COMMONWEALTH OF VIRGINIA
STATE CORPORATION COMMISSION

APPLICATION OF

VIRGINIA ELECTRIC AND POWER COMPANY **CASE NO. PUR-2023-00168**

For approval and certification of electric transmission facilities: Carson-Locks 230 kV Line #249 Partial Rebuild Project

REPORT OF C. MITCH BURTON, JR., HEARING EXAMINER

March 29, 2024

This case involves Dominion's request for approval of an electric transmission line project that would rebuild approximately seven miles of existing 230 kilovolt line, with additional related construction, in Dinwiddie County and Petersburg. Based on the filings in this case, I recommend approval of the proposed rebuild project, subject to certain conditions. The rebuild project is needed to comply with mandatory reliability standards.

History of the Case

On September 27, 2023, Virginia Electric and Power Company d/b/a Dominion Energy Virginia ("Dominion" or "Company") filed with the State Corporation Commission ("Commission") an application for approval and for a certificate of public convenience and necessity ("CPCN") to construct and operate electric transmission facilities in Dinwiddie County and the city of Petersburg, Virginia ("Application"). Specifically, the Application proposes that the Company would:

- wreck and rebuild, entirely within existing right-of-way or on Company-owned property, approximately 6.7 miles of 230 kilovolt ("kV") Carson-Locks Line #249 on single-circuit, weathering steel, H-Frame structures between Structures #249/86 and #249/22. Proposed structures #249/22 and #69/21 will be single-circuit monopoles;

- reconductor approximately 2.5 miles of Line #249, using existing transmission structures, from Locks Substation to Structure #249/22;

- reconductor approximately 0.13 miles of Line #249, using existing transmission structures, from Structure #249/93 to Carson Substation;

- install a 0.25-mile temporary line, requiring the acquisition of temporary right-of-way, and replace the existing Chaparral terminal tap structure;

- install temporary facilities to allow Line #69 to temporarily operate at 230 kV to keep Chaparral Substation energized during the rebuild of Line #249;

- complete work at Carson and Locks Substations to support the new line rating; and

- energize the existing Carson 500-230 kV Transformer #1.[1]

On October 30, 2023, the Commission issued an Order for Notice and Comment that, among other things, directed Dominion to provide notice of its Application; established a procedural schedule, including the opportunity for interested persons to file comments, notices of participation, and requests for hearing; directed the Commission's Staff ("Staff") to investigate the Application and file a report summarizing Staff's investigation; and appointed a Hearing Examiner to conduct all further proceedings in this matter on behalf of the Commission and to file a report.

On December 12, 2023, the Department of Environmental Quality ("DEQ") filed its report on Dominion's Application ("DEQ Report"), which included a Wetland Impact Consultation provided by DEQ's Office of Wetlands and Stream Protection.

On December 14, 2023, Dominion filed proof of notice, as required by the Order for Notice and Comment.

On February 28, 2024, Staff filed its report on the Application.

On March 13, 2024, Dominion filed its rebuttal testimony.

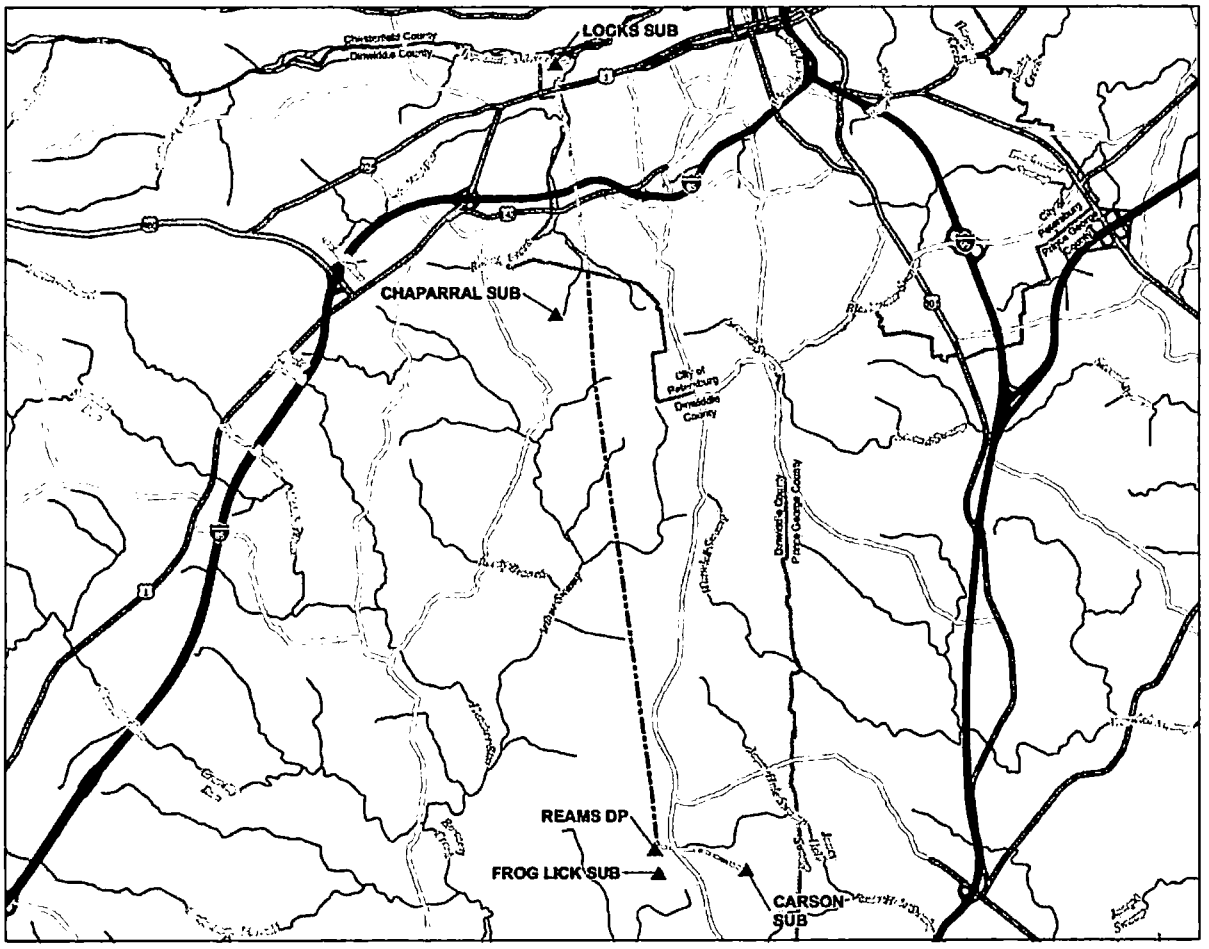
On March 27, 2024, Dominion filed supplemental testimony.

No parties intervened in this proceeding and no public comments were filed.

[1] The Company referred to these components collectively as the "Rebuild Project." Application at 3. The Application further requested that the Commission approve, pursuant to § 56-46.1, the construction of the Rebuild Project and grant a CPCN for the Rebuild Project. *Id.* at 7. The Application and the Staff Report are in agreement that the Rebuild Project comprises of elements that the Company considers to be "ordinary extensions or improvements in the usual course of business" pursuant to § 56-265.2 A 1. Staff Report at 6-7. Accordingly, if the Commission agrees, although the Company identified these components as part of the defined "Rebuild Project," and seeks approvals for the "Rebuild Project," Application at 7, these parts of the Rebuild Project would not require approvals under § 56-46.1 or § 56-265.1 *et seq.* *See* Staff Report at 7; Application at 4 n.2.

Summary of the Filings

As illustrated near the top of the map excerpt below,[2] Dominion's existing Locks Substation is located in the northwest corner of the city of Petersburg, between Central State Hospital and the Appomattox River. As depicted by the dotted line central to the map below, Dominion has three existing transmission lines that run parallel to each other from the Locks Substation to the Company's Reams Delivery Point in eastern Dinwiddie County. Two of these lines, Line #249 and #2002, are 230 kV and the third, Line #69, is 115 kV.[3]



The Application proposed to rebuild, entirely within existing right-of-way, the 6.7-mile portion of Line #249 from the Petersburg border to the Reams Delivery Point, as depicted by the darker dotted line above. The Application also proposed work at the Carson and Locks Substations to support a new line rating (collectively, the "Rebuild Project").[4] The Rebuild Project would replace 67 structures, averaging 62 feet tall, with 69 structures, averaging 68 feet

[2] Application, Appendix at 177. *See also id.* at 15.

[3] *See, e.g., Id.* at 15, 36, 135.

[4] Application at 3.

tall.[5] Most of the construction would replace wood or weathering steel H-frame structures with weathering steel H-frame structures.[6]

The Application also identified construction that Dominion plans to undertake in conjunction with the proposed rebuild, but which the Company does not believe requires Commission approval. Such construction includes: (1) reconductoring the 2.5-mile portion of Line #249 from the Petersburg border to the Locks Substation, as depicted by the lighter dotted line towards the top of the map excerpt above; (2) reconductoring the 0.13-mile portion of Line #249 from the Reams Delivery Point to the Carson Substation, as depicted by the lighter dotted line towards the bottom of the map excerpt above; and (3) construction needed to keep Chaparral Substation energized while Line #249 is rebuilt, including (i) construction of a 0.25-mile temporary tap line, in new temporary right-of-way, and replacement of the Chaparral terminal tap structure, (ii) the replacement of three structures on Line #69 and the installation of temporary facilities to allow Line #69 to temporarily operate at 230 kV, and (iii) energization of the existing Carson 500-230 kV Transformer #1.[7]

Dominion's Direct Testimony

The Company's Application, Appendix, and DEQ Supplement were sponsored by: **Alex Reilly**, Engineer III in the Electric Transmission Planning Department for Dominion; **Daniel J. Cabonor**, Engineer III in the Electric Transmission Line Engineering Department of Dominion; **Aaron C. Kuhn**, an employee from Burns and McDonnell whom Dominion engaged as a substation engineering contractor; and **Blair Parks**, Siting and Permitting Specialist for Dominion.

Mr. Reilly sponsored or co-sponsored, among other things, the Company's justification for the Rebuild Project.[8] Parts of the Appendix he co-sponsored indicate that the Rebuild Project is needed to resolve a projected overload of Line #249 identified during PJM's 2026 summer generator deliverability analysis.[9] He indicated that the Company identified no feasible project alternatives to the proposed Rebuild Project.[10]

Mr. Cabonor sponsored or co-sponsored, among other things,[11] Dominion's cost

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[5] Application, Appendix at 59-61. The estimated heights of the new structures are based on the Company's conceptual design and will be subject to final engineering. Approximate structure heights are above ground level. *Id.* at 59.

[6] Application, Appendix at 12, 53, 59-61. All the Rebuild Project's structures would be single-circuit structures. *Id.* at 12. The Application identifies the three new Line #69 structures as one monopole double-dead-end angle structure and two direct embed weathering steel two-pole H-frame anchor structures. *Id.* at 12.

[7] *See, e.g.,* Application at 3-4 nn.1-3.

[8] This includes Section I of the Appendix except for I.I and I.L, in addition to Sections II.A.3 and II.A.10. Reilly Direct Testimony at 2. All of Dominion's direct witnesses co-sponsored the Appendix's executive summary.

[9] Application, Appendix at 3, 5-6.

[10] *Id.* at 11.

[11] Mr. Cabonor sponsored or co-sponsored Sections I.A, I.F, I.I, I.L, II.A.5, II.B.1 to II.B.5, IV, and V.A of the Appendix. Cabonor Direct Testimony at 3.

estimate for the Rebuild Project;[12] drawings depicting the existing and proposed structures,[13] the line design and operational features;[14] estimated structure heights (existing and proposed);[15] and analysis of electric and magnetic field levels ("EMF").[16]

The Company provided EMF calculations for the existing Lines #249, #2002, and #69, and for these lines after construction of the Rebuild Project.[17] Based on the conclusions of scientific reviews of EMF levels associated with the Rebuild Project, the Company determined that no adverse health effects are anticipated to result from the operation of the Rebuild Project.[18]

Mr. Kuhn sponsored the details of the station work associated with the Rebuild Project and the Company's cost estimate for the station work.[19]

At the existing Carson and Locks Substations, Dominion would upgrade wave traps, circuit breaker switches, and line leads. At the Locks Substation, Dominion would also upgrade capacitively coupled voltage transformers and replace 1200/5 current transformers with 34000/5 current transformers to lift primary, secondary, and relay trip ratings on such transformers.[20]

The Company estimates the total cost of the proposed Rebuild Project is approximately $25 million. Approximately $23.7 million of this estimate is for transmission-related work, while $1.7 million is for station-related work.[21]

Ms. Parks sponsored, among other things, the Company's environmental evaluation of the Rebuild Project, including the DEQ Supplement to the Application.[22]

The Company assessed the potential environmental impact of the Rebuild Project, including the potential impact on scenic assets and historic properties. The Rebuild Project area is largely characterized as agricultural and low-density residential.[23] By Dominion's count, approximately 39 dwellings are within 500 feet of the centerline of the Rebuild Project, 13 dwellings are within 250 feet of the centerline, and no dwellings are within 100 feet of the

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[12] Application, Appendix at 17.

[13] *Id.* at 36-37, 51-57 (noting that drawings of proposed structures are preliminary and subject to change based on final design).

[14] *Id.* at 48-49.

[15] *Id.* at 59-61.

[16] *Id.* at 154-75.

[17] *Id.* at 154-56.

[18] *Id.* at 158.

[19] Mr. Kuhn sponsored or co-sponsored Sections I.I and II.C of the Appendix. Kuhn Direct Testimony at 3.

[20] Application, Appendix at 102.

[21] *Id.* at 17 (all in 2023 dollars).

[22] In addition to the DEQ Supplement, Ms. Parks sponsored or co-sponsored Sections II.A.1 to II.A.4, II.A.6 to II.A.9, II.A.11, II.A.12, II.B.5, II.B.6, III, and V of the Appendix. Parks Direct Testimony at 3-4.

[23] Application, Appendix at 103.

centerline.[24] Dominion concluded that there would be no or minimal impact on architectural resources that are either listed, eligible for listing, or potentially eligible, which are within 1.5 miles of the Rebuild Project. Seven of these resources are battlefields that the existing right-of-way and line traverse.[25]

Ms. Parks sponsored visual simulations, including simulations for battlefields within 1.5 miles from the Rebuild Project.[26] In addition to the simulations, Dominion made available a tool commonly referred to as the Backyard Application, to allow residents who live near the Rebuild Project area to compare the height of current structures with the height of proposed structures.[27]

DEQ Report

In the DEQ Report, DEQ identified the permits and approvals the Rebuild Project likely would require.[28] The DEQ Report also contained a summary of recommendations based on information and analysis submitted by reviewing agencies.[29] The recommendations contained in the DEQ Report, which are in addition to requirements of federal, state, or local law or regulations, were summarized by DEQ as follows:[30]

- Conduct an on-site delineation of all wetlands and stream crossings within the project area with verification by the U.S. Army Corps of Engineers, using accepted methods and procedures, and follow DEQ's recommendations to avoid and minimize impacts to wetlands and streams.

- Ensure that the project operates in a manner consistent with air pollution control practices for minimizing emissions, especially during periods of high ozone.

- Reduce solid waste at the source, reuse it and recycle it to the maximum extent practicable.

- Coordinate with the Department of Conservation and Recreation's Division of Natural Heritage ("DCR-DNH") on its recommendations to submit project updates and protect documented natural heritage resources, including rare plants, within the right-of-way by taking measures to protect them during construction; developing and implementing an

[24] *Id.* at 104.

[25] *See, e.g.*, Application, DEQ Supplement at Attachment 2.I.2, pp. 7-8.

[26] Application, Appendix at 80-101.

[27] *Id.* at 118.

[28] DEQ Report at 3-5.

[29] *Id.* at 9-24.

[30] *Id.* at 6-7. The Department of Conservation and Recreation ("DCR") recommendations discussed in this Hearing Examiner's Report are from DCR's Division of Natural Heritage, often referred to in filings as DCR-DNH.

invasive species management plan; and executing suggested restoration and maintenance practices.

- Coordinate with the Virginia Outdoors Foundation for additional review if the project area changes or the project does not begin within 24 months.
- Coordinate with the Department of Historic Resources regarding its recommendations to protect historic and archaeological resources.
- Coordinate with the Virginia Department of Health, as necessary, regarding its recommendation to protect water supplies.
- Follow the principles and practices of pollution prevention to the maximum extent practicable.
- Limit the use of pesticides and herbicides to the extent practicable.

Staff Report

Staff presented its findings and recommendations through a report prepared and sponsored by **Yousuf Malik**. Mr. Malik evaluated, among other things, the need asserted for the Rebuild Project and various details of the Rebuild Project. Staff concluded that the Rebuild Project is needed to comply with North American Electric Reliability Corporation ("NERC") standards and to provide reliable service to the Petersburg Load Area.[31] He stated that Staff verified the power flow modeling provided by the Company showing that the Rebuild Project is needed to resolve overloading issues on Line #249.[32] Staff agreed with the Company's assertion that projected load reductions from demand side management activities does not alter the need for the Rebuild Project.[33]

Mr. Malik summarized environmental impacts of the Rebuild Project and addressed environmental justice considerations.[34] He indicated that Staff agreed: (1) the proposed Rebuild Project avoids or reasonably minimizes impact on environmental, historic, and scenic resources; and (2) the Rebuild Project does not appear to adversely impact any goal established by the Virginia Environmental Justice Act ("VEJ Act").[35] Staff did not oppose Dominion's requested CPCN for the Rebuild Project.[36]

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[31] Staff Report at 5.

[32] *Id.*

[33] *Id.*

[34] *Id.* at 11-15.

[35] *Id.* at 16.

[36] *Id.*

Dominion's Rebuttal Testimony

Dominion offered the rebuttal testimony of **Virginia B. Gills**, an Environmental Specialist III for the Company. Ms. Gills provided one clarification to the Staff Report and objected to two recommendations in the DEQ Report.

Ms. Gills clarified that Staff's stated impact of the Rebuild Project on 28.98 acres of palustrine emergent wetlands, 1.08 acres of palustrine scrub-shrub wetlands, and 2.06 acres of open water, is with respect to "the total amount of jurisdictional resources within the proposed Rebuild Project corridor, not the impacts proposed by the Rebuild Project."[37]

With respect to the DEQ Report, she recommended rejection of DCR-DNH's recommendation that the Company develop and implement an invasive species plan to be included as part of the maintenance practices for the right-of-way and that such plan include an invasive species inventory for the Rebuild Project area,[38] because the Company has a comprehensive integrated vegetation management plan and is coordinating with DCR to address its concerns.[39] She also noted that, based on the Company's experience with species surveys and contractors, the estimated cost of this type of species survey could range between approximately $14,000 and $20,000 per mile.[40]

She recommended rejection of DEQ-Office of Pollution Prevention's ("DEQ-OPP") recommendation that the Company consider developing an effective environmental management system ("EMS"),[41] because the Company already has a comprehensive environmental management system manual in place to ensure a commitment to "complying with environmental laws and regulations, reducing risk, minimizing adverse environmental impacts, setting environmental goals, and achieving improvements in its environmental performance, consistent with the Company's core values."[42]

Applicable Law

Section 56-265.2 A 1 provides that "it shall be unlawful for any public utility to construct, enlarge or acquire ... facilities for use in public utility service, except ordinary extensions or improvements in the usual course of business, without first having obtained a certificate from the Commission that the public convenience and necessity require the exercise of such right or privilege." The construction of any overhead transmission line of 138 kV or more that requires a CPCN also requires compliance with § 56-46.1.[43]

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[37] Gills Rebuttal Testimony at 4.

[38] DEQ Report at 19-20.

[39] Gills Rebuttal Testimony at 5-7.

[40] *Id.* at 7.

[41] DEQ Report at 23.

[42] Gills Rebuttal Testimony at 7-8.

[43] Sections 56-265.2 A 1 and 56-46.1 J.

Section 56-46.1 A states, in part, as follows:

> Whenever the Commission is required to approve the construction of any electrical utility facility, it shall give consideration to the effect of that facility on the environment and establish such conditions as may be desirable or necessary to minimize adverse environmental impact. . . . In every proceeding under this subsection, the Commission shall receive and give consideration to all reports that relate to the proposed facility by state agencies concerned with environmental protection; and if requested by any county or municipality in which the facility is proposed to be built, to local comprehensive plans that have been adopted pursuant to Article 3 (§ 15.2-2223 *et seq.*) of Chapter 22 of Title 15.2. Additionally, the Commission (a) shall consider the effect of the proposed facility on economic development within the Commonwealth . . . and (b) shall consider any improvements in service reliability that may result from the construction of such facility.

Section 56-46.1 B further provides, in part, that:

> As a condition to approval the Commission shall determine that the line is needed and that the corridor or route chosen for the line will avoid or reasonably minimize adverse impact to the greatest extent reasonably practicable on the scenic assets, historic resources recorded with the Department of Historic Resources [("DHR")], and environment of the area concerned. To assist the Commission in this determination, as part of the application for Commission approval of the line, the applicant shall summarize its efforts to avoid or reasonably minimize adverse impact to the greatest extent reasonably practicable on the scenic assets, historic resources recorded with [DHR], and environment of the area concerned.

In addition, the Company is required to consider use of existing right-of-way when siting transmission lines. Section 56-46.1 C provides that "[i]n any hearing the public service company shall provide adequate evidence that existing rights-of-way cannot adequately serve the needs of the company." In addition, § 56-259 C provides that "[p]rior to acquiring any easement of right-of-way, public service corporations will consider the feasibility of locating such facilities on, over, or under existing easements of rights-of-way."

The VEJ Act sets forth that "[i]t is the policy of the Commonwealth to promote environmental justice and ensure that it is carried out throughout the Commonwealth, with a focus on environmental justice communities and fenceline communities."[44] As previously

[44] Section 2.2-235.

recognized by the Commission,[45] the Commonwealth's policy on environmental justice is broad, including "the fair treatment and meaningful involvement of every person, regardless of race, color, national origin, income, faith, or disability, regarding the development, implementation, or enforcement of any environmental law, regulation, or policy."[46]

Discussion

Ordinary Extensions

The Application proposed that certain work associated with the Rebuild Project qualifies as ordinary extensions or improvements in the usual course of business.[47] The work that Dominion plans to undertake in conjunction with the Rebuild Project, but which the Company does not believe requires Commission approval includes: (1) reconductoring the 2.5-mile portion of Line #249 from the Petersburg border to the Locks Substation, as depicted by the lighter dotted line towards the top of the map excerpt above; (2) reconductoring the 0.13-mile portion of Line #249 from the Reams Delivery Point to the Carson Substation, as depicted by the lighter dotted line towards the bottom of the map excerpt above; and (3) construction needed to keep Chaparral Substation energized while Line #249 is rebuilt, including (i) construction of a 0.25-mile temporary tap line, in new temporary right-of-way, and replacement of the Chaparral terminal tap structure, (ii) the replacement of three structures on Line #69 and the installation of temporary facilities to allow Line #69 to temporarily operate at 230 kV, and (iii) energization of the existing Carson 500-230 kV Transformer #1.[48]

The Staff Report, based on the information provided and the "Staff Guidance on Ordinary vs Non-Ordinary Extension Projects," concurred "that the work identified by the Company qualifies as an 'ordinary extension or improvement in the usual course of business.'"[49] The Staff Report considered that the permanent structure replacements on Line #69 do not exceed the height of the existing structures by more than 20 percent, and the ROW needed for the 0.25-mile tap line is temporary.[50]

Based on the filings in this case, I recommend a finding that the above-identified work constitutes "ordinary extensions or improvements in the usual course of business" under

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[45] *See, e.g., Application of Appalachian Power Company, For approval and certification of the Central Virginia Transmission Reliability Project under Title 56 of the Code of Virginia*, Case No. PUR-2021-00001, 2021 S.C.C. Ann. Rep. 368, 372, Final Order at 14 (Sept. 9, 2021); *Commonwealth of Virginia, ex rel. State Corporation Commission, Ex Parte: Establishing 2020 RPS Proceeding for Virginia Electric and Power Company*, Case No. PUR-2020-00134, 2021 S.C.C. Ann. Rep. 242, 252, Final Order at 25-26 (Apr. 30, 2021); *Commonwealth of Virginia, ex rel. State Corporation Commission, In re: Virginia Electric and Power Company's Integrated Resource Plan filing pursuant to Va. Code § 56-597 et seq.*, Case No. PUR-2020-00035, 2021 S.C.C. Ann. Rep. 190, 195, Final Order at 14-15 (Feb. 1, 2021).

[46] Section 2.2-234.

[47] *See* Application at 4 n.2.

[48] *See, e.g.*, Application at 3-4 nn.1-3.

[49] Staff Report at 7.

[50] *Id.*

§ 56-265.2 A 1. To the extent that the Commission agrees, any granted approvals need not extend to the above-identified components of the Rebuild Project.[51]

Need

The Application addressed the need for the Rebuild Project[52] and the Company's responsibility to maintain the overall, long-term reliability of its transmission system.[53] The Federal Energy Regulatory Commission ("FERC") has designated NERC as the organization responsible for electric reliability planning for the United States.[54] Federally mandated NERC Reliability Standards constitute minimum criteria with which all public utilities must comply as components of the interstate electric transmission system.[55] Dominion is a member of the regional transmission organization PJM.[56] PJM conducts an annual planning process ("RTEP") around the bulk transmission grid which includes the mandatory criteria of NERC.[57] The RTEP process identifies violations of applicable criteria and proposed upgrades.[58]

The Application represented that the Rebuild Project is a PJM baseline upgrade intended to resolve NERC-based reliability violations identified during the RTEP process.[59] Dominion characterized the Rebuild Project as necessary to resolve overloading issues on 230 kV Line #249 identified during PJM's 2026 Summer Generator Deliverability Analysis.[60] The Staff Report observed that by mid-2026, Line #249 would experience a thermal overload issue under a single contingency which involves the loss of Line #563 under Generator Deliverability conditions.[61] The current line rating is limited by 9.3 miles of 795 Aluminum Conductors Alloy Reinforced and aluminum conductor steel reinforced conductors, which have a summer emergency rating of 595 megavolt-amperes ("MVA").[62] The Rebuild Project is designed to

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[51] While the Application and Staff Report identify and group certain work as qualifying as ordinary extensions or improvements in the usual course of business, the Application did not specifically link which of the defined Rebuild Project components bulleted on page three of the Application represent ordinary extensions or improvements in the usual course of business. Based on the filings in this case, Finding Paragraph 9 of this Report identifies the components of the defined Rebuild Project that constitute ordinary extensions or improvements in the usual course of business.

[52] *See e.g.*, Application, Appendix at 3-22.

[53] *Id.* at 1.

[54] *Id.* at 2.

[55] *Id.*

[56] *Id.*

[57] *Id.*

[58] *Id.* at 2-3.

[59] *Id.* at 3.

[60] *Id.* at 3.

[61] Staff Report at 4.

[62] Application, Appendix at 8.

increase the line rating of Line #249 to a minimum summer emergency rating of 1573 MVA, which avoids the thermal overload problem identified by PJM.[63]

The Application provided a table with historical system peak loads and the anticipated summer and winter peaks loads.[64] The table represented that over the period of 2022 to 2031, the summer peak is forecasted to be a maximum of 1802 MWs, and the winter peak is forecasted to be a maximum of 2110 MWs.[65]

Forecast Load MW

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	max	min
Chesterfield - Summer	1704	1791	1795	1799	1802	1802	1802	1802	1802	1802	1802	1791
Chesterfield - Winter	2053	2092	2099	2101	2103	2103	2103	2103	2107	2110	2110	2092

Historic Load MW

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	max	min
Chesterfield - Summer	1686	1644	1629	1688	1744	1687	1617	1734	1714	1704	1744	1617
Chesterfield - Winter	1690	1784	2099	2231	1809	2129	2269	2269	1774	1666	2269	1666

	MAX	MIN
Peak Load Historic and Projected (summer and winter)	1617	2269

Highlighted cells used in application

Staff has reviewed and verified the power flow models that were provided by Dominion and confirmed that the Rebuild Project is necessary to resolve overloading issues on Line #249.[66] The Staff Report agreed that the Rebuild Project is needed to comply with NERC Reliability Standards.[67]

The Company represented that there are no feasible alternatives to the Rebuild Project.[68] The Company did conduct an analysis of Demand-Side Resources ("DSM") and its potential implications for the need of the Rebuild Project.[69] The Application broadly describes DSM as both energy efficiency and demand response programs that are designed to reduce load. The Application explained that PJM's forecasting, which is the basis for the need in this case, included existing energy efficiency programs in the forecast, but does not include an adjustment

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[63] *Id.*

[64] *Id.* at 8-9. The anticipated loads are based on the PJM 2023 Load Forecast.

[65] The Company clarified that the "Chesterfield" name shown in the table is used interchangeably with the "Petersburg Load Area." Reilly Supplemental Testimony at 3.

[66] Staff Report at 5.

[67] *Id.*

[68] Application, Appendix at 11.

[69] The Company is required to provide an analysis of DSM as incorporated into the Company's planning studies. *Id.*

for demand response programs.[70] Nonetheless, the Application stated that "[i]ncremental DSM also will not absolve the need for the Rebuild Project."[71] The Staff Report "concur[ed] with the Company that projected load reduction from DSM does not alter the need for the proposed Rebuild Project."[72]

Based on the filings, I conclude that Dominion has established that the Rebuild Project is needed to prevent a potential overloading event and to comply with mandatory NERC Reliability Standards. Accordingly, I find that the Company has demonstrated a reliability need that justifies the Rebuild Project.

Cost

The Company estimated the total cost of the proposed Rebuild Project, including the components that the Company presented as "ordinary course," is approximately $25.4 million. Approximately $23.7 million of this estimate is for transmission-related work, while $1.7 million is for station-related work.[73]

Route and Environmental Impact

The areas traversed by the lines included in the Rebuild Project are largely characterized as agricultural, low-density residential, with some industrial activity in the area.[74] Approximately 39 dwellings are within 500 feet of the centerline of the Rebuild Project, 13 dwellings are within 250 feet of the centerline, and no dwellings are within 100 feet of the centerline.[75] The Rebuild Project area includes approximately 147 acres of prime farmland and 19 acres of farmland of statewide importance.[76] Dominion has stated that it will work with landowners on final structure placement to minimize the effect on farming operations.[77] No impacts to forest are expected, as the existing right-of-way is already cleared and maintained for 230 kV transmission line operations.[78]

The existing right-of-way – and therefore the proposed Rebuild Project – crosses seven historic battlefield resources that are eligible or potentially eligible for listing. Two additional battlefield resources, one listed and the other potentially eligible, are within 0.4 miles of the nearest Rebuild Project structure. The Petersburg Breakthrough National Battlefield, a federally listed historic landmark, is approximately 1.4 miles from the nearest Rebuild Project structure,

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[70] *Id.*

[71] *Id.*

[72] Staff Report at 5.

[73] Reilly Supplemental Testimony at 3.

[74] *Id.* at 103.

[75] *Id.* at 104.

[76] Application, Appendix at 103.

[77] Application, DEQ Supplement at 12.

[78] *Id.* at 13-14.

for which Dominion anticipates no impact.[79] Dominion anticipates a minimal incremental visual impact to eight of these battlefield resources, due to the limited incremental change in structure heights and the existing tree cover.[80] The below table summarizes the impact the Rebuild Project could have on historical battlefield resources.[81]

DHR #	Resource Name	DHR/NRHP Status	Distance to Closest Structure (Feet)	Impacts
026-0050	Reams Station Battlefield I & II	Potentially Eligible	0	Minimal
026-0132	Hatchers Run Battlefield	Eligible	0	Minimal
026-5004	Boydton Plank Road Battlefield	Eligible	0	Minimal
026-5006	Lewis's Farm Battlefield	Eligible	0	Minimal
026-5007	Peebles' Farm Battlefield	Eligible	0	Minimal
026-5013	Petersburg Breakthrough Battlefield	NHL-Listed	7,361	None
123-0071	Petersburg National Battlefield	NRHP-Listed	583	Minimal
123-5022	Weldon Railroad Battlefield/ Globe Tavern Battlefield	Potentially Eligible	0	Minimal
123-5023	First Battle of Weldon Railroad/Jerusalem Plank Road Battlefield	Potentially Eligible	1,718	None
123-5026	Petersburg Battlefield III	Potentially Eligible	0	Minimal

DHR reviewed the Application's assessment of impact on historic battlefield resources and concurred that eight projects would have minimal impacts and the remaining two would have no impact.[82]

The Rebuild Project would replace 67 structures, averaging 62 feet tall, with 69 structures, averaging 68 feet tall.[83] The existing structures range from 34 to 113.5 feet tall, while the proposed structures range from 31.5 to 121.5 feet tall.[84] Although the Rebuild Project involves a variety of structures, most of the construction would replace wood or weathering steel

[79] *Id.* at Attachment 2.I.2, p. 8.

[80] *Id.* at Attachment 2.I.2, pp. 20-21, 25, 30, 35, 38, 46, 49, 56, 58.

[81] *Id.* at Attachment 2.I.2, p. 8.

[82] DEQ Report at 21.

[83] Application, Appendix at 59-61. The estimated heights of the new structures are based on the Company's conceptual design and will be subject to final engineering. Approximate structure heights are above ground level. *Id.* at 59.

[84] *Id.* at 61.

H-frame structures with weathering steel H-frame structures.[85] Attachment 1 to the Hearing Examiner's Report includes charts illustrating the estimated heights of the proposed structures compared to the existing structures they would replace.

No Virginia Outdoors Foundation easements are in the Rebuild Project area,[86] and no scenic byways would be crossed.[87]

Two acres of open water and 0.03 acres of stream are within the Rebuild Project corridor.[88] Dominion identified 30 acres of palustrine emergent wetlands, and 1 acre of palustrine scrub-shrub wetlands, within the Rebuild Project corridor.[89] The Company will obtain any necessary permits to impact jurisdictional wetlands or waterways.[90]

As requested by the Virginia Department of Aviation, Dominion has committed to filing a Form 7460 with the Federal Aviation Administration for a determination of whether the Rebuild Project would create a hazard to air navigation.[91]

Based on the filings in this case, I conclude that the route of the Rebuild Project would avoid or reasonably minimize adverse impact to the greatest extent reasonably practicable on the scenic assets, historic districts, and environment of the area concerned. I also conclude that there are no adverse environmental impacts that should prevent the construction of the Rebuild Project. Dominion should be required to obtain all necessary environmental permits and approvals that are needed to construct and operate the Rebuild Project.

Consideration of Existing Right-of-Way

The Application represented that the Rebuild Project is entirely within the existing right-of-way.[92] No permanent new right-of-way is required for the Rebuild Project, which would rebuild an existing transmission line. Temporary new right-of-way would be used for a 0.25-mile tap line to keep the Chaparral Station energized during construction of the Rebuild Project. Once the Rebuild Project is completed and energized, the temporary facilities will be removed.[93]

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[85] Application, Appendix at 12, 53, 59-61. All the Rebuild Project's structures would be single-circuit structures. *Id.* at 12. The Application identifies the three new Line #69 structures as one monopole double-dead-end angle structure and two direct embed weathering steel two-pole H-frame anchor structures. *Id.*

[86] Application, DEQ Supplement at Attachment 2.L.1, p. 1.

[87] Application, Appendix at 141.

[88] Application, DEQ Supplement at 4.

[89] *See, e.g.,* Application, DEQ Supplement at 4.

[90] *Id.* at 3-5.

[91] *Id.* at 15. The Rebuild Project is within 10.0 aeronautical miles of the Dinwiddie County Airport and heliports at Fort Lee. Application, Appendix at 140.

[92] Application, Appendix at 114.

[93] *See, e.g.,* Application, Appendix at 4.

The record supports a finding that Dominion considered the feasibility of using existing right-of-way.

DEQ Report Recommendations

Dominion requested that the Commission reject the following recommendations from the DEQ Report, consistent with Commission precedent.

- DCR-DNH's recommendation that the Company develop and implement an invasive species plan to be included as part of the maintenance practices for the right-of-way and that such plan include an invasive species inventory for the Rebuild Project area.

- DEQ-OPP's recommendation that the Company consider developing an EMS.

With respect to the DEQ Report, Company witness Gills recommended rejection of DCR-DNH's recommendation that the Company develop and implement an invasive species plan to be included as part of the maintenance practices for the right-of-way and that such plan include an invasive species inventory for the Rebuild Project area,[94] because the Company has a comprehensive integrated vegetation management plan and is coordinating with DCR to address its concerns.[95] She also noted that, based on the Company's experience with species surveys and contractors, the estimated cost of this type of species survey could range between approximately $14,000 and $20,000 per mile.[96]

She recommended rejection of DEQ-OPP's recommendation that the Company consider developing an effective EMS,[97] because the Company already has a comprehensive environmental management system manual in place to ensure a commitment to "complying with environmental laws and regulations, reducing risk, minimizing adverse environmental impacts, setting environmental goals, and achieving improvements in its environmental performance, consistent with the Company's core values."[98]

I agree with the Company that these two recommendations are unnecessary and should not be adopted, consistent with recent Commission precedent.[99] Additionally, the Company continues to meet with DCR regarding invasive species management and is working with DCR towards finalizing an addendum to the Company's integrated vegetation management plan.[100]

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[94] DEQ Report at 19.

[95] Gills Rebuttal Testimony at 6-7.

[96] *Id.* at 7.

[97] DEQ Report at 23.

[98] Gills Rebuttal Testimony at 8.

[99] *See, e.g., id.* at 7-8 n.3 (citing five Commission orders that rejected the invasive species management plan recommendation); *id.* at 8 n.4 (citing four Commission orders that rejected the environmental management system recommendation).

[100] *Id.* at 7.

I also recommend that compliance with the uncontested recommendations from the DEQ Report be made a condition of any CPCN approved in this proceeding.

Environmental Justice

Dominion asserted that it researched the demographics of the communities surrounding the Rebuild Project using 2021 census data, from which Dominion identified populations within the study area that meet the VEJ Act threshold to be defined as "environmental justice communities." Of the six census block groups within one mile of the existing transmission corridor, Dominion identified five communities of color and four low-income communities. Dominion, however, emphasized that the Rebuild Project is a rebuild that would be constructed within existing transmission line right-of-way, for which there is a statutory preference, and involves proposed structures that would be, on average, five feet taller than existing structures. The Company does not anticipate disproportionately high or adverse impacts to the surrounding community or the environmental justice communities located within the study area. Dominion also discussed the public outreach it has conducted as part of the Rebuild Project and committed to continue working with environmental justice communities and others affected by the Rebuild Project in a manner that allows them to meaningfully participate in the project development and approval process.[101] Staff concluded that the Rebuild Project does not appear to adversely impact any goal established by the VEJ Act.[102]

Based on the filings in this case, the Rebuild Project does not appear to adversely impact the goals established by the VEJ Act. Dominion has demonstrated that the environmental impact of the Rebuild Project is minimal. Additionally, Dominion has committed to abide by the Company's environmental justice policy.[103]

Economic Development

The Staff Report concurred with the Company's position that the Rebuild Project would "assur[e] continued reliable bulk electric power delivery," and thus the proposed Rebuild Project would support economic development in Dinwiddie County and the City of Peterburg, including the positive economic impacts associated with construction and operation of the Rebuild Project.[104] As such, I find that the Rebuild Project supports economic development.

Findings and Recommendations

Based on applicable law and the filings in this proceeding, I find that:

[101] Application, Appendix at 113-14.

[102] Staff Report at 15.

[103] Application, Appendix at 133.

[104] Staff Report at 13.

1. The Rebuild Project is needed to address a potential overloading event on Line #249, to comply with mandatory reliability standards of the North American Electric Reliability Corporation, and to maintain transmission system reliability;

2. The proposed Rebuild Project, which utilizes existing right-of-way, would avoid or reasonably minimize adverse impact to the greatest extent reasonably practicable on the scenic assets, historic districts, and environment of the area concerned;

3. The unopposed recommendations in the Department of Environmental Quality Report should be adopted by the Commission as conditions of approval;

4. It is not necessary to direct Dominion to develop an environmental management system;

5. It is not necessary to direct Dominion to develop an invasive species management plan. Dominion continues to meet with DCR regarding invasive species management and anticipates finalizing an addendum to the Company's integrated vegetation management plan;

6. Dominion should be required to obtain all necessary environmental permits and approvals that are needed to construct and operate the Rebuild Project;

7. The Rebuild Project does not appear to adversely impact goals established by the Virginia Environmental Justice Act;

8. The Rebuild Project would support economic development; and

9. The following components of the Rebuild Project constitute ordinary extensions or improvements in the usual course of business:

    - reconductoring approximately 2.5 miles of Line #249, using existing transmission structures, from Locks Substation to Structure #249/22;

    - reconductoring approximately 0.13 miles of Line #249, using existing transmission structures, from Structure #249/93 to Carson Substation;

    - installing a 0.25-mile temporary line, requiring the acquisition of temporary right-of-way, and replacing the existing Chaparral terminal tap structure;

    - installing temporary facilities to allow Line #69 to temporarily operate at 230 kV to keep Chaparral Substation energized during the rebuild of Line #249; and

    - energizing the existing Carson 500-230 kV Transformer #1.

Accordingly, **I RECOMMEND** the Commission enter an order that:

1. ***ADOPTS*** the findings in this Report;

2. ***AUTHORIZES*** the Company to construct and operate the Rebuild Project, subject to the findings and conditions recommended herein;

3. ***ISSUES*** the appropriate certificate of public convenience and necessity for the Rebuild Project; and

4. ***DISMISSES*** this case from the Commission's docket of active cases.

Comments

Staff and parties are advised that, pursuant to Rule 5 VAC 5-20-120 C of the Commission's Rules of Practice and Procedure ("Rules of Practice")[105] and § 12.1-31, any comments on this Report must be filed on or before April 17, 2024. To promote administrative efficiency, the parties are encouraged to file electronically in accordance with 5 VAC 5-20-140 of the Rules of Practice. If not filed electronically, an original and fifteen (15) copies must be submitted in writing to the Clerk of the Commission, c/o Document Control Center, P.O. Box 2118, Richmond, Virginia 23218. Any party filing such comments shall attach a certificate to the foot of such document certifying that copies have been sent by electronic mail to all counsel of record and any such party not represented by counsel.

Respectfully submitted,

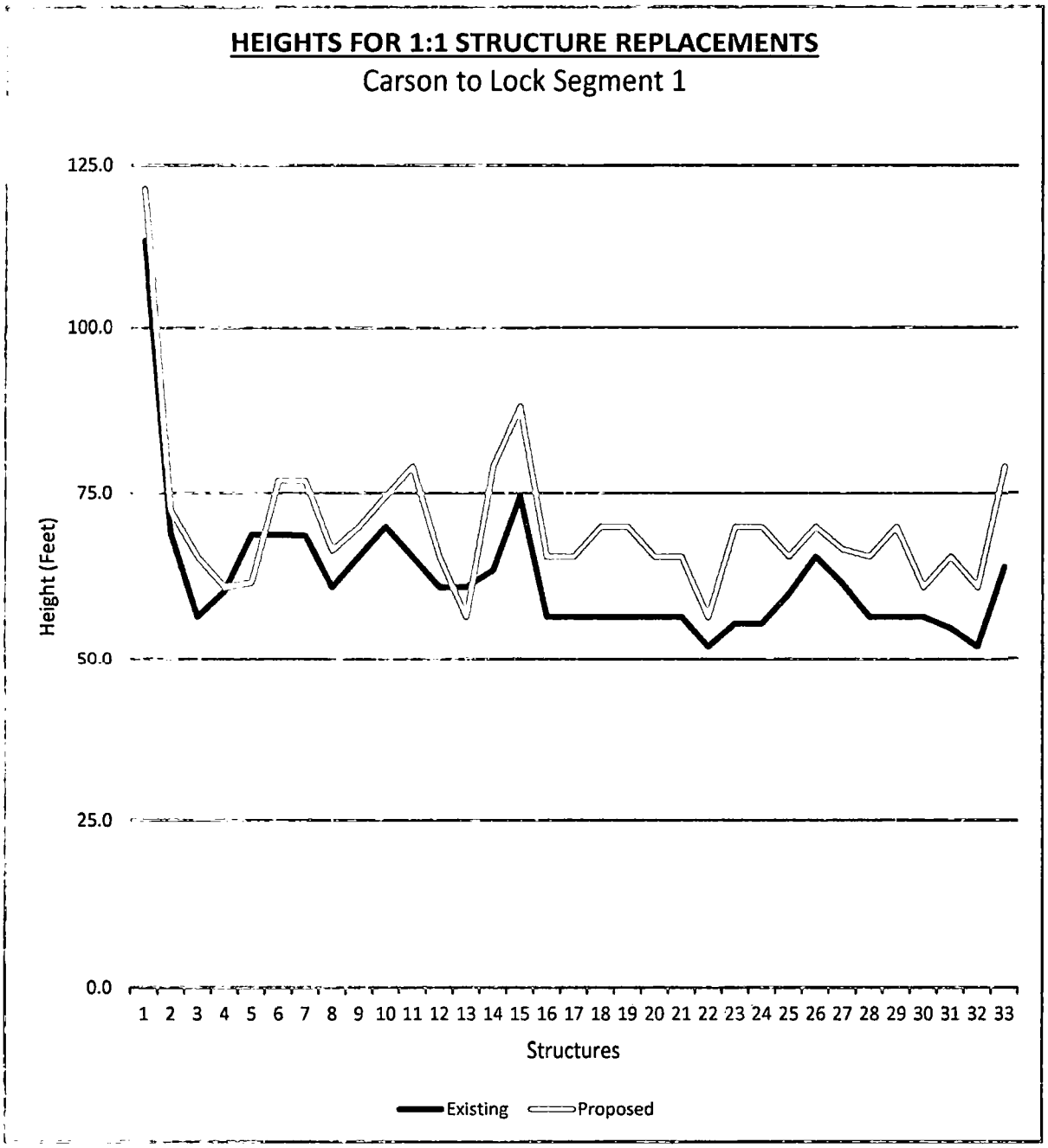
C. Mitch Burton Jr.
Hearing Examiner

Document Control Center is requested to send a copy of the above Report to all persons on the official Service List in this matter. The Service List is available from the Clerk of the State Corporation Commission, c/o Document Control Center, 1300 East Main Street, Tyler Building, First Floor, Richmond, VA 23219.

[105] 5 VAC 5-20 10 *et seq.*

ATTACHMENT 1

TO THE HEARING EXAMINER'S REPORT

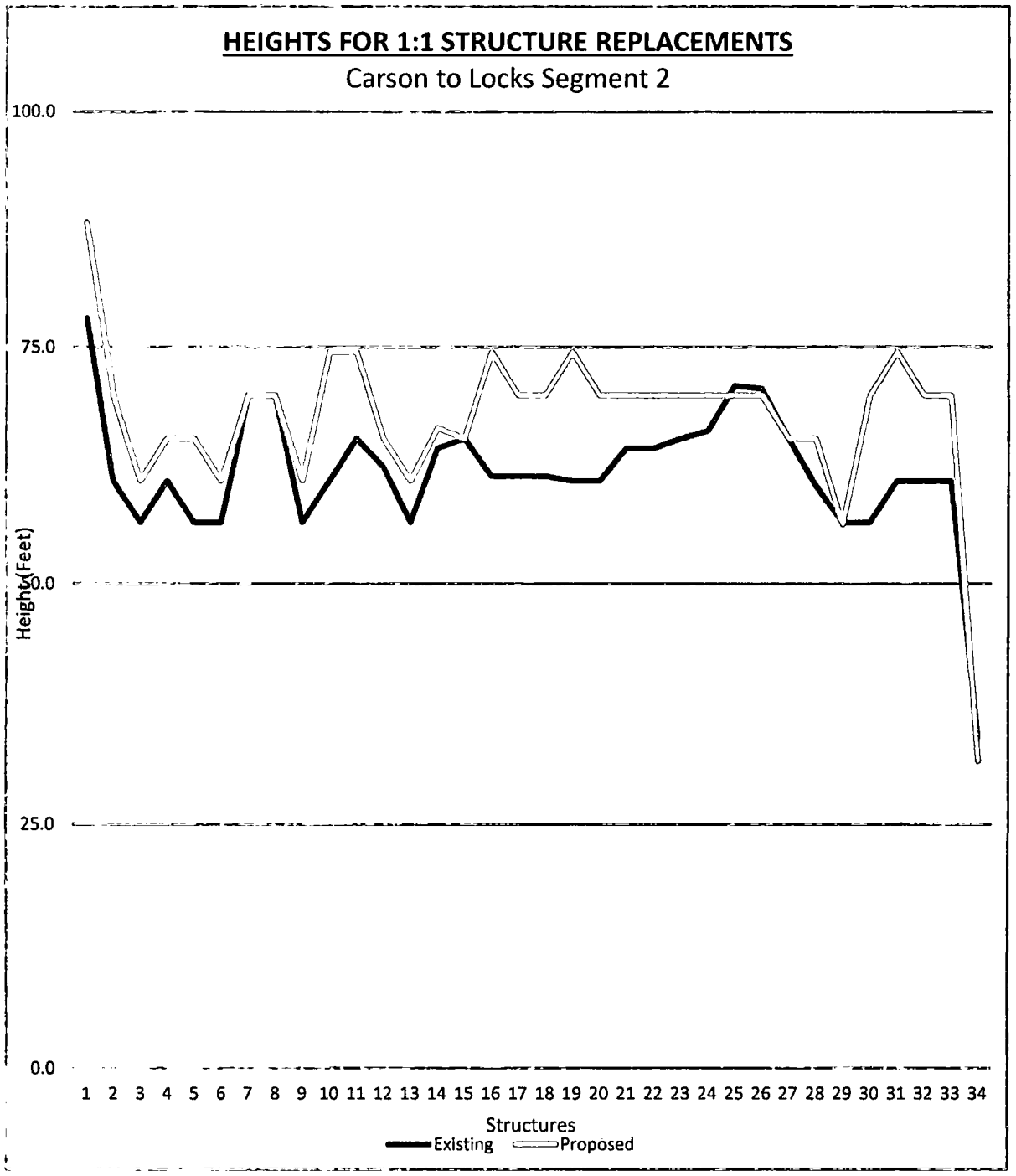


Notes:

The source of the data in this Attachment is Appendix pages 59-61. All proposed structure heights are inclusive of foundation reveal, are approximated from Dominion's conceptual design, and are subject to change based on final engineering design. *Id.* at 59.

These charts and data compare heights for 1:1 structure replacements and do not include two structures the Rebuild Project proposes to add, each with an estimate height of 40.7 feet.

CARSON TO LOCK (Segment 1)				
	Line 249	Existing	Proposed	
Chart #	Structure #	Height	Height	Delta
1	22	113.5	121.5	8.0
2	23	69.0	72.5	3.5
3	24	56.5	65.5	9.0
4	25	60.4	61.0	0.6
5	26	68.8	61.7	-7.1
6	26A	68.8	76.9	8.1
7	27	68.7	76.8	8.1
8	28	61.0	66.4	5.4
9	29	65.5	70.0	4.5
10	30	70.0	74.5	4.5
11	31	65.5	79.0	13.5
12	32	61.0	65.5	4.5
13	33	61.0	56.5	-4.5
14	34	63.5	79.0	15.5
15	35	74.5	88.0	13.5
16	36	56.5	65.5	9.0
17	37	56.5	65.5	9.0
18	38	56.5	70.0	13.5
19	39	56.5	70.0	13.5
20	40	56.5	65.5	9.0
21	41	56.5	65.5	9.0
22	42	52.0	56.5	4.5
23	43	55.5	70.0	14.5
24	44	55.5	70.0	14.5
25	45	60.0	65.5	5.5
26	46	65.5	70.0	4.5
27	47	61.5	66.6	5.1
28	48	56.5	65.5	9.0
29	49	56.5	70.0	13.5
30	50	56.5	61.0	4.5
31	51	54.8	65.5	10.7
32	51A	52.0	61.0	9.0
33	52	64.0	79.0	15.0
Segment 1 Average		**62.3**	**70.2**	**7.9**


HEIGHTS FOR 1:1 STRUCTURE REPLACEMENTS
Carson to Locks Segment 2
100.0
75.0
50.0
25.0
0.0
Height (Feet)
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34
Structures
Existing
Proposed

CARSON TO LOCK (Segment 2)				
	Line 249	Existing	Proposed	
Chart #	Structure	Height	Height	Delta
1	53	78.0	88.0	10.0
2	54	61.0	70.0	9.0
3	55	56.5	61.0	4.5
4	56	61.0	65.5	4.5
5	57	56.5	65.5	9.0
6	58	56.5	61.0	4.5
7	59	70.0	70.0	0.0
8	60	70.0	70.0	0.0
9	61	56.5	61.0	4.5
10	62	61.0	74.5	13.5
11	63	65.5	74.5	9.0
12	64	62.5	65.5	3.0
13	65	56.5	61.0	4.5
14	66	64.5	66.6	2.1
15	67	65.5	65.5	0.0
16	68	61.5	74.5	13.0
17	69	61.5	70.0	8.5
18	70	61.5	70.0	8.5
19	71	61.0	74.5	13.5
20	72	61.0	70.0	9.0
21	73	64.5	70.0	5.5
22	74	64.5	70.0	5.5
23	75	65.5	70.0	4.5
24	76	66.3	70.0	3.7
25	77	71.0	70.0	-1.0
26	78	70.7	70.0	-0.7
27	79	65.5	65.5	0.0
28	80	60.5	65.5	5.0
29	81	56.5	56.3	-0.2
30	82	56.5	70.0	13.5
31	83	61.0	74.5	13.5
32	84	61.0	70.0	9.0
33	85	61.0	70.0	9.0
34	201	34.0	31.5	-2.5
Segment 2 Average		**62.0**	**67.7**	**5.7**