound Annual Growth Rate	**1.46%**	**0.60%**	**0.34%**	**0.55%**	**0.25%**	**2.91%**	**0.74%**	**0.24%**	**0.00%**	**0.00%**	**0.94%**

Note: A&N, Choptank, and Somerset did not report applicable information for this table.
Note: "System wide" includes the entire distribution system of a utility which may extend beyond the Maryland service territory into Washington, D.C.; Delaware; and parts of West Virginia. The affected utilities include DPL, PE, and Pepco.

Appendix 3(b) (Continued): Peak Demand Forecasts (System Wide)

Appendix Table 3(b)(iii): System Wide Winter, Gross of DSM (MW)

Year	Berlin	BGE	DPL	Easton	Hagerstown	PE	Pepco	SMECO	Thurmont	Williamsport	Total
2024	17	5,918	3,700	52	60	3,534	5,359	864	19	5	**19,529**
2025	17	5,933	3,705	53	61	3,573	5,365	916	19	5	**19,647**
2026	18	5,952	3,737	53	61	3,998	5,412	951	19	5	**20,206**
2027	19	5,941	3,762	53	61	4,343	5,451	959	19	5	**20,613**
2028	19	5,989	3,811	54	61	4,412	5,497	964	19	5	**20,831**
2029	20	6,015	3,807	54	61	4,467	5,530	974	19	5	**20,952**
2030	21	6,062	3,825	54	61	4,526	5,580	986	19	5	**21,140**
2031	21	6,134	3,854	54	61	4,587	5,638	997	19	5	**21,372**
2032	22	6,204	3,899	55	62	4,650	5,704	1,009	19	5	**21,629**
2033	23	6,284	3,924	55	62	4,712	5,751	1,019	19	5	**21,854**
Change (2024-2033)	**6**	**366**	**224**	**3**	**1**	**1,178**	**392**	**155**	**0**	**0**	**2,325**
Percent Change (2024-2033)	**34.95%**	**6.19%**	**6.05%**	**4.81%**	**2.27%**	**33.34%**	**7.31%**	**17.90%**	**0.00%**	**0.00%**	**11.90%**
Compound Annual Growth Rate	**3.39%**	**0.67%**	**0.66%**	**0.52%**	**0.25%**	**3.25%**	**0.79%**	**1.85%**	**0.00%**	**0.00%**	**1.26%**

Note: A&N, Choptank, and Somerset did not report applicable information for this table.
Note: "System wide" includes the entire distribution system of a utility which may extend beyond the Maryland service territory into Washington, D.C.; Delaware; and parts of West Virginia. The affected utilities include DPL, PE, and Pepco.

Appendix Table 3(b)(iv): System Wide Winter, Net of DSM (MW)

Year	Berlin	BGE	DPL	Easton	Hagerstown	PE	Pepco	SMECO	Thurmont	Williamsport	Total
2024	17	5,827	3,700	52	60	3,301	5,359	864	19	5	**19,205**
2025	17	5,836	3,705	53	61	3,309	5,365	916	19	5	**19,286**
2026	18	5,855	3,737	53	61	3,705	5,412	951	19	5	**19,816**
2027	19	5,899	3,762	53	61	4,013	5,451	959	19	5	**20,241**
2028	19	5,947	3,811	54	61	4,050	5,497	964	19	5	**20,427**
2029	20	5,973	3,807	54	61	4,074	5,530	974	19	5	**20,517**
2030	21	6,020	3,825	54	61	4,101	5,580	986	19	5	**20,672**
2031	21	6,092	3,854	54	61	4,130	5,638	997	19	5	**20,872**
2032	22	6,162	3,899	55	62	4,161	5,704	1,009	19	5	**21,098**
2033	23	6,242	3,924	55	62	4,192	5,751	1,019	19	5	**21,291**
Change (2024-2033)	**6**	**415**	**224**	**3**	**1**	**891**	**392**	**155**	**0**	**0**	**2,086**
Percent Change (2024-2033)	**34.95%**	**7.12%**	**6.05%**	**4.81%**	**2.27%**	**26.99%**	**7.31%**	**17.90%**	**0.00%**	**0.00%**	**10.86%**
Compound Annual Growth Rate	**3.39%**	**0.77%**	**0.66%**	**0.52%**	**0.25%**	**2.69%**	**0.79%**	**1.85%**	**0.00%**	**0.00%**	**1.15%**

Note: A&N, Choptank, and Somerset did not report applicable information for this table.

Appendix 3(b) (Continued): Peak Demand Forecasts (System Wide)

Note: "System wide" includes the entire distribution system of a utility which may extend beyond the Maryland service territory into Washington, D.C.; Delaware; and parts of West Virginia. The affected utilities include DPL, PE, and Pepco.

Appendix 4: Transmission Enhancements, by Service Territory

Appendix Table 4: Transmission Enhancements by Service Territory

								Start location		End Location	
Transmission Owner	**Voltage (kV)**	**Length (miles)**	**No. of Circuits**	**Start Date**	**Comp. Date**	**In-Service Date**	**Purpose**	**County**	**Terminal**	**County**	**Terminal**
DPL	230	23.4	1	Jul-05	May-24	May-24	Capacity Expansion	Denton	Steel	Lincoln, DE	Milford
DPL	69	19.2	1	Jul-05	Dec-24	Dec-24	Aging Infrastructure	Dorchester	Vienna	Dorchester, MD	West Cambridge
PE	138	3.2	1	2022	2026	2026	Baseline Transmission Reliability	Allegany	Messick Road	Mineral	Ridgeley (WV)
PE	138	17.7	1	2022	2027	2027	Baseline Transmission Reliability	Allegany	Messick Road	Morgan	Morgan (WV)
PE	138	0.1	2	2013	2025	2025	Accommodate for Generator Interconnection	Allegany	Dans Mountain (new)	Allegany	Carlos Junction-Ridgeley (WV)
PE	230	0	1	2017	Suspended	Suspended	Baseline Transmission Reliability	Washington	Ringgold	Washington	Ringgold
PE	230	0	1	2017	Suspended	Suspended	Baseline Transmission Reliability	Frederick	Catoctin	Frederick	Catoctin
PE	230	9.7	1.00	2017	Suspended	Suspended	Baseline Transmission Reliability	Washington	Ringgold	Frederick	Catoctin
PE	500	0.1	1	2023	2027	7/19/1905	Baseline Transmission Reliability	Frederick	Doubs	York (PA)	Otter Creek PPL (PA)
PE	138	0.1	1	2023	2024	7/16/1905	Baseline Transmission Reliability	Mineral	Messick Road	Morgan	Morgan (WV)
PE	230	11.1	2	Jul-05	Jul-05	Jul-05	Baseline Transmission Reliability	Adams (PA)	Hunterstown	Carroll	Carroll
PE	138	0.1	1	2023	2025	2025	Accommodate for Generator Interconnection	Preston	Albright (WV)	Mineral	Cross School
PE	230	0.1	1	2023	2025	2025	Baseline Transmission Reliability	Frederick	Doubs	Frederick	Lime Kiln 231
PE	230	0.1	1	2023	2027	2027	Baseline Transmission Reliability	Frederick	Doubs	Frederick	Lime Kiln 231
PE	230	3.4	1	2022	7/17/1905	7/17/1905	Baseline Transmission Reliability	Frederick	Doubs	Frederick	Lime Kiln 207
Pepco	230	4.7 (0.42 in MD)	2	2018	Mar-24	Dec-23	Capacity and ageing infrastructure	Montgomery	Takoma	District of Columbia	Harvard
Pepco	230	10.1	2	2023	Sep-25	Jun-25	Aging infrastructure	Prince George's	Talbert	Prince George's	Oak Grove

Appendix 5: List of Maryland Generators, as of December 31, 2023

Appendix Table 5: List of Maryland Generators as of December 31, 2023

Owner / Operator	Plant Name	County	Capacity Statistics (MW)		
			Nameplate	Summer	% Summer
Brandon Shores LLC	Brandon Shores	Anne Arundel	685.1	635.0	93%
Brandon Shores LLC	Brandon Shores	Anne Arundel	685.1	638.0	93%
H.A. Wagner LLC	Herbert A Wagner	Anne Arundel	132.8	126.0	95%
H.A. Wagner LLC	Herbert A Wagner	Anne Arundel	359.0	305.0	85%
H.A. Wagner LLC	Herbert A Wagner	Anne Arundel	414.7	397.0	96%
H.A. Wagner LLC	Herbert A Wagner	Anne Arundel	16.0	12.9	81%
Constellation Power Source Generation, LLC	Perryman	Harford	53.1	52.0	98%
Constellation Power Source Generation, LLC	Perryman	Harford	53.1	51.0	96%
Constellation Power Source Generation, LLC	Perryman	Harford	53.1	52.0	98%
Constellation Power Source Generation, LLC	Perryman	Harford	192.0	139.0	72%
Constellation Power Source Generation, LLC	Perryman	Harford	141.0	109.8	78%
Constellation Power Source Generation, LLC	Philadelphia	Baltimore City	20.7	15.3	74%
Constellation Power Source Generation, LLC	Philadelphia	Baltimore City	20.7	14.8	71%
Constellation Power Source Generation, LLC	Philadelphia	Baltimore City	20.7	14.8	71%
Constellation Power Source Generation, LLC	Philadelphia	Baltimore City	20.7	14.8	71%
Calpine Mid-Atlantic Generation LLC	Crisfield	Somerset	2.9	2.6	90%
Calpine Mid-Atlantic Generation LLC	Crisfield	Somerset	2.9	2.6	90%
Calpine Mid-Atlantic Generation LLC	Crisfield	Somerset	2.9	2.6	90%
Calpine Mid-Atlantic Generation LLC	Crisfield	Somerset	2.9	2.6	90%
NRG Vienna Operations Inc	Vienna Operations	Dorchester	18.6	14.3	77%
NRG Vienna Operations Inc	Vienna Operations	Dorchester	162.0	153.0	94%
BP Piney & Deep Creek LLC	Deep Creek	Garrett	10.0	9.0	90%
BP Piney & Deep Creek LLC	Deep Creek	Garrett	10.0	9.0	90%
Lanyard Power Holdings, LLC	Chalk Point Power	Prince George's	659.0	595.0	90%
Lanyard Power Holdings, LLC	Chalk Point Power	Prince George's	659.0	585.3	89%
Lanyard Power Holdings, LLC	Chalk Point Power	Prince George's	16.0	18.0	113%
Lanyard Power Holdings, LLC	Chalk Point Power	Prince George's	35.0	26.0	74%
Lanyard Power Holdings, LLC	Chalk Point Power	Prince George's	103.0	86.0	83%
Lanyard Power Holdings, LLC	Chalk Point Power	Prince George's	103.0	86.0	83%
Lanyard Power Holdings, LLC	Chalk Point Power	Prince George's	125.0	109.0	87%
Lanyard Power Holdings, LLC	Chalk Point Power	Prince George's	125.0	109.0	87%
Lanyard Power Holdings, LLC	Dickerson Power	Montgomery	163.0	147.0	90%
Lanyard Power Holdings, LLC	Dickerson Power	Montgomery	163.0	152.0	93%
Lanyard Power Holdings, LLC	Morgantown Generating Plant	Charles	65.0	54.0	83%
Lanyard Power Holdings, LLC	Morgantown Generating Plant	Charles	65.0	54.0	83%
Lanyard Power Holdings, LLC	Morgantown Generating Plant	Charles	65.0	54.0	83%
Lanyard Power Holdings, LLC	Morgantown Generating Plant	Charles	65.0	54.0	83%
Constellation Power, Inc	Conowingo	Harford	45.0	41.0	91%
Constellation Power, Inc	Conowingo	Harford	55.6	56.1	101%

Appendix 5: List of Maryland Generators, as of December 31, 2023

Constellation Power, Inc	Conowingo	Harford	55.6	52.0	94%
Constellation Power, Inc	Conowingo	Harford	36.0	32.7	91%
Constellation Power, Inc	Conowingo	Harford	48.0	41.9	87%
Constellation Power, Inc	Conowingo	Harford	47.7	41.9	88%
Constellation Power, Inc	Conowingo	Harford	36.0	32.7	91%
Constellation Power, Inc	Conowingo	Harford	47.7	42.3	89%
Constellation Power, Inc	Conowingo	Harford	48.0	42.3	88%
Constellation Power, Inc	Conowingo	Harford	55.6	56.7	102%
Constellation Power, Inc	Conowingo	Harford	55.6	57.3	103%
Easton Utilities Comm	Easton	Talbot	3.5	3.5	100%
Easton Utilities Comm	Easton	Talbot	1.5	1.5	100%
Easton Utilities Comm	Easton	Talbot	1.5	1.5	100%
Easton Utilities Comm	Easton	Talbot	3.8	3.6	95%
Easton Utilities Comm	Easton	Talbot	4.1	4.1	100%
Easton Utilities Comm	Easton	Talbot	5.6	5.6	100%
Easton Utilities Comm	Easton	Talbot	5.6	5.6	100%
Easton Utilities Comm	Easton	Talbot	2.5	2.0	80%
Easton Utilities Comm	Easton	Talbot	2.5	2.0	80%
Easton Utilities Comm	Easton	Talbot	3.0	2.5	83%
Easton Utilities Comm	Easton 2	Talbot	1.5	1.5	100%
Easton Utilities Comm	Easton 2	Talbot	1.5	1.5	100%
Easton Utilities Comm	Easton 2	Talbot	5.4	4.5	83%
Easton Utilities Comm	Easton 2	Talbot	5.4	4.5	83%
Easton Utilities Comm	Easton 2	Talbot	6.2	6.2	100%
Easton Utilities Comm	Easton 2	Talbot	6.2	6.2	100%
Easton Utilities Comm	Easton 2	Talbot	6.3	6.3	100%
Easton Utilities Comm	Easton 2	Talbot	6.3	6.3	100%
Constellation Nuclear	Calvert Cliffs Nuclear Power Plant	Calvert	918.0	884.2	96%
Constellation Nuclear	Calvert Cliffs Nuclear Power Plant	Calvert	932.4	861.0	92%
A & N Electric Coop	Smith Island	Somerset	0.5	0.4	80%
A & N Electric Coop	Smith Island	Somerset	1.0	1.0	100%
Town of Berlin - (MD)	Berlin	Worcester	1.1	1.1	100%
Town of Berlin - (MD)	Berlin	Worcester	2.5	2.5	100%
Town of Berlin - (MD)	Berlin	Worcester	2.0	2.0	100%
Essential Power Operating Services LLC	Essential Power Rock Springs LLC	Cecil	198.9	167.5	84%
Essential Power Operating Services LLC	Essential Power Rock Springs LLC	Cecil	175.9	164.1	93%
Essential Power Operating Services LLC	Essential Power Rock Springs LLC	Cecil	198.9	169.0	85%
Essential Power Operating Services LLC	Essential Power Rock Springs LLC	Cecil	198.9	166.3	84%
Wheelabrator Environmental Systems	Wheelabrator Baltimore Refuse	Baltimore City	60.2	57.0	95%
Wheelabrator Environmental Systems	Wheelabrator Baltimore Refuse	Baltimore City	4.3	4.3	100%
AES WR Ltd Partnership	AES Warrior Run Cogeneration Facility	Allegany	229.0	180.0	79%
Maryland Environmental Service	Eastern Correctional Institute	Somerset	1.9	1.3	68%
Maryland Environmental Service	Eastern Correctional Institute	Somerset	1.9	1.3	68%
Maryland Environmental Service	Eastern Correctional Institute	Somerset	1.0	1.0	100%

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Maryland Environmental Service	Eastern Correctional Institute	Somerset	1.0	1.0	100%
Prince George's County	Brown Station Road Plant I	Prince George's	0.9	0.8	89%
Prince George's County	Brown Station Road Plant I	Prince George's	0.9	0.8	89%
Prince George's County	Brown Station Road Plant I	Prince George's	0.9	0.8	89%
Covanta Montgomery, Inc.	Montgomery County Resource Recovery	Montgomery	67.8	54.0	80%
American Sugar Refining, Inc.	Domino Sugar Baltimore	Baltimore City	5.0	5.0	100%
American Sugar Refining, Inc.	Domino Sugar Baltimore	Baltimore City	2.5	2.5	100%
American Sugar Refining, Inc.	Domino Sugar Baltimore	Baltimore City	10.0	10.0	100%
KMC Thermo, LLC	Brandywine Power Facility	Prince George's	98.7		
KMC Thermo, LLC	Brandywine Power Facility	Prince George's	98.7		
KMC Thermo, LLC	Brandywine Power Facility	Prince George's	91.4	230.0	252%
Prince George's County	Brown Station Road Plant II	Prince George's	1.0	0.8	80%
Prince George's County	Brown Station Road Plant II	Prince George's	1.0	0.8	80%
Prince George's County	Brown Station Road Plant II	Prince George's	1.0	0.8	80%
Prince George's County	Brown Station Road Plant II	Prince George's	1.0	0.8	80%
Trigen-Cinergy Solutions College Park	UMCP CHP Plant	Prince George's	11.0	9.4	85%
Trigen-Cinergy Solutions College Park	UMCP CHP Plant	Prince George's	11.0	9.4	85%
Trigen-Cinergy Solutions College Park	UMCP CHP Plant	Prince George's	5.4	2.0	37%
Trigen Inner Harbor East, LLC	Inner Harbor East Heating	Baltimore City	2.1	2.1	100%
Energy Power Partners	Eastern Landfill Gas LLC	Baltimore	1.0	1.3	130%
Energy Power Partners	Eastern Landfill Gas LLC	Baltimore	1.0	1.3	130%
Energy Power Partners	Eastern Landfill Gas LLC	Baltimore	1.0	1.3	130%
Energy Power Partners	Eastern Landfill Gas LLC	Baltimore	1.0	1.3	130%
National Institutes of Health	NIH Cogeneration Facility	Montgomery	28.0	27.6	99%
Industrial Power Generating Company LLC	Wicomico	Wicomico	0.3	0.3	100%
Industrial Power Generating Company LLC	Wicomico	Wicomico	0.3	0.3	100%
Industrial Power Generating Company LLC	Wicomico	Wicomico	0.3	0.3	100%
Industrial Power Generating Company LLC	Wicomico	Wicomico	0.3	0.3	100%
Industrial Power Generating Company LLC	Wicomico	Wicomico	0.3	0.3	100%
Industrial Power Generating Company LLC	Wicomico	Wicomico	0.3	0.3	100%
Industrial Power Generating Company LLC	Wicomico	Wicomico	0.3	0.3	100%
Industrial Power Generating Company LLC	Wicomico	Wicomico	0.3	0.3	100%
Industrial Power Generating Company LLC	Wicomico	Wicomico	0.3	0.3	100%
Industrial Power Generating Company LLC	Wicomico	Wicomico	0.3	0.3	100%
Industrial Power Generating Company LLC	Wicomico	Wicomico	0.3	0.3	100%
Industrial Power Generating Company LLC	Wicomico	Wicomico	0.3	0.3	100%
Industrial Power Generating Company LLC	Wicomico	Wicomico	0.3	0.3	100%
Industrial Power Generating Company LLC	Wicomico	Wicomico	0.3	0.3	100%
Industrial Power Generating Company LLC	Wicomico	Wicomico	0.3	0.3	100%
Industrial Power Generating Company LLC	Wicomico	Wicomico	0.3	0.3	100%
Industrial Power Generating Company LLC	Wicomico	Wicomico	0.3	0.3	100%
Industrial Power Generating Company LLC	Wicomico	Wicomico	0.3	0.3	100%
CPV Maryland LLC	CPV St Charles Energy Center	Charles	223.6	216.3	97%
CPV Maryland LLC	CPV St Charles Energy Center	Charles	223.6	217.0	97%

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CPV Maryland LLC	CPV St Charles Energy Center	Charles	328.1	303.7	93%
Roth Rock Wind Farm LLC	Roth Rock Wind Farm LLC	Garrett	40.0	40.0	100%
Roth Rock Wind Farm LLC	Roth Rock North Wind Farm, LLC	Garrett	10.0	10.0	100%
Criterion Power Partners LLC	Criterion	Garrett	70.0	70.0	100%
Luminace Solar Maryland, LLC	McCormick & Co. Inc. at Belcamp	Harford	1.4	1.4	100%
NRG Solar Arrowhead LLC	FedEx Field Solar Facility	Prince George's	2.0	2.0	100%
Constellation Solar Horizons LLC	Mount Saint Mary's	Frederick	13.7	13.7	100%
Terraform Arcadia	Perdue Salisbury Photovoltaic	Wicomico	1.0	1.0	100%
IKEA Property Inc	IKEA Perryville 460	Cecil	2.1	2.0	95%
IKEA Property Inc	IKEA College Park 411	Prince George's	1.0	1.0	100%
IKEA Property Inc	IKEA College Park 411	Prince George's	1.0	1.0	100%
GSA Metropolitan Service Center	Central Utility Plant at White Oak	Montgomery	5.7	5.6	98%
GSA Metropolitan Service Center	Central Utility Plant at White Oak	Montgomery	2.3	2.3	100%
GSA Metropolitan Service Center	Central Utility Plant at White Oak	Montgomery	2.3	2.3	100%
GSA Metropolitan Service Center	Central Utility Plant at White Oak	Montgomery	5.0	5.0	100%
GSA Metropolitan Service Center	Central Utility Plant at White Oak	Montgomery	2.3	2.3	100%
GSA Metropolitan Service Center	Central Utility Plant at White Oak	Montgomery	4.3	4.3	100%
GSA Metropolitan Service Center	Central Utility Plant at White Oak	Montgomery	4.3	4.3	100%
GSA Metropolitan Service Center	Central Utility Plant at White Oak	Montgomery	4.3	4.3	100%
GSA Metropolitan Service Center	Central Utility Plant at White Oak	Montgomery	4.3	4.3	100%
GSA Metropolitan Service Center	Central Utility Plant at White Oak	Montgomery	7.5	7.5	100%
GSA Metropolitan Service Center	Central Utility Plant at White Oak	Montgomery	7.5	7.5	100%
GSA Metropolitan Service Center	Central Utility Plant at White Oak	Montgomery	4.5	4.5	100%
Terraform Arcadia	Kent County-Kennedyville	Kent	1.0	1.0	100%
Terraform Arcadia	Rock Hall	Kent	1.0	1.0	100%
Terraform Arcadia	Kent County - Worton Complex	Kent	1.0	1.0	100%
LES Operations Services LLC	Millersville LFG	Anne Arundel	1.6	1.5	94%
LES Operations Services LLC	Millersville LFG	Anne Arundel	1.6	1.5	94%
Howard County - Maryland	Alpha Ridge LFG	Howard	1.0	1.0	100%
Luminace Solar Maryland II, LLC	UMMS at Pocomoke	Somerset	2.8	2.8	100%
Arevon Energy, Inc.	Maryland Solar	Washington	27.0	20.9	77%
SMECO Solar LLC	Herbert Farm Solar	Charles	5.5	5.5	100%
Tesla Inc.	Queen Anne's County	Queen Anne's	2.0	2.0	100%
Fourmile Wind Energy, LLC	Fourmile Ridge	Garrett	40.0	40.0	100%
Mayor and City Council of Baltimore City	Back River Waste Water Treatment	Baltimore City	1.1	0.9	82%
Mayor and City Council of Baltimore City	Back River Waste Water Treatment	Baltimore City	1.1	0.9	82%
Mayor and City Council of Baltimore City	Back River Waste Water Treatment	Baltimore City	0.8	0.8	100%
Fair Wind Power Partners, LLC	Fair Wind	Garrett	30.0	30.0	100%
Old Dominion Electric Coop	Wildcat Point Generation Facility	Cecil	310.3	252.3	81%
Old Dominion Electric Coop	Wildcat Point Generation Facility	Cecil	310.3	241.1	78%
Old Dominion Electric Coop	Wildcat Point Generation Facility	Cecil	493.0	497.9	101%
SunE SEM 1, LLC	Chimes West Friendship (Nixon Farms)	Howard	1.2	1.2	100%
NVT LICENSES, LLC	UMES (MD) - Princess Anne	Somerset	2.0	2.1	105%
Rockfish Solar LLC	Rockfish Solar LLC	Charles	10.3	10.3	100%

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Luminace Solar Maryland, LLC	General Motors Corp at White Marsh MD	Baltimore	1.0	1.0	100%
Luminace Solar Maryland II, LLC	CNE at Cambridge MD	Dorchester	3.2	3.2	100%
Great Bay Solar I LLC	Great Bay Solar 1	Somerset	75.0	75.0	100%
AES Tait LLC	AES Warrior Run Energy Storage Project	Allegany	11.0	5.0	45%
Consolidated Edison Solutions Inc.	CES VMT Solar	Washington	1.1	1.1	100%
Luminace Solar Holding, LLC	CCBC-Catonsville	Howard	1.6	1.6	100%
SunE DB27, LLC	Elkton Solar	Cecil	1.6	1.6	100%
Tesla Inc.	Town of Chestertown- Chestertown WWTP	Kent	1.0	1.0	100%
PSEG Keys Energy Center, LLC	Keys Energy Center	Prince George's	359.6	763.0	212%
PSEG Keys Energy Center, LLC	Keys Energy Center	Prince George's	235.5		
PSEG Keys Energy Center, LLC	Keys Energy Center	Prince George's	235.5		
SunE DB42, LLC	Cecil County CCVT HS	Cecil	2.0	2.0	100%
Terraform Arcadia	Presbyterian Senior Living Service	Baltimore	1.0	1.2	120%
Tesla Inc.	The Clorox Company	Harford	1.6	1.6	100%
Tesla Inc.	Chesapeake College	Queen Anne's	1.5	1.5	100%
Altus Power America Management, LLC	MEBA	Talbot	1.5	1.5	100%
Tesla Inc.	Wye Mills VNEM CSG	Queen Anne's	10.0	10.0	100%
Luminace Solar MC, LLC	Archdiocese of Baltimore J	Harford	2.0	2.0	100%
Luminace Solar MC, LLC	Archdiocese of Baltimore L	Harford	2.0	2.0	100%
Luminace Solar MC, LLC	Baltimore City B	Harford	2.0	2.0	100%
Luminace Solar MC, LLC	Baltimore City D	Harford	2.0	2.0	100%
Luminace Solar MC, LLC	Baltimore City F	Harford	2.0	2.0	100%
Luminace Solar MC, LLC	Baltimore City G	Harford	2.0	2.0	100%
Luminace Solar MC, LLC	City of Havre De Grace C	Harford	2.0	2.0	100%
Luminace Solar MC, LLC	Sod Run WTP A	Harford	2.0	2.0	100%
Annapolis Solar Park, LLC	Annapolis Solar Park, LLC	Anne Arundel	12.0	12.0	100%
Luminace Solar MC, LLC	Havre de Grace II - E at Perryman	Harford	1.4	1.4	100%
MN8 Energy LLC	Longview Solar	Wicomico	13.6	13.6	100%
MN8 Energy LLC	Church Hill	Queen Anne's	6.0	6.0	100%
Tesla Inc.	Montgomery County Correctional Facility	Montgomery	1.4	1.4	100%
Tesla Inc.	Garrett County - DPU Treatment Plant	Garrett	1.2	1.2	100%
UGI Energy Services, LLC	Emmitsburg Solar Arrays	Frederick	1.7	1.7	100%
Terraform Arcadia	Pfeffers	Baltimore	1.0	1.0	100%
US Dept of Army, Garrison, APG	APG Combined Heat and Power Plant	Harford	7.9	6.2	78%
CleanCapital Holdings	IGS Solar I - BWI5	Baltimore	1.1	1.1	100%
IGS ORIX Solar I, LLC	IGS Solar I - BWI2	Baltimore	1.4	1.4	100%
Cypress Creek Renewables	Baker Point	Frederick	9.0	9.0	100%
Montevue Lane Solar, LLC	Fort Detrick Solar PV	Frederick	15.7	15.7	100%
Montgomery County Solar	Montgomery County Solar	Montgomery	1.9	1.9	100%
GWCC PV Solar Farm	GWCC PV Solar Farm	Prince George's	1.6	1.6	100%
Luminace Solar MC, LLC	Gateway Solar	Worcester	5.0	5.0	100%
Luminace Solar MC, LLC	Gateway Solar	Worcester	2.6	2.6	100%
NRG Chalk Point CT	NRG Chalk Point CT	Prince George's	94.0	80.2	85%
Terraform Arcadia	Bowie State Solar	Prince George's	1.3	1.3	100%

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IOS II LLC	First Baptist Church of Glenarden	Prince George's	1.5	1.6	107%
Tesla Inc.	Bd of Educ of Queen Anne's Cnty, Cnty HS	Queen Annes'	1.7	1.7	100%
Constellation New Energy Inc.	NIST Solar	Montgomery	4.0	4.0	100%
Northstar Macy's Maryland 2015, LLC	Macy's MD Joppa Solar Project	Harford	1.8	1.8	100%
Altus Power America Management, LLC	Synergen Panorama, LLC CSG	Prince George's	5.0	5.0	100%
Greenbacker Renewable Energy Corporation	Sol Phoenix	Prince George's	2.5	2.5	100%
Greenbacker Renewable Energy Corporation	Blue Star	Kent	7.5	7.5	100%
Standard Solar	UMCES Ground Mount	Dorchester	2.0	2.0	100%
Standard Solar	Anne Arundel County Public Schools	Anne Arundel	1.0	1.0	100%
Onyx Asset Services Group	APG Old Bayside	Harford	1.7	1.7	100%
Onyx Asset Services Group	APG New Chesapeake	Harford	2.3	2.3	100%
Chester Woods Point Solar, LLC	Chester Woods Point Solar, LLC CSG	Queen Anne's	2.0	2.0	100%
Westbound Solar LLC	Amazon Maryland DCA1	Baltimore	1.3	1.3	100%
Standard Solar	MNCPPC Germantown Solar	Montgomery	1.0	1.0	100%
Greenbacker Renewable Energy Corporation	Solar Hagerstown	Washington	10.0	7.5	75%
Nautilus Solar Solutions	BTC2 Solar (CSG)	Baltimore	2.0	2.0	100%
Nautilus Solar Solutions	Upper Marlboro 1 CSG	Prince George's	2.0	2.0	100%
Nautilus Solar Solutions	White CSG	Baltimore	2.0	2.0	100%
Nautilus Solar Solutions	Gibbons CSG	Worcester	2.0	2.0	100%
Old Court Rd Solar, LLC	Old Court Rd Solar	Howard	2.0	2.0	100%
Francis Scott Key Mall	Francis Scott Key Mall	Frederick	1.6	1.6	100%
White Marsh Mall	White Marsh Mall	Baltimore	1.1	1.1	100%
Bluefin Origination 1, LLC	Bluefin Origination 1	Prince George's	2.0	2.0	100%
Tesla Inc.	Frederick County - Landfill	Frederick	2.0	2.0	100%
Tesla Inc.	Wor-Wic Community College - Offsite	Wicomico	2.0	2.0	100%
MN8 Energy LLC	Spruce - WCMD - Rubble II	Washington	2.0	2.0	100%
MN8 Energy LLC	Spruce - WCMD - Rubble I	Washington	2.0	2.0	100%
MN8 Energy LLC	Spruce - WCMD - Creek	Washington	2.0	2.0	100%
MN8 Energy LLC	Spruce - WCMD - Resh I	Washington	2.0	2.0	100%
Sheriff Rd Solar LLC	Sheriff Road	Prince George's	1.1	1.1	100%
Madison Energy Holdings LLC	Pinesburg Solar LLC	Washington	4.3	4.3	100%
Madison Energy Holdings LLC	Timonium Fairgrounds	Baltimore	1.9	1.9	100%
Bluegrass Solar, LLC	Bluegrass Solar	Queen Anne's	79.6	79.6	100%
Forefront Power, LLC	MD - CS - Potomac Edison Co - GA29 TPE	Garrett	2.0	2.0	100%
Bioenergy DevCo	Maryland Bioenergy Center (Jessup)	Howard	1.1	1.1	100%
6685 Santa Barbara Ct	6685 Santa Barbara Ct	Howard	1.0	1.0	100%
Hartz Solar, LLC	7448 Candlewood Road	Anne Arundel	1.5	1.5	100%
Nautilus Solar Solutions	Kirby Road Solar, LLC	Prince George's	1.3	1.3	100%
Standard Solar	MNCPPC Randall Farm	Prince George's	1.4	1.4	100%
Nautilus Solar Solutions	Burns Solar One LLC	Baltimore	2.0	2.0	100%
Nautilus Solar Solutions	Hostetter Solar One, LLC	Washington	2.0	2.0	100%
Nautilus Solar Solutions	P52ES 1755 Henryton Rd Phase 1 LLC CSG	Howard	1.9	1.9	100%
Nautilus Solar Solutions	P52ES 1755 Henryton Rd Phase 2 LLC	Howard	1.9	1.9	100%
Nautilus Solar Solutions	White Marsh Solar	Baltimore	1.5	1.5	100%

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Nautilus Solar Solutions	Mason Solar One LLC	Cecil	1.0	1.0	100%
Nautilus Solar Solutions	Pittman Solar One LLC	Washington	2.0	2.0	100%
Nautilus Solar Solutions	Bulldog Solar One, LLC	Prince George's	2.0	2.0	100%
Distributed Solar Development, LLC	MD - PR97 (CSG)	Prince George's	2.0	2.0	100%
Invenergy Services LLC	Todd Solar	Dorchester	20.0	20.0	100%
Standard Solar	OER Checkerspot	Anne Arundel	1.5	1.5	100%
Tesla Inc.	City of Bowie	Prince George's	2.0	2.0	100%
Hampstead Solar, LLC	Bomber CSG	Carroll	6.0	6.0	100%
ICFTS MD Solar, LLC	Hollins Ferry CSG	Baltimore City	1.5	1.5	100%
Distributed Solar Development, LLC	MD - CS - Potomac Edison Co - GA25 TPE (Community Solar)	Garrett	2.0	2.0	100%
Distributed Solar Development, LLC	MD - CS - BGE - PR24 TPE	Prince George's	2.0	2.0	100%
Standard Solar	OER Monarch CSG	Prince George's	2.0	2.0	100%
Standard Solar	OER Patuxent CSG	Anne Arundel	2.0	2.0	100%
Standard Solar	Shepherds Mill CSG	Carroll	2.0	2.0	100%
TPE MD MO32 LLC	MO32 (CSG)	Montgomery	2.0	2.0	100%
TPE MD MO33 LLC	MO33 CSG	Montgomery	2.0	2.0	100%
Snowden River Parkway, LLC	Snowden River CSG	Howard	1.9	1.9	100%
Conductive Power	Rockdale	Washington	2.0	2.0	100%
AlphaStruxure Service Co LP	Brookville Smart Bus Depot Microgrid	Montgomery	1.5	1.5	100%
AlphaStruxure Service Co LP	Brookville Smart Bus Depot Microgrid	Montgomery	0.6	0.6	100%
AlphaStruxure Service Co LP	Brookville Smart Bus Depot Microgrid	Montgomery	0.6	0.6	100%
AlphaStruxure Service Co LP	Brookville Smart Bus Depot Microgrid	Montgomery	0.6	0.6	100%
AlphaStruxure Service Co LP	Brookville Smart Bus Depot Microgrid	Montgomery	1.7	1.7	100%
MN8 Energy LLC	WMATA - Naylor Rd. Metro	Prince George's	1.7	1.7	100%
MN8 Energy LLC	WMATA - S. Ave. Carport (East) (CSG)	Prince George's	1.7	1.7	100%
CleanCapital Holdings	KDC Solar TC Little Patuxent WWTP LLC	Howard	2.0	2.0	100%
CleanCapital Holdings	KDC Solar TC George Howard LLC	Howard	2.0	2.0	100%
CleanCapital Holdings	KDC Solar TC Blandair Park LLC	Howard	2.0	2.0	100%
Greenbacker Renewable Energy Corporation	Friendship I	Howard	2.0	2.0	100%
Greenbacker Renewable Energy Corporation	Friendship II	Howard	2.0	2.0	100%
Conductive Power	Ripley	Charles	27.5	27.5	100%
Convergent Energy and Power LP	Federalsburg Energy Storage 1 LLC	Caroline	1.2	1.2	100%
Convergent Energy and Power LP	Federalsburg Energy Storage 1 LLC	Caroline	0.8	0.8	100%
Solar DG MD Holabird Broening ACC, LLC	CPG - Duke 5300A Holabird	Baltimore City	1.5	1.5	100%
Solar DG MD Holabird Broening ACC, LLC	CPG - Duke 5300B Holabird	Baltimore City	1.5	1.5	100%
Solar DG MD Holabird AJCFB, LLC	CPG - Duke 5900 Holabird	Baltimore City	1.5	1.5	100%
Solar DG MD Holabird AJCFB, LLC	CPG - Duke 6000 Holabird	Baltimore City	1.5	1.5	100%
KDC Solar CV Ascend One LLC	KDC Solar CV Ascend One LLC	Howard	2	2	100%
KDC Solar CV Cedar Lane Park LLC	KDC Solar CV Cedar Lane Park LLC	Howard	2	2	100%
KDC Solar CV Central MD Regional Transit LLC	KDC Solar CV Central MD Regional Transit	Howard	2	2	100%
KDC Solar CV Animal Control LLC	KDC Solar CV Animal Control LLC	Howard	2	2	100%
KDC Solar CV O'Donnell Property LLC	KDC Solar CV O'Donnell Property LLC	Howard	2	2	100%
Distributed Solar Development, LLC	THD Baltimore DC - 5830 Project Tiger	Baltimore	1.6	1.6	100%

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Standard Solar	Holly Spring Meadows	Prince George's	1.2	1.2	100%
Citizens Enterprises Corporation	Union Bridge Solar	Carroll	8.2	8.2	100%
Distributed Solar Development, LLC	THD Baltimore DCs - 5829 Project Lion	Baltimore	3.8	3.8	100%
FFP MD Freeland Project1, LLC	FFP - MD Foxhall	Baltimore	2	2	100%
Nautilus Solar Solutions	Meeting House	Cecil	2	2	100%
Nautilus Solar Solutions	Bear One	Washington	2	2	100%
Madison Energy Investments LLC	Boyd Soccerplex	Montgomery	1	1	100%
Spectrum Solar LLC	Spectrum Solar Hybrid	Prince George's	3	3	100%
Spectrum Solar LLC	Spectrum Solar Hybrid	Prince George's	2.6	2.6	100%
			13,150.9	**11,922.3**	**91%**

Appendix 6: Proposed New Renewable Generation in Maryland PJM Queue

Appendix Table 6: Proposed New Renewable Generation in Maryland PJM Queue
Effective Date: June 2024

Transmission Owner	Project Name	County Location	PJM Queue Status	PJM Queue #	Fuel Type	Project Capacity (MW)	Projected In-Service Date
APS	Frostburg 138 kV	Allegany	Active	AE2-289	Wind	11.76	12/31/2021
APS	Black Oak-Hatfield 500 kV	Garrett	Active	AG1-363	Solar; Storage	220	12/31/2024
APS	Lappans 34.5 kV	Washington	Active	AG2-078	Solar	13.2	5/23/2022
APS	Hagerstown-Conservit 34.5 kV	Washington	Active	AG2-279	Solar	13.6	9/30/2024
APS	Westvaco - Mt Zion 138 kV	Garrett	Active	AG2-505	Hydro	15	12/31/2023
APS	Carlos Junction 138 kV	Allegany	Active	AG2-615	Solar	62.6	12/31/2023
APS	Mount Storm-Pruntytown 500kV	Garrett	Active	AH1-283	Solar	120	10/31/2024
APS	Catoctin-Carroll 138 kV	Frederick	Active	AH2-262	Solar; Storage	10.2	3/1/2026
APS	Carlos Jct. – Ridgeley 138 kV	Allegany	Active	AI2-353	Wind	16	4/1/2024
APS	Frostburg 138 kV	Allegany	Active	AI2-490	Wind	31.9	12/15/2023
BGE	Graceton 230 kV	Harford	Active	AG2-587	Solar	36	6/1/2024
BGE	Waugh Chapel 115 kV	Anne Arundel	Active	AG2-617	Solar	33	12/31/2023
BGE	Fitzell 33 kV	Baltimore County	Active	AG2-673	Solar	3.7	12/30/2022
DPL	Airey-Vienna 69 kV	Dorchester	Active	AF2-358 - moved to TC1	Solar	60	12/15/2023
DPL	Todd 69 kV II	Dorchester	Active	AG2-092	Solar	11	12/31/2021
DPL	Princess Anne–Loretto 69 kV	Somerset	Active	AG2-101	Solar	35.16	6/1/2024
DPL	Mt. Hermon 25 kV	Wicomico	Active	AG2-115	Solar	3.5557	8/29/2022
DPL	Airey - Golden Hill 69 kV	Dorchester	Active	AG2-181	Solar	16.8	6/1/2024
DPL	Hebron 69 kV II	Wicomico	Active	AG2-274	Solar	0	12/31/2022
DPL	3 Bridges Rd 34.5 kV	Caroline	Active	AG2-419	Solar; Storage	20	5/31/2023
DPL	West Cambridge - Vienna 69 kV	Dorchester	Active	AG2-592	Solar	16.8	6/1/2024
DPL	Edgewood 12.47 kV	Wicomico	Active	AH1-057	Solar	3.4	1/31/2023
DPL	Price 69kV	Queen Anne's	Active	AH1-253	Solar	9.3	10/1/2024
DPL	Todd 25kV	Dorchester	Active	AH1-316	Solar	4.4	12/31/2025
DPL	Hillsboro-Wye Mills 138kV	Queen Anne's	Active	AH1-351	Solar	30	5/1/2025
DPL	Mt Olive - Kenny 69kV	Worcester	Active	AH1-380	Solar	12	12/20/2024
DPL	Church-Oil City 138kV	Queen Anne's	Active	AH1-536	Solar	25.6	3/1/2025
DPL	Carville 138kV	Queen Anne's	Active	AH1-620	Solar	45.6	12/1/2025
DPL	Steele-Milford 230kV	Allegany	Active	AH1-621	Solar	72	12/1/2025
DPL	New Hope 12.47 kV	Allegany	Active	AH2-052	Solar	0	12/2/2022
DPL	Mardela Springs 12.47 kV	Wicomico	Active	AH2-053	Solar	0	12/2/2022
DPL	Edgewood 12.47 kV I	Wicomico	Active	AH2-054	Solar	0	12/2/2022
DPL	TBD 69kV	Unknown	Active	AH2-055	Solar	0	2/15/2022

DPL	TBD 69kV	Prince George's	Active	AH2-065	Solar	0	12/1/2022
DPL	Edgewood 12.47 kV II	Wicomico	Active	AH2-070	Solar	0	1/27/2023
DPL	Edgewood 12.47 kV III	Wicomico	Active	AH2-071	Solar	0	1/27/2023
DPL	West Cambridge - Airey 69 kV	Dorchester	Active	AH2-096	Solar	8.19	5/1/2023
DPL	Mt. Hermon 69 kV	Wicomico	Active	AH2-198	Solar	53.8	6/30/2026
DPL	Talbot 69 kV	Worcester	Active	AH2-337	Solar; Storage	80	2/27/2026
DPL	Easton - Steele 138 kV IV	Talbot	Active	AH2-365	Solar	10.787	6/1/2024
DPL	Church - Oil City 138 kV III	Caroline	Active	AH2-370	Solar	17.816	11/15/2023
DPL	Sign Post - Stockton 69 kV	Worcester	Active	AH2-379	Solar	16.98	3/1/2026
DPL	Todd 69 kV	Dorchester	Active	AI2-176	Solar	14.5	12/31/2021
DPL	Todd 25 kV	Dorchester	Active	AI2-177	Solar	5.8	7/31/2021
DPL	Rockawalkin 69 kV	Wicomico	Active	AI2-207	Solar	5.35	3/30/2023
DPL	Price 25 kV	Queen Anne's	Active	AI2-211	Solar	2.6	3/3/2023
DPL	King's Creek 138 kV	Somerset	Active	AI2-235	Solar	62.652	3/2/2023
DPL	Keeney - Steele 230 kV	Caroline	Active	AI2-260	Solar	82.1	12/30/2025
DPL	Hillsboro - Wye Mills 138 kV	Queen Anne's	Active	AI2-350	Solar	11.9	5/1/2025
DPL	Easton - Steele 138 kV	Talbot	Active	AI2-373	Solar	23.6	3/31/2026
DPL	Bishopville – Worcester 138 kV	Worcester	Active	AJ1-018	Solar; Storage	39	12/29/2028
PEPCO	Dickerson 230 kV	Montgomery	Active	AG1-483 - moved to TC1	Solar; Storage	542.5	6/1/2024
PEPCO	Ritchie 69 kV	Prince George's	Active	AG2-520	Solar	10.2	3/1/2024
PEPCO	Morgantown 230 kV	Charles	Active	AG2-618	Solar	69.1	12/31/2023
PEPCO	Chalk Point 230kV	Prince George's	Active	AH1-552	Solar; Storage	670.2	6/1/2025
PPL	Columbia-Geisinger Tap #1 69 kV	Anne Arundel	Active	AF2-434	Solar	12	6/1/2022
SMECO	Bolton - Bennsville 69 kV	Charles	Active	AG2-647	Solar	4.6	3/31/2023
SMECO	Hughesville-Cedarville 69kV	Charles	Active	AH2-266	Solar	15	3/1/2026
APS	Frostburg 138 kV	Allegany	Active	AE2-289	Wind	11.76	12/31/2021
APS	Black Oak-Hatfield 500 kV	Garrett	Active	AG1-363	Solar; Storage	220	12/31/2024
APS	Lappans 34.5 kV	Washington	Active	AG2-078	Solar	13.2	5/23/2022
APS	Hagerstown-Conservit 34.5 kV	Washington	Active	AG2-279	Solar	13.6	9/30/2024
					Total	**2711.2**	