

COMMONWEALTH OF VIRGINIA  
STATE CORPORATION COMMISSION

APPLICATION OF

VIRGINIA ELECTRIC AND POWER COMPANY

CASE NO. PUE-2015-00107

For approval and certification of electric transmission  
facilities: Haymarket 230 kV Double Circuit Transmission  
Line and 230-34.5 kV Haymarket Substation

REPORT OF GLENN P. RICHARDSON, HEARING EXAMINER

November 15, 2016

I. HISTORY OF THE CASE

On November 6, 2015, Virginia Electric and Power Company (“Dominion” or “Company”) filed an application (“Application”) with the State Corporation Commission (“Commission”) for a certificate of public convenience and necessity (“CPCN”) authorizing the construction and operation of new electrical facilities in Loudoun and Prince William Counties and the Town of Haymarket, Virginia, pursuant to § 56-46.1 of the Code of Virginia (“Code”) and the Utility Facilities Act, § 56-265.1 *et seq.* of the Code.

The Application proposes to: (i) convert Dominion’s existing 115 kilovolt (“kV”) Gainesville-Loudoun Line #124 (“Line #124”) located in Prince William and Loudoun Counties, to 230 kV; (ii) construct a new 230-34.5 kV substation in Prince William County on property to be owned by the Company (“Haymarket Substation”); and (iii) construct a new 230 kV double circuit transmission line in Prince William County and the Town of Haymarket approximately 5.1 miles in length, from a tap point on converted Line #124, approximately one-half mile north of Dominion’s existing Gainesville Substation, to the new Haymarket Substation (collectively, the “Project”).<sup>1</sup>

The Application, appendix to the Application (“Appendix”),<sup>2</sup> and Dominion’s supporting testimony and exhibits represent the Project is necessary so Dominion can: (i) provide electric service to an existing retail customer (“Customer”) for a new data center located adjacent to the Customer’s existing data center;<sup>3</sup> (ii) maintain reliable electric service to customers in the Haymarket load area; and (iii) comply with mandatory North American Electric Reliability

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<sup>1</sup> Ex. 3 (Application) at 2.

<sup>2</sup> The Appendix, which was marked and admitted as a part of Ex. 3, contains detailed information related to the Project filed in response to the Commission’s Division of Energy Regulation’s “Guidelines of Minimum Requirements for Transmission Line Applications Filed Under Virginia Code Section 56-46.1 and The Utility Facilities Act.”

<sup>3</sup> Pursuant to confidentiality agreements between the Company, the Customer, and Prince William County, and agreements to adhere to a Protective Ruling entered by the Hearing Examiner on March 15, 2016, the identity of the Customer was not disclosed by any of the parties or Commission Staff during the hearings in this case. However, numerous public witnesses, including several state and local representatives, identified who they believe is the Customer building the new data center, as well as the name of the Customer’s Chief Executive Officer (“CEO”), who allegedly ignored hundreds of letters and emails seeking information about the Customer’s new data center. However, the specific identity of the Customer and its CEO are not relevant to my findings and recommendations in this Report.

Corporation (“NERC”) standards for transmission facilities and the Company’s transmission planning criteria.<sup>4</sup> The proposed in-service date for the Project is June 1, 2018.<sup>5</sup>

The Company’s Application contains five routes for the Commission’s consideration for the proposed Haymarket transmission line.<sup>6</sup>

## **1. I-66 Overhead Route**

The proposed route, referred to as the I-66 Overhead Route, is approximately 5.1 miles in length with an estimated cost of \$51 million.<sup>7</sup> The route begins at a tap point on Line #124 near the end of Cushing Road (SR 781) and travels northwest for 0.3 mile crossing to the north side of I-66. The route then heads in a westerly direction for another 1.7 miles paralleling the north side of I-66 utilizing Virginia Department of Transportation (“VDOT”) right-of-way (“ROW”) to the extent feasible. The general alignment of the I-66 Overhead Route is outside of the I-66 sound wall (approximately 15 feet to 40 feet) to reduce the restrictions on construction due to the need for potential lane closures and/or construction timing restrictions. The route crosses multiple on/off ramps of I-66, University Boulevard, and Lee Highway (US 29). From the Lee Highway (US 29)/I-66 interchange, the route heads southwest for 0.1 mile before turning and heading northwest 1.9 miles following the northern side of I-66 and crossing Catharpin Road (SR 676) and Old Carolina Road. The route then crosses to the south side of I-66 and heads in a southwest direction for 0.3 mile crossing James Madison Highway (US 15). The route then heads in a southwest direction for 0.1 mile, crossing John Marshall Highway (SR 55), and continues northwest on the south side of John Marshall Highway (SR 55) 0.4 mile before turning south and terminating at the proposed Haymarket Substation.

The proposed I-66 Overhead Route also includes two route variations, referred to as the Walmart Variation and the Jordan Lane Variation. The Walmart Variation will route the line behind a Walmart located at the intersection of John Marshall Highway (SR 55) and James Madison Highway (US 15). The Jordan Lane Variation is a minor variation of the proposed I-66 Overhead Route that may be necessary if Dominion cannot secure an overhead easement over Jordan Lane.

## **2. Carver Road Alternative Route**

The Carver Road Alternative Route is approximately 6.7 miles in length with an estimated cost of \$61.9 million.<sup>8</sup> The route begins at a tap point on Line #124 near the end of Cushing Road (SR 781) and travels northwest for 0.3 mile crossing to the north side of I-66. The route then heads in a westerly direction for another 1.7 miles paralleling the north side of I-66, utilizing VDOT ROW to the extent feasible. The route crosses multiple on/off ramps of I-66, University Boulevard, and Lee Highway (US 29) on the same path as the proposed I-66 Overhead Route for the first 2.08 miles. The route then heads southwest for approximately 0.5 mile crossing to the south side of I-66

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<sup>4</sup> Ex. 3 (Application) at 1-2, (Appendix) at 1-30; Ex. 4 (Gill Direct) at 8-10; Ex. 6 (Potter Direct) at 3-5.

<sup>5</sup> Ex. 3 (Application) at 3.

<sup>6</sup> See Ex. 10 (Thommes Direct) at 7-10; Ex. 3 (Appendix) at 31-36, 117-121; Ex. 17 (McCoy Direct) at Appendix III.

<sup>7</sup> The estimated cost includes \$30.2 million for transmission line construction and \$20.8 million for substation work. See Ex. 19 (Joshipura Direct) at 16.

<sup>8</sup> The estimated cost includes \$41.1 million for transmission line construction and \$20.8 million for station and substation work. See Ex. 19 (Joshipura Direct) at 16.

and generally paralleling the north side of Lee Highway (US 29). After crossing Daves Store Lane, the route follows the northern side of Daves Store Lane for 0.2 mile and then crosses Daves Store Lane a second time. The route then continues northwest for 0.2 mile crossing Daves Store Lane and John Marshall Highway (SR 55), utilizing VDOT ROW to the extent feasible. From here, the route heads southwest for about 0.2 mile before heading northwest along the Norfolk Southern Railroad tracks for about 0.1 mile. The route then crosses the railroad tracks and continues in a southwest direction for about 0.7 mile crossing Yountville Drive and Somerset Crossing Drive. The route then travels southwest for about 0.3 mile, crossing Carver Road, and then heads in a generally northwest direction for 0.5 mile before crossing Old Carolina Road. From here, the route generally continues northwest for 0.6 mile passing through forested areas surrounding residences and crossing Haymarket Drive. The route then heads northeast for 0.2 mile before turning west for another 0.2 mile. The route then follows the eastern side of James Madison Highway (US 15) for 0.1 mile, crosses James Madison Highway (US 15), and heads southwest for approximately 0.3 mile before heading northeast for about 0.2 mile and terminating at the proposed Haymarket Substation.

### **3. Madison Alternative Route**

The Madison Alternative Route is approximately 8.2 miles in length with an estimated cost of \$67.8 million.<sup>9</sup> The route begins at a tap point on Line #124 near the end of Cushing Road (SR 781) and follows the same path as the Carver Road Alternative Route for 4.7 miles to a point on the south side of Carver Road before crossing Old Carolina Road. At this point, the Carver Road Alternative Route heads northwest to follow Carver Road, while the Madison Alternative Route deviates from the Carver Road Alternative Route and heads southwest for approximately 1.6 miles. This segment of the route crosses Old Carolina Road and Thoroughfare Road. The route then crosses James Madison Highway (US 15) and continues northeast for 0.7 mile, following the west side of the highway and crossing Thoroughfare Road, Hokie Place, and Market Ridge Boulevard. Continuing northeast, the route then crosses James Madison Highway (US 15) and follows the eastern side of the highway for about 0.5 mile before meeting back with the Carver Road Alternative Route just south of North Fork Broad Run. The route then follows the same path as the Carver Road Alternative Route for the remaining 0.6 mile and terminates at the proposed Haymarket Substation.

### **4. I-66 Hybrid Alternative Route**

The I-66 Hybrid Alternative Route is approximately 5.3 miles in length with an estimated cost of \$166.7 million.<sup>10</sup> The I-66 Hybrid Alternative Route would utilize both overhead and underground transmission lines between the tap point on Line #124 and the Haymarket Substation. The route begins at a tap point on Line #124 near the end of Cushing Road (SR 781) and follows the same path as the proposed I-66 Overhead Route for 2.1 miles until it crosses to the south side of I-66 and reaches a proposed transition station, where an overhead to underground transition would occur. The proposed transition station is located on the west side of the intersection of I-66 and Lee Highway (US 29). At this point, the underground segment of the I-66 Hybrid Alternative Route is

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<sup>9</sup> The estimated cost includes \$47 million for transmission line construction and \$20.8 million for station and substation work. See Ex. 19 (Joshipura Direct) at 16.

<sup>10</sup> The estimated cost includes \$111.3 million for transmission line construction and \$55.4 million for station and substation work, including the construction cost of a transition station. See Ex. 19 (Joshipura Direct) at 16.

offset approximately 25 feet from the proposed sound wall along the I-66 corridor. The route heads northwest and continues along the southern side of I-66 for 0.7 mile, utilizing VDOT ROW to the extent feasible. After crossing Catharpin Road (SR 676), the route continues northwest, crossing I-66, for approximately 1.2 miles following the north side of I-66. The route then crosses I-66 and follows the south side of I-66 and an associated eastbound on-ramp for about 0.3 mile. After crossing James Madison Highway (US 15), the route follows the western side of the highway for about 0.1 mile, crosses John Marshall Highway (SR 55), and then continues northwest on the south side of John Marshall Highway (SR 55) for approximately 0.3 mile before heading south and terminating at the proposed Haymarket Substation.

## **5. Railroad Alternative Route**

The Railroad Alternative Route is approximately 5.7 miles in length with an estimated cost of \$55.1 million.<sup>11</sup> The route begins at a tap point on Line #124 near the end of Cushing Road (SR 781). From the tap point, the route follows the Carver Road Alternative Route for the first 3.5 miles to a point west of the John Marshall Highway (SR 55) and the Norfolk Southern Railroad crossings. The route then follows the southern side of the railroad and the northern side of North Fork Broad Run for 1.0 mile. This segment of the route passes through the Town of Haymarket. After crossing Jefferson Street (SR 625), the route crosses North Fork Broad Run and continues on the south side of the stream for 0.3 mile before the route meets up with the Carver Road Alternative Route and follows it for the remaining 0.8 mile into the proposed Haymarket Substation.

A map depicting the proposed I-66 Overhead Route and alternative routes presented for the Commission's consideration is attached to this Report as Attachment A.

On December 11, 2015, the Commission issued an Order for Notice and Hearing ("Scheduling Order") that, among other things, docketed the Application; assigned a Hearing Examiner to conduct all further proceedings in this matter; directed the Company to provide public notice of its Application; established a procedural schedule for the participation of interested parties; directed the Commission's Staff to investigate the Application and file testimony and exhibits; scheduled local hearings at the Battlefield High School in Haymarket, Virginia, on February 24 and March 14, 2016, to receive testimony from public witnesses; and scheduled an evidentiary hearing on May 10, 2016, in the Commission's courtroom in Richmond, Virginia, to receive evidence on the Company's Application. On February 8, 2016, a Hearing Examiner's Ruling was entered scheduling an additional local hearing at the Battlefield High School on May 2, 2016, given the significant interest generated by the Company's Application from individuals, businesses and state and local government officials.

As noted in the Commission's Scheduling Order, the Staff requested the Department of Environmental Quality ("DEQ") to coordinate a review of the Project by state and local agencies

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<sup>11</sup> The estimated cost includes \$34.3 million for transmission line construction and \$20.8 million for station and substation work. *See* Ex. 19 (Joshipura Direct) at 16.

and to file a report on the review. On January 21, 2016, DEQ filed its report on the Company's Application ("DEQ Report").<sup>12</sup> The DEQ Report summarizes potential impacts of the proposed I-66 Overhead Route and the four alternative routes presented by the Company, contains numerous recommendations for minimizing those impacts, and outlines the Company's responsibilities for compliance with legal requirements governing environmental protection. The DEQ Report, as amended,<sup>13</sup> included the following Summary of Recommendations:

*(i) Alternative Recommendations*

- The DEQ Office of Wetlands and Stream Protection recommends the I-66 Hybrid Alternative Route be approved, as it has the least amount of wetland impacts (REVISED Wetland Impact Consultation dated June 2, 2016).
- The Department of Historic Resources finds that the I-66 Hybrid Alternative [Route] appears to have the least overall potential impact to recorded historic resources (Environmental Impacts and Mitigation, item 9(d), page 22).
- Prince William County concludes that the I-66 Hybrid [A]lternative [Route] is the only alternative that adequately minimizes negative impacts to the County's cultural resources and to existing and planned residential communities and businesses (Environmental Impacts and Mitigation, item 13 (e), page 26). In addition, on August 4, 2015, the Board of County Supervisors adopted resolution 15-508 declaring that any proposal to install new or re-fit high-voltage transmission lines shall be supported only if the lines are buried in the right-of-way of I-66 from its intersection with US Route 29 through Haymarket and beyond (Environmental Impacts and Mitigation, item 13(b), page 25).

*(ii) Summary of General Recommendations*

If the Commission decides to grant a CPCN for the Project, irrespective of the alternative selected, DEQ offered the following recommendations which are not listed in any order of priority:

- Conduct an on-site delineation of wetlands and streams 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

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<sup>12</sup> Ex. 27 (The DEQ Report was admitted into the record as Exhibit 27 during the June 22 evidentiary hearing).

<sup>13</sup> The DEQ's Office of Wetlands and Stream Protection initially recommended that the I-66 Overhead Route be approved because it believed the route had a lower probability of wetlands than the alternative routes identified by Dominion. However, after recalculating the impact of the proposed and alternative routes on wetlands, the Office of Wetlands and Stream Protection revised its initial recommendations and, instead, filed a revised Wetland Impact Consultation on June 2, 2016, recommending that the I-66 Hybrid Alternative Route be approved because it would have the least amount of wetland impacts.

avoid and minimize impacts to wetlands and streams (Environmental Impacts and Mitigation, item 1(b), pages 9 and 10).

- Take all reasonable precautions to limit emissions of oxides of nitrogen and volatile organic compounds, principally by controlling or limiting the burning of fossil fuels (Environmental Impacts and Mitigation, item 5(c), page 14).
- Reduce solid waste at the source, reuse it and recycle it to the maximum extent practicable, and follow DEQ's recommendations to manage waste, as applicable, (Environmental Impacts and Mitigation, item 6(d) (ii), page 16).
- Coordinate with the Department of Conservation and Recreation for updates to the Biotics Data System database (if the scope of the project changes or six months passes before the project is implemented) (Environmental Impacts and Mitigation, item 7(c) (v), page 19).
- Coordinate with the U.S. Fish and Wildlife Service and Department to ensure compliance with federal guidelines for the protection of the Northern long-eared bat (Environmental Impacts and Mitigation, item 8(c) (i), page 20).
- Coordinate with the Department of Game and Inland Fisheries regarding its general recommendations to protect wildlife resources (Environmental Impacts and Mitigation, item 8(c) (ii), page 20).
- Coordinate with the Department of Historic Resources regarding recommendations to conduct comprehensive architectural and archaeological surveys to evaluate identified resources for listing in the Virginia Landmarks Register and National Register of Historic Places; and to avoid, minimize, or mitigate for adverse impacts to VLR- and NRHP-eligible resources (Environmental Impacts and Mitigation, item 9(c), page 22).
- Coordinate with the Virginia Outdoors Foundation regarding its recommendation to consider alternatives of less visual impact to avoid or minimize any adverse impacts to open space properties (e.g. Bull Run Mountain Natural Area Preserve) and their public values (Environmental Impacts and Mitigation, item 10(c), page 23).
- Coordinate with Prince William County in its discussion with the Virginia Department of Transportation on an I-66 Hybrid [A]lternative [Route] that includes the installation of buried transmission lines (Environmental Impacts and Mitigation, item 13(c), page 26).

- Follow the principles and practices of pollution prevention to the extent practicable (Environmental Impacts and Mitigation, item 14, pages 26 and 27).
- Limit the use of pesticides and herbicides to the extent practicable (Environmental Impacts and Mitigation, item 15, page 27).

On or before March 1, 2016, Notices of Participation were filed by Southview 66, LLC (“Southview”), FST Properties, LLC (“FST”), Somerset Crossing Home Owners Association, Inc. (“Somerset”), the Coalition to Protect Prince William County (“Coalition”),<sup>14</sup> and Old Dominion Electric Cooperative (“ODEC”).<sup>15</sup>

On March 8, 2016, Somerset and Heritage filed a Joint Motion of Somerset Crossing Home Owners Association and Heritage for Expedited Consideration and Extension of Procedural Dates. On March 21, 2016, a Hearing Examiner’s Ruling was entered granting the motion and extending the dates for the filing of direct testimony by the respondents and Staff, rebuttal testimony by Dominion, and public comments. In addition, the evidentiary hearing on the Application was continued to June 21, 2016, with the original evidentiary hearing date of May 10, 2016, retained on the Commission’s docket for the purpose of receiving testimony from public witnesses.

On April 22, 2016, FST filed a Motion of Respondent FST Properties to Consider Adjustment to Certain Routes. In its motion, FST requested that a small segment of the proposed I-66 Overhead Route and I-66 Hybrid Alternative Route be adjusted to avoid running across the front of FST’s property facing John Marshall Highway (SR 55) (“FST Route Variation”). Dominion filed a response on May 3, 2016, stating it had no objection to FST’s motion or consideration of the proposed FST Route Variation. In its response, the Company also proposed a slight adjustment to the FST Route Variation, called the FST Optimization Route, in order to eliminate the sharp angles in the proposed FST Route Variation. On May 6, 2016, a Hearing Examiner’s Ruling was entered granting FST’s motion and directing Dominion to provide notice of both proposed route variations.<sup>16</sup>

Hearings to receive the testimony of public witnesses were held at the Battlefield High School auditorium in Haymarket, Virginia, on February 24, March 14, and May 2, 2016, and in the Commission’s courtroom in Richmond, Virginia, on May 10, 2016. The evidentiary hearing was held on June 21 and 22, 2016, in the Commission’s courtroom. Post-Hearing Briefs were filed on August 5, 2016, by Dominion, Somerset, the Coalition, FST, Southview, and the Commission Staff.

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<sup>14</sup> The Coalition did not file testimony in this case but did participate by making an opening statement, cross-examining witnesses and filing a Post-Hearing Brief.

<sup>15</sup> ODEC filed a Notice of Participation and written comments but did not otherwise participate in the case. Prince William County Board of Supervisors filed a Notice of Participation on February 29, 2016, but subsequently filed a Motion to Withdraw on March 16, 2016, which was granted by a Hearing Examiner’s Ruling entered on March 22, 2016. Heritage Hunt HT, LLC, Heritage Hunt Commercial, LLC, Heritage Hunt Retail, LLC, Heritage Hunt Office Condominium, LLC, Heritage Sport & Health, LLC, RBS Holdings, LLC, and BKM at Heritage Hunt LLC (collectively “Heritage”) filed a consolidated Notice of Participation and testimony and exhibits in this case, but withdrew as a party when the evidentiary hearing convened on June 21, 2016.

<sup>16</sup> An aerial photograph showing the proposed FST Route Variation and Dominion’s proposed FST Optimization Route is attached to Ex. 13 (Antelo Direct) as Exhibit 3 (Attachment A).

On August 18, 2016, Dominion filed a letter alleging that the Staff “offers new evidence in its post-hearing brief in support of allocating a large portion of the cost of this transmission project to a single retail customer.”<sup>17</sup> Dominion, therefore, requested “that the Hearing Examiner’s Report either strike such evidence, or make clear that such evidence was not considered in the determination of the recommended and final decision in this matter.”<sup>18</sup>

On August 19, 2016, a Hearing Examiner’s Ruling was entered treating Dominion’s letter as a motion, allowing the Staff and parties to file a response, and giving Dominion the opportunity to file a reply to any responses filed by the Staff and parties. On August 26, 2016, responses were filed by the Commission Staff, Somerset, and the Coalition. On September 2, 2016, Dominion filed a reply.

Having considered Dominion’s motion, the responses of Staff and other parties, and Dominion’s reply, I find Dominion’s motion should be denied. The Staff’s Post-Hearing Brief does not introduce any new factual evidence into the record. Instead, the Staff’s Post-Hearing Brief addresses “legal issues,” such as the recovery of costs from the Customer developing the new data center (a major issue in this case), various means by which such costs could be recovered from the Customer, and responds to Dominion’s argument that such cost recovery is preempted by federal law. Accordingly, since I find the Staff’s Post-Hearing Brief does not introduce any new factual evidence into the record, Dominion’s motion is denied.

## II. SUMMARY OF THE RECORD

As with most applications requesting authority to construct an overhead transmission line in Northern Virginia, this case generated significant interest from members of the General Assembly, local government officials and members of the public residing in western Prince William County (the “County”) and the Town of Haymarket (the “Town”). Over 500 written and electronic comments were filed with the Commission addressing the Application, and 161 public witnesses appeared and testified at the hearings. Virtually all of the comments and public witness testimony opposed Dominion’s proposed I-66 Overhead Route, with only a few limited exceptions.<sup>19</sup> The local hearings also were well attended by the public, particularly during the evening sessions when the Battlefield High School auditorium was filled to capacity. All of the comments and testimony, with the limited exceptions noted in footnote 19 below, contained a common theme: (i) deny the Application; (ii) if there is a demonstrated need for the Project, approve the I-66 Hybrid Alternative

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<sup>17</sup> Dominion Letter at 2.

<sup>18</sup> *Id.* at 4.

<sup>19</sup> As will be discussed later in this Report, those supporting the proposed I-66 Overhead Route included ODEC; Senator Frank W. Wagner, representing the 7<sup>th</sup> Senatorial District; Delegate Terry Gilgore, representing the 1<sup>st</sup> House District; several local Chambers of Commerce; Steve Merteli, who testified at the March 14, 2016, hearing that he was not taking a position on any route proposed by Dominion but that he favored the least expensive option, which is the I-66 Overhead Route (*see* March 14 Tr. 454); and an electronic comment filed by Juanita Lynn of Woodbridge, Virginia, on February 25, 2016.



Route; and (iii) require the Customer to pay for undergrounding the transmission line, not ratepayers.<sup>20</sup>

## **1. Testimony and Comments from State and Local Government Officials**

**Delegate Robert “Bob” Marshall**, representing the 13<sup>th</sup> House District, criticized Dominion, the County and the Customer during the planning phase of the new data center and transmission line, as well as Dominion’s decision to propose the construction of the I-66 Overhead Route.<sup>21</sup> Delegate Marshall testified that Dominion’s transmission line siting proposals have presented the public with one shocking surprise after another. He testified that he and Senator Richard “Dick” Black, representing the 13<sup>th</sup> Senatorial District, became engaged early in the planning process of the proposed Haymarket transmission line by sending a letter to 2600 homes in their districts alerting their constituents of Dominion’s intention to build a new transmission line in the area. However, by the time the Company had its public meeting ten days later, Delegate Marshall testified that Dominion had changed the route of the line.

He further testified that Dominion had shown insensitivity and outright hostility toward the rights of homeowners who purchased their homes without ever being told that their greatest investment could end up in the path of 110-foot transmission line towers. When the community rallied in support of the I-66 Hybrid Alternative Route, Delegate Marshall testified that Dominion chose the I-66 Overhead Route in total disregard of the will of the people they serve.

Delegate Marshall further testified that, in what he described as another example of Dominion’s disregard for the people it serves, the Company opposed his House Bills 1297, 120, and 121, which would have: (i) given localities the authority to require data centers requiring 150 kV or more of electric service to locate in industrial zoned areas or underground their transmission lines; and (ii) eliminated the preferential sales tax exemption on personal property belonging to data centers if they located outside industrial zoned areas.

Delegate Marshall also claimed that Dominion is unconcerned about reducing other people’s home values by building unsightly power towers without compensating homeowners in any way. He said that Dominion seeks to adversely affect residents by making them pay for the Customer’s predatory business decision to locate outside of an industrial zoned area due to an anomaly in the

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<sup>20</sup> Given the consistent and repetitive nature of the testimony from public witnesses, this Report will not summarize the testimony of each individual public witness. Instead, the Report will summarize the testimony of each member of the General Assembly and each locally elected representative who testified at the hearings. The Report will then summarize the testimony of the other public witnesses as a group, without naming them or summarizing their testimony individually.

<sup>21</sup> February 24 Tr. 123-130 (Delegate Marshall’s statement was read into the record by Elena Schlossberg); March 14 Tr. 266-280, 340-342; May 2 Tr. 35-48. (Marshall Testimony).

County's zoning ordinances.<sup>22</sup> Additionally, Delegate Marshall testified that to add insult to injury, local residents would be forced to foot the bill for the transmission line to serve the Customer's new data center.

Delegate Marshall also questioned the hearing dates scheduled by the Commission, claiming the Commission scheduled hearings in order to accommodate Dominion's construction schedule instead of honoring the requests of several members of the General Assembly for hearing dates that did not conflict with the 2016 session of the General Assembly. He further testified that if the Commission approves Dominion's Application, the Commission would be demonstrating that it is more concerned with satisfying the wishes of a "giant corporation" than the general welfare of the people who would be impacted by the construction of 110-foot tall power lines.

Delegate Marshall also testified that the County Attorney's Office refused to answer Freedom of Information Act requests about the new data center because it had entered into a confidentiality agreement with the Customer. He further testified the Customer's CEO had failed to respond to any of the 400 emails and letters from community members and leaders upset about his decision to build one or more data centers outside of an industrial area.

Finally, Delegate Marshall questioned why the Customer should get a free ride with the new transmission line while Dominion's customers would be forced to pay for the cost of the Customer's infrastructure that would not benefit them. He noted that homeowners who build their own homes have to pay Dominion to have electric service extended to their homes and the Customer should likewise pay for the line extension to its data center. He asked "[w]hy the double standard, one for the rich, favored and powerful corporations, and another for the rest of us?"<sup>23</sup> In closing, Delegate Marshall testified he supported the I-66 Hybrid Alternative Route with the Customer paying for undergrounding the line.

**Delegate Tim Hugo**, representing the 40<sup>th</sup> House District, testified that he is not opposed to progress and economic development in the County, but he has "deep, deep concerns" about the I-66 Overhead Route because it would impede the value of people's homes and their quality of life.<sup>24</sup> Delegate Hugo testified that the Customer "doesn't fit" in the area and suggested there are two options available to the Commission to protect people's property values and their quality of life: (i) move the new data center to Innovation Park, which is an area designated by the County for industrial use located near the City of Manassas and George Mason University's Manassas campus; or (ii) choose the I-66 Hybrid Alternative Route.

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<sup>22</sup> The anomaly Delegate Marshall was referring to in the County's zoning ordinances was the ability of a landowner in a commercial zoned area to develop and build, by right, a data center without obtaining a special use permit from the County. This anomaly subsequently has been addressed and rectified. On May 17, 2016, the County Board of Supervisors amended its zoning ordinances to eliminate data centers as a by right use in all commercial zoned areas except those contained within a defined Data Center Opportunity Zone Overlay District. Although data centers remain an allowable use in commercial zoned areas, they are no longer a by right use but require a special use permit from the County unless they are located in the County's Data Center Opportunity Zone Overlay District. *See* Ex. 37 (Weir Comments) at 5.

<sup>23</sup> February 24 Tr. 129.

<sup>24</sup> March 14 Tr. 313-317 (Hugo Testimony).

**Delegate John Bell**, representing the 87<sup>th</sup> House District, also supported the I-66 Hybrid Alternative Route.<sup>25</sup> He testified that the impact on businesses, home values, the environment, and aesthetics would be less with the I-66 Hybrid Alternative Route. He further testified that many homes and developments in the Haymarket area were built with distribution lines placed underground, and that an overhead transmission line would “undo” what homeowners have tried to accomplish. He also testified that while we live in a divided political world today, everyone agrees that the I-66 Overhead Route is the worst plan for residents. Delegate Bell asked the Commission to honor the wishes of the residents and approve the I-66 Hybrid Alternative Route.

**Senator Richard H. Black**, representing the 13<sup>th</sup> Senatorial District, also opposed the proposed I-66 Overhead Route.<sup>26</sup> He testified that there has been absolute unity within the community against placing the transmission line and towers overhead in a way that is going to adversely impact property values. He testified the I-66 Overhead Route would cut right through neighborhoods and would impact the property values of “hundreds and hundreds” of people in a very dramatic and negative fashion. During his testimony, Senator Black asked for a show of hands of those in attendance who supported the I-66 Hybrid Alternative Route. Based on the Hearing Examiner’s observations, there appeared to be unanimous support for the I-66 Hybrid Alternative Route.

There also were several local government officials who testified in opposition to the proposed I-66 Overhead Route.

**Corey Stewart**, Chairman of the County Board of Supervisors, appeared and testified in his individual capacity.<sup>27</sup> He claimed that Dominion had exhibited a consistent pattern “to intimidate, confuse and belittle the citizens of Prince William County”<sup>28</sup> when siting the transmission line. He explained how early in the planning process Dominion favored the Railroad Alternative and how residents of the Somerset Crossing and Greenhill Crossing subdivisions came to the County for protection. In an effort to make it much more difficult for Dominion to build the transmission line using the Railroad Alternative Route, Somerset granted the County an open space easement along a corridor separating the Somerset Crossing and Greenhill Crossing subdivisions. The easement would require County consent before the transmission line could be built along the Railroad Alternative Route. In response to Somerset’s grant of the open space easement to the County, Dominion proposed the I-66 Overhead Route, which Mr. Stewart described as “disgusting.” He testified that he does not believe that Dominion has acted in good faith, and that the Company is overestimating the cost of the I-66 Hybrid Alternative Route. He further testified that the I-66 Overhead Route would have a detrimental effect on the homeowners along I-66 and the historic resources in the area.

**Pete Candland**, a member of the County Board of Supervisors representing the Gainesville District, appeared and testified in his individual capacity.<sup>29</sup> He lives in the Parks of Piedmont subdivision adjacent to I-66. He testified that he would be able to see the transmission line from his

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<sup>25</sup> May 2 Tr. 9-13 (Bell Testimony).

<sup>26</sup> *Id.* at 13-16 (Black Testimony).

<sup>27</sup> February 24 Tr. 64-69 (Stewart Testimony).

<sup>28</sup> *Id.* at 65.

<sup>29</sup> *Id.* 151-155; May 2 Tr. 87-92 (Candland Testimony).

home if the I-66 Overhead Route is approved. He further believes the Customer was wrong to place the data center in the Haymarket area, and that the proposed I-66 Overhead Route simply adds insult to injury to every resident in the area. He explained that he is not against data centers, but he is against increasing his constituents' electric bills to construct the line, which he described as "corporate welfare." He recommended that the Commission approve the I-66 Hybrid Alternative Route and require the Customer to pay to underground the transmission line.

Mr. Candland also submitted over 5000 form letters during the May 2, 2016, local hearing, which were passed to the file. The letters expressed strong opposition to all of the routing proposals except the I-66 Hybrid Alternative Route.

**Jeanine Lawson**, a member of the County Board of Supervisors representing the Brentsville District, appeared and testified at the May 10, 2016, hearing in the Commission's courtroom in Richmond, Virginia.<sup>30</sup> She testified the proposed I-66 Overhead Route and all of the overhead alternative routes would negatively affect the landscape of the Brentsville District, thereby reducing property values, diminishing viewsheds and further compromising the historical features of the area. She testified that the County is home to the Manassas National Battlefield and the site of two major land battles during the Civil War. She also testified that the Madison Alternative Route and the Carver Road Alternative Route would impact the area known as the Journey Through Hallowed Ground National Heritage Area as it follows James Madison Highway (US 15) in the County, and the Madison Alternative Route would circle around a historic house known as Woodlawn.

Ms. Lawson also identified several additional historical assets in the area, including Thoroughfare Gap Road and Warrenton Pike (present-day routes US 29 and SR 55), which were the primary passes for farm goods delivered to Alexandria and beyond, as well as strategic routes for soldiers on both sides during the Civil War. She also testified the Town of Buckland, established in 1798, still contains buildings that housed residents and served travelers along Warrenton Pike. Ms. Lawson further testified that the railroad corridor played an enormous tactical role transporting soldiers and supplies during the Civil War, thereby making Dominion's proposed Railroad Alternative Route a threat to that historical resource.

Ms. Lawson stated that she had received thousands of emails from her constituents supporting the I-66 Hybrid Alternative Route. Further, she said the County Board of Supervisors remains committed to the I-66 Hybrid Alternative Route as the only acceptable option.

**Martin Crim**, the Haymarket Town Attorney, testified that an independent determination of need for the transmission line must be conducted so the benefits of the transmission line can be weighed against its cost.<sup>31</sup>

With respect to Dominion's proposed Jordan Lane Variation, Mr. Crim claimed he does not know what Dominion is referring to when the Company said it would negotiate with local governments for an overhang easement. He testified the Town does not know what an overhang easement is, has not received any information from Dominion with regard to it, and is not required to grant the easement.

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<sup>30</sup> May 10 Tr. 26-32 (Lawson Testimony).

<sup>31</sup> February 24 Tr. 12-26 (Crim Testimony).

Turning to Dominion's various routing proposals, Mr. Crim testified that the I-66 Hybrid Alternative Route has less impact on historic resources and the Town as a whole. He also criticized the report by Dutton & Associates, LLC ("Dutton Report"), which contained Dominion's Environmental Routing Study addressing the impacts of the proposed transmission line on the historic and cultural resources in the area. Mr. Crim leveled several criticisms at the Dutton Report, including: (i) the report does not contain the Town's boundary, which is a self-declared historic district; (ii) the report does not expressly state how the historic district would be addressed, as required by statute; (iii) the report does not comply with the guidelines of the Virginia Department of Historic Resources ("DHR") because Dominion failed to consult with the Town,<sup>32</sup> failed to include photographs at the closest point of the transmission line to historic resources, failed to consider views from the entirety of historic properties and included some pictures that were not even taken from the historic resources; (iv) the report underplays the impacts on historic resources in the area by not identifying Saint Paul's Episcopal Church as a site where there would be an increased impact; and (v) the photo simulations in the report failed to accurately show the impact of the proposed transmission line towers on historic resources. He also criticized the Dutton Report for focusing too much attention on modern development in the area, which has the effect of understating the impacts of the proposed transmission line on the historic resources and district.

Mr. Crim asked the Commission to deny the Application or, in the alternative, only approve the I-66 Hybrid Alternative Route.

**Brian Henshaw**, the Haymarket Town Manager, supported Mr. Crim's request for an independent needs assessment for the proposed transmission line.<sup>33</sup> He testified that the entire Town is a self-declared historic district and, through the Town's architectural review board, the Town tries to promote economic growth while maintaining its historic character. He further testified the I-66 Overhead Route could thwart all economic development progress with the establishment of 100- to 120-foot transmission line towers that could be seen at various vantage points throughout the Town. Mr. Henshaw said he would only support the Project if a need for the line is demonstrated through an independent needs assessment and the I-66 Hybrid Alternative Route is approved by the Commission.

**Joseph Pasanello**, a member of the Haymarket Town Council, testified the proposed I-66 Overhead Route would alter the fabric of the community and negatively impact the economic well-being and quality of life of thousands of hardworking citizens for generations to come.<sup>34</sup> He testified that the citizens did not ask the Customer to industrialize the area west of the Town, but if a

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<sup>32</sup> While Mr. Crim alleged the Dutton Report did not comply with DHR guidelines, DHR itself did not indicate the Dutton Report failed to comply with its guidelines. In fact, DHR was able to conduct its review of the historic and cultural impacts of the proposed I-66 Overhead Route and other alternative route proposals in a timely manner utilizing the information contained in the Dutton Report. In addition, Mr. Crim's claim that the Town was not consulted by Dominion when planning the transmission line, as required by DHR guidelines, does not appear to be credible. Ex. 3 (Appendix) Section III.B shows that Dominion met with local government officials from the Town of Haymarket on numerous occasions in 2014 and 2015 during the planning phase of the Project. Specifically, meetings were held with the Town Manager, Brian Henshaw, several members of the Town Council, and the Haymarket Planning Commission, among others. *See also* March 14 Tr. 432 (Caudle Testimony).

<sup>33</sup> March 14 Tr. 258-262 (Henshaw Testimony).

<sup>34</sup> *Id.* at 322-332; May 2 Tr. 33-36 (Pasanello Testimony).

transmission line must be built, he maintained the Customer must shoulder its fair share of the burden by paying to underground the line.

Mr. Pasanello also testified the I-66 Overhead Route would decrease property values, shatter the American Dream for many who cannot afford it, and said the line is at best questionable and unwarranted absent a comprehensive and independent evaluation of the costs of an underground transmission line, which may prove more cost effective than an overhead transmission line. He further testified the I-66 Overhead Route would denude more acreage and have greater impacts on wetlands, and questioned how Dominion can assert the overhead project is less impactful.

Mr. Pasanello also expressed concern over the health effects of electromagnetic fields (“EMF”), noting that he has a form of lymphoma that is incurable. While he admitted that it is unknown if there is a link between EMFs and cancer, he asked “why take the risk”?<sup>35</sup>

**Susan Edwards**, a member of the Haymarket Town Council, also opposed the I-66 Overhead Route.<sup>36</sup> She testified the Town is committed to smart economic growth while preserving its historic elements. She explained that Dominion had already added a double stack to the power lines that run through the center of the Town’s historic overlay district, and testified the proposed I-66 Overhead Route would once again impact the historic district.<sup>37</sup> She further contended the Customer should pay for undergrounding the line and if that is not amenable to the Customer, they should relocate to Innovation Park where the County has designated a space for them to locate their data center. She concluded her testimony saying, “No above the ground transmission lines. Only I-66 and buried. Make [the Customer] pay for its own power cord.”<sup>38</sup>

**Matt Caudle**, a member of the Haymarket Town Council and chairman of the Town’s Planning Commission, testified that it is unanimous that the Town does not want overhead power lines along I-66 west of Gainesville or the Railroad Alternative Route cutting through the Town’s historic district.<sup>39</sup> He said the Commission should listen to the will of the people and posed several questions during the local hearing, including:

- (i) Is there a need for the transmission line outside of the Customer’s data center?
- (ii) Can Dominion show where all the future demand for power will be coming from? Mr. Caudle noted that the Haymarket Planning Commission requested Dominion to provide an independent study showing a need for the transmission line, but no such study was ever provided.

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<sup>35</sup> March 14 Tr. 331.

<sup>36</sup> *Id.* at 353-356 (Edwards Testimony).

<sup>37</sup> Dominion upgraded the capacity of its distribution circuit along John Marshall Highway/Washington Street (SR 55) in the Town of Haymarket and Prince William County to continue serving the Customer as it ramps up its load until a new transmission line can be built. *See* May 2 Tr. 96-97 (Weir Testimony).

<sup>38</sup> March 14 Tr. 355-356.

<sup>39</sup> *Id.* at 431-439 (Caudle Testimony).

- (iii) How many historic towns in the Commonwealth have 110-foot, 230 kV overhead power lines cutting through their downtown areas?
- (iv) Why are the historic resources in the area not being protected by federal law, the Department of the Interior, and the DHR, all of which are in place to protect historic districts and buildings?
- (v) Has any consideration been given to the Medevac helipad at Heathcoat Hospital?<sup>40</sup>

Mr. Caudle testified that the I-66 Overhead Route would forever devalue the Town's historical buildings, businesses and viewshed. Given the detrimental impact on the historic resources in the area, as well as devaluing homes in the area, Mr. Caudle said the only route acceptable to the local governments and communities in the area is the I-66 Hybrid Alternative Route.

**Chris Price**, the Director of the County's Planning Office, requested the Commission to consider the County's Comprehensive Plan when reviewing the proposed transmission line.<sup>41</sup> According to Mr. Price, the I-66 Hybrid Alternative Route is the only route that is consistent with the County's Comprehensive Plan.

Mr. Price testified the County's Comprehensive Plan designates corridors for transmission lines rated at 150 kV or more and that none of Dominion's proposed routes are within the plan's designated corridors. Since the proposed transmission line does not fall within any of the plan's designated corridors, he maintained that Dominion's proposed Haymarket transmission line deserves a higher level of review for consistency with the County's Comprehensive Plan.

He further testified the I-66 Overhead Route impacts James Madison Highway (US 15), which is the Journey Through Hallowed Ground, and the John Marshall Highway/ Washington Street (SR 55) Heritage Corridors, both of which also are designated scenic byways. According to Mr. Price, Heritage Corridors are identified in the Parks, Open Space and Trails chapter of the Comprehensive Plan as linear swaths of land that connect or contain resources of cultural significance.<sup>42</sup> Further, the goal of such corridors is to identify, protect and preserve environmental, heritage and recreational corridors in the County.

Mr. Price further testified that the County had adopted community design goals as a part of its Comprehensive Plan. The community design goals are designed to encourage: (i) the undergrounding of utility facilities to minimize visual impacts; (ii) development that compliments the scale and character of existing and planned developments; and (iii) projects that mitigate the adverse impacts on the structures and landscape features of archeological and historic sites, including the preservation of views to and from historic properties through the protection of farm fields, meadows and woodlands. He also testified the Comprehensive Plan states that all proposed

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<sup>40</sup> *Id.* at 433-436.

<sup>41</sup> May 10 Tr. 8-13 (Price Testimony).

<sup>42</sup> *Id.* at 9-10.

public facilities shall be planned, sited and buffered in a manner so as to provide compatibility with surrounding areas and planned uses.

Additionally, Mr. Price testified that the County's community design plan, which is a component of the Comprehensive Plan, indicates that undergrounding utilities is not only a community preference but also a crucial goal of the Comprehensive Plan.

Mr. Price testified that the only route consistent with the goals, policies and action strategies of the County's Comprehensive Plan is the I-66 Hybrid Alternative Route.

**Justin Stuart Patton**, the County's archeologist, provided testimony addressing the impact an overhead transmission line would have on historic resources in the area.<sup>43</sup> He testified the only route that is consistent with the County's Comprehensive Plan, and adequately mitigates the impacts on historic resources in the area, is the I-66 Hybrid Alternative Route. According to Mr. Patton, all of the overhead routes cross large portions of the First and Second Battlefields of Manassas, Buckland Mills Battlefield, and Thoroughfare Gap Battlefield. He further testified that all of the alternatives cut through the Journey Through Hallowed Ground National Scenic Byway, which is designated as a national scenic byway – one of the highest honors bestowed on public roads. He contended the I-66 Hybrid Alternative Route is the only route that adequately mitigates the impacts of the proposed transmission line on historic resources.

**Robert B. Weir**, a former member of the Haymarket Town Council and former member and chairman of the Haymarket Planning Commission, testified in opposition to all of the routes contained in Dominion's Application and also disputed the need for the Project.<sup>44</sup> Mr. Weir described what he characterized as a two-phased approach to serve the Customer: (i) an upgrade to Dominion's distribution system to provide bridging power while the Customer ramps up its load; and (ii) the construction of the proposed transmission line, with the Customer being the primary consumer of electricity provided by the new 230 kV transmission line. Like numerous other public witnesses, Mr. Weir testified that Dominion and the County would not release the name of the Customer to the Haymarket Town Council or Planning Commission, citing non-disclosure agreements. However, Mr. Weir sought to identify the Customer by describing certain transactions, including a land transfer to an alleged affiliate of the Customer and a Storm Water Agreement between the alleged affiliate of the Customer and the County.

Mr. Weir also challenged Dominion's statements during a meeting with the Town's Planning Commission that the Project is needed due to increased energy demand and future growth projections within the Haymarket area and western Prince William County. Mr. Weir testified that many of the developments that Dominion had cited to support its claim of load growth in western Prince William County had changed and had been stricken from the County's land use maps. He further testified that the majority of the land west of James Madison Highway (US 15) is zoned agricultural or estate and is contained within the Rural Area Boundary. Mr. Weir also claimed the only business that creates an immediate need for the proposed transmission line is the Customer and its new data center. He, therefore, requested that the Commission conduct an independent needs analysis before rendering any decision on the Application.

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<sup>43</sup> *Id.* Tr. 13-24 (Patton Testimony).

<sup>44</sup> May 2 Tr. 95-123 (Weir Testimony).



Mr. Weir next addressed the routing of the transmission line. He pointed out that none of the routes contained in Dominion's Application fall within the designated corridors for transmission lines of 150 kV or more contained in the County's Comprehensive Plan, and noted that § 56-46.1 of the Code requires the Commission take the County's Comprehensive Plan into consideration when deciding this case.

Mr. Weir also testified that the aesthetics of the proposed I-66 Overhead Route are not in accordance with the Town's Historic District Ordinance and Comprehensive Plan. Additionally, he testified that several of the proposed routes traverse a large portion of the Town's Conservation District, two of the Gateways into the Town's historic district, the areas of the Town that constitute a portion of the Journey Through Hallowed Ground, and the Town's planned Interchange Park. He also criticized Dominion's Environmental Routing Study for failing to identify the boundary of the Town and failing to describe how the impact on the Town's historic district would be addressed. The Dutton Report also was criticized by Mr. Weir for failing to accurately assess and provide images demonstrating the visual impacts of all the overhead routes. He also testified that several of the routes would transverse wetlands and a 100-year flood plain, impact endangered species, and could raise compliance problems for the County and Town under the Chesapeake Bay Preservation Act.

Mr. Weir also questioned Dominion's claim that the cost of underground transmission lines is prohibitively expensive. He pointed out that the use of underground transmission lines has increased dramatically in recent years, citing, as examples, underground lines in New York City (where overhead lines have not been built since the 1890s), Connecticut, Vermont, New Hampshire, Belgium and France. While Mr. Weir acknowledged that underground transmission lines may have significantly higher costs, he said those costs would be mitigated by the line's minimal visual impact, low EMF, protection from adverse weather conditions, elimination of corona discharge, elimination of the potential for brush fires, lower maintenance costs, lower ROW acquisition costs, minimal impact on the value of surrounding properties, greater physical security from such things as terrorist attacks, and the aesthetic and health concerns of local residents.

Mr. Weir opposed all of the routes in Dominion's Application, claiming there is no need for a transmission line. However, if the Commission determined that a route must be approved, Mr. Weir supported the I-66 Hybrid Alternative Route, provided the Customer pays the acquisition and construction costs.

## **2. Testimony and Comments of Public Witnesses**

In addition to the testimony from state and local government officials, there was a heavy turnout at the local hearings from people who reside in western Prince William County. Most of those testifying at the hearings reside in subdivisions located immediately adjacent to or nearby the proposed and alternative transmission line routes, including residents of the Heritage Hunt, Heathcote Commons, Crossroads Village, and Parks of Piedmont subdivisions, among others, located on the north side of I-66 and Somerset Crossing, Greenhill Crossing and Long Street Commons subdivisions, among others, located on the south side of I-66. In spite of the physical location of their residences, whether immediately adjacent to or nearby the transmission line routes

contained in Dominion's Application, virtually all the public witnesses who testified at the local hearings gave testimony addressing remarkably similar issues, concerns and recommendations regarding the proposed transmission line. In other words, the residents were very "on-message" thanks to an extremely well-organized campaign against the transmission line organized and led by Karen Sheehan, a resident of the Rose Hill Estates subdivision, and Elena Schlossberg, the Executive Director of the Coalition.

Like their elected representatives, many of the public witnesses expressed their frustration and anger with the County, Dominion and the Customer during the planning phase of the new data center and proposed transmission line. They asserted the planning for the data center was conducted in a secretive manner, which prevented people in the area and their elected representatives from discussing and making informed decisions about the siting and development of the data center and associated transmission line infrastructure.<sup>45</sup> Several public witnesses referred to confidentiality agreements between the County's Department of Economic Development, Dominion and the Customer that prevented people from learning the identity of the Customer, obtaining information on the type of development that was contemplated and the kind of infrastructure associated with the development.<sup>46</sup> The public witnesses also expressed concern about a trip to Seattle, Washington, by Dominion employees and County officials to showcase the County as a premier data center location.<sup>47</sup> One public witness claimed that the County was continuing to deny information to the public by withdrawing its Notice of Participation in this case so the County could avoid any discovery that might reveal damaging correspondence between the County, Dominion, and the Customer.<sup>48</sup>

The Customer's CEO was repeatedly criticized for ignoring hundreds of emails and letters requesting information about the development of the data center from people in the Haymarket area and their elected representatives.<sup>49</sup>

Dominion also did not escape criticism during the local hearings. Many public witnesses claimed the Company was "disingenuous"<sup>50</sup> and not "forthcoming"<sup>51</sup> during the planning process for the new data center and transmission line. They were very vocal and upset about what they described as "secret backroom deals" between the County, Dominion, and the Customer for the development and siting of the data center without notice to, or adequate input from, the public.<sup>52</sup>

With respect to Dominion's Application, several public witnesses asked the Commission to deny the Application in its entirety.<sup>53</sup> In support of their requests, they alleged, among other things, there is no public need for the Project. Rather, they contended the need for the Project is generated by a single customer – the owner of the data center – and not by anyone else in the area.<sup>54</sup> Other

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<sup>45</sup> See, e.g., March 14 Tr. 368-369; May 2 Tr. 141-142.

<sup>46</sup> See, e.g., February 24 Tr. 142; May 2 Tr. 97.

<sup>47</sup> *Id.* at 100-101.

<sup>48</sup> May 2 Tr. 100.

<sup>49</sup> See, e.g., Mar. 14 Tr. 290.

<sup>50</sup> *Id.* at 307.

<sup>51</sup> *Id.* at 426-427.

<sup>52</sup> February 24 Tr. 142.

<sup>53</sup> See e.g., March 14 Tr. 264; May 2 Tr. 18.

<sup>54</sup> See, e.g., February 24 Tr. 166-167; March 14 Tr. 263; May 2 Tr. 19.

public witnesses suggested there is no need for the Project at its present location because the Customer could simply relocate its data center to Innovation Park, an area where they claimed sufficient infrastructure already exists to serve the Customer's electric needs.<sup>55</sup> Others asked the Commission to invoke its power and tell the Customer to build its data center in Innovation Park instead of its current location in western Prince William County.<sup>56</sup> Additionally, one public witness testified that instead of building a transmission line, the Customer should generate its own electricity by using a fuel cell fed by natural gas pipelines or by constructing solar cells on site.<sup>57</sup>

There also was a great deal of public testimony concerning an overhead transmission line's impact on the value of their homes. A common theme of the public witness testimony throughout the local hearings was the significant negative financial impact an overhead transmission line could have on the value of their homes. Several public witnesses testified that their homes had already decreased significantly in value as a result of the 2008 recession, and that an overhead transmission line would further decrease the value of their homes, thereby placing some of them underwater on their mortgages.<sup>58</sup> Various estimates of the percentage decreases in the value of their homes were presented during the local hearings, ranging from 1% to 60%, but a 10% to 30% decrease in value appeared to represent the general consensus among those testifying at the local hearings.<sup>59</sup> Testimony also was presented claiming the decrease in home values would translate into an immediate loss to individual homeowners approaching several hundred thousand dollars and over a \$100 million in losses for the community as a whole.<sup>60</sup> Several witnesses also testified a decrease in their home values would lower the County's tax base and hurt local school budgets, affect their retirement plans, and prevent them from paying off their loans or funding their children's college education using the equity in their homes.<sup>61</sup>

Numerous public witnesses also presented testimony describing the impacts an overhead transmission would have on their viewshed, historic and environmental resources, and health and safety. Several public witnesses testifying at the local hearings reside in the Parks at Piedmont, Heritage Hunt, Heathcote and Crossroads Village subdivisions, which are located immediately north of I-66 where the proposed I-66 Overhead Route would be located. Dominion's Application and the testimony of several public witnesses indicated that in some areas the line would run outside of the I-66 sound wall currently under construction, which many public witnesses alleged would have a severe visual impact on their homes. Several people testified that if the transmission line is built on the proposed I-66 Overhead Route, it would be less than 100 feet from their homes.<sup>62</sup> In describing the location of the line and its visual impacts, the public witnesses said it would be (i) "right outside my window"; (ii) "virtually in my back yard and quite visible from my home"; (iii) visible "from my kitchen, the dining room, the living room and the family room"; (iv) "right behind my house"; and (v) "will destroy the view scape and scenic nature of the greater Haymarket area."<sup>63</sup> Testimony also was given indicating that the proposed I-66 Overhead Route would be

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<sup>55</sup> See, e.g., February 24 Tr. 32, 42, 76.

<sup>56</sup> *Id.* at 144.

<sup>57</sup> March 14 Tr. 419.

<sup>58</sup> See, e.g., February 24 Tr. 71-72, 78-79, 168, 208.

<sup>59</sup> *Id.* at 89, 144, 195-196; March 14 Tr. 286-287, 345, 375.

<sup>60</sup> See e.g., February 24 Tr. 29, 98; March 14 Tr. 345.

<sup>61</sup> See, e.g., February 24 Tr. 80, 120; March 14 Tr. 264, 397.

<sup>62</sup> See, e.g., February 24 Tr. 79; see also, Ex. 17 (McCoy Direct), Appendix V, Table 4-1.

<sup>63</sup> February 24 Tr. 35, 50, 58, 92, 181.

located “about 160 feet from a high use Crossroads [Village] play area, basketball court and area where children play soccer.”<sup>64</sup>

In addition to the public witnesses residing along I-66, many residents of the Somerset Crossing and Greenhill Crossing subdivisions also appeared and expressed similar concerns with the Railroad Alternative Route. However, the visual impact on residents living in the Somerset Crossing and Greenhill Crossing subdivisions would not be as severe as the impact on those residing along I-66 because none of the homes in the Somerset Crossing and Greenhill Crossing subdivisions are located within 200 feet of the Railroad Alternative Route.<sup>65</sup> There are, however, a significant number of single family homes, condominiums and townhomes located between 200 and 500 feet from the Railroad Alternative Route.<sup>66</sup>

The testimony of the public witnesses indicated that one of the unique features of this area is a relatively large wetlands area called North Fork Broad Run, which separates the Somerset Crossing and Greenhill Crossing subdivisions. This wetland area is within a flood plain and, based on my personal observations during a walking tour of the area, has a park-like setting with a nature trail and significant wildlife that is heavily used by residents of the two subdivisions.

Numerous residents of the Somerset Crossing and Greenhill Crossing subdivisions appeared and testified in opposition to the Railroad Alternative Route during the local hearings. Many of the residents testified that before purchasing their homes they were told that the area encompassing the wetlands behind their homes was protected and could not be developed.<sup>67</sup> While they obviously were aware of the railroad running through the wetlands area, they were surprised to learn of Dominion’s decision to propose a transmission line route paralleling the railroad.

Also, like their neighbors living adjacent to I-66, the residents were opposed to locating the line along the Railroad Alternative Route because it would negatively impact their viewshed. They testified that approval of the Railroad Alternative Route would (i) “put 110-foot high voltage power lines in many of our backyards”; (ii) be “almost right on my fence line and my neighbor’s fence line”; and (iii) cause the residents of the Somerset Crossing and Greenhill Crossing subdivisions to live “up against . . . a never ending train and . . . dangerous, hideous, 100-foot tall power lines.”<sup>68</sup>

In addition to the Railroad Alternative Route’s impact on viewsheds, the residents also testified that the route would “destroy the environment and wildlife” in the wetland area separating the Somerset Crossing and Greenhill Crossing subdivisions.<sup>69</sup>

### **3. Public Witness Testimony and Written Comments on the Staff Report**

There were several public witnesses who testified and/or filed written comments addressing the findings and recommendations in the Staff Report.

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<sup>64</sup> *Id.* at 147.

<sup>65</sup> Ex. 17 (McCoy Direct) Appendix V, Table 4-1.

<sup>66</sup> *Id.*

<sup>67</sup> February 24 Tr. 40, 217; March 14 Tr. at 284, 427-428.

<sup>68</sup> March 14 Tr. 286, 288, 371.

<sup>69</sup> February 24 Tr. 42, 211-212.

On June 16, 2016, **Delegate Marshall, Senator Black, Senator Richard Stuart,** representing the 28<sup>th</sup> Senatorial District, **Delegate Bell,** and **Delegate Hugo** filed a letter with the Commission supporting the Staff Report's recommendation that the I-66 Hybrid Alternative Route be approved by the Commission. In addition, they support the Staff's suggestion that the transmission line could be treated as a line extension, which would subject the Customer to a \$115.7 million transitional cost under Dominion's line extension policy.<sup>70</sup>

Also on June 16, 2016, the Haymarket Town Council filed a resolution supporting, among other things, the Staff's recommendation to underground the transmission line.

On June 17, 2016, Corey A. Stewart, the Chairman of the County Board of Supervisors, filed a letter urging the "Commission to accept the logic and conclusions of the SCC's June 2016 Staff Report."

Also on June 17, 2016, Curt G. Spear, Jr., Senior Assistant County Attorney for the County, filed a letter referring to the recommendations in the Staff Report, and reiterating the testimony of those public witnesses testifying on behalf of the County at the local hearings addressing the impact an overhead transmission line would have on the historical assets of the area. With regard to the Railroad Alternative Route, Mr. Spear stated that the County would not give Dominion consent to run the transmission line through the County's open space easement.

**Senator Frank W. Wagner**, representing the 7<sup>th</sup> Senatorial District, filed a letter with the Commission, dated June 16, 2016, opposing the Staff Report's recommendation that the I-66 Hybrid Alternative Route be approved. Senator Wagner said that "[f]orcing transmission lines underground will cause costs to skyrocket and can cause ratepayers in general or possibly residents living in special tax districts to pay the additional costs of the line going underground." He further maintained that "state law prohibits undergrounding when a feasible above ground alternative exists unless the locality opts for a special tax district." Further, he said it is incumbent that notification be given to residents in special tax districts of the potential costs they would be forced to pay if an underground transmission line is approved. He also opposed any new and unnecessary tax on Dominion's ratepayers in order to underground the transmission line when other options are available. Senator Wagner urged the Commission to approve overhead construction of the transmission line, which he said would be the lowest cost for all parties involved.

A letter from **Delegate Terry Kilgore**, representing the 1<sup>st</sup> House District was passed to the file during the June 21 hearing. In his letter, Delegate Kilgore expressed several concerns about the Project, including (i) treating the Project differently simply because its main driver is a single large customer; (ii) forcing the new data center or any other new job-creating business to cover an electric transmission line's cost; and (iii) placing the proposed Haymarket transmission line underground. Delegate Kilgore said these proposals, if approved by the Commission, would set a terrible precedent and would deal a severe blow to attempts to bring economic opportunities to rural localities.

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<sup>70</sup> There was some misunderstanding on the findings and recommendations in the Staff Report. The Staff did not recommend that the Customer pay a transitional cost under Dominion's line extension policy. Rather, the Staff believes Dominion's line extension policy is ambiguous and "may" be interpreted by the Commission to require the payment of a \$115.7 million transitional cost by the Customer.

Several representatives of trade organizations also expressed concerns about the Staff Report's suggestion that the Customer could be required to pay for undergrounding the line.

**Troy Murphy**, Public Policy Manager of the Northern Virginia Trade Council,<sup>71</sup> appeared at the June 21 hearing to express his "strong concern" with the suggestion in the Staff Report that the Customer pay for undergrounding the transmission line.<sup>72</sup> He said that requiring data centers to pay for undergrounding transmission lines for aesthetic reasons could establish a precedent for developers of future data center projects, and could cause Virginia to lose its competitiveness in attracting new data center jobs and development to the State.

**Ryan Dunn**, an employee of the Virginia Chamber of Commerce, appeared at the June 21 hearing and read into the record a letter from Barry Duval, the President of the Virginia Chamber of Commerce.<sup>73</sup> Mr. Duval expressed concerns about the Staff Report's recommendation<sup>74</sup> that the Customer should be required to pay for undergrounding the transmission line. Mr. Duval's letter stated that one of the key selling points of attracting business to Virginia has always been its positive business and regulatory climate. However, he expressed concern that if the Customer has to pay for undergrounding the transmission line, it will discourage businesses from locating or expanding in Virginia.

Mr. Dunn also passed several letters to the file from the Prince William Chamber of Commerce, Loudoun County Chamber of Commerce, Dulles Regional Chamber of Commerce, and Mount Vernon Lee Chamber of Commerce. All of the letters expressed similar concerns about the proposals to: (i) deny the Application because a single customer is the main driver of the proposed transmission line; (ii) make the Customer pay a portion of the transmission line costs; and (iii) undergrounding the transmission line solely for aesthetic reasons.

#### **4. Public Witness Testimony Supporting a Minor Variation to the Proposed I-66 Overhead Route Presented During the June 21, 2016 Hearing**

The final public witness testifying at the hearings was Peter Cooper, who appeared at the June 21 hearing representing the Cloverdale Trust ("Trust"). The Trust owns the Clavelli property on John Marshall Highway (SR 55) immediately to the west of and adjacent to Walmart. Mr. Cooper expressed concern over Dominion's proposed location of an angle structure on the Walmart Variation. Specifically, he was concerned that the location of the angle structure on the Clavelli property would interfere with a planned parking lot for a Home Depot and other businesses that will be developed on the property. While Mr. Cooper did not oppose the transmission line spanning the Clavelli property, he requested that the angle structure be moved further south and closer to John Marshall Highway (SR 55) so the angle structure would not interfere with the future development of the Clavelli property.

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<sup>71</sup> The Northern Virginia Trade Council is a regional trade association representing nearly 1000 companies and organizations in Northern Virginia.

<sup>72</sup> June 21 Tr. 11-16 (Murphy Testimony).

<sup>73</sup> June 21 Tr. 16-22 (Dunn Testimony). Mr. Dunn also passed Delegate Kilgore's letter to the file.

<sup>74</sup> Once again, the Staff did not recommend that the Customer pay for undergrounding the transmission line. Rather, the Staff contended Dominion's line extension policy is ambiguous, and could be interpreted to require a payment from the Customer for undergrounding the line.

Dominion agreed to work with Mr. Cooper if the Walmart Variation is approved by the Commission, and further proposed to move the angle structure to the south side of John Marshall Highway (SR 55) to reduce the impact on the Clavelli property.<sup>75</sup>

## **5. Dominion's Direct Case**

Dominion presented the direct testimony of six witnesses in support of its Application: Mark R. Gill, a Consulting Engineer in the Electric Planning Group of Dominion; Harrison S. Potter, an Engineer III in the Distribution Planning Department of Dominion; Robert J. Shevenock II, a Consulting Engineer in the Electric Transmission Line Engineering Department of Dominion; Wilson O. Velazquez, an Engineer III in the Substation Engineering Section of the Electric Transmission Group of Dominion; Donna T. Faison, a Senior Siting and Permitting Specialist, Electric Transmission Right-of-Way for Dominion; and Jeffrey R. Thommes, a Program Director and Principal with Natural Resource Group, LLC ("NRG").

**Mark R. Gill** testified that he is responsible for planning Dominion's electric transmission system in Northern Virginia for voltages of 69 kV through 500 kV.<sup>76</sup> His testimony discussed the need for the Project and its associated benefits from a transmission planning perspective. Mr. Gill also sponsored Section I.H and co-sponsored with Dominion witness Potter Sections I.A through I.C, I.E and I.I of the Appendix.<sup>77</sup>

Mr. Gill first provided an overview of Dominion's transmission system and the transmission planning process. He testified that Dominion is part of the Eastern Interconnection transmission grid (which means Dominion's transmission system is interconnected, directly or indirectly, with all other transmission systems in the U.S. and Canada between the Rocky Mountains and the Atlantic coast, except Quebec and most of Texas) and a member of PJM Interconnection L.L.C. ("PJM"), a regional transmission organization ("RTO") responsible for ensuring the reliability of electric service throughout the District of Columbia and thirteen states, including Virginia.<sup>78</sup> He also briefly described the recent summer peak demands of PJM and the Company; testified that the Company is obligated to participate in PJM's Regional Transmission Expansion Plan process; and testified that the loads in the PJM footprint are increasing, with the load in the Dominion Zone expected to be one of the fastest growing zones in PJM.<sup>79</sup>

Mr. Gill next described the load that would be served by the Project.<sup>80</sup> He testified the Customer is expanding its existing data center campus located west of the Town and is expected to have a load of 120 megavolt amperes ("MVA") when its new data center is completed.<sup>81</sup> The total loading at the proposed Haymarket Substation, according to Mr. Gill, is projected to be

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<sup>75</sup> See June 22 Tr. 583-586; Ex. 49.

<sup>76</sup> Ex. 4 (Gill Direct) at 1.

<sup>77</sup> *Id.* at 2.

<sup>78</sup> *Id.* at 3-4.

<sup>79</sup> *Id.* at 4.

<sup>80</sup> *Id.* at 4-5.

<sup>81</sup> *Id.*

approximately 160 MVA, including the new data center's load.<sup>82</sup> He further testified the new transmission facilities must be in service by the summer of 2018.<sup>83</sup>

Mr. Gill then provided a general overview of Dominion's current transmission system in the vicinity of the proposed Haymarket Substation, which consists of four substations and numerous 500 kV, 230 kV, and 115 kV transmission lines.<sup>84</sup> He then explained why additional facilities are needed to prevent overloading on Dominion's system projected to commence in the summer of 2017.<sup>85</sup>

Mr. Gill testified that Dominion currently has three 34.5 kV distribution circuits serving the area, namely #378, #379, and #695.<sup>86</sup> The available capacity on these distribution circuits during the summer of 2017 is projected to be 48.6 MVA, which is substantially below the Customer's request for 101 MVA of service.<sup>87</sup> Given Dominion's inability to provide service to the Customer under its original ramp schedule, Mr. Gill testified that Dominion and the Customer had to adjust the Customer's ramp schedule to allow Dominion sufficient time to construct a new transmission line and substation to provide additional capacity in the area.<sup>88</sup>

Mr. Gill further testified the Project would enhance the reliability for other customers in the Haymarket load area for two reasons.<sup>89</sup> First, with the additional capacity from the proposed Project, there would be a greater opportunity to switch load to other circuits in the event of an outage, which can result in faster restoration times.<sup>90</sup> Second, by constructing new distribution circuits from the proposed Haymarket Substation, the length of the circuits to certain customers would be reduced, thus promoting greater reliability.<sup>91</sup>

Mr. Gill also testified that the Company is required to comply with mandatory NERC standards.<sup>92</sup> In order to remain in compliance with such standards, Mr. Gill testified that Dominion maintains NERC-compliant Facility Connection Requirements, which include the Company's Transmission Planning Criteria.<sup>93</sup> According to Mr. Gill, the Project is necessary so the Company can maintain its compliance with Section C.2.6 of the Company's Transmission Planning Criteria, which prevents loading on a radial feed line in excess of 100 MW without an alternate transmission supply.<sup>94</sup> He testified that the double circuit configuration of the Project satisfies this criterion.<sup>95</sup>

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<sup>82</sup> *Id.*

<sup>83</sup> *Id.*

<sup>84</sup> *Id.* at 5-8.

<sup>85</sup> *Id.* at 8-9.

<sup>86</sup> *Id.* at 8.

<sup>87</sup> *Id.* at 8-9.

<sup>88</sup> *Id.*

<sup>89</sup> *Id.* at 9.

<sup>90</sup> *Id.*

<sup>91</sup> *Id.*

<sup>92</sup> *Id.* 9-10.

<sup>93</sup> *Id.* at 10.

<sup>94</sup> *Id.*

<sup>95</sup> *Id.*



Mr. Gill further testified that the Company considered whether there were any feasible alternatives to the Project.<sup>96</sup> He said the Company considered several transmission alternatives, but they were all deemed inferior to the proposed Project.<sup>97</sup>

Mr. Gill concluded that the Project is needed to assure the continued reliability of Dominion's transmission and distribution systems in the area and to support continued economic development in Virginia, including the Customer's new data center, by reinforcing the Company's transmission system in Prince William and Loudoun Counties.<sup>98</sup>

During cross-examination by the Coalition's counsel, Mr. Gill sponsored Dominion's response to interrogatory No. 2-16 of the Coalition's discovery.<sup>99</sup> In its response to this interrogatory, Dominion admitted that without the request to serve the Customer's new data center, "the Company did not have plans to construct a 230 kV line into the Haymarket load area."<sup>100</sup> During the Company's rebuttal case, Mr. Gill qualified the Company's response to this interrogatory by testifying that the Company would not build the transmission line "at this time" without the Customer's new load.<sup>101</sup>

In response to questions from Staff counsel, Mr. Gill stated the proposed Project is not related to a NERC reliability criteria violation because the Project is considered a Supplemental Project by PJM.<sup>102</sup> During redirect examination, however, Mr. Gill testified that NERC requires Dominion to maintain Facility Connection Requirements, which limit loading on a radial feed line in excess of 100 MW without an alternative transmission supply.<sup>103</sup> Accordingly, Mr. Gill testified that Dominion's planning criteria requires the Company to network the proposed transmission line when serving the Customer's new load.<sup>104</sup>

**Harrison S. Potter** testified that he is responsible for planning the Company's distribution system in and around Loudoun and Prince William Counties for voltages under 69 kV.<sup>105</sup> Mr. Potter also co-sponsored with Dominion witness Gill Sections I.A through I.C, I.E, and I.I of the Appendix.<sup>106</sup>

Mr. Potter testified that the total load at the Customer's data center is projected to be approximately 120 MVA, consisting of three buildings.<sup>107</sup> The total loading at the Haymarket Substation, including the Customer's load, is projected to be 165.5 MVA at full buildout.<sup>108</sup> He

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<sup>96</sup> *Id.*

<sup>97</sup> *Id.* See also Ex. 3 (Appendix) Section I.C.

<sup>98</sup> Ex. 4 at 10.

<sup>99</sup> Ex. 5.

<sup>100</sup> *Id.*

<sup>101</sup> June 22 Tr. 331.

<sup>102</sup> June 21 Tr. 110-111.

<sup>103</sup> *Id.* at 112-114; See also Ex. Nos. 34, 35.

<sup>104</sup> *Id.*

<sup>105</sup> Ex. 6 (Potter Direct) at 1.

<sup>106</sup> *Id.* at 2.

<sup>107</sup> *Id.* at 3.

<sup>108</sup> *Id.*

further testified that the proposed new transmission facilities must be in service by the summer of 2018.<sup>109</sup>

Mr. Potter explained that as the load in the Haymarket load area increases along with the Customer's load, overloads are projected to occur in the summer of 2017.<sup>110</sup> He noted that the Customer requested 101 MVA by the summer of 2017, and with only 48.6 MVA available on distribution circuits, the Company had to work with the Customer to adjust its original ramp schedule.<sup>111</sup> He also testified the proposed Project would solve normal and contingency overloads on the area's distribution system.<sup>112</sup>

Mr. Potter also testified the Project would enhance the reliability for other customers in the area for two distinct reasons. First, with the additional capacity from the proposed Project, there would be a greater opportunity to switch load to other circuits in the event of an outage, which can result in faster restoration times.<sup>113</sup> Second, by constructing new distribution circuits from the proposed Haymarket Substation, the length of the circuits to certain customers in the area would be reduced, thus promoting greater reliability.<sup>114</sup>

Mr. Potter further testified that Dominion considered whether there were any feasible distribution alternatives to the Project, but all such alternatives were rejected.<sup>115</sup>

**Robert J. Shevenock II** testified that he is responsible for the estimating and engineering design of high voltage transmission line projects from 69 kV to 500 kV.<sup>116</sup> He described the design characteristics of the proposed transmission line and provided EMF data for the line.<sup>117</sup> He also sponsored or co-sponsored the following sections of the Appendix: He sponsored Sections I.D, I.F, II.A.3, II.A.6, II.B, and IV, co-sponsored Section I.A with Company witnesses Gill and Potter, and co-sponsored Section I.G with Company witness Velazquez.<sup>118</sup>

Mr. Shevenock testified that the proposed I-66 Overhead Route would be constructed on new ROW using double circuit, single-shaft galvanized steel polls with three twin-bundled 795 ACSR 26/7 phase conductors with a summer transfer capability of 1225 MVA.<sup>119</sup> By cutting and tapping into Line #124, Mr. Shevenock testified the Project will create two new 230 kV transmission lines to be designated 230 kV Gainesville-Haymarket Line #2176 and 230 kV Haymarket-Loudoun Line #2169.<sup>120</sup>

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<sup>109</sup> *Id.*

<sup>110</sup> *Id.* at 4.

<sup>111</sup> *Id.*

<sup>112</sup> *Id.*

<sup>113</sup> *Id.*

<sup>114</sup> *Id.*

<sup>115</sup> *Id.* at 5. *See also*, Ex. 3 (Appendix) at Section I.B.

<sup>116</sup> Ex. 7 (Shevenock Direct) at 1.

<sup>117</sup> *Id.* at 2-5.

<sup>118</sup> *Id.* at 2.

<sup>119</sup> *Id.*

<sup>120</sup> *Id.* at 3.

He further testified that single-shaft structures are proposed to allow the installation of two 230 kV circuits in a 100-foot ROW and to minimize the footprint of the structures.<sup>121</sup> The estimated cost of the Project is \$51 million in 2015 dollars, with \$30.2 million for transmission line work.<sup>122</sup> He also estimated it would take twelve months for engineering, material procurement, ROW acquisition, and construction permitting, and twelve months to construct the Project along the I-66 Overhead Route.<sup>123</sup>

Mr. Shevenock also calculated maximum EMF levels for the Project.<sup>124</sup> He testified that at the edge of the ROW under average and peak loading conditions, the EMF levels would range from 5.495 milligauss ("mG") to 117.445 mG.<sup>125</sup> He testified that such EMF levels are comparable to those created by hair dryers (300 mG), copy machines (90 mG or more), and electric saws (40 mG or more).<sup>126</sup> He also said magnetic field strength diminishes rapidly as distance from the source increases.<sup>127</sup>

**Wilson O. Velazquez** testified that he is responsible for conceptual design, scope development and cost estimating for all of Dominion's new high voltage transmission switching stations, transmission substations and distribution stations.<sup>128</sup> He sponsored Section II.C and co-sponsored with Company witness Shevenock Section I.G of the Appendix.<sup>129</sup>

Mr. Velazquez described the work to be done at the Haymarket and Gainesville Substations and the Loudoun Station to accommodate the Project.<sup>130</sup> He estimated the total cost of the Project is \$51 million, in 2015 dollars, of which approximately \$20.8 million is for substation and station work.<sup>131</sup>

**Diana T. Faison** testified that she is responsible for identifying appropriate routes for transmission lines and sites for substations and for obtaining necessary federal, state and local approvals and environmental permits for those facilities.<sup>132</sup> She co-sponsored with Company witness Thommes portions of Sections II and III of the Appendix and the Environmental Routing Study.<sup>133</sup>

Ms. Faison testified that Dominion and its consultants, including NRG, worked to obtain relevant information from local, state and federal officials, mapping resources, and the public when selecting a route for the proposed transmission line.<sup>134</sup> She also testified that the information and

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<sup>121</sup> *Id.*

<sup>122</sup> *Id.*

<sup>123</sup> *Id.* at 4.

<sup>124</sup> *Id.* at 4-5.

<sup>125</sup> *Id.* at 4.

<sup>126</sup> *Id.*

<sup>127</sup> *Id.* at 4-5.

<sup>128</sup> Ex. 8 (Velazquez Direct) at 2.

<sup>129</sup> *Id.* at 2-3.

<sup>130</sup> *Id.* at 3-4.

<sup>131</sup> *Id.* at 4-5.

<sup>132</sup> Ex. 9 (Faison Direct) at 1.

<sup>133</sup> *Id.* at 2.

<sup>134</sup> *Id.* at 3.

materials used during presentations, open house displays and public meetings were posted on the Company's website.<sup>135</sup> Finally, as required by § 15.2-2202 D of the Code, she said letters were sent to local officials in Prince William and Loudoun Counties advising them of the Company's intent to file the Application and inviting their input on the Project.<sup>136</sup>

**Jeffrey R. Thommes'** direct testimony<sup>137</sup> was adopted by **Jon M. Berkin**, a Principal Environmental Consultant with NRG, at the June 21 hearing.<sup>138</sup> Mr. Berkin also sponsored the Environmental Routing Study conducted by NRG, Sections II.A.1, 2, 4, 5, 7-9, III and V of the Appendix, and co-sponsored with Company witness Faison the DEQ supplement filed with the Application.<sup>139</sup>

Mr. Thommes' testimony gave an overview of the route selection process, identified the routes considered by the Company for a new transmission line, and described why the I-66 Overhead Route was selected over the other alternatives. He explained that the route selection process begins with Dominion's Transmission Planning Department identifying the origin and termination points for the transmission line and the study area for the Project.<sup>140</sup> With this information, NRG then collects information within the study area, performs a routing analysis comparing the alternative routes, and documents the routing efforts in the Environmental Routing Study filed with the Application.<sup>141</sup> Dutton and Associates was retained to identify known cultural and environmental resources in the study area.<sup>142</sup>

Mr. Thommes' testimony also described what specific factors are considered by NRG during its routing analysis. Once a study area is determined, NRG conducts a review to determine if existing ROW is available in which to co-locate the new line.<sup>143</sup> Co-location minimizes the impact of a transmission line and is consistent with FERC Guideline #1 and §§ 56-46.1 and 56-259 of the Code, both of which promote the use of existing ROW for new transmission lines.<sup>144</sup>

Mr. Thommes' testimony also indicated that NRG identifies sensitive environmental, political, and constructability-related features that may be considered routing restraints in the study area.<sup>145</sup> After all opportunities and routing constraints are mapped and identified, he said buildable routes are identified and GIS mapping is used to quantify the potential impacts of each route.<sup>146</sup>

Mr. Thommes explained that NRG identified and considered five potential routes in its routing study, including the I-66 Overhead Route and the I-66 Hybrid Alternative Route, among

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<sup>135</sup> *Id.*

<sup>136</sup> *Id.* at 3-4.

<sup>137</sup> Ex. 10 (Thommes Direct).

<sup>138</sup> June 21 Tr. 122-123.

<sup>139</sup> Ex. 10 (Thommes Direct) at 4-5.

<sup>140</sup> *Id.* at 5.

<sup>141</sup> *Id.*

<sup>142</sup> *Id.*

<sup>143</sup> *Id.* at 5-6

<sup>144</sup> *Id.* at 6.

<sup>145</sup> *Id.*

<sup>146</sup> *Id.*

others.<sup>147</sup> He then described and summarized each of the five routes NRG identified in its routing analysis.<sup>148</sup> He testified the Railroad Alternative Route was Dominion's preferred route early in the planning process because it avoided the I-66 ROW, co-located with existing Norfolk Southern railroad tracks, and would reasonably minimize adverse impacts in the area.<sup>149</sup> However, Dominion subsequently concluded the Railroad Alternative Route was not a viable route after the County was granted an open space easement along North Fork Broad Run, a wetlands area separating the Somerset Crossing and Greenhill Crossing subdivisions.<sup>150</sup>

Mr. Thommes' testimony indicated that Dominion selected the I-66 Overhead Route as its proposed route "because it provides an opportunity to maximize co-location with existing infrastructure (I-66 and the Norfolk Southern Railroad), presents a reasonable cost compared to the other Alternative Routes, and provides the shortest and most direct route to the proposed Haymarket Substation available."<sup>151</sup>

## 6. Southview's Direct Case

Southview presented the testimony of Arthur N. Fuccillo, the Executive Vice President of Lerner Enterprises ("Lerner"). Lerner is the owner and sole member of Southview, which owns two parcels of property consisting of approximately 110 acres, located in the quadrant southwest of the I-66/Lee Highway (US 29) interchange.<sup>152</sup>

**Arthur N. Fuccillo** testified that the I-66 Hybrid Alternative Route, Railroad Alternative Route, Carver Road Alternative Route, and Madison Alternative Route would negatively impact Southview's planned development of its property.<sup>153</sup> He testified the I-66 Hybrid Alternative Route would significantly impact Southview's property because the line would run along the property's northern boundary fronting I-66, and because Dominion's proposed transition station, where the transmission line would transition from an overhead line to an underground line, would consume most of Parcel Two of Southview's property.<sup>154</sup> He further testified the Railroad Alternative Route, Carver Road Alternative Route, and Madison Alternative Route would negatively impact the high density commercial development envisioned for Southview's property by the County's Comprehensive Plan.<sup>155</sup>

Mr. Fuccillo introduced two "concept plans" setting forth proposed developments on Southview's property, one in his direct testimony and another during the hearing.<sup>156</sup> He testified the I-66 Hybrid Alternative Route would eliminate a hotel planned on Parcel 2 of Southview's property

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<sup>147</sup> *Id.* at 7.

<sup>148</sup> *Id.* at 7-10.

<sup>149</sup> *Id.* at 9.

<sup>150</sup> February 24 Tr. 65; June 21 Tr. 70-71; Ex. 10 (Thommes Direct) at 9-10.

<sup>151</sup> Ex. 10 (Thommes Direct) at 10.

<sup>152</sup> Ex. 11 (Fuccillo Direct) at 1-3.

<sup>153</sup> *Id.* at 1-2.

<sup>154</sup> *Id.*

<sup>155</sup> *Id.* at 2. The County's Comprehensive Plan contemplates high density commercial development on Southview's property of over one million square feet.

<sup>156</sup> *Id.* at Exhibit 2; Ex. 12.

and all of the retail space planned along I-66.<sup>157</sup> He further testified that the Railroad Alternative Route, Carver Road Alternative Route, and Madison Alternative Route would impair the visibility into Southview's property from roads adjacent to the property and would likely eliminate the possibility of constructing a hotel on Parcel 2 of Southview's property.<sup>158</sup> Although the proposed I-66 Overhead Route would not impact Southview's property, Mr. Fuccillo said he was hesitant to support the proposed route because of its impact on other property owners.<sup>159</sup>

Mr. Fuccillo also disagreed with Dominion witness Lennhoff's rebuttal testimony, which claimed that commercial properties are less affected than residential properties by overhead transmission lines.<sup>160</sup> Mr. Fuccillo testified that an overhead transmission line would create a visual barrier to Southview's planned development and would require people to look through power lines to see the commercial development on Southview's property.<sup>161</sup>

Mr. Fuccillo recommended that Dominion's Application be denied because "[t]he need is being created by one user, and one user alone cannot justify the construction of 230 kV transmission lines through an area where such transmission lines are in direct conflict with existing and planned uses."<sup>162</sup>

## 7. FST's Direct Case

FST presented the testimony of two witnesses in its direct case: Denar Antelo, the Director of Engineering at The Engineering Group, Inc., and Don Mayer, the owner and managing partner of FST.

**Denar Antelo** performed a study to determine the impact the proposed I-66 Overhead Route would have on FST's property, which is located at 15405 John Marshall Highway (SR 55).<sup>163</sup> His study included a "pre-take" and "post-take" development analysis, which is a study of the property's development potential both without and with the I-66 Overhead Route running across FST's property fronting John Marshall Highway (SR 55).<sup>164</sup> His study assumed the property's current M-2 zoning would remain in place, FST's existing building would remain on site, and the new development on the property would be four story office buildings.<sup>165</sup>

Mr. Antelo testified that based on his "pre-take" analysis, FST could construct approximately 82,000 square feet of additional development on its property without the I-66 Overhead Route running along the front of FST's property.<sup>166</sup> Applying the same assumptions to his "post-take" analysis and including the proposed 100-foot easement for the transmission line, Mr. Antelo testified that FST could construct only 49,600 square feet of additional development on its

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<sup>157</sup> Ex. 11 (Fuccillo Direct) at 3.

<sup>158</sup> *Id.*

<sup>159</sup> *Id.*

<sup>160</sup> June 21 Tr. 128-129; *See also* Ex. 44 at 7-8.

<sup>161</sup> June 21 Tr. at 129.

<sup>162</sup> Ex. 11 (Fuccillo Direct) at 4.

<sup>163</sup> Ex. 13 (Antelo Direct) at 1.

<sup>164</sup> *Id.* at 1-2.

<sup>165</sup> *Id.* at 2.

<sup>166</sup> *Id.*

property.<sup>167</sup> He also opined that retail users would not be interested in FST's property if overhead transmission lines are constructed on the property because of a lack of visibility, the presence of the lines on the property and the visual impact to the property.<sup>168</sup> Mr. Antelo also testified the I-66 Hybrid Alternative Route would impact FST's property but to a lesser extent.<sup>169</sup>

In order to mitigate the impact of the I-66 Overhead Route on FST's property, Mr. Antelo also developed and proposed a minor variation to the I-66 Overhead Route, called the FST Route Variation for the Commission's consideration. His proposed route variation, attached to his direct testimony as Exhibit 3, would depart from the proposed I-66 Overhead Route immediately to the east of FST's property line and run along the east and south sides of FST's property before terminating at the proposed Haymarket Substation.<sup>170</sup> Mr. Antelo's Exhibit 3 also shows Dominion's proposed variation to FST Route Variation, called the FST Optimization Route, which would eliminate the sharp angles in Mr. Antelo's proposed FST Route Variation. Mr. Antelo concluded that the FST Route Variation is just as feasible as the proposed I-66 Overhead Route and the I-66 Hybrid Alternative Route from a civil engineering and land development standpoint.<sup>171</sup>

**Don Mayer** testified that FST's property currently has a one-story building, which has approximately 9,600 square feet of space and is used primarily as a flower distribution business.<sup>172</sup> He further testified that the proposed I-66 Overhead Route would have a "devastating" impact on FST's property because "it would eliminate the development potential of the Property."<sup>173</sup> He also opined, like FST witness Antelo, that no retail user would be interested in FST's property with an overhead line "because buildings would be set back over 100 feet from Route 55 frontage, and retail users would be traveling under power lines to enter the businesses."<sup>174</sup>

In order to reduce the negative impacts to FST's property, Mr. Mayer said he preferred that Dominion's transmission line avoid FST's property altogether.<sup>175</sup> He also said he does not oppose Dominion's proposed FST Optimization Route.<sup>176</sup> He also noted that the Walmart variation would not impact FST's property but testified that he is "sensitive to the concerns of other neighboring property owners who are impacted by this alternative."<sup>177</sup>

Mr. Mayer ultimately opposed all of the routes in Dominion's Application.<sup>178</sup> He said "[t]he need [for the line] is being created by one user, and one user alone cannot justify the construction of 230 kV transmission lines through an area where such transmission lines are in direct conflict with existing and planned uses."<sup>179</sup> However, if the Commission finds the proposed transmission line is

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<sup>167</sup> *Id.* at 3.

<sup>168</sup> *Id.* at 3.

<sup>169</sup> *Id.*

<sup>170</sup> *Id.* at Exhibit 3.

<sup>171</sup> *Id.* at 4.

<sup>172</sup> Ex. 14 (Mayer Direct) at 1.

<sup>173</sup> *Id.* at 2.

<sup>174</sup> *Id.* at 2-3.

<sup>175</sup> *Id.* at 3.

<sup>176</sup> *Id.*

<sup>177</sup> *Id.* at 4.

<sup>178</sup> *Id.*

<sup>179</sup> *Id.*

needed, Mr. Mayer requested that the transmission line be routed to avoid impacting FST's property.<sup>180</sup>

## 8. Somerset's Direct Case

Somerset presented the testimony of James R. Napoli, the President of Somerset Crossing Home Owners Association, Inc.

**James R. Napoli** began his testimony by reviewing the Virginia statutes that apply to Dominion's Application and discussing the issues that must be considered by the Commission.<sup>181</sup> Mr. Napoli first addressed the threshold issue in every CPCN case before the Commission; namely, whether there is a need for Dominion's proposed transmission line.<sup>182</sup> On this issue, Mr. Napoli took the position that Dominion has not shown "that any of the proposed routes are necessary, as required pursuant to Va. Code § 56-46.1."<sup>183</sup> In support of this assertion, Mr. Napoli testified that "the sole purpose for the installation of the proposed transmission line is to provide service to a single end-user," and "the alleged 'need' only exists due to a private agreement between Dominion and [the Customer]."<sup>184</sup> Stated differently, Mr. Napoli recommends that Dominion's Application be denied because the transmission line is not needed to serve the existing customer base in the area but is only needed to serve the Customer's new data center.

Mr. Napoli highlighted several additional reasons why he believes the transmission line is not needed. First, he claimed that Dominion's Line #124 "is perfectly adequate for the current load and indeed, all anticipated future development, if such future development does not include [the] Customer's data center that eats up the entire load."<sup>185</sup>

Next, he claimed that Dominion did not "provide clear or adequate answers" when responding to Staff's discovery requesting information on why the proposed Haymarket transmission line is needed.<sup>186</sup> Staff interrogatory No. 1-13, for example, asked Dominion whether NERC or PJM would prohibit Dominion from amending its Transmission Planning Criteria<sup>187</sup> to create a different load limit for radial transmission lines that are needed for a line extension to serve a single customer, such as a data center.<sup>188</sup> The Company's response admitted that a different load limit was possible, but said such a change "could" reduce reliability and negatively impact economic development, as well as "could be" inconsistent with the Company's responsibility to provide non-discriminatory service.<sup>189</sup> According to Mr. Napoli, Dominion has the burden of proof

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<sup>180</sup> *Id.*

<sup>181</sup> Ex. 16 (Napoli Direct) at 2-3.

<sup>182</sup> *Id.* at 3-7.

<sup>183</sup> *Id.* at 2.

<sup>184</sup> *Id.* at 3-4.

<sup>185</sup> *Id.* at 4.

<sup>186</sup> *Id.* at 4-5.

<sup>187</sup> As noted earlier in this Report, Section C.2.6 of the Company's Transmission Line Planning Criteria limits loading on a radial line to 100 MW without an alternate transmission supply source.

<sup>188</sup> Ex. 16 (Napoli Direct) at 4.

<sup>189</sup> *Id.* at 4-5.



in this case, and responses couched in terms of “could” or “could be” are simply insufficient evidence to establish a need for the Project.<sup>190</sup>

Mr. Napoli also challenged Dominion’s ability to justify a need for the transmission line based on future economic development in the area. In this regard, Mr. Napoli asserted that “Dominion is not competent to determine the effect the existence of a transmission line could have on any potential economic development or to opine as to what ‘could’ negatively impact economic development.”<sup>191</sup> In Mr. Napoli’s view, “[t]hat is an issue left to the localities which are being subjected to this monstrous project and to the Commission itself, after evaluating all of the evidence.”<sup>192</sup> Mr. Napoli further alleged the County and Town have “clearly stated that the economic development is not worth it if the community property values are grossly devalued as a result of this Project.”<sup>193</sup> He also claimed that the “County has engaged in extensive analysis of its future development and electricity needs, and, in so doing, explicitly declined to include any of Dominion’s proposed routes in its long-term plan.”<sup>194</sup>

Mr. Napoli next referred to Dominion’s response to Staff interrogatory No. 1-6 in support of his claim that Dominion failed to demonstrate a need for the transmission line. In this interrogatory, Staff sought information on Dominion’s basis for converting Line #124 from 115 kV to 230 kV.<sup>195</sup> In its response, Dominion explained that the conversion of Line #124 to 230 kV was consistent with the Company’s approach to support demand growth in Northern Virginia and cited several Commission cases in support of its response. Mr. Napoli distinguished the cases cited in Dominion’s response from the current case, alleging the cases cited by Dominion did not involve a single customer without evidence of additional necessity, but, instead, involved replacing a deteriorating line (Case No. PUE-2009-00134<sup>196</sup>); building a new 230 kV line, but with no objections as to necessity (Case No. PUE-2011-00011<sup>197</sup>); transferring a transmission line (Case No. PUE- 2012-00065<sup>198</sup>); and finally citing a case where the need for a transmission solution was

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<sup>190</sup> *Id.*

<sup>191</sup> *Id.* at 5.

<sup>192</sup> *Id.*

<sup>193</sup> *Id.*

<sup>194</sup> *Id.*

<sup>195</sup> *Id.*

<sup>196</sup> *Application of Virginia Electric and Power Company D/B/A Dominion Virginia Power, For approval of certificates of public convenience and necessity for facilities in Loudoun and Prince William Counties: Loudoun-New Road Double-Circuit 230 kV Transmission Line and New Road Substation*, Case No. PUE-2009-00134, 2011 S.C.C. Ann. Rept. 307, Final Order (Jan. 24, 2011).

<sup>197</sup> *Application of Virginia Electric and Power Company D/B/A Dominion Virginia Power, For approval and certification of electric facilities in Prince William County and the City of Manassas: Cannon Branch-Cloverdale 230 kV Transmission Line and Cloverdale Substation*, Case No. PUE-2011-00011, 2011 S.C.C. Ann. Rept. 428, Final Order (Dec. 21, 2011).

<sup>198</sup> *Application of Virginia Electric and Power Company d/b/a Dominion Virginia Power, For approval and certification of electric transmission facilities in Prince William County and the City of Manassas: Cloverdale-Liberty Loop 230 kV Double Circuit Transmission Line and 230 kV-115 kV Liberty Substation*, Case No PUE-2012-00065, 2013 S.C.C. Ann. Rept. 272, Final Order (Apr. 17, 2013).

not challenged (PUE-2014-00025<sup>199</sup>).<sup>200</sup> While Mr. Napoli did not specifically say so in his direct testimony, apparently his point here is that converting a line from 115 kV to 230 kV operation in order to support future growth in Northern Virginia in general is not sufficient, in and of itself, to demonstrate a need for Dominion's proposed transmission line to serve the Haymarket load area.

Mr. Napoli, therefore, maintained that Dominion had failed to meet its burden of proof in this case because the Company "has attempted to establish the 'need' for the line by entering into a private, third party agreement to construct a line that is: (1) unnecessary to meet anticipated growth [in the area]; (2) is not required to address a condition of overstress [on Dominion's existing system]; and (3) is in direct conflict with the public priorities as established by the local governments."<sup>201</sup>

However, in the event the Commission finds a need for the proposed Haymarket transmission line has been established by Dominion, Mr. Napoli addressed the specific route that should be approved by the Commission to meet this need.<sup>202</sup> He testified that "the Commission must remove from consideration the Railroad Alternative Route, Carver Road Alternative Route, and Madison Alternative Route based on environmental considerations, historical considerations and the establish[ed] public interest and, instead, approve the I-66 Hybrid [Alternative] Route."<sup>203</sup>

Citing the DEQ Report filed with the Commission on January 20, 2016, Mr. Napoli testified that "to the extent any agencies opined about the five routes included in Dominion's Application, the consensus opinion of those agencies is that the I-66 Hybrid [Alternative] Route would have the least negative environmental impact according to criteria defined by Va. Code § 56-46.1."<sup>204</sup>

With respect to the environmental issues, Mr. Napoli referred to a finding by the DEQ's Office of Wetlands and Stream Protection ("OWSP") that the Railroad Alternative Route, Carver Road Alternative Route, and Madison Alternate Route would have substantially greater impacts on wetlands than the proposed I-66 Overhead Route.<sup>205</sup> Moreover, as noted earlier in this Report, subsequent to the filing of Mr. Napoli's direct testimony, DEQ's OWSP filed a letter with the Commission on June 2, 2016, which recalculated the wetlands impact of the proposed and alternative routes. The DEQ's OWSP ultimately concluded that the I-66 Hybrid Alternative Route would have less wetland impacts than any of Dominion's other routing proposals, including the I-66 Overhead Route.<sup>206</sup>

Mr. Napoli further testified that substantial and irreversible damage would occur to wildlife and natural habitat if the Railroad Alternative Route, Carver Road Alternative Route or Madison

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<sup>199</sup> *Application of Virginia Electric and Power Company, For approval and certification of electric transmission facilities for the Remington CT-Warrenton 230 kV Double Circuit Transmission Line, Vint Hill-Wheeler and Wheeler-Loudoun 230 kV Transmission Lines, 230 kV Vint Hill Switching Station, and 230 kV Wheeler Switching Station*, Case No. PUE-2014-00025, Final Order (Feb. 11, 2016).

<sup>200</sup> Ex. 16 (Napoli Direct) at 5-6.

<sup>201</sup> *Id.* at 7.

<sup>202</sup> *Id.* at 7-19.

<sup>203</sup> *Id.* at 7-8.

<sup>204</sup> *Id.* at 8.

<sup>205</sup> *Id.*

<sup>206</sup> See Ex. 27 at Revised Wetland Impact Consultation Letter (June 2, 2016).

Alternate Route were selected.<sup>207</sup> He noted that Dominion's own Environmental Routing Study indicates the Railroad Alternative Route would cross property (which is commonly referred to as Rolling Creek Park) that is subject to an open space easement held by the County for 0.8 of a mile.<sup>208</sup> Mr. Napoli further testified that both the DEQ and Department of Conservation and Recreation have noted that several protected species reside in the area, including brook floaters, yellow lances and northern long-eared bats, as well as other species such great blue herons, red-tailed hawks, horned owls, foxes and a multitude of other birds and mammals that would be negatively impacted by the Railroad Alternative Route.<sup>209</sup> He also claimed "the Railroad Alternative Route would produce 'down stream' damage to the environment since Rolling Creek Park is within a resource protection area meant to protect the Potomac watershed."<sup>210</sup> He further asserted that "Rolling Creek Park contains wetlands, old-growth forest, substantial and varied vegetation, and is home to a large and varied number of species of wildlife which, together, create a valuable and irreplaceable local ecosystem."<sup>211</sup>

Mr. Napoli further testified the Carver Road Alternative Route and Madison Alternative Route would have similar negative environmental impacts. With respect to the Carver Road Alternative Route, Mr. Napoli referred to Dominion's Environmental Routing Study, which showed the route would cross Palustrine Forested, Palustrine Emergent, and Palustrine Unconsolidated wetlands.<sup>212</sup> He further testified the same conditions are present for the Madison Alternative Route because it would cross several wetlands and a variety of waterbodies including Young's Branch, a tributary to Rocky Branch, two crossings of North Fork Broad Run, and two crossings of tributaries to North Fork Broad Run.<sup>213</sup> He claimed construction of a transmission line "within and adjacent to these waterbodies would cause irreversible devastation to these important wetlands that are a critical component of the local ecosystem."<sup>214</sup> Mr. Napoli also noted that both routes also would cross high-priority protected forest and over two miles each of medium priority protected forest.<sup>215</sup>

Given the significant negative environmental impacts of the Railroad Alternative Route, Carver Road Alternative Route, and Madison Alternative Route, Mr. Napoli asserted that each of those routes must be rejected in favor of the I-66 Hybrid Alternative Route.<sup>216</sup>

Mr. Napoli next addressed the impact the proposed I-66 Overhead Route and other alternative overhead routes would have on historic resources.<sup>217</sup> He testified that the historic resources in the area include St. Paul's Episcopal Church, Old Town Hall, Haymarket School, Buckland Mills Battlefield, Thoroughfare Gap Battlefield, Manassas National Battlefield Park

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<sup>207</sup> Ex. 16 (Napoli Direct) at 9.

<sup>208</sup> *Id.*

<sup>209</sup> *Id.*

<sup>210</sup> *Id.*

<sup>211</sup> *Id.* at 9-10 (footnote omitted).

<sup>212</sup> *Id.* at 10-11.

<sup>213</sup> *Id.* at 11.

<sup>214</sup> *Id.*

<sup>215</sup> *Id.*

<sup>216</sup> *Id.* at 12.

<sup>217</sup> *Id.* at 12-14.

Historic District & Expansion, Manassas Stations Operations Battlefield, and the Second Battle of Manassas.<sup>218</sup> He testified that both the DHR and the County, through its archeologist, found the I-66 Hybrid Alternative Route “is the only acceptable route based on the fact that it would minimize the negative impacts on the neighboring historically and culturally significant resources within Prince William County.”<sup>219</sup> Mr. Napoli further testified that the County adopted a resolution on August 4, 2015, expressly opposing any route other than the I-66 Hybrid Alternative Route.<sup>220</sup>

Mr. Napoli also testified the I-66 Hybrid Alternative Route is the route most consistent with the public interest.<sup>221</sup> He gave several reasons why, in his opinion, the Railroad Alternative Route, Carver Road Alternative Route, and Madison Alternate Route are inconsistent with the public interest, including, the routes: (i) are in conflict with the County’s Long Range Land Use Strategy in its Comprehensive Plan because they are not located within the Comprehensive Plan’s corridors for transmission lines 150 kV or greater; (ii) are contrary to the resolutions adopted by the County and Town supporting the I-66 Hybrid Alternative Route; and (iii) would reduce home values due to the loss of use of open space, reduction in viewsheds, and proximity to potentially dangerous, high voltage transmission lines located within the broader Somerset community.<sup>222</sup>

Mr. Napoli also claimed that many residents purchased their homes with knowledge of the County’s Comprehensive Plan, including the designated corridors for transmission lines.<sup>223</sup> Therefore, he claimed that residents could never reasonably foresee a transmission line being built in the vicinity of their homes.<sup>224</sup> Finally, Mr. Napoli said the lines raise health and safety concerns, and he questioned whether it is permissible under the Virginia Constitution to take private property for the primary benefit of a single user.<sup>225</sup>

For all of the above reasons, Mr. Napoli contended “the Commission must select the I-66 Hybrid [Alternative] Route as the only route that complies with the requirements of § 56-46.1 and § 56-265.2 of the *Code of Virginia*.”<sup>226</sup>

## 9. ODEC’s Notice of Participation and Written Comments

As noted earlier in this Report, ODEC filed a Notice of Participation but did not enter an appearance at the hearings, file testimony, or otherwise participate in the case. ODEC is a member of PJM, as a network transmission customer, and is also a generation-owing utility.<sup>227</sup> ODEC uses Dominion’s transmission facilities for the delivery of its members’ electric and capacity requirements within the PJM footprint, and pays for its use of Dominion’s transmission facilities by purchasing Network Integration Transmission Service (“NITS”) from PJM.<sup>228</sup>

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<sup>218</sup> *Id.* at 12.

<sup>219</sup> *Id.* at 13.

<sup>220</sup> *Id.*

<sup>221</sup> *Id.* at 14-19.

<sup>222</sup> *Id.* at 16.

<sup>223</sup> *Id.* at 16-17.

<sup>224</sup> *Id.* at 17.

<sup>225</sup> *Id.* at 17-18.

<sup>226</sup> *Id.* at 19.

<sup>227</sup> ODEC Notice of Participation at 2.

<sup>228</sup> *Id.*

ODEC supports overhead construction of the proposed transmission line and objects to and opposes any suggestion that any transmission facilities be placed underground because ODEC would be required to pay a portion of the undergrounding costs.<sup>229</sup> ODEC stated that transmission lines should be placed underground only in “extraordinary” circumstances, and that underground construction “cannot be justified as necessary for reasons of reliability, operational performance, or economic efficiency.”<sup>230</sup> ODEC further alleged that overhead construction is better than underground construction on the basis of “(i) reliability; (ii) life cycle; (iii) construction time; (iv) personnel required; (v) conductor and cable prices; (vi) total costs per line mile; and (vii) total project costs.”<sup>231</sup> According to ODEC, “[t]he cost of undergrounding is generally eight to ten times the cost of overhead construction.”<sup>232</sup>

ODEC further stated that underground transmission lines should be approved only in very limited situations where there are no viable overhead line routes available.<sup>233</sup> In the present case, according to ODEC, there are viable overhead routes available for the line.<sup>234</sup> Moreover, if the localities and members of the public want the transmission line placed underground, ODEC contended that the cost should not be allocated to wholesale transmission customers, most of who are far removed from the County.<sup>235</sup> Instead, ODEC maintained that those who benefit from the undergrounding of the line should pay for it, and if a locality is strongly committed to underground construction, it should pursue voluntary funding as authorized under § 15.2-2404 F of the Code.<sup>236</sup>

On June 17, 2016, ODEC filed supplemental comments responding to an April 28, 2016, letter from the County Board of Supervisor’s re-affirming its support for the I-66 Hybrid Alternative Route and asserting, among other things, that the proposed I-66 Overhead Route is not within the corridors for the placement of transmission lines in excess of 150 kV set forth in the County’s Comprehensive Plan.<sup>237</sup> ODEC pointed out that the I-66 Overhead Route and the I-66 Hybrid Alternative Route are both located outside the Comprehensive Plan’s corridors for transmission lines.<sup>238</sup> Accordingly, ODEC contended that if the proposed I-66 Overhead Route is inconsistent with the County’s Comprehensive Plan, the I-66 Hybrid Alternative Route must be inconsistent as well since both are routed outside of the Comprehensive Plan’s transmission line corridors.<sup>239</sup> Further, ODEC contended that “[n]o [further] explanation is provided for why the overhead route is inconsistent, or why undergrounding the line is consistent, with the [Comprehensive] Plan.”<sup>240</sup>

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<sup>229</sup> *Id.* at 2-4

<sup>230</sup> *Id.* at 3.

<sup>231</sup> *Id.*

<sup>232</sup> *Id.*

<sup>233</sup> *Id.*

<sup>234</sup> *Id.* at 3-4.

<sup>235</sup> *Id.* at 4.

<sup>236</sup> *Id.* at 4-5.

<sup>237</sup> ODEC Supplemental Comments at 3.

<sup>238</sup> *Id.*

<sup>239</sup> *Id.*

<sup>240</sup> *Id.*

ODEC once again repeated its opposition to undergrounding the transmission line primarily because of the significant cost of the I-66 Hybrid Alternative Route.<sup>241</sup> If the line is undergrounded, ODEC ends up being responsible for 8.5% of the costs of such projects.<sup>242</sup> Based on ODEC's initial cost projections, it estimated that the additional cost to ODEC for undergrounding the line alone would be about \$1.5 million a year.<sup>243</sup>

ODEC requested that the Commission reject the I-66 Hybrid Alternative Route and grant Dominion a CPCN for the Project using the proposed I-66 Overhead Route.<sup>244</sup>

## 10. Commission Staff's Direct Case

The Commission Staff presented the testimony of Wayne D. McCoy, President of Mid Atlantic Environmental LLC ("MAE"), and Neil Joshipura, a Utilities Engineer in the Commission's Division of Energy Regulation.

**Wayne D. McCoy** testified that MAE was hired by the Commission's Division of Energy Regulation to conduct an independent assessment of Dominion's Application.<sup>245</sup> He also sponsored MAE's report on Dominion's Application.<sup>246</sup>

Mr. McCoy testified that he reviewed all five routes set forth in Dominion's Application, as well as three additional routes that Dominion considered and rejected in its Environmental Routing Study; namely, the New Road Alternative Route, Northern Alternative Route, and Wheeler Alternative Route.<sup>247</sup> He said the five routes contained in Dominion's Application are all viable routes and agreed with Dominion's decision that the New Road Alternative Route, Northern Alternative Route, and Wheeler Alternative Route are not reasonable alternatives for further review.<sup>248</sup>

Mr. McCoy noted that of all the viable alternatives he reviewed, the Railroad Alternative Route is encumbered by an open space easement granted to the County by Somerset.<sup>249</sup> He also noted that the Railroad Alternative Route would impact significant linear nontidal wetlands that lie between the Somerset Crossing and Greenhill Crossing subdivisions.<sup>250</sup> Mr. McCoy further testified that the grant of an open space easement to the County caused Dominion to develop the Carver Road Alternative Route and the Madison Alternative Route.<sup>251</sup> The length of these two routes is 6.7 and 8.2 miles, respectively.<sup>252</sup>

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<sup>241</sup> *Id.* at 4-8.

<sup>242</sup> *Id.* at 4.

<sup>243</sup> *Id.*

<sup>244</sup> *Id.* at 8.

<sup>245</sup> Ex. 17 (McCoy Direct) at 1.

<sup>246</sup> *Id.* at 2.

<sup>247</sup> *Id.* at 2-3.

<sup>248</sup> *Id.*

<sup>249</sup> *Id.* at 3.

<sup>250</sup> *Id.*

<sup>251</sup> *Id.*

<sup>252</sup> *Id.*

Mr. McCoy testified that “MAE finds no justification for the Carver Road, Madison and Railroad Alternative routes, given that the I-66 routes are shorter, more direct, and offer reasonable collocation opportunities.”<sup>253</sup> He then compared the characteristics of the proposed I-66 Overhead Route and I-66 Hybrid Alternative Route to determine which route he would recommend for Commission approval.<sup>254</sup>

According to Mr. McCoy, the I-66 Overhead Route is 5.0 miles in length and offers the most direct route to the proposed Haymarket Substation.<sup>255</sup> It also is collocated for most of its length (4.5 miles), runs parallel to I-66, and its construction requires less coordination and disruption to traffic on I-66.<sup>256</sup> Mr. McCoy noted, however, that the transmission towers along the I-66 Overhead Route “would have to be placed in close proximity to a significant number of residences and commercial properties.”<sup>257</sup>

Mr. McCoy testified the I-66 Hybrid Alternative Route, in contrast, is 5.3 miles in length, and the portion of the line that is undergrounded would alleviate the long-term visual impacts to adjacent residences and those who travel on I-66.<sup>258</sup> This route also has the support of state and local elected officials and people living in the Haymarket load area, but Mr. McCoy noted that this route is considerably more expensive than the proposed I-66 Overhead Route.<sup>259</sup> More specifically, he noted that the cost of the I-66 Hybrid Alternative Route is \$166 million, or approximately \$115 million more than the proposed I-66 Overhead Route.<sup>260</sup>

Based on his investigation of Dominion’s Application, Mr. McCoy recommended that the I-66 Hybrid Alternative Route be approved by the Commission in order to mitigate the visual and natural resource impacts of the Haymarket transmission line.<sup>261</sup> Mr. McCoy further testified that if the Commission finds the I-66 Hybrid Alternative Route is too costly to approve, he recommended approval of the I-66 Overhead Route, including the Walmart and Jordan Lane Variations.<sup>262</sup>

**Neil Joshipura** sponsored the Staff Report, which summarized the results of the Staff’s investigation of Dominion’s Application.<sup>263</sup> Mr. Joshipura testified that the Project is prompted by a request Dominion received from the Customer seeking additional load to serve a new data center located west of the Town near James Madison Highway (US 15) and John Marshall Highway (SR 55).<sup>264</sup> He further testified that the Customer, after completing its new data center, is expected to have three data center buildings on site with a projected combined load of 120 MVA by 2018.<sup>265</sup>

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<sup>253</sup> *Id.*

<sup>254</sup> *Id.* at 3-4.

<sup>255</sup> *Id.* at 3.

<sup>256</sup> *Id.* at 3-4.

<sup>257</sup> *Id.* at 4.

<sup>258</sup> *Id.*

<sup>259</sup> *Id.*

<sup>260</sup> *Id.*

<sup>261</sup> *Id.* at 5.

<sup>262</sup> *Id.*

<sup>263</sup> Ex. 19 (Joshipura Direct) at 1.

<sup>264</sup> *Id.* at 4.

<sup>265</sup> *Id.*

He also said the total projected load at the Haymarket Substation, including the Customer's load, is projected to be 160 MVA at full build-out.<sup>266</sup>

Mr. Joshipura also described Dominion's upgrade to its three distribution circuits (#378, #379, and #695) to accommodate the Customer's ramp-up schedule.<sup>267</sup> He agreed with Dominion that the upgrade to the Company's distribution circuits would not be sufficient to serve the Customer's load at full build-out, noting "that a distribution solution is not feasible due to the large amount of projected load to be supplied to the Customer."<sup>268</sup> He further agreed that Dominion's proposed double circuit configuration of the transmission line would allow the Company to remain in compliance with its Transmission Planning Criteria approved by NERC.<sup>269</sup> Accordingly, he agreed with Dominion that the Project is needed.<sup>270</sup>

Mr. Joshipura also noted the Project would have ancillary benefits by increasing the reliability of Dominion's distribution system in the Haymarket load area.<sup>271</sup> He noted, however, that the Project would not be needed if the new data center was not being built.<sup>272</sup>

Mr. Joshipura also described the specifics of the Project, including the ROW necessary for the transmission line, pole structures, conductors, equipment to be installed at the proposed Haymarket substation, and major work necessary at Dominion's Gainesville Substation and Loudoun Switching Station.<sup>273</sup> He testified it would take 12 months for engineering, material procurement, ROW acquisition, and construction permitting and 12 months to construct the Project.<sup>274</sup> He also included a table of the costs of the I-66 Overhead Route and the other alternative routes, which is presented below:

Cost Breakdown for Routes					
	Proposed (millions)	Hybrid (millions)	Carver (millions)	Madison (millions)	Railroad (millions)
Transmission Line (OH and UG) Work	\$ 30.2	\$ 111.3	\$ 41.1	\$ 47.0	\$ 34.3
Haymarket Substation Work	\$ 16.7	\$ 29.1	\$ 16.7	\$ 16.7	\$ 16.7
Gainesville Substation Work	\$ 2.0	\$ 2.0	\$ 2.0	\$ 2.0	\$ 2.0
Loudoun Station Work	\$ 2.1	\$ 2.1	\$ 2.1	\$ 2.1	\$ 2.1
Heathcote Station Work	\$ -	\$ 22.2	\$ -	\$ -	\$ -
Total Cost	\$ 51.0	\$ 166.7	\$ 61.9	\$ 67.8	\$ 55.1

Mr. Joshipura also raised a cost allocation and recovery issue in this case that generated significant controversy. He testified that since Dominion could not justify the need for the Project without the Customer's request for service, the transmission line could be viewed as a line

<sup>266</sup> *Id.*

<sup>267</sup> *Id.* at 5-6.

<sup>268</sup> *Id.* at 6.

<sup>269</sup> *Id.* at 6-7.

<sup>270</sup> *Id.* at 6.

<sup>271</sup> *Id.* 7-8.

<sup>272</sup> *Id.* at 8.

<sup>273</sup> *Id.* at 8-10.

<sup>274</sup> *Id.* at 10.



extension under Section XXII “Electric Line Extensions and Installations” of Dominion’s Terms and Conditions (“Section XXII”).<sup>275</sup> While he acknowledged that Section XXII has never been applied to transmission facilities in the past, he testified “the Staff considers Section XXII to be ambiguous with respect to transmission facilities.”<sup>276</sup> In support of this claim, Mr. Joshipura testified that there is no language in Section XXII that “explicitly states that these terms and conditions apply to distribution facilities only.”<sup>277</sup> In further support of his claim that Section XXII is ambiguous, Mr. Joshipura referred to Dominion’s response to the Staff’s discovery in Case No. PUE-2015-00053.<sup>278</sup> In that case, Dominion described its proposed Poland Road transmission line as a line extension subject to Section XXII before correcting its response several months later.<sup>279</sup> Mr. Joshipura further noted during redirect examination by Staff counsel, that Dominion had referred to its proposed Haymarket transmission line, as well as its Poland Road and Yardley Ridge<sup>280</sup> transmission lines, as line extensions in its 2016 Integrated Resource Plan filing.<sup>281</sup>

If Section XXII is found by the Commission to apply to transmission lines, Mr. Joshipura testified that the Customer would be required to make a \$115.7 million payment if the I-66 Hybrid Alternative Route was approved by the Commission.<sup>282</sup> However, if the Commission approves an overhead transmission line and also finds Section XXII applies, Mr. Joshipura testified that data center customers typically have large enough non-fuel revenues to cover the costs of an overhead transmission line under Section XXII.<sup>283</sup>

Mr. Joshipura next addressed the economic development benefits of the Project.<sup>284</sup> While he testified the Haymarket transmission line would have negligible impact on long-term job creation, he noted that significant tax revenues would be generated by the new data center, which would have a significant positive impact on the County.<sup>285</sup>

Mr. Joshipura also addressed the route supported by the Staff for the Haymarket transmission line. He testified that “[i]f the Commission determines the impacts associated with the overhead routes are too great, then the Staff recommends the I-66 Hybrid Alternative Route. If, however, the significantly higher cost associated with the I-66 Hybrid Alternative Route is

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<sup>275</sup> *Id.* at 17-21.

<sup>276</sup> *Id.* at 20.

<sup>277</sup> *Id.* at 19.

<sup>278</sup> *Id.*, see also *Application of Virginia Electric and Power Company, For approval and certification of electric transmission facilities: Poland Road 230 kV Double Circuit Transmission Line Loop and 230-34.5 V Poland Road Substation*, Case No. PUE-2015-00053 (hereinafter “Poland Road”).

<sup>279</sup> Ex. 19 (Joshipura Direct) at 19, Attachment 15.

<sup>280</sup> *Application of Virginia Electric and Power Company, For approval and certification of electric transmission facilities: Yardley Ridge 230 Double Circuit Transmission Line Loop and 230 kV Yardley Ridge Switching Station*, Case No. PUE-2015-00054 (hereinafter “Yardley Ridge”).

<sup>281</sup> June 22 Tr. 310-312. See also Ex. 26, an excerpt from Dominion’s 2016 Integrated Resource Plan filing in *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. PUE-2016-00049, filed April 29, 2016 (hereinafter “2016 IRP”).

<sup>282</sup> Ex. 19 (Joshipura Direct) at 21.

<sup>283</sup> June 22 Tr. 313.

<sup>284</sup> Ex. 19 (Joshipura Direct) at 21.

<sup>285</sup> *Id.*

unacceptable, then the Staff recommends the Commission approve the Company's proposed Project (I-66 Overhead Route)."<sup>286</sup>

During cross-examination, Dominion's counsel questioned Mr. Joshipura about the following statement on page 16, lines 9-12, of his testimony:

Because the need for the Project is driven by a single large customer requesting new service, as opposed to being driven by system network needs, the Staff gives considerable weight to the concerns of the respondents and impacted property owners, in addition to just looking at costs alone.

Dominion's counsel suggested, during cross-examination of Mr. Joshipura, that his statement above is a new "standard" that is being applied by the Staff to the Haymarket transmission line.<sup>287</sup> While Dominion and Staff counsel quibbled over whether the above quoted language represented a new standard or not,<sup>288</sup> Mr. Joshipura admitted that this case and the Poland Road and Yardley Ridge cases are the first cases where such language has been included in a Staff Report addressing a transmission line application.<sup>289</sup>

Mr. Joshipura further admitted that in earlier transmission line cases, such as Case Nos. PUE-2011-00011<sup>290</sup> and PUE-2011-00129,<sup>291</sup> the Staff evaluated the need for the transmission lines based on total load growth in an area, inclusive of the large block loads of data centers, in its testimony.<sup>292</sup> There also was no mention by the Staff in the Cannon Branch and Waxpool cases that it would give considerable weight to the concerns of the respondents and impacted property owners because the need for the transmission lines in each case were driven by data centers.<sup>293</sup>

During cross-examination of Mr. Joshipura, Dominion also introduced into the record Exhibit Nos. 20, 21 and 22. Exhibit 20 is a portion of Dominion's direct testimony in its 2009 going in case, Case No. PUE-2009-00019,<sup>294</sup> where Julius M. Griles, Dominion's Manager of Electric Distribution Design, testified that the proposed revisions to the Company's line extension

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<sup>286</sup> *Id.* at 23.

<sup>287</sup> June 21 Tr. at 239.

<sup>288</sup> *Id.*

<sup>289</sup> June 21 Tr. at 241.

<sup>290</sup> *Application of Virginia Electric and Power Company D/B/A Dominion Virginia Power, For approval and certification of transmission facilities in Prince William County and the City of Manassas: Cannon Branch-Cloverhill 230 kV Transmission Line and Cloverhill Substation*, Case No. PUE-2011-00011 (hereinafter "Cannon Branch").

<sup>291</sup> *Application of Virginia Electric and Power Company d/b/a Dominion Virginia Power, For approval and certification of electric facilities: Waxpool 230 kV Double Circuit Transmission Line, Brambleton-BECO 230 kV Transmission Line and 230-34.5 kV Waxpool Substation*, Case No. PUE-2011-00129, 2013 S.C.C. Ann. Rept. 232, Opinion of the Commission (Apr. 18, 2013), *aff'd*, *Loudoun Bay D, LLC v. State Corp. Comm'n.*, Va. Sup. Ct. Record No. 130674 (Oct. 18, 2013) (hereinafter "Waxpool").

<sup>292</sup> June 21 Tr. at 243-254.

<sup>293</sup> *Id.* at 249-250, 252.

<sup>294</sup> *Application of Virginia Electric and Power Company, For a 2009 statutory review of the rates, terms and conditions for the provision of generation, distribution, and transmission services pursuant to § 56-585.1 A of the Code of Virginia*, Case No. PUE-2009-00019, 2010 S.C.C. Ann. Rept. 301, Order Approving Stipulation and Addendum (Mar. 11, 2010) (hereinafter "2009 Going In Case").

policy do not apply to transmission lines but only target underground facilities below 50 kV.<sup>295</sup> Exhibit Nos. 21 and 22 are excerpts from the Staff's testimony in Dominion's 2009 Going In Case where the Staff addressed certain ambiguities and vagueness in the Company's tariff but made no mention of any ambiguity with respect to the application of Dominion's line extension policy to transmission lines. Mr. Joshipura also acknowledged that in Dominion's 2013 biennial review, Case No. PUE-2013-00020,<sup>296</sup> the Company introduced the testimony of Steven Eisenrauch, who testified that the revised line extension policy does not apply to transmission lines but only facilities rated below 50 kV.<sup>297</sup>

Dominion's counsel also asked Mr. Joshipura what portions of the Company's line extension policy would apply to the Haymarket transmission line, thus subjecting the Customer to a transitional cost.<sup>298</sup> He said the line could be viewed as an "Approach Line" if it runs to the property of the Customer or a "Branch Feeder" if it is located on the property of the Customer.<sup>299</sup> However, after some questioning from Dominion's counsel, he expressed some doubt about whether the transmission line would be located on property owned by the Customer, thus qualifying the transmission line as an "Approach Line" or "Branch Feeder."<sup>300</sup>

During redirect examination of Mr. Joshipura, Staff counsel distinguished the earlier transmission line cases where the Staff never raised the issue of whether Dominion's line extension policy applies to transmission lines built to serve data centers. Under questioning from Staff counsel, Mr. Joshipura testified that (i) Dominion did not propose underground transmission lines in the Cannon Branch and Waxpool cases;<sup>301</sup> (ii) there were no homes within 500 feet of the Cannon Branch and Waxpool transmission lines;<sup>302</sup> and (iii) elected officials did not appear at the public hearings to oppose the Cannon Branch and Waxpool transmission lines.<sup>303</sup>

During re-cross-examination, Dominion's counsel asked Mr. Joshipura about certain terms in the Company's line extension policy. Mr. Joshipura confirmed that the definitions of "Approach Line" and "Branch Feeder" relate to customers requesting "Electric Delivery Service," which is defined in the tariff as distribution service or customers served at transmission-level voltage.<sup>304</sup> Dominion's counsel asked Mr. Joshipura if the Haymarket transmission line would be providing distribution service to the Customer.<sup>305</sup> Mr. Joshipura did not respond directly to the question, but

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<sup>295</sup> The tariff provisions relating to Section XXII's line extensions were proposed in the 2009 going in case were not approved by the Commission because of a settlement reached by the parties and Staff. Accordingly, Section XXII was not approved by the Commission until Dominion's 2013 biennial review, Case No. PUE-2013-00020.

<sup>296</sup> *Application of Virginia Electric and Power Company, For a 2013 biennial review of the rates, terms and conditions for the provision of generation, distribution and transmission services pursuant to § 56-585.1 A of the Code of Virginia*, Case No. PUE-2013-00020, 2013 S.C.C. Ann. Rept. 371, Final Order (Nov. 26, 2013) (hereinafter "2013 Biennial Review").

<sup>297</sup> June 21 Tr. at 262-263. An excerpt from Dominion witness Eisenrauch's testimony in the Company's 2013 Biennial Review is attached to Mr. Joshipura's testimony as Attachment 14.

<sup>298</sup> June 21 Tr. at 274-278.

<sup>299</sup> *Id.* at 277.

<sup>300</sup> *Id.*

<sup>301</sup> June 22 Tr. at 302.

<sup>302</sup> *Id.* at 303.

<sup>303</sup> *Id.*

<sup>304</sup> *Id.* at 316-320.

<sup>305</sup> *Id.* at 317.

said that a transmission line is necessary to provide the Customer with distribution service.<sup>306</sup> He did acknowledge, however, that the Customer would not receive service at transmission-level voltage.<sup>307</sup>

## 11. Dominion's Rebuttal Case

Dominion presented the testimony of nine witnesses in its rebuttal case: Mark R. Gill; Harrison S. Potter; Robert J. Shevenock II; Wilson O. Velazquez; Mr. Donald E. Koonce, a Principal Consultant with Power Deliver Consultants, Inc.; Harold Payne, Manager – Regulation for Virginia Electric and Power Company; David C. Lennhoff, Senior Director of the Altus Group U.S., Inc.; Diana T. Faison; and Jon M. Berkin.

**Mark R. Gill** presented rebuttal testimony responding to Somerset witness Napoli's direct testimony questioning the need for the Project and to Staff witness Joshipura's direct testimony.

Mr. Gill first responded to Somerset witness Napoli's direct testimony, which questioned whether the Project is needed to provide service to existing and future customers consistent with the County's long-term land use plan.<sup>308</sup> In response, Mr. Gill referred to the County's December 31, 2014 Build-Out Analysis,<sup>309</sup> which indicated that approximately 8.5 million square feet of non-residential development and at least 889 residential units were scheduled for future development in the area.<sup>310</sup> Mr. Gill further noted during the June 22 hearing that his analysis of future development did not include FST's planned development of its property.<sup>311</sup>

Mr. Gill also testified that the County is continuing to market itself to the data center industry.<sup>312</sup> In support of this claim, he sponsored a brochure that the County uses to market itself as an optimal location for data centers.<sup>313</sup>

Accordingly, Mr. Gill testified that "there is still the potential for a great deal of residential and commercial development in the area," and he disagreed with "Mr. Napoli's contention that the proposed Project is [not needed or is] inconsistent with the Prince William County's long-term land use plan."<sup>314</sup>

Mr. Gill further testified that attempting to serve future development in the County, including the Customer's new data center, from Dominion's Gainesville Substation is not feasible because: (i) there is not enough space at the Gainesville Substation to install the additional transformer and circuit capacity necessary to serve anticipated loads; (ii) finding circuit paths to the load areas would be problematic and would create operational issues due to the amount of load and

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<sup>306</sup> *Id.*

<sup>307</sup> *Id.* at 318.

<sup>308</sup> Ex. 28 (Gill Rebuttal) at 2-9.

<sup>309</sup> Ex. 30.

<sup>310</sup> Ex. 28 (Gill Rebuttal) at 2-3; Rebuttal Schedule 2.

<sup>311</sup> June 22 Tr. 331.

<sup>312</sup> *Id.* at 335.

<sup>313</sup> Ex. 29.

<sup>314</sup> Ex. 28 (Gill Rebuttal) at 3-4.

line length; and (iii) in 2018 the loads at the Gainesville Substation could result in a violation of mandatory NERC reliability standards.<sup>315</sup>

Mr. Gill next addressed Mr. Napoli's claim that Line #124 is adequate to serve current and future development.<sup>316</sup> Mr. Gill testified that Mr. Napoli "appears to be drawing an incorrect conclusion based on either a misreading of the Company's Application or by incorrectly attributing certain statements to the Company that do not appear in the Application."<sup>317</sup> Mr. Gill explained that "Line #124 is an existing 115 kV line that is networked between the Company's Gainesville Substation and Loudoun Switching Station," and the "only directly-connected load served from Line #124 is [Northern Virginia Electric Cooperative's] Catharpin Delivery Point."<sup>318</sup> He also testified that Line #124 "is being converted to 230 kV operations for the sole purpose of providing an appropriate tap point for the proposed Project because additional 230 kV terminals cannot be accommodated at the Company's Gainesville Substation."<sup>319</sup> Mr. Gill also testified that Mr. Napoli's claim that Line #124 is already serving a data center is incorrect and based on his misreading of a Company response to Staff interrogatory No. 1-10.<sup>320</sup>

Mr. Gill also disputed Mr. Napoli's claim that the proposed transmission line is not needed because Dominion could change its Transmission Planning Criteria, thus eliminating the need for the line.<sup>321</sup> Mr. Gill testified that Dominion's Transmission Planning Criteria "have nothing to do with whether a transmission line is *needed* to serve the load in this area but, rather, addresses whether criteria could be relaxed so that the transmission line could be constructed as a radial line," as opposed to a double circuit transmission line.<sup>322</sup>

Mr. Gill also testified that Mr. Napoli's statement on page 5 of his direct testimony that the County and Town have "clearly stated that economic development is not worth it if the community property values are grossly devalued as a result of this Project" has no support in the record.<sup>323</sup> Based on his review of the resolutions adopted by the County and Town, Mr. Gill said he found no language "in either resolution where it is stated, clearly or otherwise, that economic development 'is not worth it' if property values are 'grossly devalued.'"<sup>324</sup>

Mr. Gill also questioned Mr. Napoli's claim that the County had engaged in extensive analysis of its future development and electricity transmission needs and, in doing so, declined to include any of the proposed routes in its long-term plan.<sup>325</sup> Mr. Gill questioned whether the County has conducted any such extensive analysis of its future transmission needs because: (i) the transmission line corridors identified in the County's long-term plan only include transmission lines that existed as of 2008; (ii) the map delineating transmission line corridors in the

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<sup>315</sup> *Id.* at 4-5; June 22 Tr. 334.

<sup>316</sup> Ex. 28 (Gill Rebuttal) at 5-6.

<sup>317</sup> *Id.* at 5.

<sup>318</sup> *Id.*

<sup>319</sup> *Id.* at 6.

<sup>320</sup> *Id.*

<sup>321</sup> *Id.* at 7-9.

<sup>322</sup> *Id.* at 8.

<sup>323</sup> *Id.* at 9-10.

<sup>324</sup> *Id.*

<sup>325</sup> *Id.* at 10.

long-term plan was updated on July 17, 2012, but did not include any corridors for several new transmission lines approved by the Commission subsequent to 2008; and (iii) the Company has never consulted with the County to determine whether existing corridors are sufficient to accommodate future growth.<sup>326</sup>

Mr. Gill also responded to Mr. Napoli's testimony suggesting that the need for the Project cannot be established based upon Dominion's practice of upgrading its system from 115 kV to 230 kV.<sup>327</sup> Mr. Gill testified that he believes Mr. Napoli misunderstood the issue being addressed in the Company's response to Staff interrogatory No. 1-6.<sup>328</sup> Mr. Gill testified the Company's response was merely describing the Company's practice of moving load off the 115 kV system and converting to 230 kV to support load growth in Northern Virginia, which has been stated in the Company's Electric Transmission Long-Term Plan since at least 2009.<sup>329</sup> Accordingly, the Company's response to Staff interrogatory No. 1-6 was not intended to demonstrate a need for the Project but was intended to describe how the Company responds to load growth in Northern Virginia.

Finally, Mr. Gill responded to Mr. Napoli's claim that Dominion's Application is lacking (i) engineering analysis demonstrating a need for additional infrastructure; (ii) evidence demonstrating that the Company's current transmission system has been stress tested; and (iii) evidence demonstrating a significant volume of overloads.<sup>330</sup> In response, Mr. Gill testified that the Project was submitted to PJM as a Supplemental Project and was approved as part of PJM's 2015 Regional Transmission Expansion Plan because the existing distribution system is inadequate to serve the area, including the Customer's new data center.<sup>331</sup>

Mr. Gill also testified that he agreed with Staff witness Joshipura's testimony indicating that the new data center would generate tax revenues that could have a significant positive impact on the County.<sup>332</sup> Mr. Gill also attached a report to his testimony from the Northern Virginia Technology Council, entitled "The Economic and Fiscal Contribution that Data Centers make to Virginia," which confirmed the many significant positive impacts data centers have on localities in Virginia.<sup>333</sup>

Mr. Gill also responded to Mr. Joshipura's testimony indicating the Project would not be needed without the request for service to the new data center.<sup>334</sup> While Mr. Gill did not dispute the point, he said "the Project would be needed at some point in the future to maintain reliable service in the area."<sup>335</sup> He further testified (i) the line would be networked and serve loads other than the Customer's new data center; (ii) NOVEC is exploring the possibility of co-locating a delivery point within the Haymarket Substation; and (iii) future non-residential development served by the

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<sup>326</sup> *Id.*

<sup>327</sup> *Id.* at 11-13.

<sup>328</sup> *Id.* at 11.

<sup>329</sup> *Id.* at 13.

<sup>330</sup> *Id.* at 14-15.

<sup>331</sup> *Id.*

<sup>332</sup> *Id.* at 15.

<sup>333</sup> *Id.* at 15-16; Rebuttal Schedule 8.

<sup>334</sup> *Id.* at 17-18.

<sup>335</sup> *Id.* at 17.

Gainesville Substation would eventually lead to a violation of mandatory NERC Reliability Standards, requiring load relief that could be provided by the Haymarket Substation.<sup>336</sup>

During the June 22 hearing, Mr. Gill also responded to written comments filed by Chris Price, the County's Planning Director, and Robert Weir, a former member of the Town Council and a past member and chairman of the Town's Planning Commission. Their comments challenged Mr. Gill's analysis of anticipated load growth in the area.<sup>337</sup> They alleged Mr. Gill's analysis of future growth in his Rebuttal Schedule 2 is flawed because, among other things, it is based on stale data; it includes land owned by public entities that may likely be developed as low intensity public use; and it double counts some of the square footage to be developed.<sup>338</sup> In response to these allegations, Mr. Gill referred to the County's Build-Out Analysis and Build-Out Analysis Methodology.<sup>339</sup>

In response to the claim that he used stale data in his Rebuttal Schedule 2, Mr. Gill pointed to page 3 of the County's Build-Out Analysis, which states that the analysis assumes stale zoning cases will be rezoned to a higher intensity use in accordance with the County's Comprehensive Plan.<sup>340</sup> Next, Mr. Gill responded to the claims that he double counted some of the square footage in his Rebuttal Schedule 2. He testified that a review of his Rebuttal Schedule 2 shows "there are no properties in there that are listed twice or double counted."<sup>341</sup> Finally, he responded to the claim that some of the land included in his analysis is owned by public entities that is usually developed for low intensity usage.<sup>342</sup> Referring to page 7 of Prince William County County's Build-Out Analysis Methodology, he pointed out that public lands were not included in the build-out calculations.<sup>343</sup> His interpretation of that passage is that property owned by public entities, "would not have any impact on the tables where [he] extracted the non-residential inventory."<sup>344</sup>

Finally, Mr. Gill responded to the claims by numerous government officials and public witnesses that the Customer should move its data center to Innovation Park where sufficient infrastructure was already in place to serve its load.<sup>345</sup> Mr. Gill testified that just because you put a large block load next to an existing transmission line does not necessarily mean the line has the capacity to provide service.<sup>346</sup> According to Mr. Gill, the Company would need to perform a contingency analysis to determine whether existing infrastructure is sufficient at Innovation Park to serve the Customer's new data center.<sup>347</sup>

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<sup>336</sup> *Id.* at 17-18.

<sup>337</sup> While the letter from Mr. Price and Mr. Weir's self-described "Supplemental Testimony" are public comments, and not testimony, they were marked as Exhibit Nos. 37 and 38, respectively, during the hearing and admitted for the sole purpose of allowing Mr. Gill to respond to certain allegations contained therein. While it is uncommon for public comments to be marked as exhibits in Commission proceedings, I found it appropriate to do so here because (i) the information contained in the comments were from individuals who possess expertise in land use planning in the County and Town, and (ii) Prince William County was a respondent in this case before withdrawing.

<sup>338</sup> See Ex. Nos. 37 and 38.

<sup>339</sup> Ex. Nos. 30 and 31.

<sup>340</sup> June 22 Tr. 343-345; Ex. 30 at 3.

<sup>341</sup> June 22 Tr. 345.

<sup>342</sup> *Id.* at 345-346.

<sup>343</sup> *Id.*; Ex. 31 at 7.

<sup>344</sup> June 22 Tr. 346.

<sup>345</sup> *Id.* at 348-353.

<sup>346</sup> *Id.* at 353.

<sup>347</sup> *Id.*, also see Ex. 32.

**Harrison S. Potter** presented rebuttal testimony responding to Somerset witness Napoli's direct testimony questioning the need for the Project, and describing when the Company's current distribution system would be inadequate for anticipated load growth.

In response to Mr. Napoli's testimony questioning the need for the Project, Mr. Potter explained that the Haymarket load area is currently served by three 34.5 kV distribution circuits.<sup>348</sup> These distribution circuits serve residential and commercial load in the area and also are being used as bridging circuits to the Customer's data center facilities, which at full ramp up would load the circuits to their thermal operating limits.<sup>349</sup> Mr. Potter further testified that having large loads, like the Customer's, at the end of fully loaded distribution circuits complicates the ability of the Company to effectively operate its system because the Company is unable to switch load from one source to another during planned and unplanned outage events.<sup>350</sup> This means that instead of switching to another source of power during outage events (switch-before-fix), Dominion must fix the problem before power can be restored (fix-before-switch).<sup>351</sup>

Mr. Potter also described the load growth the Company is expecting in the Haymarket load area and included confidential information showing the Customer's ramp-up schedule for its new data center.<sup>352</sup> Mr. Potter testified that the Customer's total load is projected to be approximately 120 MVA at full build-out and that the new transmission facilities must be in place by June 2018 to serve the Customer's new data center.<sup>353</sup>

Mr. Potter also described the load that would be served by the proposed Haymarket Substation, in addition to the load of the Customer's new data center.<sup>354</sup> He testified that Dominion would install an additional 34.5 kV distribution circuit in the Haymarket Substation to serve 456 customers west of James Madison Highway (US 15), including the Haymarket Village Center and the Novant Health Haymarket Medical Center for a total load of approximately 5.5 MVA.<sup>355</sup> In addition, the Company would install two automated loop schemes, or restoration schemes, that could reduce the time it takes to restore service to over 2,800 customers currently being served by distribution circuits #379 and #695.<sup>356</sup> Mr. Potter further testified that the Haymarket Substation has sufficient room to install an additional 230-34.5 kV 84 MVA transformer to support future load growth.<sup>357</sup>

Mr. Potter further testified that Dominion cannot serve the load growth anticipated in the Haymarket load area without the proposed Project.<sup>358</sup> According to Mr. Potter, "[t]he existing

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<sup>348</sup> Ex. 39 at 2.

<sup>349</sup> *Id.*

<sup>350</sup> *Id.* at 2-3.

<sup>351</sup> *Id.*

<sup>352</sup> *Id.* at 3-6; Ex. 39C.

<sup>353</sup> Ex. 39 (Potter Rebuttal) at 3.

<sup>354</sup> *Id.* at 5-6.

<sup>355</sup> *Id.* at 5.

<sup>356</sup> *Id.*

<sup>357</sup> *Id.* at 5-6.

<sup>358</sup> *Id.* at 6.



distribution infrastructure is not adequate to serve a block load of this magnitude from the Company's existing Gainesville Substation."<sup>359</sup>

**Robert J. Shevenock II** presented rebuttal testimony correcting some minor errors in the Staff Report. First, he testified that Staff witness Joshipura's Attachment 3 does not represent the structures at the Line #124 tap point but represent structures between the Company's Gainesville Substation and the tap point.<sup>360</sup> He further testified that the height of the 3-pole structures at the Line #124 tap point is 55 feet, not 120 feet, and that the structures would be installed on existing ROW, not new ROW, under Dominion's 500 kV line #535.<sup>361</sup> Mr. Shevenock further testified that the average height of the double circuit pole structures shown in Mr. Joshipura's Attachment 4 is 112 feet, not 100 feet.<sup>362</sup>

**Wilson O. Velazquez** filed rebuttal testimony responding to Southview witness Fuccillo's direct testimony concerning Dominion's proposed transition station for the I-66 Hybrid Overhead Route. Mr. Velazquez first noted that a transition station would not be required for any of the overhead routes.<sup>363</sup> He also described the appearance of the transition station, its configuration, and its physical size.<sup>364</sup> Mr. Velazquez testified that approximately 5-7 acres would be needed for the transition station, and confirmed Mr. Fuccillo's claim that the transition station would take up a substantial portion of Southview's Parcel Two, which is approximately 11 acres.<sup>365</sup>

**Donald E. Koonce** presented rebuttal testimony providing an updated analysis regarding the construction of the underground portion of the I-66 Hybrid Alternative Route. He also responded to the direct testimony of Staff witnesses McCoy and Joshipura.

Mr. Koonce testified that Dominion is not supporting the I-66 Hybrid Alternative Route because of its significantly higher cost and longer construction schedule than the proposed I-66 Overhead Route.<sup>366</sup> He noted that Dominion is obligated to provide reliable and adequate electric service at just and reasonable rates, and the Company meets this obligation by using overhead transmission facilities, which are generally more economical and less costly than underground transmission lines.<sup>367</sup> He further noted that underground facilities represent only 1.28% of the Company's total transmission system, and that underground construction is only used in a limited number of cases where there are no viable overhead routes available or where underground transmission lines are installed pursuant to legislatively approved pilot programs.<sup>368</sup>

Turning to the I-66 Hybrid Alternative Route, Mr. Koonce explained that a number of significant items have changed since the Company performed its original cost estimate of the

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<sup>359</sup> *Id.*

<sup>360</sup> Ex. 42 (Shevenock Rebuttal) at 1.

<sup>361</sup> *Id.* at 2.

<sup>362</sup> *Id.*

<sup>363</sup> Ex. 43 (Velazquez Rebuttal) at 2.

<sup>364</sup> *Id.* at 2-3.

<sup>365</sup> *Id.*

<sup>366</sup> Ex. 46 (Koonce Rebuttal) at 2.

<sup>367</sup> *Id.* at 3.

<sup>368</sup> *Id.* at 3.

route.<sup>369</sup> Among other things, VDOT's installation of sound walls along I-66 have included the installation of drainage facilities, such as storm water management ponds and deep drainage ditches, which make the installation of the I-66 Hybrid Alternative Route more difficult.<sup>370</sup> According to Mr. Koonce, these new drainage features could slow trenching production rates by as much as 50% in very constricted areas that are occupied by ponds or steep-sloped ditches and could add to the Company's original estimated cost of the I-66 Hybrid Alternative Route.<sup>371</sup>

Mr. Koonce further testified that the Company's original estimated cost of the I-66 Hybrid Alternative Route did not reflect the appropriate number of bored road crossings.<sup>372</sup> While the Company's original cost estimate included boring costs for I-66 and James Madison Highway (US 15), the estimate failed to include the cost for bored crossings at Catharpin Road, John Marshall Highway (SR 55), and a potential third crossing at Old Carolina Road if VDOT does not permit lane closures for an open cut crossing.<sup>373</sup>

During his onsite field observations, Mr. Koonce also discovered that VDOT's construction of the I-66 sound wall exposed significantly more rock than the Company anticipated in its original cost estimate for the I-66 Hybrid Alternative Route.<sup>374</sup> According to Mr. Koonce, more rock in the area to be excavated will significantly increase the cost of the I-66 Hybrid Alternative Route because rock excavation takes longer and the excavated material may not be suitable for backfilling, due to its thermal characteristics, thus requiring the material to be hauled offsite and more suitable material trucked back in to backfill the trenches.<sup>375</sup>

Additionally, Mr. Koonce testified that the I-66 Hybrid Alternative Route would take significantly longer to construct than the proposed I-66 Overhead Route.<sup>376</sup> While the Company initially estimated that duct work construction would take approximately 18 months, based on information from a cable installation contractor, Mr. Koonce testified the construction time could take as long as 24 months with the likelihood of slow production along the north side of I-66.<sup>377</sup> Other factors that could complicate the duct bank construction include: "(i) the crossing of I-66 at two locations; (ii) four horizontal borings under I-66 that will each be between 350 to 400 feet in length; (iii) congested areas on the western crossing of I-66, making installation difficult; (iv) generally limited space for the positioning of boring equipment; and (v) exceptionally limited space for a laydown yard to stage all the steel casings and associated ducts that will line the underground borings."<sup>378</sup>

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<sup>369</sup> *Id.*

<sup>370</sup> *Id.* at 3-4, Rebuttal Schedule 1 at 1-3 (containing photographs of VDOT's drainage ditches and a storm water management pond adjacent to the I-66 sound walls currently under construction).

<sup>371</sup> *Id.* at 4.

<sup>372</sup> *Id.*

<sup>373</sup> *Id.*

<sup>374</sup> *Id.* at 4-5.

<sup>375</sup> *Id.* at 5.

<sup>376</sup> *Id.* at 6-8.

<sup>377</sup> *Id.* at 6.

<sup>378</sup> *Id.* at 6-7.

Mr. Koonce also testified that Dominion's second stage of construction, power cable installation, also could take longer than originally anticipated.<sup>379</sup> Based upon information from a cable installation company, power cable installation was estimated to take approximately 12 months to complete.<sup>380</sup> However, depending on when cable installation begins, Mr. Koonce said it could take 24 to 36 months to complete, or even longer if the trenching production rate drops or if VDOT imposes restrictions on the schedule for daily construction operations.<sup>381</sup>

Mr. Koonce's Rebuttal Schedule 2, which depicts the construction durations and overlaps for the I-66 Hybrid Alternative Route and the proposed I-66 Overhead Route,<sup>382</sup> shows that construction of the I-66 Hybrid Alternative Route would take approximately 32 months, which Mr. Koonce described as the "[a]bsolutely best-case scenario" during the June 22 hearing.<sup>383</sup>

Mr. Koonce also responded to Staff witness McCoy's claim that underground construction is "at best, inconvenient."<sup>384</sup> According to Mr. Koonce, there are additional construction impacts of underground transmission lines as compared to overhead transmission lines.<sup>385</sup> He said that underground construction (i) significantly impacts public ROWs, such as roads, during construction; (ii) creates more dust and noise; (iii) requires greater excavation than overhead construction, which creates more material that must be hauled offsite; (iv) complicates the ability to get large pre-cast manholes on site or cast manholes on site given the severely constricted area where the I-66 Hybrid Alternative Route would be located; and (v) creates significant noise 24 hours a day during directional boring, which caused the Company to install hay bales to deaden the sound of boring equipment when installing its Garrisonville underground transmission line.<sup>386</sup>

In addition to the undesirable impacts of underground construction cited above, Mr. Koonce also noted that the Company saw significant cost overruns with its Garrisonville underground transmission line, and he said it took 14 more months to complete than the Company's original estimate.<sup>387</sup>

Mr. Koonce also responded to Staff witness Joshipura's testimony, which acknowledged that the I-66 Hybrid Alternative Route is more expensive and may require more construction time but said the underground route is a viable alternative to the proposed I-66 Overhead Route and is economically feasible.<sup>388</sup> While Mr. Koonce did not disagree with Mr. Joshipura's testimony, he said there are other reasons why the I-66 Hybrid Alternative Route is undesirable, including:

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<sup>379</sup> *Id.* at 7.

<sup>380</sup> *Id.*

<sup>381</sup> *Id.*

<sup>382</sup> *Id.* at Rebuttal Schedule 2.

<sup>383</sup> June 22 Tr. 561.

<sup>384</sup> *See* Ex. 17 (McCoy Direct) MAE Report at 6-7.

<sup>385</sup> Ex. 46 (Koonce Rebuttal) at 8.

<sup>386</sup> *Id.* at 8-9. Mr. Koonce also said it was unlikely a similar sound barrier could be installed for the I-66 Hybrid Alternative Route because of space constraints. Ex. 46 (Koonce Rebuttal) at 8.

<sup>387</sup> *Id.* at 9-10. Dominion estimated it would take 36 months to complete the Garrisonville underground transmission line, but it took 50 months to complete the line, a nearly 40% overrun.

<sup>388</sup> *Id.* 10-13.

(i) underground transmission lines are less reliable than overhead lines; (ii) it is more difficult to locate a problem on underground transmission lines than overhead lines; (iii) on average, it takes weeks to repair problems on underground transmission lines versus hours for overhead lines; (iv) outage times are lower on overhead lines because circuit breakers open and reclose automatically if the line has not been damaged, while automatic reclosing is not permitted on underground lines; and (v) underground lines add operating restrictions to the electric system when power usage is low and capacitance causes system voltage increases.<sup>389</sup>

If, however, the Commission approves the I-66 Hybrid Alternative Route, Mr. Koonce recommended two adjustments to the route.<sup>390</sup> First, he noted that the route alignment on the south side of I-66 just west of Old Carolina Road appears to be unbuildable based on the available space between the new VDOT sound wall and the limits of VDOT's ROW.<sup>391</sup> He, therefore, recommended changing the 90 degree bored crossing of I-66 to a diagonal horizontal directional drilling crossing that includes both Old Carolina Road and I-66.<sup>392</sup> He also recommended that the Walmart Variation be approved for the I-66 Hybrid Alternative Route based on the multiple 90 degree angles in the underground route presented in the Company's Application.<sup>393</sup>

**Harold Payne** presented rebuttal testimony describing how Dominion recovers its transmission costs as a member of PJM. Mr. Payne testified that effective May 1, 2005, Dominion integrated into PJM, with PJM assuming operational control of the Company's transmission facilities.<sup>394</sup> As a member of PJM, Dominion obtains NITS from PJM and pays PJM for such service at the rates contained in PJM's Open Access Transmission Tariff ("PJM OATT").<sup>395</sup> According to Mr. Payne, the costs of the Haymarket transmission facilities would be recovered under Attachment H-16 of the PJM OATT, which is a formula rate that is populated by Dominion on an annual basis to produce an Annual Transmission Revenue Requirement ("ATTR") associated with the Company's transmission facilities.<sup>396</sup> The ATTR is then collected from appropriate NITS customers in the Dominion Zone and credited back to the Company.<sup>397</sup>

Mr. Payne further testified that since the Haymarket Project has been classified as a Supplemental Project by PJM, the cost of the Project is not eligible for regional cost allocation under the PJM OATT.<sup>398</sup> Rather, the costs of the Haymarket transmission facilities would be recovered from NITS customers in the Dominion Zone on a load ratio share basis.<sup>399</sup> Dominion's Virginia jurisdictional share of the ATTR is then recovered through a combination of the Company's base rates and a rate adjustment clause, as authorized by § 56-585.1 A 4 of the Code.<sup>400</sup>

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<sup>389</sup> *Id.*

<sup>390</sup> *Id.* at 13-14.

<sup>391</sup> *Id.* at 13.

<sup>392</sup> *Id.*

<sup>393</sup> *Id.*

<sup>394</sup> Ex. 47 (Payne Rebuttal) at 1.

<sup>395</sup> *Id.* at 2.

<sup>396</sup> *Id.*

<sup>397</sup> *Id.*

<sup>398</sup> *Id.*

<sup>399</sup> *Id.*

<sup>400</sup> *Id.* at 3.

Mr. Payne also testified that the Staff's suggestion that the Customer could be required to make a payment for undergrounding the transmission line could result in disparate treatment between large block load customers, such as data centers, and a transmission dependent utility ("TDU") requesting a new PJM point of delivery.<sup>401</sup> Since Dominion's retail tariff provisions do not apply to wholesale customers, a TDU requesting a new point of delivery would only pay its load ratio share of costs for undergrounding a transmission line and all other NITS customers in the Dominion Zone would pay the balance of the undergrounding costs.<sup>402</sup> However, if the Customer in this case is assessed a large capital contribution to underground the Haymarket transmission line, as suggested by Staff, the Customer would pay all of the incremental costs associated with undergrounding the transmission line, and none of the incremental underground costs would be allocated to any other NITS customers.<sup>403</sup> Mr. Payne said this disparate treatment "could result in incensing customers with large loads to locate outside the Company's retail service territory."<sup>404</sup>

**Mr. Lennhoff** presented rebuttal testimony in response to Somerset witness Napoli, FST witness Mayer, and numerous public witnesses who testified that a transmission line would negatively impact the fair market value of their homes and businesses. Mr. Lennhoff has been appraising properties in the County since 1975, including land, shopping centers, houses, apartments and hotels.<sup>405</sup> His analysis on the financial impacts of transmission lines on homes and businesses was limited to those properties not actually encumbered by transmission line ROW easements.<sup>406</sup>

Mr. Lennhoff testified that there is no consensus in literature that property abutting a transmission line ROW suffers a loss in value.<sup>407</sup> In support of this claim, he attached a study to his rebuttal testimony (Rebuttal Schedule 1), authored by Jennifer M. Pitts and Thomas O. Jackson, PhD, MAI, entitled "Power Lines and Property Values Revisited."<sup>408</sup> This study summarizes the research findings from other past studies, many of which indicate that a transmission line has no significant impact on residential property values.<sup>409</sup> Moreover, when negative impacts were found, the studies indicated an average reduction in home values of between 1% and 10%.<sup>410</sup> The studies further indicated that the impacts diminish as the distance from the transmission line increases and disappear at a distance of approximately 200 feet from the line.<sup>411</sup> Further, when the transmission line structures are screened by landscaping or topography, any negative impacts are reduced considerably.<sup>412</sup> Mr. Lennhoff also noted that the value reduction attributable to a transmission line is temporary and decreases over time, disappearing entirely in four to ten years.<sup>413</sup>

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<sup>401</sup> *Id.* at 5.

<sup>402</sup> *Id.*

<sup>403</sup> *Id.*

<sup>404</sup> *Id.* at 6.

<sup>405</sup> Ex. 44 (Lennhoff Rebuttal) at 3.

<sup>406</sup> *Id.* at 2.

<sup>407</sup> *Id.* at 3.

<sup>408</sup> *Id.* at Rebuttal Schedule 1.

<sup>409</sup> *Id.* at 3-4; Rebuttal Schedule 1 at 1.

<sup>410</sup> *Id.* at 4; Rebuttal Schedule 1 at 1.

<sup>411</sup> *Id.* at 4.

<sup>412</sup> *Id.*

<sup>413</sup> *Id.*

Mr. Lennhoff next responded to Catherine Calvin's public witness testimony, which referenced a 2008 study that showed a 38% loss in value for homes in the vicinity of transmission lines.<sup>414</sup> Mr. Lennhoff testified that he believed Ms. Calvin was referring to a 2008 report by the "Askon Consulting Group ("Askon")," which he attached to his rebuttal testimony as Rebuttal Schedule 2. Although Mr. Lennhoff claimed the Askon "report does not provide sufficient detail to confirm the reliability of its conclusions,"<sup>415</sup> there is indeed language in the report which states that "[a] study carried out in Britain in 2007 showed the value of detached properties at a distance of less than 100 m[eters] from overhead transmission lines was 38 percent lower than comparable properties."<sup>416</sup> Mr. Lennhoff distinguished the finding in the British study by claiming that the U.S. studies he has reviewed "show little to no significant impact on home values due to" transmission lines.<sup>417</sup>

Mr. Lennhoff also responded to Tad Wilson's public witness testimony citing an article from the Appraisal Journal in 2013, which showed that home values near a transmission line could decrease by 12%.<sup>418</sup> Mr. Lennhoff pointed out that the article in the Appraisal Journal also cited many other studies that "concluded there was no observable significant price effect from proximity to, or visibility of, [transmission lines]."<sup>419</sup> He also noted that the authors of the article conducted a study on the impact of transmission lines on properties in Portland, Oregon, and Seattle, Washington, which showed a 2% and 2.4%, respectively, reduction in value.<sup>420</sup> However, he noted that the article also found that "all markets do not react in the same way to [transmission line] proximity."<sup>421</sup>

Mr. Lennhoff also took issue with Staff witnesses Joshipura and McCoy regarding the potential negative impact of an overhead transmission line on property values.<sup>422</sup> Once again, Mr. Lennhoff emphasized that "there is no empirical research evidence to support such an understanding."<sup>423</sup>

Mr. Lennhoff also challenged the statements of some public witnesses who claimed that homes near a transmission line take longer to sell.<sup>424</sup> Referencing the article attached to his rebuttal testimony as Rebuttal Schedule 1, Mr. Lennhoff said that interviews were conducted with realtors and appraisers by the authors of the study, and approximately one half of those interviewed had not observed that the presence of power lines negatively impacted the number of days that homes remained on the market.<sup>425</sup> He said the remaining realtors and appraisers observed that homes near transmission lines could expect to remain on the market from 0 to 60 additional days.<sup>426</sup>

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<sup>414</sup> *Id.*

<sup>415</sup> *Id.*

<sup>416</sup> *Id.* at Rebuttal Schedule 2 at 5.

<sup>417</sup> *Id.* at 4.

<sup>418</sup> *Id.* at 5.

<sup>419</sup> *Id.*

<sup>420</sup> *Id.*

<sup>421</sup> *Id.*

<sup>422</sup> *Id.* at 5-6.

<sup>423</sup> *Id.*

<sup>424</sup> *Id.* at 6.

<sup>425</sup> *Id.*

<sup>426</sup> *Id.*

Mr. Lennhoff also attached a more recent study to his rebuttal testimony as Rebuttal Schedule 3. In this study, Dr. James A. Chalmers and Dr. Frank A Voorvaart reviewed the findings of sixteen studies examining whether a home's proximity to a transmission line affected its value.<sup>427</sup> According to Mr. Lennhoff, the studies reviewed by Drs. Chalmers and Voorvaart observed that when transmission lines impact property values, they tend to be small, almost always less than 10%, and usually in the range of 3% to 6%.<sup>428</sup> He also said the study found that the impact on a home's value decreases rapidly as distance to the line increases, and usually disappears at 200 to 300 feet.<sup>429</sup> He also said the negative impact of a transmission line on a home's value tends to dissipate over time.<sup>430</sup>

Mr. Lennhoff also responded to FST witness Mayer's testimony that no retail user would be interested in FST's property with overhead transmission lines in place because buildings would be set back over 100 feet from the John Marshall Highway (SR 55) and retail users would be traveling under power lines to enter the businesses.<sup>431</sup> While Mr. Lennhoff admitted he did not study FST's property, he said his "expectation is that there would be no negative effect on the value of retail property from users traveling under power lines to enter the businesses."<sup>432</sup>

Mr. Lennhoff also disagreed with Somerset witness Napoli's claim that Dominion is not competent to determine the effect a transmission line would have on potential economic development or opine as to what could negatively impact economic development.<sup>433</sup> Mr. Lennhoff testified that "[s]tudies are widely available that would enable the Company, as well as anyone else, to understand the likely impact of a transmission line on potential economic development."<sup>434</sup>

Based on his review of academic literature, Mr. Lennhoff contended that the impact of a transmission line on property values should be minimal.<sup>435</sup>

**Ms. Faison** presented rebuttal testimony addressing the DEQ Report and responding to the direct testimony of Somerset witness Napoli, FST witness Mayer, and Staff witness McCoy.

Ms. Faison testified that Dominion "generally agrees with all recommendations included in the Summary of General Recommendations listed in the DEQ Report."<sup>436</sup> She further testified the "Company has no issues or objections to the permit requirements described in the DEQ Report, and fully intends to comply with all federal, state and local laws."<sup>437</sup> She did, however, comment on two comments in the DEQ Report.<sup>438</sup>

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<sup>427</sup> *Id.* at Rebuttal Schedule 3 at 3.

<sup>428</sup> *Id.* at 6.

<sup>429</sup> *Id.*

<sup>430</sup> *Id.*

<sup>431</sup> *Id.* at 7-8.

<sup>432</sup> *Id.*

<sup>433</sup> *Id.* at 8.

<sup>434</sup> *Id.*

<sup>435</sup> *Id.* at 9.

<sup>436</sup> Ex. 45 (Faison Rebuttal) at 2.

<sup>437</sup> *Id.*

<sup>438</sup> *Id.* at 2-4.

In response to the Virginia Outdoor Foundation's ("VOF") comments expressing concern that the proposed I-66 Overhead Route would be a significant visual intrusion on the Bull Run Mountains Natural Area,<sup>439</sup> Ms. Faison testified that during the engineering phase of the Project, Dominion would make an effort to design and place structures to address the VOF's concerns with potential visual impacts of the line.<sup>440</sup> In this regard, she testified that the Company intends to use galvanized steel structures for the I-66 Overhead Route, which would blend in and minimize visual impacts.<sup>441</sup>

Ms. Faison next addressed the coordination between the Company, the County, and VDOT. She testified that Dominion has coordinated closely with VDOT on routing the line along VDOT ROW, and said VDOT has agreed to work with the Company during the placement of utilities within VDOT's limited access ROW for whichever route is approved by the Commission.<sup>442</sup> She further testified the Company will include the County in future meetings with VDOT after a route is approved by the Commission.<sup>443</sup>

Ms. Faison further testified that Dominion had reviewed the testimony of the witnesses for Southview, FST, and Somerset regarding the impacts of the proposed I-66 Overhead Route and the other overhead alternative routes.<sup>444</sup> However, she said the Company continued to support the I-66 Overhead Route for approval by the Commission because it is needed and because it reasonably minimizes adverse impacts.<sup>445</sup>

Ms. Faison also responded to FST witness Mayer's testimony addressing the proposed widening of John Marshall Highway (SR 55).<sup>446</sup> Mr. Faison testified that Dominion learned of the proposed widening of the highway late in the routing process and acknowledged that the proposed I-66 Overhead Route would place utility structures within the expanded ROW necessary for the widening project.<sup>447</sup> She testified, however, that the proposed Walmart Variation would move the line away from any additional ROW necessary for the expansion of John Marshall Highway (SR 55), would minimize tree clearing along the highway, and would increase the transmission line's distance from future development located along the highway.<sup>448</sup>

Ms. Faison next responded to Somerset witness Napoli's testimony addressing the proximity of the proposed I-66 Overhead Route to a helipad located at the Novant Health Haymarket Medical Center ("Novant Health").<sup>449</sup> Ms. Faison testified that the Company met with representatives of Novant Health to discuss the proposed line and its potential impact on helipad operations.<sup>450</sup> She testified that the representatives of Novant Health did not foresee any problems with the Company's

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<sup>439</sup> Ex. 27 at 22-23.

<sup>440</sup> Ex. 45 (Faison Rebuttal) at 3.

<sup>441</sup> *Id.*

<sup>442</sup> *Id.* at 3-4.

<sup>443</sup> *Id.* at 4.

<sup>444</sup> *Id.*

<sup>445</sup> *Id.*

<sup>446</sup> *Id.* at 5.

<sup>447</sup> *Id.*

<sup>448</sup> *Id.*

<sup>449</sup> *Id.* at 6.

<sup>450</sup> *Id.*



preliminary project designs, but they did suggest adding markers or lights to improve the visibility of an overhead transmission line.<sup>451</sup>

Ms. Faison also responded to Mr. Napoli's testimony about an open space easement Somerset granted to the County that impacts the viability of the Railroad Alternative Route.<sup>452</sup> Ms. Faison agreed that the Railroad Alternative Route is no longer a viable alternative because the County has indicated that it does not intend to give Dominion permission to build the transmission line along the Railroad Alternative Route.<sup>453</sup>

Ms. Faison further testified that if the Commission approves the proposed I-66 Overhead Route, the Company would request an overhead easement in the vicinity of Jordan Lane from the County and/or Town in order to run the transmission line over Jordan Lane.<sup>454</sup> However, if the Company is unable to obtain an overhead easement from the localities after a reasonable amount of time, she asked the Commission to approve the Jordan Lane Variation, which would route the line around any property owned by the County or Town.<sup>455</sup>

**Jon Berkin** was the Company's final rebuttal witness. He presented rebuttal testimony addressing (i) the June 2, 2016 letter from the DEQ's OWSP, which recalculated the wetland impacts of the routes and recommended that the I-66 Hybrid Alternative Route be approved by the Commission; (ii) the adverse impacts of the proposed and alternative overhead routes identified by witnesses for Southview, FST, and Somerset; and (iii) the testimony and reports of the Commission Staff.

Mr. Berkin testified that the Company disagrees with the OWSP's revised wetland impacts consultation, and believes the I-66 Hybrid Alternative Route would have greater, not less, wetland impacts than the proposed I-66 Overhead Route.<sup>456</sup> According to Mr. Berkin, the wetland impacts associated with the proposed transition station for the I-66 Hybrid Alternative Route was not considered when NRG examined the route's impact on wetlands.<sup>457</sup> Interestingly enough, when the wetlands impacted by the transition station are included, both the proposed I-66 Overhead Route and the I-66 Hybrid Alternative Route impact the exact same amount of wetlands - 5.9 acres.<sup>458</sup> Mr. Berkin further testified that the construction of underground transmission lines have greater wetland impacts than overhead routes because of the trenching required to install transmission lines underground.<sup>459</sup> Overhead transmission lines, in contrast, use a small footprint for supporting structures and can span wetland areas, thereby reducing the impacts on wetland resources.<sup>460</sup>

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<sup>451</sup> *Id.* at 6-7.

<sup>452</sup> *Id.* at 7-9.

<sup>453</sup> *Id.* at 8-9.

<sup>454</sup> *Id.* at 9-10.

<sup>455</sup> *Id.*

<sup>456</sup> Ex. 48 (Berkin Rebuttal) at 3-5.

<sup>457</sup> *Id.* at 5.

<sup>458</sup> *Id.*

<sup>459</sup> *Id.* at 4.

<sup>460</sup> *Id.*

Mr. Berkin also addressed the impact of the transmission line on the future development on two parcels of property owned by Southview.<sup>461</sup> Mr. Berkin agreed with Southview witness Fuccillo's testimony that the transition station for the I-66 Hybrid Alternative Route would almost totally consume Parcel Two of FST's property and would preclude future development on the parcel.<sup>462</sup> He testified, however, that "there is not another open parcel with sufficient space for the siting of a transition station in the surrounding area."<sup>463</sup>

Mr. Berkin also agreed with FST witness Antelo's direct testimony that the proposed I-66 Overhead Route "would significantly reduce the developable area of the FST property."<sup>464</sup> He pointed out, however, that the FST Route Variation, Dominion's FST Optimization Route, and the Walmart Variation would all locate the line off of FST's property and not impact the future development of FST's property.<sup>465</sup> He further testified that after further consideration of the Project, Dominion now supports the incorporation of the Walmart Variation into both the proposed I-66 Overhead Route and I-66 Hybrid Alternative Route.<sup>466</sup>

Mr. Berkin then responded to Somerset Napoli's testimony that the Railroad Alternative Route would cause downstream damage to the environment and the Potomac watershed.<sup>467</sup> Mr. Berkin pointed out that the area between Somerset and the Norfolk Southern railroad tracks is designated as a Resource Protection Area ("RPA") under the Chesapeake Bay Preservation Act (the "Act").<sup>468</sup> In addition, he further noted that under the Act public utility facilities, such as transmission lines, can be located within RPAs provided certain criteria are met.<sup>469</sup> Mr. Berkin further testified that Dominion "will construct the Project in accordance with required regulations that constitute effective best management practices to avoid erosion and sediment deposit in waterbodies."<sup>470</sup> However, any impact of the Railroad Alternative Route on the Potomac watershed now appears to be moot. As Mr. Berkin testified, the construction of a transmission line along the Railroad Alternative Route is no longer viable because the County has expressly rejected granting an overhead easement for the route.<sup>471</sup>

Mr. Berkin also responded to Mr. Napoli's assertion that the DHR recommends the I-66 Hybrid Alternative Route because it is the only alternative that substantially mitigates the adverse and unalterable impacts that the Project will have on the historic assets of the region.<sup>472</sup> While Mr. Berkin acknowledged that the DHR supports undergrounding the transmission line, he claimed that Mr. Napoli exaggerated the impacts of the I-66 Overhead Route on historic resources in the area.<sup>473</sup> In support of this claim, Mr. Berkin testified that the impacts of the I-66 Overhead Route "does not

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<sup>461</sup> *Id.* at 5-6.

<sup>462</sup> *Id.* at 5.

<sup>463</sup> *Id.*

<sup>464</sup> *Id.* at 6.

<sup>465</sup> *Id.* at 6-7.

<sup>466</sup> *Id.* at 7.

<sup>467</sup> *Id.* at 7-8.

<sup>468</sup> *Id.* at 7.

<sup>469</sup> *Id.*

<sup>470</sup> *Id.* at 8.

<sup>471</sup> *Id.* at 9.

<sup>472</sup> *Id.* at 9-14.

<sup>473</sup> *Id.* at 14.

have a noteworthy variance from the I-66 Hybrid Alternative [Route] recommended by the DHR.”<sup>474</sup> His rebuttal testimony includes a table that compares the impacts of both routes on historical resources in the area.<sup>475</sup> When the I-66 Hybrid Alternative Route is compared with the proposed I-66 Overhead Route, Mr. Berkin noted that the only difference is the I-66 Hybrid Alternative Route would have “moderate” impacts on only one historic resource (the Second Battle of Manassas Battlefield) while the proposed I-66 Overhead Route would have a moderate impact on two historic resources (the Second Battle of Manassas Battlefield and the Buckland Mills Battlefield).<sup>476</sup> He further asserted that while the proposed I-66 Overhead Route would impact two battlefields, the visual impacts of the route are moderated by the significant development along the I-66 corridor.<sup>477</sup>

Mr. Berkin also responded to Mr. Napoli’s testimony criticizing all of the overhead routes presented by the Company because they are inconsistent with the County’s Comprehensive Plan.<sup>478</sup> Mr. Berkin testified that Dominion considered the Comprehensive Plan during the routing process, as well as a myriad of other environmental and electrical considerations.<sup>479</sup> He pointed out, however, that “the comprehensive plan is neither binding nor is it inclusive of every potential land use that may be considered during the life of the document.”<sup>480</sup> Mr. Berkin noted that the Comprehensive Plan itself states “a comprehensive plan is a general guide to the location, character, and extent of proposed or anticipated land use, including public facilities.”<sup>481</sup>

With respect to the Comprehensive Plan’s designated corridors for transmission lines, Mr. Berkin said “the areas designated for transmission lines appear simply to represent locations that already contain existing 115 kV or higher voltage transmission lines when the Plan was published rather than considering or planning for future load needs.”<sup>482</sup> He further testified that during the planning process for transmission lines, the Company makes a concerted effort to use existing transmission line corridors and collate lines within or adjacent to existing infrastructure, such as highways, when siting transmission lines.<sup>483</sup> He noted, however, the Comprehensive Plan does not contain any designated transmission line corridors that can be used to serve the load in the Haymarket load area.<sup>484</sup> Mr. Berkin further testified that the area where the proposed I-66 Overhead Route will be constructed, if approved by the Commission, “is not visually pristine, and a transmission line would certainly be compatible with the existing uses or future development along [I-66] . . . .”<sup>485</sup>

Mr. Berkin also responded to Somerset witness Napoli’s concern that the I-66 Overhead Route would have serious and irrevocable impacts on environmental, scenic, and historic

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<sup>474</sup> *Id.* at 10.

<sup>475</sup> *Id.* at 11.

<sup>476</sup> *Id.*

<sup>477</sup> *Id.* at 11-14.

<sup>478</sup> *Id.* at 14-16.

<sup>479</sup> *Id.* at 14-15.

<sup>480</sup> *Id.* at 15.

<sup>481</sup> *Id.* at 15; Rebuttal Schedule 2 at 2.

<sup>482</sup> *Id.* at 15.

<sup>483</sup> *Id.* at 15-16.

<sup>484</sup> *Id.* at 16.

<sup>485</sup> *Id.*

resources.<sup>486</sup> According to Mr. Berkin, many people have the misconception that there are no adverse impacts with an underground line, which is simply not the case.<sup>487</sup> He testified the I-66 Hybrid Alternative Route would have significant impacts as well, including the clearing and maintenance of vegetation in the transmission line's ROW, the installation of manholes, as well as negative impacts on future development.<sup>488</sup>

Mr. Berkin finally responded to Staff witness McCoy's testimony that claimed NRG's Environmental Routing Study gives a "false impression," "does not give a clear picture," and is "misleading" with respect to the impacts of the I-66 Hybrid Alternative Route.<sup>489</sup> Mr. Berkin testified that he believes Staff witness McCoy's statements appear to "be based largely, or even solely, on the criteria of visual impacts."<sup>490</sup> Referring to Table 4-1 in NRG's Environmental Routing Study, Mr. Berkin testified that all the routes, including the I-66 Hybrid Alternative Route, have varying degrees of permanent impacts.<sup>491</sup> He further testified the potential impacts of the I-66 Hybrid Alternative Route are underestimated in Table 4-1 because the table does not include the impacts associated with the transition station for the I-66 Hybrid Alternative Route.<sup>492</sup>

Mr. Berkin also disagreed with Staff witness McCoy's statement that the visual impacts of the I-66 Hybrid Alternative Route would be reduced to zero within the most populated areas of the route.<sup>493</sup> According to Mr. Berkin, the I-66 Hybrid Alternative Route would require permanent clearing of shrub and forestlands, the placement of manholes every 2,000 feet, the development of permanent access roads to access the manholes, and the construction of a transition station that would encompass 5-7 acres – all of which would visually impact those residences and businesses in the vicinity of the underground portion of the line.<sup>494</sup>

Mr. Berkin testified that it must be remembered that § 56-46.1 B of the Code provides that a transmission line should reasonably minimize, not eliminate, adverse impact on the scenic assets, historic districts and environment of the area.<sup>495</sup> He further testified that he believes the proposed I-66 Overhead Route meets the requirements of the statute.<sup>496</sup>

### III. DISCUSSION OF THE ISSUES

The statutory scheme governing Dominion's Application is found in several chapters of Title 56 of the Code.

Section 56-265.2 of the Code provides that "it shall be unlawful for any public utility to construct . . . facilities for use in public utility service . . . without first having obtained a certificate

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<sup>486</sup> *Id.* at 17-18.

<sup>487</sup> *Id.* at 17.

<sup>488</sup> *Id.* at 17-18.

<sup>489</sup> *Id.* at 18-20.

<sup>490</sup> *Id.* at 19.

<sup>491</sup> Ex. 10 (Environmental Routing Study) at 60-65, Table 4-1.

<sup>492</sup> Ex. 48 (Berkin Rebuttal) at 18.

<sup>493</sup> *Id.* at 19.

<sup>494</sup> *Id.*

<sup>495</sup> *Id.* at 20.

<sup>496</sup> *Id.*

from the Commission that the public convenience and necessity require the exercise of such right or privilege.” Section 56-46.1 of the Code further directs the Commission to consider several factors when reviewing the Company’s Application. Subsection A of the statute provides, in part, that:

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 . . .

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.

Subsection B of the statute 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 the line is to follow will reasonably minimize adverse impact on the scenic assets, historic districts and environment of the area concerned. . . . In making the determinations about need, corridor or route, and method of installation, the Commission shall verify the applicant’s load flow modeling, contingency analyses, and reliability needs presented to justify the new line and its proposed method of installation. . . . Additionally, the Commission shall consider, upon the request of the governing body of any county or municipality in which the line is proposed to be constructed, (a) the costs and economic benefits likely to result from requiring the underground placement of the line and (b) any potential impediments to timely construction of the line.

The Code further requires that the Commission consider existing ROW easements when siting transmission lines. Section 56-46.1 C of the Code 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 of the Code 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.”

## **1. Need**

The threshold issue in every transmission line case seeking a CPCN is whether the line is “needed.” If the Commission finds the transmission line is needed, it then becomes necessary to

consider and address numerous additional issues, including, among other things, the transmission line's impact on the environment, scenic assets, historic districts, the health and safety of persons in the area, system reliability, and economic development. If, however, the Commission finds the line is not needed, the Commission's inquiry is over and the application must be denied.

Several novel arguments were raised contesting the need for a new transmission line to serve the Haymarket load area. Many public witnesses maintained that a new transmission line is not needed because the Customer could relocate its data center to Innovation Park, where they claimed sufficient electric infrastructure is already in place to serve the Customer's new data center. Other public witnesses requested the Commission to invoke its power and require the Customer to relocate its data center to Innovation Park.

Several parties and public witnesses also contested the need for a new transmission line, but for a different reason. They contended the line is being proposed to serve only one customer, the developer of the new data center, and that need cannot be established based on the needs of one customer alone. FST's Post-Hearing Brief also questioned the need for a new transmission line, asserting that the need for a new transmission line "is not readily apparent from the record in this matter . . . ."<sup>497</sup> FST further asserted that the Commission "should not take possible future users into consideration" when determining whether the line is needed.<sup>498</sup> In addition, several locally elected officials claimed the transmission line would not be needed but for the large block load of the Customer's new data center. Accordingly, they requested that the Commission hire an independent consultant to determine whether there is a need for the transmission line prior to ruling on Dominion's Application.

When determining whether the transmission line is needed, it is quite obvious that the Commission cannot deny the Application simply because there may be sufficient infrastructure located elsewhere to serve the Customer's new data center. Nor can the Commission invoke its authority and require the Customer to relocate its data center to Innovation Park because no such authority exists. The County, not the Commission, determines when and where residential, commercial, and industrial development takes place in the County through its zoning ordinances. In this case, the Customer is developing its data center "by right," which allowed the Customer to begin construction of its data center without first obtaining a special use permit from the County.<sup>499</sup> The Commission has no authority to interfere in this process, and any attempt to do so indirectly, by finding a transmission line is not needed because sufficient infrastructure is available elsewhere, would be improper and beyond the jurisdiction of the Commission.

I further find that it would be improper to ignore the load of the Customer's new data center, as some parties and public witnesses suggest, when determining whether the proposed transmission line is "needed" under § 56-46.1 B of the Code. The plain language of the statute does not draw a

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<sup>497</sup> FST Post-Hearing Brief at 3.

<sup>498</sup> *Id.*

<sup>499</sup> On May 17, 2016, the County amended its zoning ordinances to eliminate data centers as a "by right" use in all commercial districts located outside a defined Data Center Opportunity Zone Overlay District. Accordingly, new data centers located outside the County's new Data Center Opportunity Zone Overlay District would need to obtain a special use permit from the County before constructing a new data center. However, this amendment to the County's zoning ordinances does not affect the Customer's new data center in this case.

distinction between new large block load customers, such as the Customer's new data center in this case, and a public utility's other smaller load customers when determining whether a new transmission line is needed. Accordingly, the need for a new transmission line must be determined based on the aggregate load of all customers in the load area, including large block load customers, smaller load customers, as well as future projected load growth. Any attempt to determine need by "cherry picking" which customer loads or customer classes should be included in a needs analysis has no support in the plain language of the statute, or in past Commission precedent. Additionally, such a selective and segmented approach for determining need would have absolutely no bearing on when and where new transmission infrastructure is needed. When determining whether a transmission line is needed under § 56-46.1 B of the Code, all existing loads and future projected loads, regardless of size, must be considered.

Moreover, interpreting need in the manner suggested by some of the parties and public witnesses in this case would prevent Dominion from performing its statutory duties as defined by the General Assembly. Section 56-234 of the Code requires Dominion "to furnish reasonably adequate service at reasonable and just rates to any person, firm or corporation along its lines desiring same." Excluding large block load customers, such as the Customer's new data center load when conducting a needs analysis, would put Dominion and the Customer in a "Catch 22" regulatory situation. In other words, the Customer needs additional power for its new data center operations, Dominion has a statutory obligation to provide such power, but Dominion would be prevented from doing so because the line is not needed to serve Dominion's other customers. Such an interpretation of § 56-46.1 B of the Code not only defies logic, it also would create a statutory conflict between §§ 56-46.1 B and 56-234 of the Code.

After reviewing the record in this case, I find that a new transmission line is needed for Dominion to meet its statutory duty to provide reasonably adequate service at reasonable and just rates to all of its customers in the Haymarket load area, including the Customer's new data center. The evidence introduced in this case reveals that there are three distribution circuits currently serving the area; namely, distribution circuits #378, #379, and #695. Further, Dominion's existing distribution circuits do not have sufficient capacity to serve the aggregate load of the Customer's new data center, existing customers, and future projected load growth.

Attachment I.B. 2 of the Appendix shows the actual and projected loads on the three distribution circuits between 2010 and 2024, including the anticipated load from the Customer's new data center. Based on a very conservative annual load growth rate of 1.0%, the available capacity of Dominion's three distribution circuits serving the Haymarket load area is projected to be 47.8 MVA during the summer of 2018 when the new data center becomes fully operational. The Customer's total load in the summer of 2018 is projected to be 120 MVA – far above the 47.8 MVA of projected capacity available on Dominion's three distribution circuits. Accordingly, Dominion's existing distribution facilities are not sufficient to serve the projected load in the Haymarket load area and a new transmission line is needed to continue providing service to all of Dominion's customers in the Haymarket load area, including the Customer's new data center.

Three additional issues that merit a brief discussion include (i) the challenges to Dominion witness Gill's Rebuttal Schedule 2, which showed future anticipated development in the area;

(ii) Somerset witness Napoli's claim that Dominion's system was not "stress-evaluated" to determine whether the proposed transmission line is needed; and (iii) the requests by current and former Town officials that the Commission hire an independent consultant to determine whether a new transmission line is needed.

With respect to Dominion witness Gill's Rebuttal Schedule 2, Chris Price, the County's Planning Director, and Robert Weir, a former member of the Town Council and former member and chairman of the Town's Planning Commission, filed written comments on June 17, 2016, criticizing Mr. Gill's Rebuttal Schedule 2, which showed future development planned in the area.<sup>500</sup> Rebuttal Schedule 2, which was developed based on information contained in the County's December 31, 2014 Build-Out Analysis,<sup>501</sup> showed approximately 8.5 million square feet of non-residential development and 889 additional residential units scheduled for future development. Messrs. Price's and Weir's written comments claimed that Mr. Gill's Rebuttal Schedule 2 is inaccurate and overstates future development because, among other things, Mr. Gill relied on stale zoning data, double counted some of the future development in his analysis, and inflated the number of residential units to be developed because many of the residential units have already been built. However, these written comments criticizing Mr. Gill's Rebuttal Schedule 2 should be given little, if any, weight in this proceeding for several reasons.

First, even if one totally ignores all future growth in the area, a new transmission line is still needed to serve the load of the Customer's new data center and Dominion's existing customers. In the summer of 2018, for example, the total projected capacity available on Dominion's three distributions circuits serving the area will be 47.8 MVA. Accordingly, even if one assumes there will be no future development whatsoever in the area, the transmission line is still needed so Dominion can perform its statutory duty and serve the Customer's request for 120 MVA of power in 2018, as well as the Company's existing customers. Simply put, the information contained in Mr. Gill's Rebuttal Schedule 2 relating to future growth is not needed to rule on Dominion's Application. The Company has demonstrated a need for the Haymarket transmission line regardless of any additional future development in the area.

Second, while Dominion, the County, and Mr. Weir can quibble about when and how fast future development will occur, I am not convinced that the criticisms of Mr. Gill's Rebuttal Schedule 2 are entirely valid. To give an example, much was made over the fact that Mr. Gill used stale zoning data and double counted proposed future developments in his analysis. However, as Mr. Gill pointed out during his rebuttal testimony, the County's Build-Out Analysis states that stale zoning applications are assumed to be developed at a higher intensity use.<sup>502</sup> This assumption in the Build-Out Analysis would tend to indicate that future development in the County may be greater than estimated by Mr. Gill's Rebuttal Schedule 2.

I have also reviewed Mr. Gill's Rebuttal Schedule 2 and find no evidence of double counting. While Mr. Gill included the Customer's new data center in his analysis of future development, which is already under construction, there is no evidence of any double counting. Additionally, while Mr. Gill's Rebuttal Schedule 2 may include some residential units that have

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<sup>500</sup> Ex. Nos. 37, 38.

<sup>501</sup> Ex. 30.

<sup>502</sup> June 22 Tr. at 344-345; Ex. 30 at 3.



already been built, it cannot be seriously debated that development is not occurring in western Prince William County.<sup>503</sup> Western Prince William County is a highly desirable area, as many public witnesses testified during the local hearings, because of its rural nature and proximity to Washington, D.C.<sup>504</sup>

Finally, if Messrs. Price and Weir wanted to demonstrate that future development in the area is significantly lower than shown in Mr. Gill's Rebuttal Schedule 2, they could have provided the County's most recent Build-Out Analysis.<sup>505</sup> As stated in the County's December 31, 2014 Build-Out Analysis, the analysis *is prepared annually* by the County's Planning Office (emphasis added).<sup>506</sup> By failing to provide an accurate, up-to-date copy of the County's most recent Build-Out Analysis, which Mr. Price could have easily provided as the Director of the County's Planning Office, I seriously question whether the future development in the area is as low as Messrs. Price and Weir attempt to portray in their written comments criticizing Mr. Gill's Rebuttal Schedule 2.

Turning now to Somerset witness Napoli's testimony claiming that Dominion did not "stress test" its system, and the requests by Town officials that an independent third-party consultant be hired to determine the need for the Project, I find that neither of these issues should cause the proposed transmission line to be rejected or delayed.

This is a very simple case as far as the issue of need is concerned. By stress tests, I am assuming that Mr. Napoli is requesting that a series of complicated load flow studies, contingency analyses and modeling be performed to determine if the Haymarket transmission line is needed. However, such complicated studies and analyses are not necessary in this case. Load flow studies, contingency analyses and modeling are typically used to determine whether electric infrastructure is needed to prevent potential NERC reliability violations in large regional areas and to determine when and where new infrastructure should be built to address overloading and reliability concerns. In this case, complicated load flow studies, contingency analyses and modeling, or so-called 'stress testing' in Mr. Napoli's words, are not necessary. The only load flow information needed to decide this case is the projected available capacity on Dominion's three distribution circuits serving the Haymarket load area and the annual projected loads of the Customer's new data center. This data clearly shows that overloading will occur on Dominion's system if a new transmission line is not built.

Similarly, there is no need to hire an independent consultant to determine whether the proposed transmission line is needed. Such a study would be a waste of valuable Commission resources and would only delay the approval of the Haymarket transmission line. The need in this case can be demonstrated quite easily by comparing the projected available capacity on Dominion's three distribution circuits (47.8 MVA) with the Customer's projected load (120 MVA) in 2018.

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<sup>503</sup> See e.g., March 14 Tr. at 260; see also letter from Brendon Shaw, Director of Government Relations, Prince William Chamber of Commerce, to Joel Peck, Clerk of the Commission, dated June 17, 2016, passed to the file during the June 21 hearing (describing the significant growth taking place in Prince William County).

<sup>504</sup> See e.g., February 24 Tr. at 40, 139, 160.

<sup>505</sup> Mr. Gill's Rebuttal Schedule 2 was based on the County's December 31, 2014 Build-Out Analysis, which is latest version currently displayed on the County's website.

<sup>506</sup> Ex. 30 at 2.

For all of the above reasons, I find that a new transmission line is needed so Dominion can meet its statutory duty “. . . to furnish reasonably adequate service and facilities at reasonable and just rates to any person, firm or corporation along its lines . . . .”<sup>507</sup>

## 2. Routing

### (a) Overhead versus Underground Construction

The major routing issue presented in this case is whether the transmission line should be constructed overhead or underground. When resolving this issue, it is helpful to review past Commission precedent where underground transmission lines have been approved and under what circumstances the Commission has found underground construction is appropriate. It must be recognized, however, that the vast majority of past Commission transmission line cases have found that transmission lines should be constructed overhead because of the significantly greater costs of underground construction and the Commission’s belief that Dominion’s general body of ratepayers should not be required to subsidize underground construction to mitigate local impacts and concerns. As recognized by the Commission in Case No. PUE-2002-00702, “the Commission has approved underground construction in limited circumstances and that underground construction has been the ‘exception’ on [Dominion’s] system.”<sup>508</sup>

A review of past Commission decisions indicates that underground transmission lines have only been approved in exceptional and limited circumstances, including when:

- (1) No overhead ROW is available and an overhead transmission line is not feasible;<sup>509</sup>

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<sup>507</sup> Section 56-234 of the Code.

<sup>508</sup> *Application of Virginia Electric and Power Company D/B/A Dominion Virginia Power, For a certificate of public convenience and necessity for facilities in Loudoun County: Brambleton-Greenway 230 kV Transmission Line*, Case No. PUE-2002-00702, 2004 S.C.C. Ann. Rept. 347, 350, Final Order (Oct. 8, 2004), *aff’d* *Dulles Gateway Associates, LLC, et al., v State Corp. Comm’n.*, Record No. 050273, slip op. (Va. Sup. Ct. Nov. 4, 2005).

<sup>509</sup> *Application of Virginia Electric and Power Company D/B/A Dominion Virginia Power, For a certificate of public convenience and necessity for facilities in the Cities of Portsmouth and Norfolk: Churchland-Sewells Point 230 kV Transmission Line*, Case No. PUE-2004-00139, 2005 S.C.C. Ann. Rept. 383, Final Order (Aug. 29, 2005) (finding that a portion of a transmission line should be undergrounded because there was no ROW available for overhead construction); *Application of Virginia Electric and Power Company, For a certificate of public convenience and necessity authorizing construction and operation of transmission lines and facilities in the City of Alexandria: Jefferson Street-Glebe and Ox-Glebe 230 kV Transmission Lines, Phase 2-Potomac Yards Circuit Transmission Line Underground Installation*, Case No. PUE-1996-00071, 1996 S.C.C. Ann. Rept. 311, Final Order (Aug. 9, 1996) (authorizing a transmission line to be relocated underground because there were no feasible overhead routes available); *Application of Virginia Electric and Power Company, To amend its certificate of public convenience and necessity No. ET-63g authorizing operation of transmission lines and facilities in Arlington County: Glebe Substation – Pentagon Substation 230 kV Underground Transmission Line*, Case No. PUE-1988-00063, 1989 S.C.C. Ann. Rept. 260, Final Order (Apr. 3, 1989) (finding there were no viable overhead transmission line routes available when approving the underground construction for a transmission line).

(2) The cost of undergrounding a transmission line is comparable to or less than the cost of overhead construction;<sup>510</sup>

(3) An underground transmission line is approved as a pilot project under House Bill 1319, as amended and reenacted;<sup>511</sup>

(4) An underground transmission line is approved on an experimental basis to allow experience to be gained with extruded dielectric cross-linked polyethylene ("XLPE") cable.<sup>512</sup>

(5) Where a third party agrees to pay for the costs of underground construction;<sup>513</sup> and

(6) Where a special tax district is created under § 15.2-2404 F of the Code to impose a tax or assessment on electric utility customers to pay the additional incremental costs to underground a transmission line.

A review of the evidence presented in this case demonstrates that the proposed Haymarket transmission line does not meet any of the criteria previously established by the Commission or the General Assembly for undergrounding a transmission line.

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<sup>510</sup> *Application of Virginia Electric and Power Company, To amend its certificate of public convenience and necessity No. ET-79bb authorizing operation of transmission lines and facilities in Fairfax County: Pender Substation – Oakton Substation 230 kV Underground Transmission Line*, Case No. PUE-1988-00079, 1989 S.C.C. Ann. Rept. 267, Final Order (Apr. 3, 1989) (approving an underground transmission line because it cost less than an overhead line).

<sup>511</sup> See House Bill 1319, 2008 Va. Acts ch. 799, as amended and reenacted by House Bill 2027, 2011 Va. Acts ch. 244. The Commission approved three underground transmission line pilot projects under this enabling legislation, including: *Modified Request of Virginia Electric and Power Company, To participate in pilot project, and for approval of underground transmission line construction, under §2.A of HB 1319*, Case No. PUE-2008-00042, 2008 S.C.C. Ann. Rept. 537, Order Approving Modified Request (May 28, 2008); *Application of Virginia Electric and Power Company, For approval and certification of Beaumeade-NIVO 230 kV Underground Transmission line and 230-34.5 kV NIVO Substation under Va. Code § 56-46.1 and the Utility Facilities Act, Va. Code § 56-265.1 et seq., and as a pilot project pursuant to HB 1319*, Case No. PUE-2008-00063, 2009 S.C.C. Ann. Rept. 319, Final Order (May 29, 2009); *Application of Virginia Electric and Power Company, For approval and certificates of public convenience and necessity for facilities in Arlington County: Glebe-Radnor Heights 230 kV Transmission Line; Davis-Radnor Heights 230 kV Transmission Line; Ballston-Radnor Heights 230 kV Transmission Line; and Radnor Heights Substation*, Case No. PUE-2010-00004, 2010 S.C.C. Ann. Rept. 443, Final Order (July 21, 2010).

<sup>512</sup> *Application of Virginia Electric and Power Company D/B/A Dominion Virginia Power, For a certificate of public convenience and necessity for facilities in Arlington County: Clarendon-Ballston 230 kV Transmission Line*, Case No. PUE-2006-00082, 2007 S.C.C. Ann. Rept. 349, Final Order (May 25, 2007); *Application of Virginia Electric and Power Company D/B/A Dominion Virginia Power, For a certificate of public convenience and necessity for facilities in Stafford County: Garrisonville 230 kV Transmission Line and 230 kV-34.5 kV Garrisonville Switching Substation*, Case No. PUE-2006-00091, 2008 S.C.C. Ann. Rept. 343, Final Order (Apr. 8, 2008).

<sup>513</sup> *Petition of Virginia Electric and Power Company, For a Declaratory Judgment and, in the Alternative, Application for Authority to Construct and Operate Transmission Facilities Pursuant to the Utility Facilities Act*, Case No. PUE-2002-00180, 2002 S.C.C. Ann. Rept. 531, Final Order (July 16, 2002) (authorizing underground construction of a transmission line when the U.S. Navy agreed to pay for the project); *Application of Virginia Electric and Power Company, For a certificate of public convenience and necessity authorizing operation of transmission lines and facilities in the City of Alexandria: Jefferson Street-Glebe/Ox-Glebe 230 kV double circuit transmission line underground installation*, Case No. PUE-1995-00134, 1996 S.C.C. Ann. Rept. 295, Final Order (Apr. 1, 1996) (authorizing a portion of a proposed transmission line to be constructed underground when the City of Alexandria agreed to reimburse Dominion for the costs of undergrounding the line).

First, no one has suggested that there is inadequate ROW available for the construction of an overhead transmission line. Indeed, the record in this case indicates that sufficient ROW is available to construct the proposed I-66 Overhead Route and three additional alternative overhead routes presented in Dominion's Application.

Second, the cost of undergrounding the Haymarket transmission line is significantly more expensive than the proposed I-66 Overhead Route, or any of the alternative overhead routes presented in Dominion's Application. The cost of an overhead transmission line ranges between \$51 to \$67.8 million, depending on the overhead route selected, compared to the \$166.7 million estimated cost of the I-66 Hybrid Alternative. Clearly, the cost of undergrounding the line is significantly more expensive than the costs of the proposed and alternative overhead routes presented in Dominion's Application.

Moreover, it is highly likely that the cost of the I-66 Hybrid Alternative is significantly understated. As Dominion witness Koonce testified during the Company's rebuttal case, the Company's original estimate for underground construction did not include a sufficient number of road borings, nor did the estimate anticipate the additional costs that would be incurred to excavate the significant amount of rock exposed during the construction of sound walls along I-66. These additional costs for undergrounding the line will only further increase the difference in costs between overhead and underground construction of the Haymarket transmission line.

Third, the Haymarket transmission line cannot qualify as a pilot project. The enabling legislation, as amended and reenacted, only applied to transmission line applications filed between April 2, 2008, and July 1, 2014.

Fourth, no one has suggested that the Haymarket transmission line should be approved on an experimental basis to allow Dominion to gather additional information on the use of XLPE cable. The Commission has already approved two underground transmission lines to allow Dominion to gather information on XLPE cable. Another experiment is not necessary because it would only needlessly duplicate the two experimental underground transmission lines previously approved by the Commission, and further increase costs to Dominion's general body of ratepayers.

Finally, no one has stepped forward and agreed to pay for undergrounding the Haymarket transmission line, neither the Customer building the new data center nor residents in the area through the creation of a special tax district under § 15.2-2404 F of the Code.

Accordingly, there was no evidence presented in this case that would support a recommendation to approve the I-66 Hybrid Alternative Route based on any of the factors previously identified by the Commission. Indeed, any recommendation to underground the Haymarket transmission line would be contrary to an extensive body of past Commission precedent holding that a public utility's general body of ratepayers should not be required to subsidize underground construction to mitigate local impacts and concerns.

## **(b) Section XXII Underground Line Extensions**

There was a proposal raised in this case that would insulate Dominion's general body of ratepayers from the costs of undergrounding the proposed Haymarket transmission line, thereby removing the primary reason why the Commission has favored overhead construction of transmission lines in past cases, and possibly creating an additional exception to the Commission's general rule favoring overhead construction. Under this proposal, the Haymarket transmission line would be deemed a line extension under Section XXII of Dominion's Terms and Conditions, and the Customer would be required to pay a \$115.7 million "transitional cost" to underground the Haymarket transmission line.<sup>514</sup> In a manner similar to the U.S. Navy's agreement to pay for undergrounding a transmission line in Case No. PUE-2002-00180, this proposal would insulate Dominion's general body of ratepayers from paying the costs to underground the Haymarket transmission line. However, unlike the U.S. Navy's "voluntary agreement" to pay for undergrounding a transmission line, the Customer building the new data center in this case would be "required" to pay such costs under Section XXII.

The theory supporting this new approach was explained by Staff witness Joshipura. He testified the Staff does not believe the transmission line would be needed without the Customer's request for electric service to its new data center. Accordingly, he suggested the transmission line could be viewed as a line extension under Section XXII of Dominion's Terms and Conditions. In support of this approach, he testified there is "nothing in the actual Commission-approved language of Section XXII, or any part therein, [that] explicitly states that these terms and conditions apply to distribution facilities only."<sup>515</sup> He also noted that Dominion itself had stated in response to a Staff interrogatory in the Poland Road case that Section XXII would apply to the transmission line proposed in that case before correcting its response several months later. Finally, the Staff pointed out that the Haymarket, Poland Road and Yardley Ridge transmission lines were all characterized as "line extensions" in Dominion's 2016 IRP filing.

The Staff's Post-Hearing Brief urged the Commission to consider whether Dominion's line extension policy should apply as a means to mitigate the costs of the I-66 Underground Hybrid Route on Dominion's ratepayers.<sup>516</sup> The Staff further suggested that application of Dominion's line extension policy may be appropriate since "the need for the Project is entirely due to the request for additional service by a single customer," and the line would not be needed at all for the foreseeable future without the Customer's new data center.<sup>517</sup> The Staff further argued that the application of Dominion's line extension policy to the proposed Haymarket transmission line is not preempted by federal law.<sup>518</sup>

The Coalition argued in its Post-Hearing Brief that the Haymarket transmission line falls within the definition of an Approach Line under the plain language of Section XXII and the Customer should, therefore, be required to pay the transitional cost to underground the transmission

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<sup>514</sup> Section XXII A 12 defines "transitional cost" as the amount by which the estimated cost of providing underground facilities exceeds the estimated cost of providing comparable overhead facilities along Dominion's preferred route.

<sup>515</sup> Ex. 19 at 19.

<sup>516</sup> Staff Post-Hearing Brief at 3, 8-18.

<sup>517</sup> *Id.* at 3.

<sup>518</sup> *Id.* at 11-15.

line in accordance with the cost allocation formula in Section XXII.<sup>519</sup> The Coalition further argued that even if the language of Section XXII is found to be ambiguous by the Commission, the language in Section XXII must be construed against Dominion and in the Coalition's favor.<sup>520</sup>

In its Post-Hearing Brief, Dominion argued that the Commission should disregard the Staff's suggestion that the Customer could be charged a transitional cost for undergrounding the Haymarket transmission line under Section XXII of its Terms and Conditions.<sup>521</sup> Dominion pointed out that the proposed Haymarket transmission line will be a networked, high voltage transmission line that will be operated by PJM, and the costs of the line will be allocated and recovered in accordance with the PJM OATT that is on file with FERC.<sup>522</sup> Dominion argued the PJM OATT is subject to FERC's exclusive jurisdiction, and any attempt to apply Section XXII to the Haymarket transmission line and allocate costs differently than prescribed by the PJM OATT is federally preempted.<sup>523</sup>

Dominion also argued that Section XXII was intended to apply to distribution lines, not transmission lines.<sup>524</sup> In support of its argument, Dominion referred to the Company's direct testimony in its 2009 Going In and 2013 Biennial Review cases. In both cases, Dominion witnesses specifically testified that the proposed revisions to the Company's line extension policy relating to underground installations did not apply to transmission lines. Rather, the witnesses in both cases testified that the facilities targeted for underground installation were rated below 50 kV.<sup>525</sup> The Company also referred to Staff testimony in both cases. According to Dominion, the Staff "filed testimony raising 'ambiguities' with the 2009 submittal, but none of those ambiguities, which were addressed by the Company in the 2013 Biennial Review filing of the tariff revisions, asserted the tariff was 'ambiguous' on whether it applied to overhead or underground transmission facilities."<sup>526</sup>

Dominion further argued that the only provisions where the Customer could be charged a transitional cost is if the Haymarket transmission line meets the definition of an "Approach Line," "Branch Feeder," or "Bulk Feeder" under Section XXII of the Terms and Conditions.<sup>527</sup> However, Dominion asserted the Haymarket transmission line does not meet any of these definitions.

The Haymarket transmission line cannot be an Approach Line, according to Dominion, because an Approach Line is defined as facilities installed from an existing source to "the property

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<sup>519</sup> Coalition Post-Hearing Brief at 7-9.

<sup>520</sup> *Id.* 11-13.

<sup>521</sup> Dominion Post-Hearing Brief at 51-67.

<sup>522</sup> *Id.* at 51-55, 57-62.

<sup>523</sup> *Id.*

<sup>524</sup> *Id.* at 62-65.

<sup>525</sup> In the 2009 Going In case, Dominion witness Julius M. Griles, Jr., was asked, "Do the proposed revisions to the line extension policy relate or apply in any way to transmission lines?" He responded, "No. The facilities targeted for expanded underground are rated below 50 kV." *See* Ex. 20. In Dominion's 2013 Biennial Review, Company witness Steven Eisenrauch was asked, "Do the proposed revisions to the line extension plan relate or apply in any way to transmission lines?" His response, "No. The facilities targeted for expanded underground installation are rated below 50 kV." *See* Ex. 19 at Attachment 14.

<sup>526</sup> Dominion Post-Hearing Brief at 63 (citation omitted). Section XXII was first proposed in the Company's 2009 Going In case, but was not adopted due to a settlement between the parties and Staff. As a result, Section XXII was again proposed, and approved by the Commission, in the Company's 2013 Biennial Review.

<sup>527</sup> Dominion Post-Hearing Brief at 65-67.

of the customer.”<sup>528</sup> The Haymarket transmission line, however, will terminate at the Haymarket Substation, which will be on property owned by the Company.<sup>529</sup> Dominion further argued that the true customer of the Haymarket transmission line is not the Customer developing the data center but the segment of Dominion acting as a wholesale customer or load serving entity (“LSE”).<sup>530</sup> “In other words, the Customer developing the data center is not being served at transmission voltage and, therefore, is not a customer for purposes of the definition of Approach Line.”<sup>531</sup>

Dominion further argued the Haymarket transmission line is not a Branch Feeder because a Branch Feeder is installed on the property of the customer.<sup>532</sup> Additionally, as noted above, the Haymarket transmission line is being provided to the Company as the LSE, not the Customer developing the data center.<sup>533</sup>

Dominion further pointed out that the definitions of Approach Line and Branch Feeder include the phrase “customer or developer requesting Electric Delivery Service.”<sup>534</sup> Under Dominion’s tariff, Electric Delivery Service is defined as “Distribution Service, and the delivery of electricity under this tariff to Customers served at transmission level voltage, and related utility services, to the extent each is provided under this tariff.” Dominion pointed out that while the Customer will be receiving “distribution service,” that service will be through distribution circuits, not a transmission line.<sup>535</sup> Moreover, the I-66 Hybrid Alternative is not providing distribution service, it is not providing transmission level voltage to the Customer, and it is not providing related utility service. Therefore, according to Dominion, the I-66 Hybrid Alternative cannot be an Approach Line or Branch Feeder.<sup>536</sup>

Additionally, Dominion argued the I-66 Hybrid Alternative is not a Bulk Feeder because such a facility “is generally understood to be a distribution term and, therefore, would not apply to transmission facilities.”<sup>537</sup> Dominion further pointed to the rebuttal testimony of Company witness Koonce, who testified that in his 34 years of working for the Company in transmission, these terms (Approach Line and Branch Feeder) have never been applied in a transmission context, only distribution.<sup>538</sup>

Finally, Dominion cited the Virginia Supreme Court case of *Central Virginia Electric Cooperative v. State Corporation Commission*, 221 Va. 807, 814 (1981), which held that “the basic legal consideration in evaluating line extension charges is one of reasonableness; that is, the policy should not place an unreasonable burden on the customers or the [utility] as a whole.” Dominion argued that “[c]harging the Customer \$115 million under a state tariff for a FERC-jurisdictional

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<sup>528</sup> *Id.* at 65.

<sup>529</sup> *Id.*

<sup>530</sup> *Id.* at 65-66.

<sup>531</sup> *Id.*

<sup>532</sup> *Id.* at 66.

<sup>533</sup> *Id.*

<sup>534</sup> *Id.*

<sup>535</sup> *Id.*

<sup>536</sup> *Id.*

<sup>537</sup> *Id.* at 66-67.

<sup>538</sup> June 22 Tr. at 527-528.

asset when the Company made clear it should not apply and, indeed, by its own terms it does not apply, would be the epitome of unreasonableness.”<sup>539</sup>

Having considered the arguments of the parties and Staff, I find the Customer should not be charged a \$115.7 million transitional cost to underground the Haymarket transmission line. Not only would such a charge jeopardize the Customer’s new data center, which is already under construction, but it appears that Section XXII was never intended to be applied in the manner suggested by the Staff or the Coalition. I am also unaware of any case where the Commission has applied Dominion’s line extension policy, or, indeed, any public utilities’ line extension policy, to a transmission line.<sup>540</sup> Additionally, the parties and Staff have not cited a single case in their Post-Hearing Briefs where the Commission has done so.

To be sure, the language of Section XXII is not a beacon of clarity when it comes to deciding this issue. There is obviously some degree of ambiguity in Section XXII as explained by Dominion’s initial belief that the line extension policy would apply to the transmission line it proposed in the Poland Road case, before reversing its position several months later. Moreover, if Section XXII is not ambiguous, as the Coalition argues, I question how the parties and Staff can have such a fundamental disagreement over whether transmission lines are subject to a transitional cost under Section XXII. I also agree with the Staff’s assertion that the language in Section XXII is somewhat ambiguous because it does not specifically limit its applicability to distribution facilities, thus rendering the applicability of Section XXII to transmission lines a valid question.

Accordingly, since the plain language of Section XXII does not answer this question, I find that Section XXII is ambiguous with respect to whether it applies to transmission lines.

When resolving this issue, it is important to remember that the Commission acts in a legislative capacity when it approves a utility’s rates or terms and conditions of service.<sup>541</sup> In other words, the Commission is delegated the authority to act on behalf of the Virginia General Assembly in such matters, and any rates or terms and conditions approved by the Commission have the same effect as laws enacted by the Virginia General Assembly. Accordingly, when resolving the ambiguity in Section XXII, I find the rules of statutory construction that apply to interpreting statutes enacted by the General Assembly should be used when interpreting Dominion’s line extension policy.<sup>542</sup>

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<sup>539</sup> Dominion Post-Hearing Brief at 67. (footnote omitted).

<sup>540</sup> Even if Section XXII applied to the proposed Haymarket transmission line, it is doubtful that the Customer would be required to pay any additional costs if an overhead route is approved by the Commission. Under Section XXII, customers are only required to pay the amount, if any, by which the cost of the overhead line exceeds four times the continuing estimated annual revenue – less fuel charge revenue – that can be reasonably expected. As Staff witness Joshipura testified during the hearing, “typically these types of customers [i.e., data centers] have large enough revenue to cover the cost of overhead transmission lines.” June 22 Tr. at 313.

<sup>541</sup> See *Virginia Elec. & Power Co. v. State Corp. Comm’n*, 284 Va. at 741, 735 S.E.2d at 691 (“[W]hen the Commission is conducting a ratemaking procedure, it is exercising a legislative function delegated to it by the General Assembly.”) (citing *Potomac Edison Co. v. State Corp. Comm’n*, 276 Va. 577, 587, 667 S.E.2d 772, 777 (2008)); *Howell v. Chesapeake & Potomac Tel. Co. of Virginia*, 215 Va. 549, 211 S.E.2d 265, appeal dismissed, 423 U.S. 805, 96 S. Ct. 13, 46 L. Ed. 2d 26 (1975).

<sup>542</sup> The Coalition argued that the legal doctrine of *contra proferentem* should apply with interpreting the Company’s line extension policy. This doctrine holds that a document or contract must be construed against its drafter. However, I do



When a law, or in this case a tariff, is ambiguous, the primary question becomes one of intent. In other words, when Section XXII was approved by the Commission, did the Company and Commission intend for Section XXII to apply to transmission lines or not? While there are numerous rules of statutory construction that are utilized by courts to determine intent, I find that the history of Section XXII before the Commission provides the best evidence of the Commission's intent when approving the Company's line extension policy.

The history of Section XXII before the Commission does not support its applicability to transmission lines. Indeed, Dominion's witnesses supporting Section XXII in Dominion's 2009 Going In case and its 2013 Biennial Review testified that the proposed revisions to the Company's line extension policy for underground installations did not apply to transmission lines. Instead, Dominion's witnesses testified uniformly that the facilities targeted for underground installations under Section XXII are rated below 50 kV – which are distribution level facilities. On the basis of Dominion witness Eisenrauch's testimony in the Company's 2013 Biennial Review, stating that the proposed revisions targeted distribution facilities, and not transmission facilities, the revised line extension policy was approved by the Commission. There also is no language in the Commission's Final Order in the Company's 2013 Biennial Review indicating that Dominion's line extension policy was ever intended to apply to transmission lines. Indeed, the language in the Commission's Final Order approving Section XXII states, "We approve Dominion's proposed reforms to [Dominion's] line extension policy, which include certain revisions proposed by Staff and are designed to have a positive impact on *distribution system* reliability and to reduce the annual impact on customers requesting underground service." (emphasis added). Nowhere in the Commission's Final Order is it remotely suggested that the line extension policy for underground installations was intended to apply to transmission facilities.

Given the testimony supporting Section XXII before the Commission, the Commission's acceptance of the tariff revisions based on that testimony, the lack of language in the Commission's Final Order indicating the line extension policy would apply to transmission lines, and the language in the Commission's Final Order in the Company's 2013 Biennial Review expressly stating that the line extension revisions were designed to improve distribution system reliability, I find Section XXII was not intended by the Commission to apply to transmission lines.

Having found that Section XXII does not apply to the Haymarket transmission line, there is no need to address the federal preemption argument raised by Dominion. The federal preemption argument only needs to be addressed if the Commission finds Section XXII applies to transmission facilities.

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not believe it is appropriate to use this doctrine when interpreting the Company's line extension policy under the facts of this case. *Contra proferentem* is generally a rule of last resort that is only applied where other means of resolving an ambiguity have failed. See e.g., *Gardiner, Kamy & Associates, P.C. v. Jackson*, 467 F.3d 1348 (2006); *Residential Mktg. Group v. Granite Inv. Group v. Granite Inv. Group*, 933 F.2d 546,549 (7<sup>th</sup> Cir. 1991). Here, there are numerous rules of construction that can be used to interpret the Company's line extension policy. Moreover, the Customer developing the data center could make the very same argument as the Coalition and claim that Section XXII should be construed in its favor and against Dominion. Accordingly, *contra proferentem* does not render much, if any, assistance when resolving the ambiguity in the tariff.

### **(c) Prince William County's Comprehensive Plan**

The County requested the Commission to consider its Comprehensive Plan when deciding this case. As mentioned earlier in this Report, the County contends the I-66 Hybrid Alternative Route is the only route that is "consistent" with its Comprehensive Plan. In accordance with the County's request, I have considered its Comprehensive Plan when making my findings and recommendations in this case. However, I find the Commission should not underground the proposed Haymarket transmission line in order to be "consistent" with the County's Comprehensive Plan.

The definition of "consistent" is "marked by harmony" or "agreement."<sup>543</sup> However, there is nothing in the Code that requires the Commission's routing decision to be harmonious with or in agreement with the County's Comprehensive Plan. If that were the case, a locality could simply adopt a comprehensive plan that would require the undergrounding of all transmission lines within its borders and the Commission would be powerless to approve overhead construction because it would not be "consistent" with a locality's comprehensive plan. This would, in effect, transfer the construction and routing authority over transmission lines from the Commission to localities, a result that is plainly contrary to the duties imposed upon the Commission by the Code.

I am also not aware of a single Commission case that has approved the underground construction of a transmission line based solely on a locality's comprehensive plan. While § 56-46.1 of the Code requires the Commission to "consider" a locality's comprehensive plan when requested to do so, there is nothing in the Code that prevents the Commission from approving a transmission that may be inconsistent with certain aspects of a locality's comprehensive plan. This is because many other factors, such as transmission line's cost, may outweigh the developmental goals and objectives contained in a locality's comprehensive plan, thus warranting approval of a transmission line that differs from the route supported by a locality.

Accordingly, when considering the proposed Haymarket transmission line, the Commission should not attempt to approve a route that is "consistent," harmonious, or in agreement with the County's Comprehensive Plan. Rather, the Commission should only "consider" the County's Comprehensive Plan, as required by the Code, and route the line in such a way as to mitigate any adverse impacts on the developmental objectives and goals of the County's Comprehensive Plan realizing, of course, there will always be some adverse impacts of a transmission line that cannot be avoided, even for underground installations.

One provision of the County's Comprehensive Plan that cannot be complied with relates to the corridors established for transmission lines rated at 150 kV or more. As discussed earlier in this Report, one complaint repeatedly voiced during the hearings is that the proposed Haymarket transmission line is outside the designated corridors for transmission lines specified by the County's Comprehensive Plan. However, there are no designated transmission line corridors west of the ROW that contains Dominion's Line #124 that could be used to serve the Customer's new data center. Accordingly, in order to get power to the Customer's new data center, the Haymarket

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<sup>543</sup> Merriam-Webster's On-Line Dictionary.

transmission line must, by necessity, depart from the designated corridors set forth in the County's Comprehensive Plan.

The proposed I-66 Overhead Route, as well as the other overhead alternative routes in Dominion's Application, also will impact historic assets in the area, which are protected under the County's Comprehensive Plan. The Comprehensive Plan also contains Community Design Goals, which are intended to promote quality development and a quality visual environment throughout the County. One of the means the County uses to promote a quality visual environment is the Comprehensive Plan's guidelines encouraging the undergrounding of utility lines. These are all laudable goals, but they do not supersede the Commission's duties and obligations under the Code with respect to the siting and construction of transmission lines.

Accordingly, I find the proposed Haymarket transmission line should not be constructed underground so the line can be "consistent" with the County's Comprehensive Plan. Rather, I find that the Commission should only "consider" the Comprehensive Plan when deciding this case, and approve a route that minimizes, to the extent possible, any adverse impacts on the plan's developmental goals and objectives.

**(d) Overhead Route that reasonably minimizes adverse impacts in the area**

Having found the proposed Haymarket transmission line should not be undergrounded, the central question becomes which of the remaining four overhead routes best reasonably minimize adverse impacts on the environment, scenic assets, and historic districts in the area? This routing issue, in my opinion, can be decided through a simple process of elimination.

First, one of the overhead routes, the Railroad Alternative Route, is no longer a viable option because the County has indicated it will not give Dominion consent to construct an overhead transmission line through its open space easement. While public service corporations, such as Dominion, are granted the right of eminent domain under the Code, they cannot condemn any property interests owned by a county, city, or town.<sup>544</sup> Accordingly, the Railroad Alternative Route is no longer a viable route, and it must be removed from the Commission's consideration.

This leaves only three overhead routes that can be considered for the Haymarket transmission line; namely, the proposed I-66 Overhead Route, the Carver Road Alternative Route, and the Madison Alternative Route. While the three remaining overhead routes have differing impacts on the environment, scenic assets, and historic resources in the Haymarket load area, I find that the proposed I-66 Overhead Route should not be approved by the Commission. The proposed I-66 Overhead Route, while the cheapest and shortest route available between the tap point on converted Line #124 and the proposed Haymarket Substation, would have significant and permanent visual impact on hundreds, if not thousands, of people residing along I-66, including

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<sup>544</sup> Section 56-49 of the Code grants public service corporations, such as Dominion, the power of eminent domain to acquire property interests of any "person" necessary for the construction and operation of its transmission lines. However, the definition of "person" in § 56-1 only "includes individuals, partnerships, limited liability companies, and corporations." The definition does not include counties or municipalities, thereby preventing Dominion from exercising its power of eminent domain and acquiring an overhead easement from the County.

those people residing in the Parks at Piedmont, Crossroads Village, Heritage Hunt, Heathcote Commons, Piedmont Mews, and many other subdivisions in the vicinity of I-66.<sup>545</sup>

As shown in Table 4-1 of Staff witness McCoy's direct testimony, there are 68 townhome/condominium units, 17 townhome/condominium structures, and 5 single family homes located within 100 feet of the proposed I-66 Overhead Route.<sup>546</sup> In addition, there are 151 townhome/condominium units, 32 townhome/condominium structures, and 15 single family homes located within 200 feet of the proposed I-66 Overhead Route. Finally, there are 565 townhome/condominium units, 109 townhome/condominium structures and 114 single family homes located within 500 feet of the proposed I-66 Overhead Route. It also is important to remember that these measurements are taken from the centerline of the proposed 100-foot ROW for the monopole structures that would run from the tap point on converted Line #124 to the proposed Haymarket Substation, which means that the edge of the I-66 Overhead Route's ROW would be 50 feet or less from numerous residences located along I-66.

The evidence presented in this case indicates that the proposed I-66 Overhead Route transverses a very congested area that would significantly, negatively, and permanently impact hundreds, if not thousands, of residents in the vicinity of I-66. In addition, there are no means available to mitigate the adverse impacts on these people. The available space between I-66 and the residences in the area is so tight that little, if any, screening opportunities are available to plant trees or other vegetation to shield the homeowners' views of the line. Indeed, many of the residents would walk out their back door and look up to see 112-foot tall towers and/or hanging conductors in very close proximity to their homes, far less than 100 feet away in many cases. In my opinion, the adverse impacts on the residents along the I-66 Overhead Route are so severe they outweigh any adverse environmental impacts (such as the greater impact on wetlands, streams, and forested areas) that would occur if the Carver Road Alternative Route or Madison Alternative Route is approved for the transmission line.

Another concern I have with the proposed I-66 Overhead Route is if I-66 is widened again in the future, which is highly likely given the sustained growth in northern Virginia. When this occurs, there would be no room to rebuild the line overhead along I-66 unless the Company condemned numerous homes, townhouses and condominiums along I-66, placed the line underground, or relocated the line away from the I-66 corridor. This, of course, would add considerable additional expense that would need to be recovered from Dominion's ratepayers in the future. Simply put, while collocating transmission lines along roadways is an acceptable routing practice to lessen the adverse impacts of transmission lines, such is not the case here.

Given my finding that the proposed I-66 Overhead Route should not be approved by the Commission, this leaves only two overhead routes available for the Haymarket transmission line; namely, the Carver Road Alternative Route and the Madison Alternative Route. Of these two alternatives, I find the Carver Road Alternative Route is clearly the superior route, and it is the route that I recommend be approved by the Commission. There are several reasons why the Carver Road Alternative Route is superior to the Madison Alternative Route.

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<sup>545</sup> See June 21 Tr. at 196-197, where Staff witness McCoy testified the I-66 Overhead Route would have "a tremendous visual impact to the residents adjoining I-66."

<sup>546</sup> Ex. 17 (McCoy Direct) at Table 4.1.

First, the Carver Road Alternative Route is shorter and less expensive than the Madison Alternative Route. The Carver Road Alternative Route is 6.7 miles in length and the Madison Alternative Route is 8.2 miles in length. Additionally, the Carver Road Alternative Route's estimated cost is \$61.9 million versus the Madison Alternative Route's estimated cost of \$67.8 million.

Second, the Carver Road Alternative Route also has fewer single family homes and townhomes/condominiums within 500 feet, 200 feet, and 100 feet of the transmission line than the Madison Alternative Route.

Third, the Carver Road Alternative Route will have less impact on historic resources in the area than the Madison Alternative Route. As indicated in the DHR's review of Dominion's Application, which is attached to the DEQ Report, the Madison Alternative Route will have a "moderate" impact<sup>547</sup> on three historic sites in the area, including, the Buckland Mills Battlefield, the Second Battle of Manassas, and Woodlawn, a historic home in the area eligible for listing in the National Register of Historic Places. The Carver Road Alternative Route, on the other hand, will have a "moderate" impact on only two historic sites, including, the Buckland Mills Battlefield and the Second Battle of Manassas. In addition, the Madison Alternative Route would have a much greater impact on the Journey Through Hallowed Ground (James Madison Highway (US 15)) than the Carver Road Alternative Route. The Madison Alternative Route would parallel the Journey Through Hallowed Ground for approximately 1.3 miles while the Carver Road Alternative Route would parallel the Journey Through Hallowed Ground for 0.1 mile. Therefore, the adverse impact of the Carver Road Alternative Route on historic resources in the area is far less than the Madison Alternative Route.

The Carver Road Alternative Route will also address some of the concerns expressed by public witnesses. By moving the line south of I-66 and looping it below the Somerset Crossing subdivision, the line would not run through the Town. This would substantially reduce, if not totally eliminate, any visual impacts on historic resources in the Town. Indeed, it appears the only historic site in the Town that could possibly be impacted by the Carver Road Alternative Route is St. Paul's Episcopal Church, which will be approximately .2 mile from the route at its closest point of approach. However, there are trees in the area that would screen St. Paul's Episcopal Church from the transmission line, at least during leaf-on conditions. Moreover, there is other development in the vicinity of St. Paul's Episcopal Church which will tend to moderate any adverse visual impacts from the line.

The Carver Road Alternative Route would also move the line away from the greatest concentration of residences in the area. The line would not be visible to most of the subdivisions located along I-66, as well as the Greenhill Crossing subdivision located south of I-66. There would be some visual impact on the Somerset Crossing subdivision, but the impact would be limited to those residing along the southern edge of the subdivision. Simply put, the Carver Road Alternative Route would reduce considerably the visual impact on people in the area because it

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<sup>547</sup> Moderate impacts "[i]nclude viewsheds with expansive views of the transmission line, more dramatic changes in the line and tower height, and/or an overall increase in the visibility of the route from historic properties." See Ex. 27 (DHR Review).

would move the transmission line away from those areas with the greatest concentration of residences.

Finally, after considering the County's Comprehensive Plan, it appears that the Carver Road Alternative Route will minimize the transmission line's impact on the plan's developmental goals and objectives, particularly the plan's focus on preserving the rural nature of the County. Several witnesses testified during the hearings about the importance of preserving the Rural Crescent, which covers approximately 80,000 acres of rural land and low density development located in the vicinity of the Project.<sup>548</sup> The Carver Road Alternative Route would have very little impact on the Rural Crescent because the line would be located on the eastern edge of the Rural Crescent where there is already significant modern development. Modern development on the eastern edge of the Rural Crescent near the termination point of the Carver Road Alternative Route includes the Customer's existing data center, FST's property, a Kohl's, a Walmart, a soon to be developed Home Depot, and significant additional development located on the western boundary of the Town in the vicinity of the intersection of the James Madison Highway (US 15) and John Marshall Highway (SR 55). Accordingly, I do not believe the Carver Road Alternative Route will have a significant adverse impact on the Rural Crescent, nor will the route significantly impact the developmental goals and objectives of the County's Comprehensive Plan.

The County also pointed out that the Haymarket transmission line would cross the John Marshall Highway (SR 55) and James Madison Highway (US 15), both of which are designated as Heritage Corridors in the County's Comprehensive Plan. However, the transmission line's crossing of the John Marshall Highway (SR 55) is significantly east of the Town in an area that already has commercial development on the south side of the highway, and is scheduled for significant commercial development on the north side of the highway by Southview, John Marshall Commons, and Village Place at Gainesville.<sup>549</sup> In addition, as mentioned previously, the Carver Road Alternative Route's crossing of James Madison Highway (US 15) is in an area that already encumbered by significant modern development in the vicinity of the transmission lines crossing of James Madison Highway (US 15).

In conclusion, I find the Carver Road Alternative Route should be approved by the Commission because it is the overhead route that best reasonably minimizes adverse impacts on the environment, scenic assets, and historic resources in the Haymarket load area.

### **3. Health and Safety**

While several public witnesses expressed concerns over EMF exposure from the proposed Haymarket transmission line and possible adverse health effects, I find there was no scientific evidence introduced in this case showing that transmission lines represent a hazard to human health. This is a topic that has been studied extensively in the past. It is the general consensus of health agencies reviewing the available research on EMF that the levels associated with the operation of a 230 kV double circuit transmission line, or other common sources of EMF in the environment, do

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<sup>548</sup> A graphic depiction of the Rural Crescent is located in Ex. 10 (Environmental Routing Study) at Appendix C, Figure 7.

<sup>549</sup> See Written comments filed on June 16, 2016 by Joseph J. Contrucci, Esq., explaining the existing and future residential and commercial development in this area.

not cause any long-term adverse health effects. This finding is consistent with the Virginia Department of Health's latest report on the subject that was completed in 2000.

#### **4. Reliability**

Section 56-46.1 A of the Code requires the Commission to "consider any improvements in service reliability that may result from the construction of the [Haymarket transmission line]." The undisputed evidence in this case indicates that the proposed Project will improve the reliability of Dominion's system in the Haymarket load area. First, with the additional capacity from the proposed Project, the Company will have a greater opportunity to switch load to other available circuits in the event of an outage on any given circuit, which can result in shorter times to restore electric service. Second, by constructing new distribution circuits from the proposed Haymarket Substation, the length of the circuits to certain customers in the Haymarket load area will be reduced from six miles to less than one mile, thus promoting greater reliability for those customers.

#### **5. Economic Development Impacts**

Section 56-46.1 A of the Code also requires the Commission to consider the effect of the proposed facility on economic development within the Commonwealth. I find the proposed transmission line will have a positive impact on economic development. First, and foremost, the transmission line will increase the capacity on Dominion's system serving the Haymarket load area. This will allow the Customer to ramp up its data center operations as originally planned, and accommodate future residential and commercial development in western Prince William County. While the construction of the transmission line and new data center will not create a significant number of permanent jobs for those in the area, the new data center will generate significant tax revenues that will benefit the County and its residents.

Additionally, as the Customer continues to ramp up its data center operations, the available capacity on Dominion's three distribution circuits will continue to diminish and eventually reach a point where overloading will occur if the Project is not constructed, thus foreclosing any future development in the Haymarket load area. The proposed Haymarket transmission line will eliminate the potential loading problems on Dominion's distribution system, and it will allow future economic development to continue unimpeded in the Haymarket load area. I, therefore, find the Haymarket transmission line will have a very favorable, and positive, impact on future economic development.

### **IV. FINDINGS AND RECOMMENDATIONS**

Based on the evidence presented in this case, and for the reasons set forth herein, I find that:

(1) The Project is needed so Dominion can continue to provide reasonably adequate service to its customers at reasonable and just rates;

(2) The Carver Road Alternative Route reasonably minimizes the Project's impact on the environment, scenic assets, and historic resources;

- (3) The Project utilizes existing right-of-way to the maximum extent practicable;
- (4) There are no adverse environmental impacts that would preclude the construction and operation of the Project;
- (5) There are no adverse public health or safety issues associated with the Project;
- (6) The Project will have a positive impact on the economy in Prince William County and the Town of Haymarket by allowing Dominion to provide service to a new data center, thereby generating significant tax revenues for Prince William County, and by allowing current and future residential, commercial, and industrial development to continue unimpeded in the area;
- (7) The Project will improve Dominion's system reliability in the area;
- (8) The Commission should condition approval of Dominion's Application on the Company's compliance with the *Summary of General Recommendations* contained in the DEQ Report;
- (9) The Commission should not condition approval of Dominion's Application on the *Alternative Recommendations* contained in the DEQ Report, wherein DEQ's Office of Wetlands and Stream Protection, the Virginia Department of Historic Resources, and Prince William County recommended underground construction of the proposed transmission line; and
- (10) A certificate of public convenience and necessity should be issued for the Company to construct and operate the Project.

I therefore **RECOMMEND** the Commission enter an order that:

- (1) **ADOPTS** the findings and recommendations in this Report;
- (2) **ISSUES** a certificate of public convenience and necessity to the Company to construct and operate the Project; and
- (3) **PASSES** the papers herein to the file for ended causes.

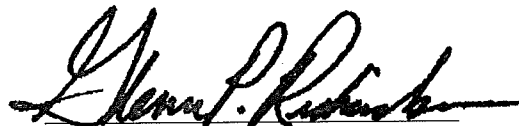
### **COMMENTS**

The parties are advised that any comments (Section 12.1-31 of the Code of Virginia and Commission Rule 5 VAC 5-20-120 C) to this Report must be filed with the Clerk of the Commission, in writing, in an original and fifteen (15) copies, within twenty-one (21) days from the date hereof. The mailing address to which any such filing must be sent is 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 mailed or delivered to all counsel of record and any such party not represented by counsel.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Glenn P. Richardson", written over a horizontal line.

Glenn P. Richardson  
Hearing Examiner

Document Control Center is requested to mail 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.