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*Commonwealth of Virginia, ex rel. State Corporation Commission,
In re: Virginia Electric and Power Company's 2024 Integrated Resource Plan
filing pursuant to Va. Code § 56-597 et seq.*
Case No. PUR-2024-00184

Dear Mr. Logan:

In accordance with the Virginia State Corporation Commission's ("SCC") October 11, 2024 Order, please find enclosed for electronic filing in the above-captioned proceeding Virginia Electric and Power Company's SCC Directed 2024 IRP Supplement.

Please do not hesitate to contact me if you have any questions regarding this filing.

Very truly yours,

/s/ Vishwa B. Link

Vishwa B. Link

Enclosure

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SCC Directed 2024 IRP Supplement

1.0 Introduction

On October 11, 2024, the Virginia State Corporation Commission (“SCC”) issued an Order (“October 11 Order”) directing Virginia Electric and Power Company (“Dominion Energy” or the “Company”) to submit a supplement to its 2024 Integrated Resource Plan (“SCC Directed 2024 IRP Supplement”). More specifically, the SCC directed the Company to (1) conduct additional sensitivity modeling (as summarized in SCC Directed 2024 IRP Supplement Figure 1.1 below), including a description of assumptions made in conducting the modeling; and (2) identify whether known transmission projects are primarily being driven by data center load growth.

**SCC Directed 2024 IRP Supplement Figure 1.1:
Sensitivity Modeling Summary**

Sensitivity Modeling Summary				
	Name	Plan	Data Center Load Growth	Capacity Forecast
1	No Data Center Load Growth – REC RPS Only with EPA	Least Cost Plan	Without	2024 IRP
2	No Data Center Load Growth – VCEA with EPA	VCEA-compliant Plan	Without	2024 IRP
3	Updated Capacity Pricing – REC RPS Only with EPA, with Data Center Load Growth	Least Cost Plan	With	Updated Capacity Price Forecast*
4	Updated Capacity Pricing – REC RPS Only with EPA, without Data Center Load Growth	Least Cost Plan	Without	Updated Capacity Price Forecast*
5	Updated Capacity Pricing – VCEA with EPA, with Data Center Load Growth	VCEA-compliant Plan	With	Updated Capacity Price Forecast*
6	Updated Capacity Pricing – VCEA with EPA, without Data Center Load Growth	VCEA-compliant Plan	Without	Updated Capacity Price Forecast*

*Note: The updated capacity price forecast incorporates the impacts of the PJM base residual capacity auction held in July 2024 for the entire 15-year planning period, as directed in the October 11 Order.

As a regulated public utility, Dominion Energy has an obligation to reliably serve all customers who request service within its service territory. As a vertically integrated utility, the Company operates all three aspects of electric utility service: generation, transmission, and distribution systems to serve customers. The Company’s service territory is served by the Dominion Energy Load Serving Entity (“DOM LSE”).

Resource planning is designed around serving the load obligation for the entire system. In other words, Dominion Energy does not have dedicated generation or transmission system resources to serve any class of customers and does not plan to serve customers by class. Therefore, ignoring forecasted growth of one type of end-use customer (*i.e.*, data centers) is not a realistic assumption

for resource planning purposes. In addition, data center growth within the DOM LSE is validated by existing contracts with customers with binding financial commitments. The contracts that Dominion Energy currently has in hand supports the load forecast through 2032, if not beyond. As such, these customers are not just a number in a projection but rather are counting on us to provide them with reliable service.

Notwithstanding, and with respect to the Commission’s desire for an expansive record, the Company has diligently undertaken the directed analysis as described in the October 11 Order and hereby presents the results as this SCC Directed 2024 IRP Supplement.

2.0 Sensitivity Modeling Input Assumptions

2.1 Load Forecast Assumptions

In order to model sensitivities to show projected data center load growth removed, as directed by the October 11 Order, new assumptions for the load forecast were created.

To show no data center load growth for the sensitivity analysis for energy, the Company used the DOM LSE load forecast and (1) froze the volume of energy attributable to data centers at the forecasted 2024 levels and (2) froze the proportion of Customer Choice data center customers at the forecasted 2024 levels and applied that to each forecast year.¹ SCC Directed 2024 IRP Supplement Figure 2.1.1 below shows the differences between the 2024 IRP energy forecast versus the directed “No Data Center Growth” energy forecast.

**SCC Directed 2024 IRP Supplement Figure 2.1.1:
Comparison of Energy Forecast – DOM LSE**

	Energy (GWh)	
	2024 IRP	No Data Center Growth
2024	98,296	98,296
2025	99,307	97,761
2026	104,713	97,898
2027	107,693	98,127
2028	111,596	98,803
2029	115,058	98,955
2030	118,979	99,424
2031	122,949	100,011
2032	128,182	101,115
2033	132,684	101,515
2034	138,317	102,423
2035	144,476	103,484
2036	151,526	105,070
2037	158,049	105,844
2038	165,427	107,016
2039	172,999	108,329

¹ The Company also applied a factor to account for the impact of leap years.

In addition, for peak demand, a DOM LSE peak demand forecast was created that had data center demand frozen at 2024 levels. This was achieved by creating a Dominion Zone (DOM Zone) peak forecast net of data center demand to which the Company converted to a DOM LSE peak forecast net of data centers and then added back only the forecasted 2024 value. SCC Directed 2024 IRP Supplement Figure 2.1.2 provides a comparison of the coincident peak demand forecast as used in the 2024 IRP and the directed “No Data Center Growth” forecast.

**SCC Directed 2024 IRP Supplement Figure 2.1.2:
Comparison of Coincident Peak Demand Forecast**

	CP (MW)	
	2024 IRP	No Data Center Growth
2024	17,353	17,353
2025	17,497	17,309
2026	18,147	17,300
2027	18,465	17,280
2028	18,870	17,290
2029	19,318	17,326
2030	19,787	17,376
2031	20,280	17,453
2032	20,875	17,548
2033	21,504	17,660
2034	22,245	17,818
2035	23,074	18,016
2036	23,985	18,269
2037	24,849	18,402
2038	25,708	18,480
2039	26,623	18,608

2.2 Updated Capacity Price Forecast Assumptions

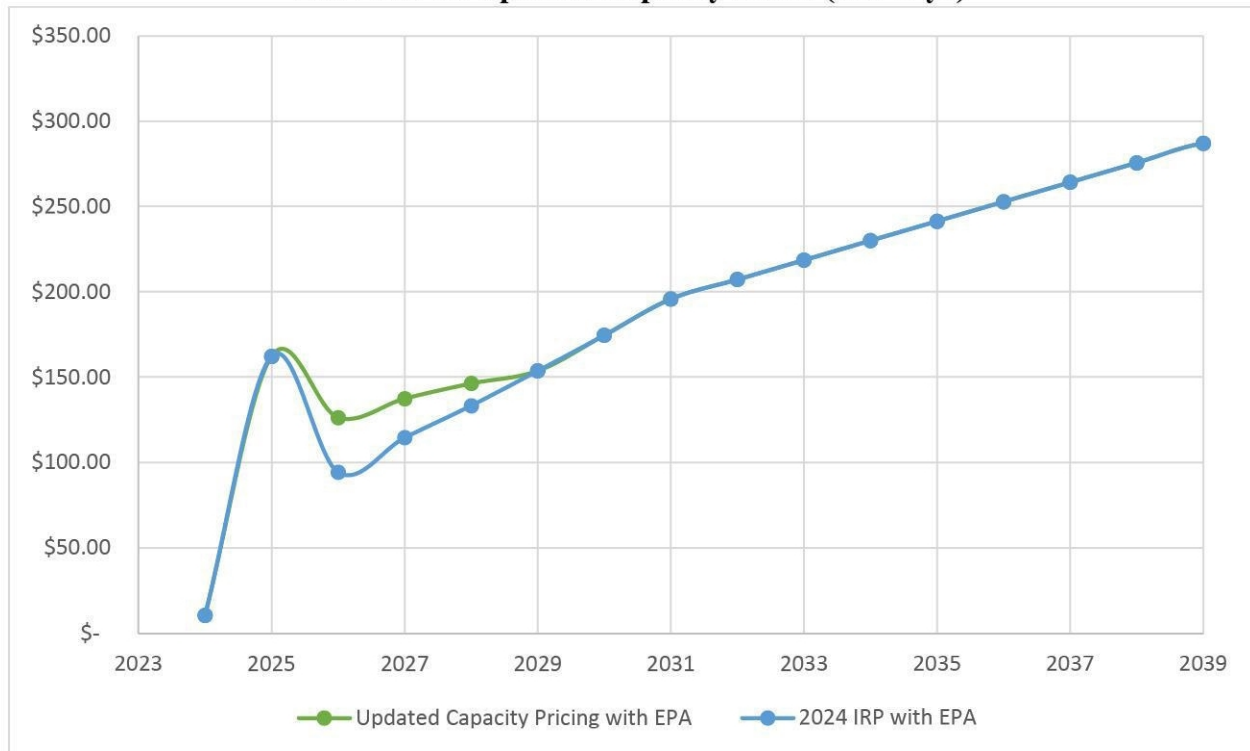
Dominion Energy obtained an updated capacity price forecast from ICF Resources, LLC (“ICF”) to account for the PJM base residual capacity auction held in July 2024 for the entire 15-year planning period. ICF’s forecast reflects elevated capacity prices in the near-term in consideration of:

1. Supply demand balance: recent market trends indicate a tightening supply and demand balance.
2. Retirement risks for existing generators: existing generation faces both economic and policy risks that could result in significant retirements by the early 2030s.
3. Risks of delays in new capacity additions: additions of new bulk system generation have experienced delays related to permitting, contracting, supply chain, and interconnection queue. These delays are expected to continue to some degree over the next several years.
4. Market structure: the forecast assumes no significant changes to market structure or rules.
5. Demand response: the forecast assumes no significant change in demand response participation in the markets in the near-term.

In response to high prices, ICF expects market adjustments that would result in a reversion to equilibrium prices beyond 2030.

The near-term elevated capacity prices and the market adjustment in a reversion to equilibrium prices beyond 2030 can be seen in SCC Directed 2024 IRP Supplement Figure 2.2.1 which compares the updated capacity pricing forecast for the DOM Zone with EPA with the 2024 IRP capacity pricing forecast.

**SCC Directed 2024 IRP Supplement Figure 2.2.1:
Comparison of Capacity Pricing Forecast with EPA for the DOM Zone
2024 IRP vs. Updated Capacity Prices (\$/KW-yr)**



3.0 Sensitivity Modeling Results

Consistent with the directive to model sensitivities, the Company utilized the forecasts for energy, renewable energy certificates, and other commodities that served as inputs to the 2024 IRP. Similarly, the Company also held constant the available resource selection, build limits, REC purchase limits, capacity and energy import limits, energy efficiency savings reductions, and transmission build assumptions and costs. The capacity pricing forecast was updated for the designated sensitivities.

The sensitivity modeling results as compared to the REC RPS Only with EPA and VCEA with EPA Portfolios from the 2024 IRP are as shown in SCC Directed 2024 IRP Supplement Figure 3.1 below. In addition, SCC Directed 2024 IRP Supplement Appendix 1 contains build plan summaries for the sensitivities.

**SCC Directed 2024 IRP Supplement Figure 3.1:
Sensitivity Modeling Results**

Portfolio	2024 IRP		No Data Center Load Growth		Updated Capacity Pricing			
	REC RPS Only with EPA	VCEA with EPA	REC RPS Only with EPA	VCEA with EPA	REC RPS Only with EPA	REC RPS Only with EPA	VCEA with EPA	VCEA with EPA
Data Center Growth	With	With	Without	Without	With	Without	With	Without
Net Present Value (NPV) Total (\$B)	\$100.2	\$102.9	\$77.2	\$80.8	\$100.3	\$77.3	\$103.3	\$80.9
Solar (MW)	11,932	12,210	11,560	12,210	11,932	11,560	12,210	12,210
Wind (MW)	3,460	3,460	60	60	3,460	60	3,460	60
Storage (MW)	4,577	4,100	-	2,250	4,577	-	4,100	2,250
Nuclear (MW)	1,340	1,340	-	-	1,340	-	1,340	-
Natural Gas Fired (MW)	5,934	5,934	3,398	2,580	5,934	3,398	5,934	2,580
Retirements (MW)	-	-	-	-	-	-	-	-

Overview of Results of the Modeling Sensitivity Analysis

The results of the modeling sensitivity analysis show that even with updated capacity pricing and removing the data center load growth:

- There is still an incremental capacity need.
- The model does not choose to retire any existing generation.
- Renewable and dispatchable generation is needed to meet demand in all sensitivities.

2024 IRP Portfolios Compared to No Data Center Growth

When compared with the 2024 IRP REC RPS Only with EPA Portfolio, the REC RPS Only with EPA sensitivity with no data center load growth resulted in significantly less storage, nuclear and

wind resources being built. Approximately 400 MW, or 3%, less solar resources are built in the sensitivity. The model still chose to build approximately 3,400 MW of natural gas fired generation starting in 2030.

When compared with the 2024 IRP VCEA with EPA Portfolio, the VCEA with EPA sensitivity with no data center load growth resulted in significantly less nuclear and wind resources being built. The same amount of solar was chosen by the model in the 2024 IRP portfolio and the sensitivity and approximately 1,800 MW, or 44%, less storage resources were built. The model still chose to build approximately 2,600 MW of gas fired generation starting in 2030.

2024 IRP Portfolios Compared to Updated Capacity Pricing

Updating the capacity pricing has almost no impact on the plan NPV in both the 2024 IRP REC RPS Only with EPA and VCEA with EPA Portfolios compared to the sensitivities. The total MWs built are identical to the 2024 IRP Portfolios when only updating the capacity pricing. The timing of when resources are built is also identical for all resources except natural gas fired generation. The first gas unit is still built in 2030 with the second, third and fourth units still being built in 2032, 2033, and 2034. There are minor timing differences of when the fifth and sixth gas units are built between 2035 through 2039.

Updating the capacity pricing *and* removing data center growth results in nearly identical build totals by resource type as the sensitivities that only removed data center growth. The NPVs for the sensitivities with updated capacity pricing and removing data center growth are also nearly identical to the NPVs with removing the data center growth. In summary, the updated capacity pricing forecast alone has an immaterial impact on the overall build plans and NPVs over the 15-year planning horizon.

4.0 Transmission Project Primary Drivers

Finally, regarding transmission interconnection and enhancement costs, the SCC directed that for all planned transmission projects identified in the 2024 IRP, the Company shall “identify whether the need for the transmission project is primarily being driven by data center load growth.”

Appendix 2C-2 (formerly Appendix 3C in the 2023 IRP) of the Company’s 2024 IRP identifies planned transmission projects, the projected cost, and whether the project was subject to PJM’s Transmission Expansion Planning process. As directed by the Commission, the Company has updated this Appendix (“Supplemental Appendix 2C-2”) by adding a Data Center column to identify the primary driver for each project. Supplemental Appendix 2C-2 can be found in SCC Directed 2024 IRP Supplement Appendix 2.

Data center driven projects are identified by a “Y” in the Data Center column and include projects that (1) were initiated by a Delivery Point (“DP”) request specifically indicating that the interconnection was for a new data center load or, (2) resolve “harm” associated with the interconnection of new data center DPs, as identified through PJM and Transmission Owners’ “Do No Harm” (“DNH”) analysis.

Projects not considered “data center driven” have an “N” in the Data Center column and include electric transmission infrastructure replacements (*e.g.*, lines, transmission transformers, etc.) that satisfy the metrics in the Company’s End-of-Life (“EOL”) criteria or other supplemental drivers, such as operational flexibility and efficiency, infrastructure resilience, etc.

Projects identified by an “M” in the Data Center column are multi-driver regional reliability, mixed load (*e.g.*, commercial, residential, and data center), and/or generation deliverability projects that have been awarded to the Company through PJM’s competitive Regional Transmission Expansion Plan (“RTEP”) process. These projects may be driven by increased loads within a region (including those from data centers) but cannot be directly attributed to a specific customer type.

Information regarding the interconnection of end-user facilities (*i.e.*, DPs) to the electric transmission system can be found in the Dominion Energy Facility Interconnection Requirements (“FIR”) document which is publicly available on the Company’s website (www.dominionenergy.com).

The document “PJM Transmission Owners Attachment M-3 Process Guidelines”, dated August 15, 2022, found on PJM’s website (www.pjm.com/planning/rtep-development/stakeholder-process/trans-owners), discusses the DNH analysis.

Details of the EOL criteria can be found in Section C.2.9 of the Company’s Electric Transmission Planning Criteria (<https://www.pjm.com/planning/planning-criteria/to-planning-criteria>).

PJM’s RTEP Plan process is described in Manual 14B while the Competitive Planning process is described in Manual 14F; both are available on PJM’s website.

5.0 Conclusion

As noted by the SCC in its October 11 Order and documented in the 2024 IRP, the Company and the Commonwealth are indeed facing unprecedented load growth. The Company takes seriously its obligation to reliably meet the needs of all customers, and the 2024 IRP presents a snapshot in time of the plan to do so with alternative resource portfolios. Dominion Energy does not believe that isolating—and entirely excluding—a certain end-use customer or customer class from the load forecast is a reasonable planning assumption as there is no reasonably foreseeable scenario in which that would reflect reality. Accordingly, while the Company has respectfully complied with the Commission’s October 11 Order, the modeling sensitivity results presented herein should not be construed as “a forecast of [Dominion Energy’s] load obligations and a plan to meet those obligations by supply side and demand side resources over the ensuing 15 years to promote reasonable prices, reliable service, energy independence, and environmental responsibility.”² The Company will adhere to its mission to provide reliable, affordable, and increasingly clean energy that powers all our customers every day.

² Va. Code § 56-597, definition of an integrated resource plan or IRP.

SCC Directed 2024 IRP Supplement Appendix 1: Sensitivity Build Plan Summaries

No Data Center Load Growth – REC RPS Only with EPA

Year	Solar PPA	Solar COS	Solar DER	Wind	Storage	Natural Gas Fired	Nuclear	Capacity Purchases	Retirements
2025	20	-	-	-	-	-	-	-	-
2026	-	-	-	-	-	-	-	2,500	-
2027	206	-	3	-	-	-	-	1,200	-
2028	111	-	-	-	-	-	-	1,600	-
2029	1,020	-	-	-	-	-	-	1,300	-
2030	1,020	-	-	-	-	944	-	800	-
2031	1,020	-	-	60	-	-	-	800	-
2032	1,020	-	-	-	-	818	-	200	-
2033	1,020	-	-	-	-	818	-	-	-
2034	1,020	-	-	-	-	818	-	-	-
2035	1,020	-	-	-	-	-	-	100	-
2036	1,020	-	-	-	-	-	-	400	-
2037	1,020	-	-	-	-	-	-	500	-
2038	1,020	-	-	-	-	-	-	600	-
2039	1,020	-	-	-	-	-	-	700	-
TOTAL	11,557	-	3	60	-	3,398	-	10,700	-

No Data Center Load Growth – VCEA with EPA

Year	Solar PPA	Solar COS	Solar DER	Wind	Storage	Natural Gas Fired	Nuclear	Capacity Purchases	Retirements
2025	-	-	-	-	-	-	-	-	-
2026	-	-	-	-	-	-	-	2,400	-
2027	-	-	-	-	-	-	-	1,100	-
2028	-	-	-	-	-	-	-	1,300	-
2029	660	360	45	-	100	-	-	1,000	-
2030	660	360	66	-	100	944	-	400	-
2031	720	300	75	60	150	-	-	400	-
2032	720	300	87	-	200	818	-	-	-
2033	720	300	96	-	200	818	-	-	-
2034	720	300	99	-	200	-	-	-	-
2035	720	300	102	-	200	-	-	100	-
2036	720	300	102	-	250	-	-	400	-
2037	720	300	105	-	250	-	-	500	-
2038	720	300	108	-	300	-	-	400	-
2039	720	300	105	-	300	-	-	500	-
TOTAL	7,800	3,420	990	60	2,250	2,580	-	8,500	-

Updated Capacity Pricing – REC RPS Only with EPA, with Data Center Load Growth

Year	Solar PPA	Solar COS	Solar DER	Wind	Storage	Natural Gas Fired	Nuclear	Capacity Purchases	Retirements
2025	20	-	-	-	-	-	-	-	-
2026	-	-	-	-	150	-	-	3,200	-
2027	206	-	4	-	92	-	-	2,300	-
2028	482	-	-	-	485	-	-	2,800	-
2029	1,020	-	-	-	350	-	-	2,800	-
2030	1,020	-	-	-	350	944	-	2,500	-
2031	1,020	-	-	60	350	-	-	2,900	-
2032	1,020	-	-	-	350	1,268	-	2,200	-
2033	1,020	-	-	-	350	818	-	2,400	-
2034	1,020	-	-	-	350	1,268	-	2,600	-
2035	1,020	-	-	-	350	-	268	3,000	-
2036	1,020	-	-	-	350	818	268	3,000	-
2037	1,020	-	-	2,600	350	-	268	3,100	-
2038	1,020	-	-	-	350	818	268	2,900	-
2039	1,020	-	-	800	350	-	268	3,300	-
TOTAL	11,928	-	4	3,460	4,577	5,934	1,340	39,000	-

Updated Capacity Pricing – REC RPS Only with EPA, without Data Center Load Growth

Year	Solar PPA	Solar COS	Solar DER	Wind	Storage	Natural Gas Fired	Nuclear	Capacity Purchases	Retirements
2025	20	-	-	-	-	-	-	-	-
2026	-	-	-	-	-	-	-	2,500	-
2027	206	-	3	-	-	-	-	1,200	-
2028	111	-	-	-	-	-	-	1,600	-
2029	1,020	-	-	-	-	-	-	1,300	-
2030	1,020	-	-	-	-	944	-	800	-
2031	1,020	-	-	60	-	-	-	800	-
2032	1,020	-	-	-	-	818	-	200	-
2033	1,020	-	-	-	-	818	-	-	-
2034	1,020	-	-	-	-	818	-	-	-
2035	1,020	-	-	-	-	-	-	100	-
2036	1,020	-	-	-	-	-	-	400	-
2037	1,020	-	-	-	-	-	-	500	-
2038	1,020	-	-	-	-	-	-	600	-
2039	1,020	-	-	-	-	-	-	700	-
TOTAL	11,557	-	3	60	-	3,398	-	10,700	-

Updated Capacity Pricing – VCEA with EPA, with Data Center Load Growth

Year	Solar PPA	Solar COS	Solar DER	Wind	Storage	Natural Gas Fired	Nuclear	Capacity Purchases	Retirements
2025	-	-	-	-	-	-	-	-	-
2026	-	-	-	-	-	-	-	3,200	-
2027	-	-	-	-	-	-	-	2,300	-
2028	-	-	-	-	250	-	-	2,800	-
2029	660	360	45	-	350	-	-	2,800	-
2030	660	360	66	-	350	944	-	2,500	-
2031	720	300	75	60	350	-	-	2,800	-
2032	720	300	87	-	350	1,268	-	2,200	-
2033	720	300	96	-	350	818	-	2,400	-
2034	720	300	99	800	350	818	-	2,700	-
2035	720	300	102	-	350	-	268	3,200	-
2036	720	300	102	-	350	1,268	268	2,800	-
2037	720	300	105	-	350	818	268	2,700	-
2038	720	300	108	2,600	350	-	268	2,700	-
2039	720	300	105	-	350	-	268	3,300	-
TOTAL	7,800	3,420	990	3,460	4,100	5,934	1,340	38,400	-

Updated Capacity Pricing – VCEA with EPA, without Data Center Load Growth

Year	Solar PPA	Solar COS	Solar DER	Wind	Storage	Natural Gas Fired	Nuclear	Capacity Purchases	Retirements
2025	-	-	-	-	-	-	-	-	-
2026	-	-	-	-	-	-	-	2,400	-
2027	-	-	-	-	-	-	-	1,100	-
2028	-	-	-	-	-	-	-	1,300	-
2029	660	360	45	-	100	-	-	1,000	-
2030	660	360	66	-	100	944	-	400	-
2031	720	300	75	60	150	-	-	400	-
2032	720	300	87	-	200	818	-	-	-
2033	720	300	96	-	200	818	-	-	-
2034	720	300	99	-	200	-	-	-	-
2035	720	300	102	-	200	-	-	100	-
2036	720	300	102	-	250	-	-	400	-
2037	720	300	105	-	250	-	-	500	-
2038	720	300	108	-	300	-	-	400	-
2039	720	300	105	-	300	-	-	500	-
TOTAL	7,800	3,420	990	60	2,250	2,580	-	8,500	-

SCC Directed 2024 IRP Supplement Appendix 2: Supplemental Appendix 2C-2

Supplemental Appendix 2C-2: List of Planned Transmission Projects during the Planning Period

Project Description	Line Voltage (kV)	Target Date	Location	PJM RTEP Cost Estimates (\$M)	Data Center Y/N/M
Winters Branch - Add 4th TX - DEV (Position #4)	230	Aug-24	VA	0.3	Y
Pearsons 230kV Switch Replacements EOL	230	Aug-24	VA	0.5	N
Altair 230kV Delivery - NOVEC (Microsoft Leesburg) (Belmont-Altair-Brambleton)	230	Sep-24	VA	51.9	Y
Line #224 (Lanexa -Northern Neck) EOL Rebuild and 2nd Circuit	230	Sep-24	VA	151.0	N
Youngs Branch - Add 2nd TX - DEV	230	Sep-24	VA	0.8	Y
Aviator 230kV Delivery - DEV	230	Sep-24	VA	42.0	Y
Cemetery Road Sub - 115kV Delivery - DEV	115	Oct-24	VA	5.0	N
Thunderball (Wildwood) 230kV Delivery - NOVEC	230	Oct-24	VA	13.9	Y
Clifton Forge TX#2 EOL	138/230	Nov-24	VA	3.0	N
Line #2008 Uprate - Takeoff to Lincoln Park	230	Nov-24	VA	4.5	Y
Line #2008 Uprate - Takeoff to Walney	230	Nov-24	VA	2.0	Y
Gretna 69kV Delivery - Add 2nd TX - DEV	69	Nov-24	VA	0.6	N
Line #2008 Uprate - Cub Run to Walney	230	Nov-24	VA	2.0	Y
Line #2242 Uprate - Dulles to Lincoln Park	230	Nov-24	VA	6.0	Y
230kV Line Extension Cannon Branch to Winters Branch	230	Dec-24	VA	22.0	M
Trappe Rock 230kV Delivery - NOVEC	230	Dec-24	VA	16.2	Y
Roundtable 230kV Delivery - Add 3rd and 4th TX	230	Dec-24	VA	0.8	Y
Farmville 230-115kV Transformer #5 EOL Replacement	115/230	Dec-24	VA	6.4	N
NIVO - Bus Expansion	230	Dec-24	VA	12.0	M
Magruder Sub - Upgrade 115/34.5kV TX#1 - DEV	115	Dec-24	VA	1.0	N
Northstar 230kV Delivery - NOVEC	230	Dec-24	VA	10.0	Y
Line #81 (Carolina - S Justice Branch) EOL Partial Rebuild - 1.7 mile Double Circuit Sections with Line #2056 (Hornertown-Hathaway)	115	Dec-24	NC	3.4	N
Metcalf Sub 115kV Delivery - TX #1 Upgrade - DEV	115	Dec-24	VA	0.6	N
Harrisonburg Transformer#1 Upgrade	115	Dec-24	VA	0.3	N
NIT Industrial - New 230kV Delivery Point (DEV)	230	Dec-24	VA	5.0	N
Line #2010 Underground Relocation	230	Dec-24	VA	40.0	N
Line #100 (Locks to Harrowgate) Partial Rebuild	115	Dec-24	VA	9.1	N
Bishop Substation -115 kV Delivery (MEC) - Ridge DP	115	Mar-25	VA	15.0	Y
Jeffress Sub - 115 kV Delivery (MEC) - Lakeside DP	115	Feb-25	VA	15.5	Y
230kV Line Extension to Relieve Cloverhill Loop (Winters Branch - Wakeman)	230	Mar-25	VA	3.9	Y
EPG - Add 2nd and 3rd TX - DEV	230	Mar-25	VA	6.1	N
Nimbus 230kV Delivery - DEV (Beauneade-Nimbus-Buttermilk)	230	Apr-25	VA	12.0	Y
Line #141 (Balcony Falls to Skimmer) & Line#28 (Balcony Falls to Cushaw) EOL and Balcony Falls Substation Rebuild	115	May-25	VA	55.0	N
Davis Drive - 230kV Ring Bus Expansion - Line Extension W&OD Trail to Sub	230	Jun-25	VA	15.0	Y
Clifton - Replace Overdutied L282 Breaker	230	Jun-25	VA	0.5	Y
Install 115kV breaker at Stuarts Draft station	115	Jun-25	VA	5.0	N
Cumulus 230kV Delivery - Add 5th TX - DEV	230	Jun-25	VA	0.5	Y
DTC 230kV Delivery - DEV (Extension of Line #2143 (Beaumeade-BECO) to DTC)	230	Jun-25	VA	60.3	Y
Sherwood Transformer#2 Upgrade	115	Jun-25	VA	0.4	N
Line #2031 Uprate-Enterprise to Greenway to Roundtable	230	Jun-25	VA	5.9	M
Line #2186 Uprate - Shellhorn to Enterprise	230	Jun-25	VA	4.0	M
Line #2188 Uprate-Shellhorn to Greenway to Lockridge	230	Jun-25	VA	3.8	M
Line #2214 Uprate - Buttermilk to Roundtable	230	Jun-25	VA	4.8	M
Line #2218 Uprate-Sojourner to Runway DP to Shellhorn	230	Jun-25	VA	6.5	M
Line #2223 Uprate-Roundtable to Lockridge	230	Jun-25	VA	2.6	M
Rixlew 230 kV Delivery - NOVEC	230	Jun-25	VA	10.0	Y
Line #249 (Carson to Locks) Rebuild and Energize TX #1	230	Jun-25	VA	25.6	N
Line #2151 Uprate - Railroad DP to Gainesville	230	Jun-25	VA	6.1	Y
King and Queen 230kV Delivery - DEV	230	Jul-25	VA	1.9	N
Lost City - New 230 kV Delivery - DEV	230	Jul-25	VA	10.2	Y
Varina SUB - add new TX (TX #2) - DEV	230	Jul-25	VA	0.5	N

Supplemental Appendix 2C-2: List of Planned Transmission Projects during the Planning Period

Project Description	Line Voltage (kV)	Target Date	Location	PJM RTEP Cost Estimates (\$M)	Data Center Y/N/M
Line #105 (Tarboro-Parmele) EOL Rebuild	115	Jul-25	NC	26.0	N
Evans Creek Sub - Roanoke DP - 230kV Delivery-DEV_ New 230kV Line from Tunstall to Evans Creek and Evans Creek to Raines	230	Aug-25	VA	30.0	Y
Raines Sub - Interstate DP - 230kV Delivery-DEV-New 230kV Line from Tunstall to Raines	230	Aug-25	VA	20.0	Y
Tunstall Sub - Hillcrest DP - 230kV Delivery-DEV-New Unity 500/230kV Sub - Two New 230kV Lines from Unity to Tunstall	230/500	Aug-25	VA	140.0	Y
Partial Line#5 Retirement (Fork Union to Cunningham DP)-line 1049 retirement	115	Aug-25	VA	5.5	N
Trident 230 kV Delivery - NOVEC (ARC West) (Gainesville-Trident-Wheeler)	230	Sep-25	VA	15.8	Y
Interconnection 230kV Delivery - DEV (Beaumeade-Interconnection-Nimbus)	230	Sep-25	VA	32.0	Y
Park Center 230kV Delivery - DEV	230	Sep-25	VA	10.0	Y
Foster Drive 230 kV Delivery - CoM (BCG & AWS)	230	Oct-25	VA	15.3	Y
Ocean Court 230kV Delivery - DEV	230	Oct-25	VA	12.7	Y
Prentice Drive 230kV Delivery - DEV (CPR changed to Engineering)	230	Oct-25	VA	20.0	Y
Southall (North Louisa (REB)) 230kV Delivery (Amazon AZ) - ODEC - Engineering	230	Nov-25	VA	55.0	Y
Line #77 (Carolina-Roanoke Rapids Hydro) EOL Rebuild	115	Nov-25	VA	7.4	N
Line #81 (Carolina - S Justice Branch) EOL Partial Rebuild	115	Nov-25	NC	27.2	N
Install 2nd 115kV 33.67MVar Cap bank at Harrisonburg	115	Dec-25	VA	1.0	N
Walnut Creek 115kV switching station	115	Dec-25	VA	23.7	N
Line #2095 Uprate - Cabin Run to Shellhorn	230	Dec-25	VA	8.0	Y
Stratus 230kV Delivery - DEV - (CPR changed to Engineering)	230	Dec-25	VA	24.0	Y
Brickyard 230kV Delivery - DEV	230	Dec-25	VA	6.6	Y
Buttermilk 230kV Delivery - Add 3rd and 4th TX	230	Dec-25	VA	1.0	Y
Butler Farm Sub - 230kV Delivery-DEV- Bailey DP - New Finneywood 500/230kV Sub a new 230kV Line (Butler Farm - Finneywood) and a new 230kV Line (Butler Farm - Clover)	230/500	Dec-25	VA	220.0	Y
Line #2019 (Greenwich to Thalia) EOL Partial Rebuild	230	Dec-25	VA	14.3	N
Line #293 (Staunton to Valley) & Partial Line #83 EOL	230	Dec-25	VA	44.8	N
Line #202 - Clark to Idylwood Uprate	230	Dec-25	VA	8.0	N
Line #2104 (Cranes Corner to Stafford) partial uprate	230	Dec-25	VA	28.3	N
Line #172 & # 197 Conversion - Liberty to Cannon Branch	230	Dec-25	VA	28.0	M
500kV / 230kV Line Extension - Southern (Wishing Star to Mars)	230/500	Dec-25	VA	842.3	M
Verona Transformer#2 New Circuit Switcher	115	Dec-25	VA	0.5	N
Princess Anne Sub upgrade TX1	115	Dec-25	VA	0.5	N
Line #53 (Chesterfield - Kevlar) Install Reymet Tap	115	Dec-25	VA	3.0	N
Line #183 Rebuild to Resolve EOL and 2021 OW Violations	115	Dec-25	VA	38.0	N
Line #53 and Line #72 (Chesterfield to Brown Boveri Tap) EOL Partial Rebuild	115	Dec-25	VA	9.8	N
Pleasant View 230kV Delivery - Add 4th TX - DEV	230	Dec-25	VA	1.0	N
230kV Line Extension to Relieve Waxpool Loop (Nimbus to Farmwell)	230	Dec-25	VA	5.7	M
Line #2007 (Lynnhaven to Thalia) EOL Rebuild	230	Dec-25	VA	28.7	N
Brambleton Overduty Breaker Replacement (SC102.H302, H402, 218302)	230	Dec-25	VA	1.7	Y
Line #2011 Uprate - Cannon Branch to Clifton (Rebuild)	230	Dec-25	VA	31.7	Y
Harrisonburg TX#6 EOL	115	Jan-26	VA	5.2	N
Line #2209 Uprate Evergreen Mills to Yardley	230	Jan-26	VA	5.0	Y
Decoy Airfield - 230kV Delivery - DEV	230	Feb-26	VA	12.0	Y
Broderick Drive 230kV Delivery - DEV	230	Feb-26	VA	24.5	Y
Twin Creeks Sub 230kV Delivery - DEV	230	Mar-26	VA	20.0	Y
Bring 2-230 kV Sources into White Oak SUB and Resolve 300 MW Load Loss Violation - Engineering Assessment	230	Apr-26	VA	42.2	Y
Hornbaker 230kV Delivery - NOVEC (Avanti) (Liberty-Hornbaker-Pioneer)	230	Apr-26	VA	45.0	Y
Northwoods 230kV Delivery - NOVEC	230	Apr-26	VA	15.8	Y

Supplemental Appendix 2C-2: List of Planned Transmission Projects during the Planning Period

Project Description	Line Voltage (kV)	Target Date	Location	PJM RTEP Cost Estimates (\$M)	Data Center Y/N/M
Germanna 230kV Delivery - DEV	230	Apr-26	VA	24.8	Y
Foxbrook Lane 230kV Delivery - REC (AWS Central Louisa - 1st DP)	230	May-26	VA	55.0	Y
Line #574 - Ladysmith to Elmont Rebuild - EOL	500	May-26	VA	91.3	N
Alexanders Corner Tx 1 Replace Ground Switch with Circuit Switcher	115	May-26	VA	0.3	N
Deep Creek Tx 1 Replace Ground Switch with Circuit Switcher	115	May-26	VA	0.3	N
Deep Creek Tx 2 Replace Ground Switch with Circuit Switcher	115	May-26	VA	0.3	N
Brown Boveri Tx 1 Replace Ground Switch with Circuit Switcher	115	May-26	VA	0.3	N
Quantico Tx 1 Replace Ground Switch with Circuit Switcher	115	May-26	VA	0.3	N
Quantico Tx 2 Replace Ground Switch with Circuit Switcher	115	May-26	VA	0.3	N
Partial Line #26 (Buena Vista to Balcony Falls) Rebuild	115	Jun-26	VA	22.2	N
Relieve Line #219-2066 Load Drop - Loop Trabue 230kV to Midlothian	230	Jun-26	VA	8.5	N
Line #502 Terminal Upgrade-Loudoun to Mosby	500	Jun-26	VA	6.3	M
Daves Store 230kV Delivery - DEV	230	Jun-26	VA	36.5	Y
Tunis Tx 1 Replace Ground Switch with Circuit Switcher	115	Jun-26	NC	0.3	N
Lines #211 and #228 (Chesterfield to Hopewell) partial rebuild	230	Jun-26	VA	12.3	N
Line #126 (Earleys to Kelford) Partial Rebuild	115	Jun-26	NC	18.8	N
Cloud 115kV Cap Bank	115	Jun-26	VA	1.5	Y
Line #23 Bell Ave to Suffolk Partial Rebuild	115	Jun-26	VA	39.5	N
Line #1024 (Chestnut - S Justice Branch) EOL Rebuild	115	Jun-26	NC	5.1	N
Spartan - New 230kV Substation	230	Jun-26	VA	21.3	Y
Sycolin Creek 230kV Delivery - DEV	230	Jun-26	VA	28.0	Y
Line #2226 (Clover to Easters) Partial Rebuild (DNH)	230	Jun-26	VA	34.0	Y
Line #205 (Locks to Tyler) Partial Rebuild	230	Jun-26	VA	27.0	N
Jeffress Substation 230 kV Delivery (MEC) - Lakeside DP	230	Jul-26	VA	92.6	Y
Line #2172 Uprate - Brambleton to Evergreen	230	Jul-26	VA	2.3	M
Line #2213 Uprate - Yardley to Cabin Run	230	Jul-26	VA	1.8	M
Line #2210 Uprate - Brambleton to Evergreen Mills	230	Jul-26	VA	2.3	M
Daves Store 230 kV Line Extension (New) (Cut and Extend Line #2161 Gainesville - Wheeler)	230	Aug-26	VA	45.9	Y
Gemini 230 kV Delivery - DEV	230	Aug-26	VA	15.3	Y
Bear Run Sub - Cub Run 230kV Expansion - NOVEC	230	Sep-26	VA	24.5	Y
Install Cap Bank at Lexington Substation	500	Nov-26	VA	5.9	M
Mint Springs (Jacksonville) 230kV Delivery - NOVEC	230	Nov-26	VA	16.0	Y
Possum Point 2nd 500-230kV TX (Ox Overloads) (PP 500kV - PP230kV)	230/500	Nov-26	VA	23.1	M
Wishing Star DP -NOVEC	230	Dec-26	VA	10.0	Y
Line #2080 Uprate - Liberty to Railroad DP	230	Dec-26	VA	1.5	Y
Line #2163 Uprate - Vint Hill to Liberty	230	Dec-26	VA	13.0	Y
Line #2187 and #2228 Uprate - Pioneer DP to Liberty	230	Dec-26	VA	11.4	Y
Occoquan 500-230kV TX (OX violation); Line 2013 Upgrade and Cut in of Line #571 and #237	230/500	Dec-26	VA	84.5	Y
Line #29 Fredericksburg to Aquia Harbor Rebuild	230	Dec-26	VA	59.5	N
Idylwood - Convert Straight Bus to Breaker and a Half	230	Dec-26	VA	159.3	N
Line #108 (Boykins-Tunis) EOL Rebuild	115	Dec-26	NC	72.7	N
Line #584 Terminal Upgrade-Loudoun to Mosby	500	Dec-26	VA	6.4	M
Line #2056 (Hornertown-Hatlaway) EOL Rebuild	230	Dec-26	NC	49.1	N
City of Franklin P&L DP#4 (Pretlow) - New 115kV Delivery Point	115	Dec-26	VA	2.5	N
Remington CT 230 kV Terminal Upgrades (Line #2114)	230	Dec-26	VA	2.6	Y
Gainesville 230 kV Terminal Upgrades (Line #2222)	230	Dec-26	VA	9.2	Y
Otterdam Sub - 230kV Delivery (MEC) - Otterdam DP	230	Dec-26	VA	25.0	N
Bermuda Hundred 230kV Delivery - DEV	230	Dec-26	VA	15.0	Y
Line #260 (Harrisonburg to Grottoes) EOL Rebuild	230	Dec-26	VA	28.0	N
Line # 2090 (Ladysmith CT to Summit) Rebuild	230	Jan-27	VA	32.0	M
Line #1001 (Battleboro to Chestnut) EOL Rebuild	115	Jan-27	NC	14.0	N
Lunar 230kV Delivery - DEV	230	Mar-27	VA	28.0	Y
Youngs Branch - Add 3rd, 4th, 5th TX - DEV (Position #1,3,5)	230	Apr-27	VA	1.2	Y
Mars 2nd 500 -230 kV TX	230/500	May-27	VA	42.2	M
Bristers - 500-230 kV TX Expansion	230/500	May-27	VA	65.0	Y

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Project Description	Line Voltage (kV)	Target Date	Location	PJM RTEP Cost Estimates (\$M)	Data Center Y/N/M
Evergreen Mills 230kV Delivery Part B	230	Jun-27	VA	7.7	M
Philo 230 kV Delivery - DEV	230	Jun-27	VA	64.5	Y
Terminate Line 583 Doubs - Bismark into Woodside 500kV DOM	500	Jun-27	VA	5.1	M
Lines #2150 & #2081 Uprates-Golden to Paragon Park	230	Jun-27	VA	3.0	M
Line #2207 Uprate- Paragon Park to Beco	230	Jun-27	VA	5.3	M
Line #256 (Ladysmith - St John) Partial Rebuild	230	Jun-27	VA	31.7	M
Loudoun Capacitor Banks	230/500	Jun-27	VA	90.1	M
Line #14 (Fudge Hollow to the demarcation point of AEP) EOL	115	Jun-27	VA	30.0	N
Line #9290 (Ox to Braddock) and Partial Line#2097 Uprate	230	Jun-27	VA	43.5	Y
Line #272 (Dooms to Grottoes) EOL Rebuild	230	Jul-27	VA	34.0	N
Line #2008 Uprate - Loudoun to Takeoff	230	Aug-27	VA	4.6	Y
Line #265 Uprate - Sully to Takeoff	230	Aug-27	VA	4.6	Y
Takeoff 230kV Delivery - DEV Transformers	230	Aug-27	VA	4.0	Y
Takeoff Substation 230kV Interconnection for Poland Loop	230	Aug-27	VA	45.9	Y
230kV Line Extension to Relieve Poland Loop (Aviator to Takeoff)	230	Aug-27	VA	29.5	Y
Spring Hill 230kV Delivery - DEV	230	Aug-27	VA	35.0	N
Edsall 230 kV Delivery - DEV	230	Oct-27	VA	23.2	Y
Mountain Run new 230kV substation (Named Cirrus) and partial conversion of lines #2 and #70 to 230kV; Convert lines #2 and #70 to 230kV and connect to Line #2199	230	Nov-27	VA	60.0	Y
Line # 2054 (Charlottesville to Hollymead) Rebuild	230	Dec-27	VA	71.1	M
Locks Substation 230/115 kV Transformer Upgrade	115/230	Dec-27	VA	7.1	N
Line # 2135 (HollyMeade to Gordonsville) Rebuild	230	Dec-27	VA	36.8	M
Line #58 (Skiffes to Yorktown) EOL Partial Rebuild	115	Dec-27	VA	6.0	N
Line #209 and #58 (Skiffes to Yorktown) EOL Partial Rebuild	115/230	Dec-27	VA	13.5	N
Terminate New Nextera 500kV Line from Woodside into Goose Creek Sub DOM	500	Dec-27	VA	30.5	M
Line #2101 Uprate - Bristers to Bristers Junction	230	Dec-27	VA	23.0	Y
Sloan Drive - 230kV Delivery - DEV	230	Dec-27	VA	30.0	Y
5-2 North Line Extension - Aspen to Golden	230/500	Dec-27	VA	623.0	M
Line #204 and #220 Partial Rebuild EOL	230	Dec-27	VA	5.4	N
Nokesville to Hornbaker 230 kV Line (new)	230	Dec-27	VA	139.0	Y
500 kV line extension - Aspen to Doubs	230/500	Dec-27	VA	74.0	M
Apollo 230kV Delivery - DEV	230	Mar-28	VA	28.0	Y
Partial Line #83 EOL Rebuild	115	Mar-28	VA	23.0	N
Atlas 230 kV Delivery - DEV	230	Apr-28	VA	15.4	Y
Line #557 (Chickahominy to Elmont) EOL Rebuild	500	Jun-28	VA	58.2	N
5-2 Connector - Mars to Golden	230/500	Jun-28	VA	342.9	M
Starlight 230kV Delivery - DEV	230	Jun-28	VA	28.0	Y
Lucky Hill Substation - paused	230	Jun-28	VA	7.5	Y
Barrister Sub 230kV Delivery - DEV (CPR changed to Engineering)	230	Jun-28	VA	24.0	Y
Lines #2150 & #2081 Uprates-Golden to Sterling Park	230	Sep-28	VA	8.0	M
Lines #2194 & #9231 Uprates-Davis Drive to Sterling Park	230	Sep-28	VA	5.5	M
Nimbus 230kV Delivery - Add 3rd and 4th TX	230	Oct-28	VA	1.1	Y
Lines #233 and 291 (Dooms to Charlottesville) Rebuild	230	Dec-28	VA	112.4	N
Weyers Cave Substation - New 2nd Transformer	115	Dec-28	VA	0.9	N
Line #246 Earleys to Suffolk EOL Rebuild	230	Dec-28	VA-NC	150.0	N
Convert Line #29 Fredericksburg to Possum Point to 230 kV	230	Jan-29	VA	56.7	N
Line #29 and #252 (Possum Point to Aquia Harbor) Rebuild	230	Jan-29	VA	38.0	N
Line #10 (Goshen to Craigsville) EOL Partial Rebuild	115	Mar-29	VA	29.6	N
Fentress Sub - Add 2nd TX	230	May-29	VA	0.4	N
Vint Hill 500-230 kV Expansion	230/500	Jun-29	VA	115.0	Y
500/230kV Morrisville-Wishing Star Upgrades	230/500	Jun-30	VA	852.9	M
New Nextera 500 kV Line from Woodside to Goose Creek Sub (DOM Scope)	500	Sep-30	VA	15.6	M
Replace Overdutied Breakers _ 2022 Reliability Open Window #3	230/500	Oct-31	VA	66.3	M

CERTIFICATE OF SERVICE

I hereby certify that on this 15th day of November 2024, a true and accurate copy of the foregoing filed in Case No. PUR-2024-00184 was hand delivered, electronically mailed, and/or mailed first class postage pre-paid to the following:

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