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October 1, 2024

BY ELECTRONIC FILING

Hon. Bernard J. Logan, Clerk
State Corporation Commission
Tyler Building, 1st Floor
1300 East Main Street
Richmond, VA 23219

Re: Application of Virginia Electric and Power Company for Approval and Certification of Electric Transmission Facilities: 230 kV Line #2090 Extension and Tributary Switching Station – Case No. PUR-2024-00181.

Dear Mr. Logan:

Please find enclosed for electronic filing in the above-captioned proceeding the application for approval of electric facilities on behalf of Virginia Electric and Power Company (the "Company"). This filing contains the Application, Appendix, Direct Testimony, DEQ Supplement, and Routing Study, including attachments.

If you have any questions or need further information, please feel free to contact us.

Sincerely,

Andrew J. Flavin

Timothy L. McHugh

Enclosures

cc: William H. Chambliss, Esq.
Mr. David Essah (without enclosures)
Mr. Neil Joshipura (without enclosures)
Mr. Michael A. Cizenski (without enclosures)
David J. DePippo, Esq.
Charlotte P. McAfee, Esq.
Viktoriia A. De Las Casas, Esq.
William H. Smith, III, Esq.

Dominion Energy®

Application, Appendix, DEQ Supplement, Routing Study, and Direct Testimony and Exhibits, of Virginia Electric and Power Company

Before the State Corporation Commission of Virginia

230 kV Line #2090 Extension and Tributary Switching Station

Application No. 342

Case No. PUR-2024-00181

Filed: October 1, 2024

Volume 1 of 3

COMMONWEALTH OF VIRGINIA
BEFORE THE
STATE CORPORATION COMMISSION

APPLICATION OF

VIRGINIA ELECTRIC AND POWER COMPANY

FOR APPROVAL AND CERTIFICATION
OF ELECTRIC TRANSMISSION FACILITIES

230 kV Line #2090 Extension and Tributary Switching Station

Application No. 342

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COMMONWEALTH OF VIRGINIA

STATE CORPORATION COMMISSION

APPLICATION OF	)	
	)	
VIRGINIA ELECTRIC AND POWER COMPANY	)	Case No. PUR-2024-00181
	)	
For approval and certification of electric transmission facilities: 230kV Line #2090 Extension and Tributary Switching Station	)	

APPLICATION OF VIRGINIA ELECTRIC AND POWER COMPANY FOR APPROVAL AND CERTIFICATION OF ELECTRIC TRANSMISSION FACILITIES: 230KV LINE #2090 EXTENSION AND TRIBUTARY SWITCHING STATION

Pursuant to § 56-46.1 of the Code of Virginia ("Va. Code") and the Utility Facilities Act, Va. Code §§ 56-265.1 *et seq*., Virginia Electric and Power Company ("Dominion Energy Virginia" or the "Company"), by counsel, files with the State Corporation Commission of Virginia (the "Commission") this application for approval and certification of electric transmission facilities (the "Application"). In support of its Application, Dominion Energy Virginia respectfully shows as follows:

1. Dominion Energy Virginia is a public service corporation organized under the laws of the Commonwealth of Virginia furnishing electric service to the public within its Virginia service territory. The Company also furnishes electric service to the public in portions of North Carolina. Dominion Energy Virginia's electric system—consisting of facilities for the generation, transmission, and distribution of electric energy—is interconnected with the electric systems of neighboring utilities and is a part of the interconnected network of electric systems serving the

continental United States. By reason of its operation in two states and its interconnections with other utilities, the Company is engaged in interstate commerce.

2. In order to perform its legal duty to furnish adequate and reliable electric service, Dominion Energy Virginia must, from time to time, replace existing transmission facilities or construct new transmission facilities in its system.

3. In this Application, in order to provide requested transmission service to Rappahannock Electric Cooperative ("REC"), with the requested service being prompted by the growing data center development in the area; to maintain reliable service for overall load growth in the area; and to comply with mandatory North American Electric Corporation ("NERC") Reliability Standards, Dominion Energy Virginia proposes in Spotsylvania County, Virginia to:

- Construct a new 230 kilovolt ("kV") delivery point ("DP") switching station ("Tributary Station"), which will provide interconnection to REC to serve its customer, the SpotsyTech Campus, a planned mixed-use technology park which includes a data center; and

- Extend the Company's existing 230 kV Line #2090 (Fredericksburg — Ladysmith CT) by constructing a new double circuit overhead 230 kV line on new approximately 100-foot-wide right-of-way by cutting the Company's existing 230 kV Line #2090 (Fredericksburg — Ladysmith CT) at the proposed Structure #2090/91A[1] ("#2090 Tap") (the new double circuit overhead 230 kV line is referred as "230 kV Line #2090 extension"). The cut in will result in (i) new 230 kV Line #2404 from New Post to Tributary Station, and (ii) 230 kV Line #2090 from Ladysmith CT to Tributary Station.[2] From the cut-in location at the #2090 Tap, the 230 kV Line #2090 extension will extend for approximately 2.4 miles to the Tributary Station.

[1] Structure #2090/91A is a proposed structure to be constructed between existing Structures #2090/91 and #2090/92 of Line #2090.

[2] Segments of Line #2090 (Fredericksburg – Ladysmith CT) will be renumbered several times as a result of other projects in the Fredericksburg – Ladysmith CT corridor. Line #2090 will be renumbered to 230 kV Line #2301 between Fredericksburg and Lee's Hill Substations, and to 230 kV Line #2335 between Lee's Hill and New Post Substations. After this Project is completed, 230 kV Line #2090 will again be renumbered to Line #2404 between New Post and Tributary Stations, with existing 230 kV Line #2090 extending between Tributary Station and Ladysmith CT only. See Attachments I.A.3, I.A.4, and I.A.5 for one-line diagrams of: (i) the existing transmission system in the Project load area, (ii) the Project load area after the New Post and Lee's Hill Substations are built, and (iii) the Project load area after the Project is energized.

The Tributary Station and the 230 kV Line #2090 extension are collectively referred to as the "Project."

4. The Project is necessary to assure that Dominion Energy Virginia is able to provide the service requested by REC to serve the planned SpotsyTech Campus in Spotsylvania County, Virginia; to maintain reliable service for the overall growth in the load area; and to comply with mandatory NERC Reliability Standards. The combination of competitive colocation/cloud environment, fiber connectivity, strategic geographic location, low risk of business disruptions, affordable and reliable power, and the business climate in Virginia, has created the largest market for data center capacity in the United States. The data center market continues to rapidly expand in Virginia, and the growing demand for data center space in Virginia has led the industry to locations within the central Virginia region. This Project is in this concentrated area of Spotsylvania County. On November 21, 2023, the Company received a DP request from REC for a new 230 kV DP to serve the SpotsyTech Campus. The DP request ultimately projects a load of 295 megawatts ("MW") by 2032, with the initial load being 7 MW.

5. The Company identified an approximately 2.4-mile overhead proposed route from Structure #2090/91A to the proposed Tributary Station (the "Proposed Route").[3] The Company also identified two overhead alternative routes ("Alternative Route 3" and "Alternative Route 4").[4] The total length of the Alternative Route 3 is approximately 2.8 miles from the #2090 Tap to the Tributary Station. The total length of the Alternative Route 4 is approximately 3.0 miles from Structure #2090/82 of existing 230 kV Line #2090 to the Tributary Station.

[3] The Proposed Route is also referred to as "Route 2" in the Environmental Routing Study.

[4] Alternative Route 3 and Alternative Route 4 are referred to as "Route 3" and "Route 4," respectively, in the Environmental Routing Study.

6. The Proposed Route is the preferred route for the Project. The Proposed Route is the shortest, would cross the fewest parcels, avoids close proximity to residences, avoids crossing U.S. Route 1 Bike trail, requires the least amount of tree and forested wetland clearing, and crosses the fewest acres of forested land. While the Proposed Route has the estimated potential to impact 14.1 acre of wetlands, the route has been designed to avoid wetlands to the maximum extent practicable. For all these reasons, the Company supports the Proposed Route for the 230 kV Line #2090 extension, and the Tributary Station as it avoids or reasonably minimizes adverse impact to the greatest extent reasonably practicable on the scenic assets, historic and cultural resources, and environment of the area concerned, as well as on planned developments in the Project area.

7. The Company's proposed Tributary Station will consist of a 230 kV ring bus with four breakers installed initially to terminate the cut sections of Line #2090 and will have space to incorporate two additional 230 kV circuit breakers for future use. The 230 kV ring bus will be constructed to provide two 230 kV delivery points to REC's customer, the SpotsyTech Campus. The Tributary Station will be constructed on an approximately 2.2-acre parcel.

8. The desired in-service target date for the proposed Project is April 1, 2027. The Company estimates it will take approximately 21 months after a final order from the Commission for detailed engineering, materials procurement, permitting, real estate, and construction of the proposed Project. Accordingly, to support this estimated construction timeline and construction plan, the Company respectfully requests a final order by July 1, 2025. Should the Commission issue a final order by July 1, 2025, the Company estimates that construction should begin in the Spring of 2026 with the Project to be completed by the in-service target date of April 1, 2027. This schedule is contingent upon obtaining the necessary permits and careful coordination of outages, the latter of which may be particularly challenging due to the amount of new load growth, rebuilds,

and new builds scheduled to occur in this load area. Dates may need to be adjusted based on permitting delays or design modifications to comply with additional agency requirements identified during the permitting application process, as well as the ability to schedule outages, and unpredictable delays due labor shortages or materials/supply issues. Based on the Project's complexity, there may be delays with procurement of materials.

9. In addition, the Company is actively monitoring regulatory changes and requirements associated with the Northern Long Eared Bat ("NLEB") and how it could potentially impact construction timing associated with time of year restrictions ("TOYRs"). The U.S. Fish and Wildlife Service ("USFWS") has indicated that it plans to issue final NLEB guidance to replace the interim guidance by April 1, 2024; however, the interim guidance has been extended by USFWS until late summer 2024. In the meantime, the USFWS issued several draft guidance documents for public review and comment. The Company actively is tracking updates from the USFWS with respect to the final guidance. Once issued, the Company plans to review and follow the final guidance to the extent it applies to the Company's projects. Until the final guidance is issued, the Company will continue following the interim guidance. For projects that may require additional coordination, the Company will coordinate with the USFWS.

10. The Company is also continuing to track potential regulatory changes associated with the potential up-listing of the Tricolored bat ("TCB"). On September 14, 2022, the USFWS published the proposed rule to the Federal Register to list the TCB as endangered under the Endangered Species Act ("ESA"). On April 1, 2024, the USFWS issued draft guidance for the NLEB and TCB for public review and comment. The USFWS also recently extended its Final Rule issuance target from September 2023 to September 2024. The Company is actively tracking

this ruling and evaluating the effects of potential outcomes on Company projects' permitting, construction, and in-service dates, including electric transmission projects.

11. Any adjustments to the Project schedule resulting from these or similar challenges could necessitate a minimum of a six- to twelve-month delay in the targeted in-service date. Accordingly, for purposes of judicial economy, the Company requests that the Commission issue a final order approving both a desired in-service target date (i.e., April 1, 2027) and an authorization sunset date (i.e., April 1, 2028) for energization of the Project.

12. The estimated conceptual cost of the Project along the Proposed Route is approximately $20.6 million for transmission-related work and $11.7 million for station-related work (2024 dollars).

13. Based on consultations with the Virginia Department of Environmental Quality ("DEQ"), the Company has developed a supplement ("DEQ Supplement") containing information designed to facilitate review and analysis of the proposed facilities by the DEQ and other relevant agencies. The DEQ Supplement is attached to this Application.

14. Based on the Company's experience, the advice of consultants, and a review of published studies by experts in the field, the Company believes that there is no causal link to harmful health or safety effects from electric and magnetic fields generated by the Company's existing or proposed facilities. Section IV of the Appendix provides further details on Dominion Energy Virginia's consideration of the health aspects of electric and magnetic fields.

15. Section V of the Appendix provides a proposed route description for public notice purposes and a list of federal, state, and local agencies and officials that the Company has notified or will notify about the Application.

16. In addition to the information provided in the Appendix and the DEQ Supplement, this Application is supported by the pre-filed direct testimony of Company Witnesses Ramtin Khalili, Blair Parks, George Brimmer, Sergio E. De Hoyos Irizarry, and Mariah Weitzenkamp.

17. Finally, Dominion Energy Virginia requests that, to the extent the Commission modifies the deadline for responses to interrogatories and requests for production of documents in 5 VAC 5-20-260, the Commission grant the parties seven calendar days in order to afford the Company adequate time to provide comprehensive responses to discovery.

WHEREFORE, Dominion Energy Virginia respectfully requests that the Commission:

(a) direct that notice of this Application be given as required by Va. Code § 56-46.1;

(b) approve pursuant to Va. Code § 56-46.1 the construction of the Project; and

(c) grant a certificate of public convenience and necessity for the Project under the Utility Facilities Act, Va. Code §§ 56-265.1, *et seq.*, by July 1, 2025, if possible.

VIRGINIA ELECTRIC AND POWER COMPANY

By: _____ _____

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Counsel for Virginia Electric and Power Company

October 1, 2024

COMMONWEALTH OF VIRGINIA
BEFORE THE
STATE CORPORATION COMMISSION

APPLICATION OF

VIRGINIA ELECTRIC AND POWER COMPANY

FOR APPROVAL AND CERTIFICATION
OF ELECTRIC TRANSMISSION FACILITIES

230 kV Line #2090 Extension and Tributary Switching Station

Application No. 342

Appendix

Containing Information in Response to
"Guidelines for Transmission Line Applications Filed Under title 56 of the Code of Virginia"

CASE NO. PUR-2024-00181

Filed: October 1, 2024

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EXECUTIVE SUMMARY

In order to provide requested transmission service to Rappahannock Electric Cooperative ("REC"), with the requested service being prompted by the growing data center development in the area; to maintain reliable service for overall load growth in the area; and to comply with mandatory North American Electric Corporation ("NERC") Reliability Standards, Virginia Electric and Power Company ("Dominion Energy Virginia" or the "Company") proposes in Spotsylvania County, Virginia to:

- Construct a new 230 kilovolt ("kV") delivery point ("DP") switching station ("Tributary Station"), which will provide interconnection to REC to serve its customer, the SpotsyTech Campus, a planned mixed-use technology park which includes a data center; and

- Extend the Company's existing 230 kV Line #2090 (Fredericksburg — Ladysmith CT) by constructing a new double circuit overhead 230 kV line on new approximately 100-foot-wide right-of-way by cutting the Company's existing 230 kV Line #2090 (Fredericksburg — Ladysmith CT) at the proposed Structure #2090/91A[1] ("#2090 Tap") (the new double circuit overhead 230 kV line is referred as "230 kV Line #2090 extension"). The cut in will result in (i) new 230 kV Line #2404 from New Post to Tributary Station, and (ii) 230 kV Line #2090 from Ladysmith CT to Tributary Station.[2] From the cut-in location at the #2090 Tap, the 230 kV Line #2090 extension will extend for approximately 2.4 miles to the Tributary Station.

The Tributary Station and the 230 kV Line #2090 extension are collectively referred to as the "Project."

The Project is necessary to assure that Dominion Energy Virginia is able to provide the service requested by REC to serve the planned SpotsyTech Campus in Spotsylvania County, Virginia; to maintain reliable service for the overall growth in the load area; and to comply with mandatory NERC Reliability Standards. The combination of competitive colocation/cloud environment, fiber connectivity, strategic geographic location, low risk of business disruptions, affordable and reliable power, and the business climate in Virginia, has created the largest market for data center capacity in the United States. The data center market continues to rapidly expand in Virginia, and the growing demand for data center space in Virginia has led the industry to locations within the central Virginia region. This Project is in this concentrated area of Spotsylvania County.

[1] Structure #2090/91A is a proposed structure to be constructed between existing Structures #2090/91 and #2090/92 of Line #2090.

[2] Segments of Line #2090 (Fredericksburg – Ladysmith CT) will be renumbered several times as a result of other projects in the Fredericksburg – Ladysmith CT corridor. Line #2090 will be renumbered to 230 kV Line #2301 between Fredericksburg and Lee's Hill Substations, and to 230 kV Line #2335 between Lee's Hill and New Post Substations. After this Project is completed, 230 kV Line #2090 will again be renumbered to Line #2404 between New Post and Tributary Stations, with existing 230 kV Line #2090 extending between Tributary Station and Ladysmith CT only. See Attachments I.A.3, I.A.4, and I.A.5 for one-line diagrams of: (i) the existing transmission system in the Project load area, (ii) the Project load area after the New Post and Lee's Hill Substations are built, and (iii) the Project load area after the Project is energized.

On November 21, 2023, the Company received a DP request from REC for a new 230 kV DP to serve the SpotsyTech Campus. The DP request ultimately projects a load of 295 megawatts ("MW") by 2032, with the initial load being 7 MW.

The Company identified an approximately 2.4-mile overhead proposed route from Structure #2090/91A to the proposed Tributary Station (the "Proposed Route").[3] The Company also identified two overhead alternative routes ("Alternative Route 3" and "Alternative Route 4").[4] The total length of the Alternative Route 3 is approximately 2.8 miles from the #2090 Tap to the Tributary Station. The total length of the Alternative Route 4 is approximately 3.0 miles from Structure #2090/82 of existing 230 kV Line #2090 to the Tributary Station.

The Company is proposing these three routes for Commission consideration and notice. Discussion of the Proposed Route and Alternative Routes, as well as other overhead routes that the Company studied but ultimately rejected ("Alternative Route 1" and "Alternative Route 5"), is provided in Section II of the Appendix and discussed in more detail in the Environmental Routing Study (or "Routing Study") included with the Application.

The estimated conceptual cost of the Project along the Proposed Route is approximately $20.6 million for transmission-related work and $11.7 million for station-related work (2024 dollars). The estimated conceptual costs for the transmission-related work associated with the Alternative Routes 3 and 4 are provided in Section II.A.9.

The desired in-service target date for the Project is April 1, 2027. The Company estimates it will take approximately 21 months after a final order from the State Corporation Commission ("Commission") for detailed engineering, materials procurement, permitting, real estate, and construction of the Project. Accordingly, to support this estimated construction timeline and construction plan, the Company respectfully requests a final order by July 1, 2025. Should the Commission issue a final order by July 1, 2025, the Company estimates that construction should begin in the Spring of 2026 with the Project to be completed by the in-service target date of April 1, 2027. This schedule is contingent upon obtaining the necessary permits and careful coordination of outages, the latter of which may be particularly challenging due to the amount of new load growth, rebuilds, and new builds scheduled to occur in this load area. Dates may need to be adjusted based on permitting delays or design modifications to comply with additional agency requirements identified during the permitting application process, as well as the ability to schedule outages, and unpredictable delays due labor shortages or materials/supply issues.

Any adjustments to the Project schedule resulting from these or similar challenges could necessitate a minimum of a six- to twelve-month delay in the targeted in-service date. Accordingly, for purposes of judicial economy, the Company requests that the Commission issue a final order approving both a desired in-service target date (*i.e.*, April 1, 2027) and an authorization sunset date (*i.e.*, April 1, 2028) for energization of the Project.

[3] The Proposed Route is also referred to as "Route 2" in the Environmental Routing Study.

[4] Alternative Route 3 and Alternative Route 4 are referred to as "Route 3" and "Route 4," respectively, in the Environmental Routing Study.

In addition, the Company is actively monitoring regulatory changes and requirements associated with the Northern Long Eared Bat ("NLEB") and how it could potentially impact construction timing associated with time of year restrictions ("TOYRs"). The U.S. Fish and Wildlife Service ("USFWS") previously indicated that it planned to issue final NLEB guidance to replace the interim guidance by April 1, 2024; however, the interim guidance has been extended by USFWS until late summer 2024. In the meantime, the USFWS issued several draft guidance documents for public review and comment. The Company actively is tracking updates from the USFWS with respect to the final guidance. Once issued, the Company plans to review and follow the final guidance to the extent it applies to the Company's projects. Until the final guidance is issued, the Company will continue following the interim guidance. For projects that may require additional coordination, the Company will coordinate with the USFWS.

The Company is also continuing to track potential regulatory changes associated with the potential up-listing of the Tricolored bat ("TCB"). On September 14, 2022, the USFWS published the proposed rule to the Federal Register to list the TCB as endangered under the Endangered Species Act ("ESA"). On April 1, 2024, the USFWS issued draft guidance for the NLEB and TCB for public review and comment. The USFWS also recently extended its Final Rule issuance target from September 2023 to September 2024. The Company is actively tracking this ruling and evaluating the effects of potential outcomes on Company projects' permitting, construction, and in-service dates, including electric transmission projects.

I. NECESSITY FOR THE PROPOSED PROJECT

A. State the primary justification for the proposed project (for example, the most critical contingency violation including the first year and season in which the violation occurs). In addition, identify each transmission planning standard(s) (of the Applicant, regional transmission organization ("RTO"), or North American Electric Reliability Corporation) projected to be violated absent construction of the facility.

Response: The Project is necessary to provide interconnection to REC to serve its customer, the SpotsyTech Campus, a planned mixed-use technology park which includes a data center in Spotsylvania County, Virginia; to maintain reliable service for the overall growth in the Project area; and to comply with mandatory NERC Reliability Standards. See Attachment I.A.1.a for an overview map of the Proposed Route and the approximate boundary of the Fredericksburg-Ladysmith-Pinewood Load Area, and Attachment I.A.1.b for a zoomed in map of the Project, including the location of the mixed-use technology park which includes a data center.

Dominion Energy Virginia's transmission system is responsible for providing transmission service: (i) for redelivery to the Company's retail customers; (ii) to Appalachian Power Company, Old Dominion Electric Cooperative, Northern Virginia Electric Cooperative, Central Virginia Electric Cooperative, and Virginia Municipal Electric Association for redelivery to their retail customers in Virginia; and (iii) to North Carolina Electric Membership Corporation and North Carolina Eastern Municipal Power Agency for redelivery to their customers in North Carolina (collectively, the "Dom Zone"). The Company needs to be able to maintain the overall, long-term reliability of its transmission system to meet its customers' evolving power needs in the future.

Dominion Energy Virginia is part of the PJM Interconnection, L.L.C. ("PJM") regional transmission organization, which provides service to a large portion of the eastern United States. PJM currently is responsible for ensuring the reliability of and coordinating the movement of electricity through all or parts of Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia, and the District of Columbia. This service area has a population of approximately 65 million and on August 2, 2006, set a record high of 165,563 megawatts ("MW") for summer peak demand, of which Dominion Energy Virginia's load portion was approximately 19,256 MW. On July 28, 2023, the Company set a record high of 21,993 MW for summer peak demand. On December 24, 2022, the Company set a winter peak and all-time record demand of 22,189 MW. Based on the 2024 PJM Load Forecast, the Dominion Energy Zone is expected to grow with average growth rates of 5.6%

summer and 5.1% winter over the next 10 years compared to the PJM average of 1.7% and 2.0% over the same period for the summer and winter, respectively.[5]

Dominion Energy Virginia is also part of the Eastern Interconnection transmission grid, meaning its transmission system is interconnected, directly or indirectly, with all of the other transmission systems in the United States and Canada between the Rocky Mountains and the Atlantic Coast, except for Quebec and most of Texas. All of the transmission systems in the Eastern Interconnection are dependent on each other for moving bulk power through the transmission system and for reliability support. Dominion Energy Virginia's service to its customers is extremely reliant on a robust and reliable regional transmission system.

NERC has been designated by the Federal Energy Regulatory Commission ("FERC") as the electric reliability organization for the United States. Accordingly, NERC requires that the planning authority and transmission planner develop planning criteria to ensure compliance with NERC Reliability Standards. Mandatory NERC Reliability Standards require that a transmission owner ("TO") develop facility interconnection requirements that identify load and generation interconnection minimum requirements for a TO's transmission system, as well as the TO's reliability criteria.[6]

Federally mandated NERC Reliability Standards constitute minimum criteria with which all public utilities must comply as components of the interstate electric transmission system. Moreover, the Energy Policy Act of 2005 mandates that electric utilities follow these NERC Reliability Standards and imposes fines on utilities found to be in noncompliance up to $1.3 million per day per violation.

PJM's Regional Transmission Expansion Plan ("RTEP") is the culmination of a FERC-approved annual transmission planning process that includes extensive analysis of the electric transmission system to determine any needed improvements.[7] PJM's annual RTEP is based on the effective criteria in place at the time of the analyses, including applicable standards and criteria of NERC, PJM, and local reliability planning criteria, among others.[8] Projects identified through the RTEP process are developed by the TO in coordination with PJM, and are

[5] A copy of the 2024 PJM Load Report is available at the following: https://www.pjm.com/-/media/library/reports-notices/load-forecast/2024-load-report.ashx. See, in particular, page 3 (PJM) and pages 28, 35, and 39 (DOM Zone).

[6] The Company's Transmission Planning Criteria (effective January 1, 2024) can be found in Attachment 1 of the Company's Facility Interconnection Requirements ("FIR") document, which is available online at https://cdn-dominionenergy-prd-001.azureedge.net/-/media/pdfs/virginia/parallel-generation/facility-connection-requirements.pdf?la=en&rev=f280781e90cf47f69ea526c944c9c347&hash=82DD2567D0B033C47536134B8C4D5C5E.

[7] PJM Manual 14B (effective July 1, 2021) focuses on the RTEP process and can be found at https://www.pjm.com/-/media/documents/manuals/m14b.ashx.

[8] See PJM Manual 14B, Attachment D: PJM Reliability Planning Criteria. *See supra*, n. 4.

presented at the Transmission Expansion Advisory Committee ("TEAC") meetings prior to inclusion in the RTEP that is then presented for approval by the PJM Board of Managers (the "PJM Board"). PJM's generation deliverability test for reliability analysis ensures the transmission system is capable of delivering the aggregate system generating capacity at peak load with all firm transmission service modeled. Generation deliverability is a critical system condition test that is part of the PJM reliability standards and, thus, also is required to be satisfied by NERC Reliability Standards.

Outcomes of the RTEP process include three types of transmission system upgrades or projects: (i) baseline upgrades are those that resolve a system reliability criteria violation, which can include planning criteria from NERC, Reliability-First Corporation, SERC Reliability Corporation, PJM, and TOs; (ii) network upgrades are new or upgraded facilities required primarily to eliminate reliability criteria violations caused by proposed generation, merchant transmission, or long-term firm transmission service requests; and (iii) supplemental projects are projects initiated by the TO in order to interconnect new customer load, address degraded equipment performance, improve operational flexibility and efficiency, and increase infrastructure resilience. While supplemental projects are included in the RTEP, the PJM Board does not provide formal approval for such projects. As discussed in more detail below, the Project is classified as a supplemental project initiated by the TO to interconnect REC's customer, the SpotsyTech Campus. See Section I.J for a discussion of the PJM process as it relates to this Project.

The proposed Project is needed to meet the load requirements of the planned new SpotsyTech Campus in Spotsylvania County; to accommodate future load growth in the area; and to comply with mandatory NERC Reliability Standards. The data center market continues to rapidly expand in Virginia, and the growing demand for data center space in Virginia has led the industry to locations within the central Virginia region. The combination of competitive colocation/cloud environment, fiber connectivity, strategic geographic location, low risk of business disruptions, affordable and reliable power, and the business climate in Virginia, has created the largest market for data center capacity in the United States. This Project is in this concentrated area of Spotsylvania County.

On November 21, 2023, ODEC, on behalf of REC submitted a DP request to the Transmission Planning group for a new 230 kV delivery point to serve the planned SpotsyTech Campus which includes a data center development. The data center development is located just north of Riverview Elementary School on North Roxbury Mill Road. See Attachment I.A.2. The DP request ultimately projects a load of 295 MW by 2032.

The SpotsyTech Campus is the immediate load driver for the Project. The technology park will contain a data center along with mixed-use industrial customers. REC has projected an ultimate load of approximately 295 MW.

To meet this demand, the Company proposes to:

- Construct a new 230 kilovolt ("kV") delivery point ("DP") switching station ("Tributary Station"), which will provide interconnection to REC to serve its customer, the SpotsyTech Campus, a planned mixed-use technology park which includes a data center; and

- Extend the Company's existing 230 kV Line #2090 (Fredericksburg — Ladysmith CT) by constructing a new double circuit overhead 230 kV line on new approximately 100-foot-wide right-of-way by cutting the Company's existing 230 kV Line #2090 (Fredericksburg — Ladysmith CT) at the proposed Structure #2090/91A[9] ("#2090 Tap") (the new double circuit overhead 230 kV line is referred as "230 kV Line #2090 extension"). The cut in will result in (i) new 230 kV Line #2404 from New Post to Tributary Station, and (ii) 230 kV Line #2090 from Ladysmith CT to Tributary Station.[10] From the cut-in location at the #2090 Tap, the 230 kV Line #2090 extension will extend for approximately 2.4 miles to the Tributary Station.

The Company identified an approximately 2.4-mile overhead proposed route from Structure #2090/91A to the proposed Tributary Station (the "Proposed Route").[11] The Company also identified two overhead alternative routes ("Alternative Route 3" and "Alternative Route 4").[12] The Company is proposing these three routes for Commission consideration and notice. Discussion of the Proposed Route and Alternative Routes, as well as other overhead routes that the Company studied but ultimately rejected ("Alternative Route 1" and "Alternative Route 5"), is provided in Section II of the Appendix and discussed in more detail in the Environmental Routing Study (or "Routing Study") included with the Application.

Attachment I.A.3 provides the existing one-line diagram of the transmission system in the Fredericksburg-Ladysmith-Pinewood Load area as of September

[9] Structure #209091A is a proposed structure to be constructed between existing Structures #2090/91 and #2090/92 of Line #2090.

[10] Segments of Line #2090 (Fredericksburg – Ladysmith CT) will be renumbered several times as a result of other projects in the Fredericksburg – Ladysmith CT corridor. Line #2090 will be renumbered to 230 kV Line #2301 between Fredericksburg and Lee's Hill Substations, and to 230 kV Line #2335 between Lee's Hill and New Post Substations. After this Project is completed, 230 kV Line #2090 will again be renumbered to Line #2404 between New Post and Tributary Stations, with existing 230 kV Line #2090 extending between Tributary Station and Ladysmith CT only. See Attachments I.A.3, I.A.4, and I.A.5 for one-line diagrams of: (i) the existing transmission system in the Project load area, (ii) the Project load area after the New Post and Lee's Hill Substations are built, and (iii) the Project load area after the Project is energized.

[11] The Proposed Route is also referred to as "Route 2" in the Environmental Routing Study.

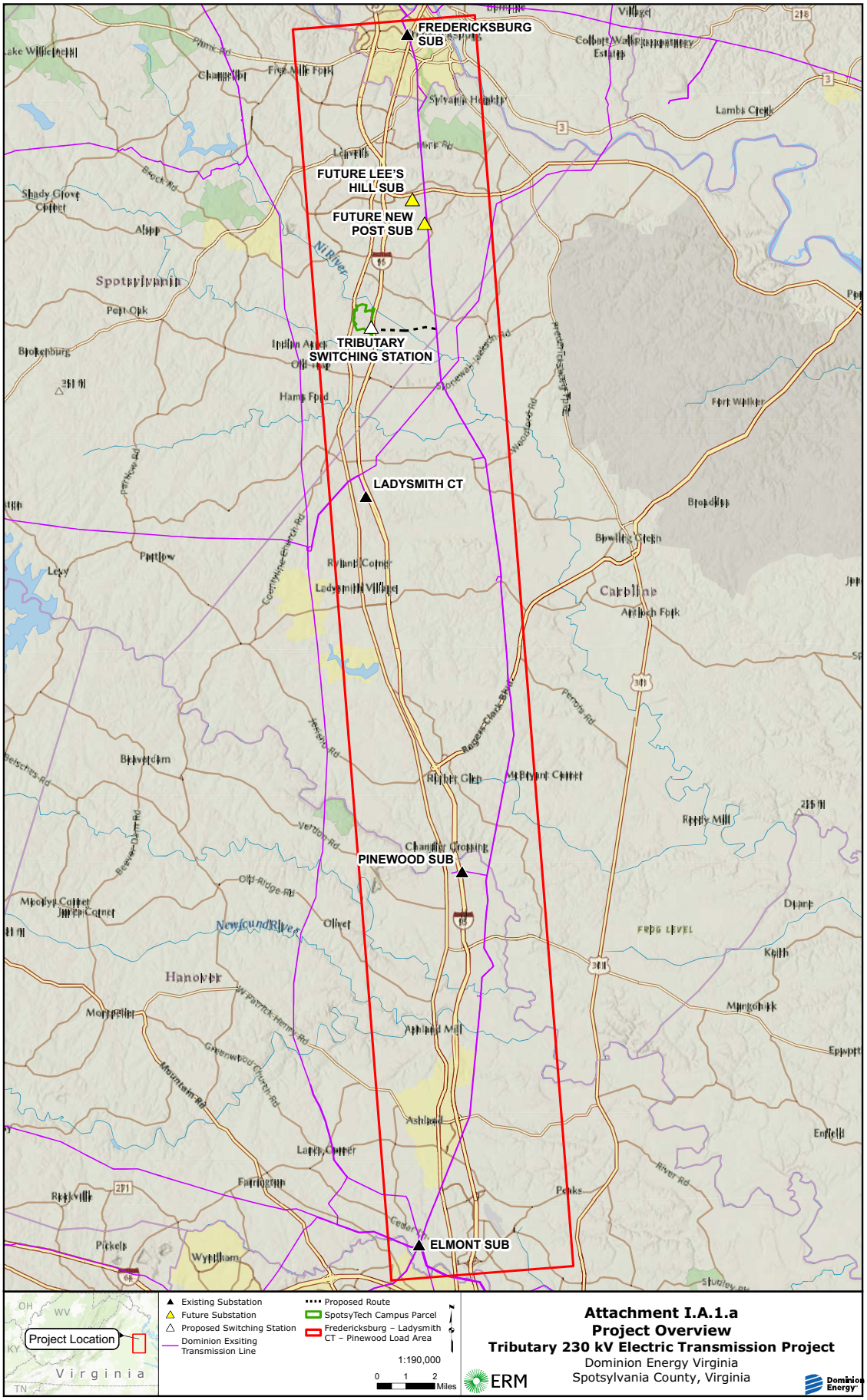
[12] Alternative Route 3 and Alternative Route 4 are referred to as "Route 3" and "Route 4," respectively, in the Environmental Routing Study.

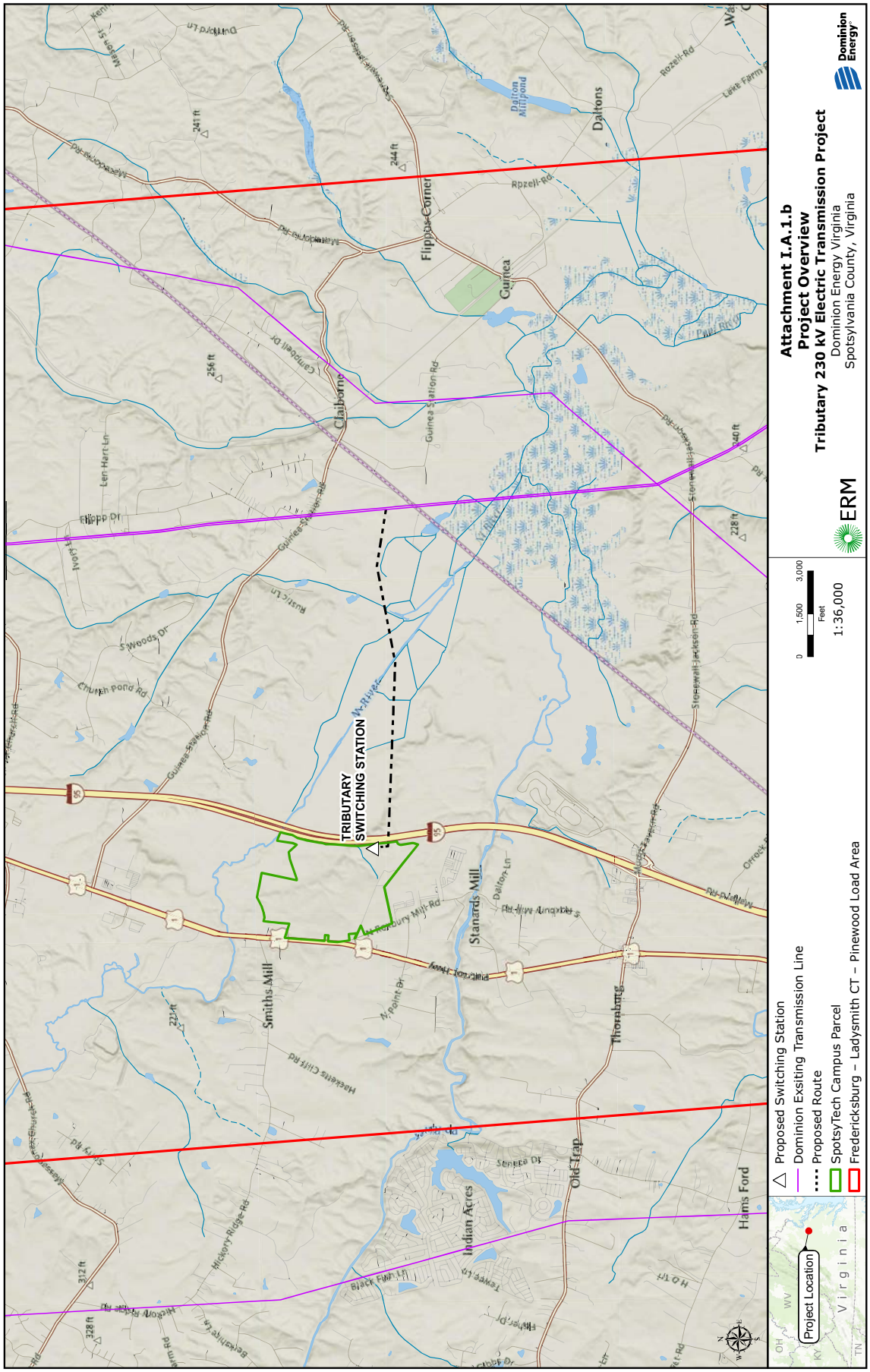
2024. Attachment I.A.4 provides the one-line diagram for the load area after the New Post and Lee's Hill Substations are built in late 2025. Attachment I.A.5 provides the one-line diagram for the load area after the Tributary Station is energized in April 2027.

The Company proposes to construct the Tributary Station with a four-breaker ring bus configuration. The station will serve 295 MW of REC load.

To energize the Tributary Station, the Company proposes to cut the existing 230 kV Line #2090 (Ladysmith CT – Fredericksburg) at the proposed Structure #2090/91A and construct a new double circuit overhead 230 kV transmission line approximately 2.4 miles long to the proposed Tributary Station (230 kV Line #2090 extension). Different sections of Line #2090 will be renumbered multiple times before energizing Tributary Station. After energizing New Post Substation in 2025, Line #2090 will proceed between New Post and Ladysmith CT. The cut-in and construction of the Project will result in the 230 kV Line #2404 (New Post – Tributary) (approximately 9.4 miles) and 230 kV Line #2090 (Tributary – Ladysmith CT) (approximately 3.2 miles).

In summary, the proposed Project is needed to provide requested transmission service to REC and its customer, the SpotsyTech Campus, a mixed-use technology park which includes a data center; to maintain reliable service for the overall growth in the Project area; and to comply with mandatory NERC Reliability Standards.


FREDERICKSBURG SUB
FUTURE LEE'S HILL SUB
FUTURE NEW POST SUB
TRIBUTARY SWITCHING STATION
LADYSMITH CT
PINEWOOD SUB
ELMONT SUB
Project Location
Existing Substation
Future Substation
Proposed Switching Station
Dominion Exsiting Transmission Line
Proposed Route
SpotsyTech Campus Parcel
Fredericksburg – Ladysmith CT – Pinewood Load Area
1:190,000
0 1 2 Miles
Attachment I.A.1.a
Project Overview
Tributary 230 kV Electric Transmission Project
Dominion Energy Virginia
Spotsylvania County, Virginia
ERM
Dominion Energy


TRIBUTARY
SWITCHING STATION
Claiborne
Guinea
Flippins Corner
Daltons
Stanards Mill
Smiths Mill
Thornburg
Old Trap
Indian Acres
Hams Ford
Proposed Switching Station
Dominion Exsiting Transmission Line
Proposed Route
SpotsyTech Campus Parcel
Fredericksburg – Ladysmith CT – Pinewood Load Area
Project Location
0
1,500
3,000
Feet
1:36,000
Attachment I.A.1.b
Project Overview
Tributary 230 kV Electric Transmission Project
Dominion Energy Virginia
Spotsylvania County, Virginia
ERM
Dominion Energy

REQUEST/NOTIFICATION FOR
CHANGES IMPACTING DOMINION FACILITIES

SECTION I – GENERAL Date: 11 / 21/ 2023 Revision No.: 0

Requestor Name: Old Dominion Electric Cooperative

Requestor Address: 4201 Dominion Blvd, Suite 300

Glen Allen, Virginia 23060

Name of Contact Person: Dan Watkins Coop Member Contact Person: Craig Timson REC 540-891-5834

Contact's Phone: 804-968-4096 ext. Contact's Cell: 804-314-6047

Contact's Fax: - - Contact's Email: dwatkins@odec.com

Signature below authorizes Dominion to proceed with design, engineering, and estimation of Project cost as appropriate for Dominion to evaluate and respond to this request. This authorization is pursuant and subject to all terms and conditions of the Agreement of which this Appendix is a part.

Authorizing Signature: Kevin C. Miller Auth. Date: 11 /21/ 2023

Printed Name: Kevin Miller Phone: 804-968-4040

Title: Vice President of Engineering

SECTION II – DESCRIPTION OF REQUEST

Name of Delivery Point:	River View
Brief Description of Request: (attach detail)	This for construction Delivery Point request is a follow up to the engineering only request for LC Riedhill in May of 2023. Dominion determined that the load was feasible and the customer has director REC to submit this for construction delivery point request. The load data has not changed since the engineering only request. This load is a combination of manufacturing and warehouse as well as data center.
Brief Reasoning for Request: (attach detail)	REC has received a request for a new load in Spotsylvania County
Delivery Point Location: (attach detail if DP is new)	There is a site layout attached the this request. .The site is located at approximately 38.16103048779047, -77.51493408292343 just North of the Riverview Elementry School on North Roxbury Mill Road.
Noteworthy Load Characteristics: (large motors, large fluctuating loads, large harmonic-producing loads, etc.)	There is a detailed load ramp attached to this request.

PRESENT DELIVERY POINT DATA:

Present Delivery Point Voltage: N/A

Present Maximum kVA Capacity of Delivery Point Facilities:

Present Summer Peak kW Demand: Present Summer Peak kVAR Demand:

Present Winter Peak kW Demand: _____ Present Winter Peak kVAR Demand: _____

ANTICIPATED NEW DELIVERY POINT FACILITES DATA:

New Delivery Point Voltage: TBD

New Peak kVA Capacity of Delivery Point Facilities: 295,000

Peak kW and rkVA During First Three Years Following Implementation and Highest Peak Within Ten Years:

	Initial Year:	Second Year:	Third Year:	Highest in First Ten Years:
Enter Year ➔	2025	2026	2027	2035
Summer Peak kW:	7,000	47,000	108,000	295,000
Summer Peak rkVA:				
Winter Peak kW:				
Winter Peak rkVA:				

Delivery Point Facilities Route:
(attach detail if new line extension is involved)

Additional Comments: The customer has requested the full 295 MWs by 2032.

SECTION III – CUSTOMER'S EQUIPMENT

Transformer Primary Voltage: _____ Transformer Secondary Voltage: _____

Transformer Nameplate Capacity: _____ Temperature Rise: _____

Transformer Taps: _____

Connection (e.g. Wye-Wye): _____

Transformer Impedance: _____

Isolation Device Type and Rating: _____

Protection Device Type and Rating: _____

Required Attachments: [1] One-line diagram [2] Transformer test report [3] Transformer loss curve
[4] Operating procedures description [5] Protection scheme functional diagram
[6] Protection Device information (including device types, serial and model numbers, relay settings, etc.)

SECTION IV – TIMING

Request included in Customer's planning documents submitted to Dominion on:

Most Recent Submission: 5 /31/ 2023 Second Most Recent Submission: / / 20

Expected Date Customer's Construction to Commence: 1 /1/ 2025

Expected Completion Date of Customer Work: 6 /1/ 2025

Date Requested for Dominion Construction to Commence: / / 20

Requested Completion Date of Dominion Work (De-energized): / / 20

Requested Date to Energize: **(See Note)** 6 /1/ 2025

Other Milestones:

NOTE: If the "Requested Date to Energize" is marked as (E), then the firm date ultimately supplied must be on or after the estimated date, unless an earlier firm date is mutually agreed-upon prior to submission of the revised request form.

(E) = Estimated

N/A = Not Available

TBD = To Be Determined

SpotsyTechnoCampus, LLC

1025 Connecticut Avenue NW,
Suite 711
Washington D.C. 20036

SpotsyTech Campus Cover Letter for Power Delivery

L.C. Riedhill, through its special purpose vehicle SpotsyTechnoCampus LLC, owns the property also known as SpotsyTech Campus.

SpotsyTech Campus is a 314-acre property, zoned I-1, suited for industrial and a data center development, located in Central Virginia (Spotsylvania County), within driving distance to the major cities of Richmond (VA) and Washington (DC), with up to 216 developable contiguous acres, adjacent to I-95 and Route 1.

The Project is planned to include approximately 1,887,500 square feet of data center space and 912,500 square feet of industrial space targeted for distribution and logistics users as well as light manufacturing users.

The development will be phased. Depending on market demand, the startup phase will include 412,500 SF of industrial space and a data center building of 200,000 SF with a power capacity of 30 MW.

The startup phase is expected to be completed by the end of 2025 and fully operational in Q1/Q2 2026.

The subsequent phases on the property will be built according to market demand. The project is expected be completed by year 2032.

The total capacity required at completion and full occupancy expected is just under 300 MW.

Approximately 283 MW will be dedicated to the data center use while the remaining capacity will be dedicated to the other site uses.

SpotsyTechnoCampus acknowledges that the cost incurred by REC and/or Dominion Energy during the time required to conduct the feasibility study will be borne by SpotsyTechnoCampus LLC. This amount is understood to be approximately $80,000.00.

Along with this cover letter, you will find the load ramp schedule of the property as well as a conceptual site plan produced by our architects.