

**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**

**REPORT OF**

**ALEXANDER F. SKIRPAN, JR.  
SENIOR HEARING EXAMINER**

**NOVEMBER 20, 2015**

## **APPLICATION OF**

**VIRGINIA ELECTRIC AND POWER COMPANY**

**CASE NO. PUE-2014-00025**

**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**

### **REPORT OF ALEXANDER F. SKIRPAN, JR., SENIOR HEARING EXAMINER**

**November 20, 2015**

Dominion Virginia Power seeks authority to construct Projects to address loading issues at its Warrenton and Gainesville Substations, otherwise designated as Option C following Route C-1.1c. The Company's proposal is supported by the Fauquier County, Brookside, Neighbors, Authority, PEC, Schools, and the vast majority of public witnesses and public commenters. Staff recommends Option A following Route A-2/3 Staff, and is supported by Morris Farm. Based on the record developed in this proceeding, I find that Option C best meets the needs identified in this proceeding and will reasonably minimize adverse impact on the scenic assets, historic districts and environment of the area concerned.

## **HISTORY OF THE CASE**

On March 31, 2014, Virginia Electric and Power Company ("Dominion Virginia Power" or "Company") filed with the State Corporation Commission ("Commission") an application for a certificate of public convenience and necessity ("Certificate") for the Remington CT-Warrenton 230 kilovolt ("kV") double circuit transmission line, Vint Hill-Wheeler and Wheeler-Loudoun 230 kV transmission lines, 230 kV Vint Hill Switching Station, and the 230 kV Wheeler Switching Station ("Application"). During the course of this proceeding, the proposed Wheeler-Loudoun 230 kV transmission line became the proposed Wheeler-Gainesville 230 kV transmission line.

On May 29, 2014, the Commission entered its Order for Notice and Hearing in which, among other things, the Commission docketed the Application; scheduled public hearings to be held at Patriot High School in Nokesville, Virginia, on August 20, 2014; scheduled a public hearing in Richmond to begin on September 30, 2014; and appointed a Hearing Examiner to conduct all further proceedings in this matter and to file a final report.

On June 18, 2014, the Department of Environmental Quality ("DEQ") filed comments containing the results of its coordinated review of the Application and its potential impacts to natural and cultural resources. DEQ stated that its comments were based on reviews conducted by the DEQ and the following agencies and localities: Department of Game and Inland Fisheries

("DGIF"); Department of Conservation and Recreation ("DCR"); Department of Health ("DOH"); Department of Historic Resources ("DHR"); Department of Forestry ("DOF"); Marine Resources Commission ("MRC"); Department of Transportation ("VDOT"); Department of Aviation ("DOA"); Virginia Outdoors Foundation ("VOF"); Loudoun County ("Loudoun County"); and Prince William County ("Prince William County"). DEQ noted that it also sought comments from: the Department of Agriculture and Consumer Services ("DACS"); Department of Mines, Minerals and Energy ("DMME"); Northern Virginia Planning District Commission ("NVPDC"); Rappahannock-Rapidan Regional Commission ("RRRC"); Fauquier County ("Fauquier County"); Town of Warrenton ("Warrenton"); and the City of Manassas ("Manassas"). DEQ's comments include DEQ's summary of findings, recommendations, and a listing of potential permits concerning the Application.

On June 25, 2014, Dominion Virginia Power filed proof of notice as directed by ordering ¶ (9) of the Commission's Order for Notice and Hearing.<sup>1</sup> The Company certified that it sent property owner notice letters on June 20, 23, and 24, 2014, as required by ordering ¶ (6) of the Commission's Order for Notice and Hearing; made timely publication as required by ordering ¶ (7) of the Commission's Order for Notice and Hearing; and sent notice letters to the affected municipalities as required by ordering ¶ (8) of the Commission's Order for Notice and Hearing.

On June 26, 2014, Morris Farm LLP ("Morris Farm") filed its Notice of Participation. On July 16, 2014, the Piedmont Environmental Council ("PEC") filed its Notice of Participation, along with a motion for Robert G. Marmet, Esquire, to be admitted to practice *pro hac vice*. Mr. Marmet was admitted to practice *pro hac vice* in a Hearing Examiner's Ruling dated August 8, 2014.

On August 11, 2014, Dominion Virginia Power filed a Motion for Entry of a Protective Ruling. A Hearing Examiner's Protective Ruling was issued on August 12, 2014.

On August 20, 2014, a hearing to receive testimony from public witnesses was held at Patriot High School in Nokesville, Virginia, as scheduled. Vishwa B. Link, Esquire, and Charlotte P. McAfee, Esquire, appeared on behalf of Dominion Virginia Power. Robert G. Marmet, Esquire, appeared on behalf of PEC. William H. Chambliss, Esquire, appeared on behalf of Staff. Twelve public witnesses presented testimony during the hearing.

On August 22, 2014, Staff filed a Motion for Order, requesting that Dominion Virginia Power be directed to (i) conduct further study, in coordination with Staff, to develop additional Option A Warrenton-Wheeler transmission alternatives; (ii) give notice to the public of a set of buildable Option A Warrenton-Wheeler alternatives; and (iii) continue the procedural schedule in this case to give the Company sufficient time to study Option A, give notice, supplement the record, and provide interested persons the opportunity to comment or participate. Dates for expedited responses to Staff's motion were set in a Hearing Examiner's Ruling dated August 25, 2014.

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<sup>1</sup> Exhibit No. 1.

On August 26, 2014, Dominion Virginia Power and Staff filed a Joint Motion for Extension requesting: (i) an extension of the deadline to file a response to Staff's Motion for Order; (ii) an extension of the deadline for Staff to file a reply concerning its Motion for Order; (iii) an extension of time for Staff to file its testimony; (iv) an extension of time for the filing of Company rebuttal testimony; and (v) an extension of the start of the evidentiary hearing. The Joint Motion for Extension was granted in a Hearing Examiner's Ruling dated August 27, 2014, which retained the hearing scheduled for September 30, 2014, for the sole purpose of receiving the testimony of public witnesses, and advised that the dates for (i) the evidentiary hearing, (ii) the filing of Staff testimony, and (iii) the filing of the Company's rebuttal testimony would be directed in a subsequent ruling. An additional extension for response to the Staff's Motion for Order was granted in a Hearing Examiner's Ruling dated September 5, 2014.

On September 19, 2014, Dominion Virginia Power and PEC filed responses opposing Staff's Motion for Order. On September 25, 2014, Staff filed its reply. Staff's Motion for Order was denied in a Hearing Examiner's Ruling dated October 1, 2014 ("October 1<sup>st</sup> Ruling"). However, the October 1<sup>st</sup> Ruling provided that "[w]ith further development of the record for an alternative route, additional notice may become desirable even if such notice causes a delay in the procedural schedule." The October 1<sup>st</sup> Ruling also scheduled a prehearing conference for October 6, 2014, to reestablish the procedural schedule in this matter. Based on the discussion during the prehearing conference, the procedural schedule was reset in a Hearing Examiner's Ruling dated October 7, 2014.

On September 30, 2014, a hearing to receive testimony from public witnesses was held in the Commission's courtroom in Richmond, Virginia, as scheduled. Vishwa B. Link, Esquire, Jennifer D. Valaika, Esquire, and Charlotte P. McAfee, Esquire, appeared on behalf of Dominion Virginia Power. Robert G. Marmet, Esquire, appeared on behalf of PEC. William H. Chambliss, Esquire, Alisson P. Klaiber, Esquire, and Garland S. Carr, Esquire, appeared on behalf of Staff. Nineteen public witnesses presented testimony during the hearing.

On October 22, 2014, Dominion Virginia Power filed a Motion for Extension, requesting a three-week extension of the deadline for filing its supplemental direct testimony and exhibits to allow sufficient time for the Company to run additional power flow cases suggested by Staff. The motion was not opposed and was granted in a Hearing Examiner's Ruling dated October 23, 2014.

On November 14, 2014, Dominion Virginia Power filed a supplemental appendix to its Application and supporting supplemental testimony to reflect terminating Option C at Gainesville instead of Loudoun as originally proposed by the Company.

On January 8, 2015, Dominion Virginia Power filed a Joint Motion for Extension, with Staff, seeking to modify the procedural schedule to provide additional time to undertake and review load flow models, contingency analyses, and reliability needs. The motion was not opposed and was granted in a Hearing Examiner's Ruling dated January 8, 2015.

On February 19, 2015, Staff filed a Joint Motion for Extension, with the Company, asking for a modification of the procedural schedule to review and verify the Company's

additional load flow modeling, contingency analyses, and reliability needs. The motion was not opposed and was granted in a Hearing Examiner's Ruling dated February 20, 2015. A public hearing scheduled for April 20, 2015, was retained for the sole purpose of receiving the testimony of public witnesses.

On March 19, 2015, Staff filed a Motion for Notice, requesting that Dominion Virginia Power be directed to give notice to the public of two Option A Warrenton-Wheeler alternatives, Alternative Route A-2/3 and Alternative Route A-2/3 Staff ("Staff's Supplemental Alternatives"). On March 23, 2015, Morris Farm filed its response in support of Staff's Motion for Notice. On March 26, 2015, Dominion Virginia Power filed its response in opposition to Staff's Motion for Notice. On March 30, 2015, Staff filed its reply. Based on Staff's further development of Staff's Supplemental Alternatives, and based on Staff's support and recommendation of these routes, Staff's Motion for Notice was granted in a Hearing Examiner's Ruling dated March 31, 2015.

Because supplemental notice of Staff's Supplemental Alternatives necessitated an adjustment in the procedural schedule, a prehearing telephonic conference was scheduled for April 2, 2015. The notice to be provided by the Company and a new procedural schedule was adopted in a Hearing Examiner's Ruling dated April 9, 2015 ("April 9<sup>th</sup> Ruling"). Among other things the April 9<sup>th</sup> Ruling established May 21, 2015, as the deadline for interested parties to file a notice of participation; directed Dominion Virginia Power to provide a tour and viewing of all of the route options for the hearing examiner, Staff and respondents; and scheduled a public hearing for August 4, 2015.

On April 17, 2015, Brookside Development, LLC ("Brookside Development"), and Brookside Home Owners Association ("Brookside HOA"), (collectively, "Brookside") filed their Notice of Participation. On May 6, 2015, the Eastern Fauquier Neighbors Against Option A ("Neighbors") filed their Notice of Participation. On May 20, 2015, Fauquier County Public Schools ("Schools") filed their Notice of Participation. On May 21, 2015, the Fauquier County Water and Sanitation Authority ("Authority") filed its Notice of Participation; and Fauquier County filed its Notice of Participation.

On April 20, 2015, a hearing to receive testimony from public witnesses was held in the Commission's courtroom in Richmond, Virginia, as scheduled. Vishwa B. Link, Esquire, Jennifer D. Valaika, Esquire, and Charlotte P. McAfee, Esquire, appeared on behalf of Dominion Virginia Power. Merle W. Fallon, Esquire, appeared on behalf of Brookside. Robert G. Marmet, Esquire, appeared on behalf of PEC. William H. Chambliss, Esquire, Alisson P. Klaiber, Esquire, and Garland S. Carr, Esquire, appeared on behalf of Staff. Nineteen public witnesses presented testimony during the hearing.

On May 7, 2015, Dominion Virginia Power file proof of notice as directed in the April 9<sup>th</sup> Ruling.<sup>2</sup>

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<sup>2</sup> Exhibit No. 2.

On June 2, 2015, Dominion Virginia Power provided a tour and viewing of all route options noticed in this proceeding for the hearing examiner, Staff and respondents as scheduled by the April 9<sup>th</sup> Ruling (“June 2<sup>nd</sup> Routing Tour”).

On July 10, 2015, Neighbors and Brookside filed a Motion for Leave to Amend Prefiled Testimony and for Expedited Treatment, asking for the inclusion of an exhibit omitted from the direct testimony of Edward Barry Wright. The motion was granted in a Hearing Examiner’s Ruling dated July 13, 2015.

During the course of this proceeding, the Commission received comments from the following: Delegate Robert G. Marshall, in opposition to reexamining Option A; Senator Jill Vogel, Delegate Scott Lingamfelter, and Delegate Michael Webert, in opposition to Option A; the Board of Supervisors of Fauquier County, in support of underground lines to minimize impacts in populated areas along the Option A or Option C route; and Old Dominion Electric Cooperative, in opposition to undergrounding the line due to costs. In addition, 2,746 written comments were filed in opposition to Option A routes. Delegate Lingamfelter also filed a list of 89 residents who registered opposition to Option A via telephone calls to his office. Ten written comments were filed in opposition to other routes and the overhead power line including five comments in opposition to Option C routes, two comments in opposition to the power line in general, two comments in opposition to the general route, and one comment in support of underground lines. Along with the written comments pertaining to this case, 460 written comments were filed by residents in the Gainesville, Haymarket, Lexington, and Stone Ridge, Virginia, areas in opposition to routes and fees not proposed in this case.<sup>3</sup>

Due to continuing comments in opposition and requests for additional community input, and due to the fact that the local hearing in this proceeding was held prior to notice of Staff’s Supplemental Alternatives, an additional public hearing solely to receive the testimony of public witnesses was scheduled for Monday, August 10, 2015, at the Warrenton Community Center, 430 East Shirley Avenue, Warrenton, Virginia, by a Hearing Examiner’s Ruling dated July 29, 2015.

On August 4, 2015, a public hearing in this matter was convened as scheduled. Vishwa B. Link, Esquire; William G. Bushman, Esquire; Jennifer D. Valaika, Esquire; and Charlotte P. McAfee, Esquire, appeared on behalf of Dominion Virginia Power. Kevin J. Burke, Esquire, appeared on behalf of Fauquier County. Merle W. Fallon, Esquire, appeared on behalf of Brookside. Cliona M. Robb, Esquire, appeared on behalf of Neighbors. Timothy E. Biller, Esquire, appeared on behalf of the Authority. Robert G. Marmet, Esquire, appeared on behalf of PEC. Andrew R. McRoberts, Esquire, appeared on behalf of Schools. William H. Chambliss,

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<sup>3</sup> On brief, Neighbors provided a compilation of comments and public witnesses showing 2,943 in opposition to Option A and 21 (18 + 3) in opposition to the Option C routes. Neighbors Brief at 4, Attached Exhibit A. The differences in the totals provided above and by Neighbors are due to: (i) the inclusion of public witnesses by Neighbors; (ii) the filtering of comments that did not address specific routes or pertain to this case; and (iii) counts regarding the Lingamfelter/Vogel letters, some of which were sent to the Commission individually and not sent as part of a block of letters from the legislators.

Esquire; Alisson P. Klaiber, Esquire; and Garland S. Carr, Esquire, appeared on behalf of Staff. In addition, seventeen public witnesses presented testimony.

On August 10, 2015, a hearing to receive testimony from public witnesses was held at the Warrenton Community Center, Warrenton, Virginia, as scheduled. Charlotte P. McAfee, Esquire, appeared on behalf of Dominion Virginia Power. Merle W. Fallon, Esquire, appeared on behalf of Brookside. Robert G. Marmet, Esquire, appeared on behalf of PEC. Garland S. Carr, Esquire, appeared on behalf of Staff. Sixty-nine public witnesses presented testimony during the hearing.

The date for the filing of briefs by the participants was set for September 23, 2015, in a Hearing Examiner's Ruling dated August 26, 2015. On September 9, 2015, Staff filed a motion for extension of the time for briefs to October 1, 2015. Staff's motion was granted in a Hearing Examiner's Ruling dated September 10, 2015.

On October 5, 2015, Morris Farm filed a Reply in which it made assertions regarding the Prince William County Board of Supervisors. On October 6, 2015, the Company filed a Motion to Strike Reply of Morris Farm LLP. On October 8, 2015, Morris Farm filed its Motion to Strike Virginia Electric and Power Post-Hearing Brief. On October 9, 2015, the Company filed its response to Morris Farm's Motion to Strike. Morris Farm's Reply was struck, and Morris Farm's Motion to Strike was denied in a Hearing Examiner's Ruling dated November 4, 2015.

## **SUMMARY OF THE RECORD**

In this proceeding, Dominion Virginia Power seeks authority to: (i) replace the existing 230 kV single circuit radial transmission line between its Remington CT Switching Station ("Remington CT Station") and its Warren Substation, which is located entirely in Fauquier County, with a double circuit 230 kV transmission line; (ii) expand the existing Warrenton Substation in Fauquier County within the existing property lines; and (iii) add one 230 kV breaker and associated equipment, in order to network the two 230 kV transmission lines between Remington CT Station and Warren Substation (collectively, "Remington CT-Warrenton Double Circuit 230 kV Line").<sup>4</sup> In addition, Dominion Virginia Power proposes to: (i) construct a 230 kV Vint Hill Switching Station ("Vint Hill Station") in Prince William County; (ii) construct a new 230 kV single circuit transmission line to run approximately 5.4 miles from the proposed Vint Hill Station to the Company's proposed 230 kV Wheeler Switching Station ("Wheeler Station") located entirely in Prince William County on double circuit structures; (iii) construct the Wheeler Station in Prince William County; (iv) purchase, uprate, and convert from 115 kV to 230 kV, Northern Virginia Electric Cooperative's ("NOVEC") Line #922 that currently connects NOVEC's Wheeler Substation to NOVEC's Gainesville Delivery Point, located entirely in Prince William County (collectively, "Vint Hill-Wheeler-Gainesville 230 kV Lines").<sup>5</sup> The proposed Remington CT-Warrenton Double Circuit 230 kV Line and Vint Hill-Wheeler-Gainesville 230 kV Lines are collectively referred to as the "Projects." The proposed in-service date for the Remington CT-Warrenton Double Circuit 230 kV Line is the summer of

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<sup>4</sup> Exhibit No. 3, at 2.

<sup>5</sup> *Id.* at 2-3, as corrected by Exhibit No. 6.

2018; and the proposed in-service date for the Vint Hill-Wheeler-Gainesville 230 kV Lines is the summer of 2017.<sup>6</sup>

### **Dominion Virginia Power's Direct Testimony**

In support of its Application, Dominion Virginia Power filed the direct testimony of Mark R. Gill, engineer III in the Electric Transmission Planning Group of the Company; H. Lee Willis, founding partner, senior vice president, and executive advisor at Quanta Technology, LLC ("Quanta"); Robert J. Shevenock II, consulting engineer in the Electric Transmission Line Engineering Department of the Company; Wilson O. Velazquez, engineer III in the Substation Engineering Section of the Electric Transmission Group of the Company; Diana T. Faison, senior siting and permitting specialist, electric transmission right-of-way for the Company; and Douglas J. Lake, technical director and senior vice president with Natural Resource Group, LLC ("NRG"). A summary of the prefiled direct testimony of each witness is presented below.

**Mark R. Gill** testified that the Project is required to: (i) resolve projected violations of the North American Electric Reliability Corporation ("NERC") Reliability Standards projected to occur in 2017 at the Company's Gainesville Substation and 2018 at the Company's Warrenton Substation; (ii) relieve loading and resolve operational issues on NOVEC's Line #922; and (iii) reliably serve the area's growth.<sup>7</sup> Mr. Gill advised that Dominion Virginia Power's transmission system serves the Company's retail customers and provides service to Appalachian Power Company, Old Dominion Electric Cooperative, NOVEC, Central Virginia Electric Cooperative, Virginia Municipal Electric Association, North Carolina Electric Membership Corporation, and North Carolina Eastern Municipal Power Agency.<sup>8</sup> Mr. Gill noted that the Company is part of the Eastern Interconnection transmission grid and is part of PJM Interconnection, L.L.C. ("PJM"), which is the regional transmission organization responsible for ensuring reliability and coordinating the movement of electricity through all or parts of Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia, and the District of Columbia.<sup>9</sup>

Mr. Gill maintained that the proposed Remington CT-Warrenton Double Circuit 230 kV Line is needed for compliance with NERC Reliability Standards.<sup>10</sup> Specifically, Mr. Gill stated that the proposed Remington CT-Warrenton Double Circuit 230 kV Line addresses loading on the existing Remington CT-Warrenton 230 kV Line #2086 ("Line #2086").<sup>11</sup> Mr. Gill advised that by the summer of 2018, load additions by a large governmental customer in the Town of Warrenton, and a load shift from Gainesville are projected to increase the loading on the Warrenton Substation to above 100 MW.<sup>12</sup>

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<sup>6</sup> *Id.* at 3, as corrected by Exhibit No. 6.

<sup>7</sup> Exhibit No. 13, at 2.

<sup>8</sup> *Id.* at 3.

<sup>9</sup> *Id.* at 4.

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

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

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



In regard to the Vint Hill-Wheeler-Loudoun 230 kV Lines, and associated facilities, Mr. Gill testified that the Company is required to provide reliable service to customers served from the Company's Gainesville Substation and NOVEC's Line #922, and to address excessive load loss on the Gainesville Substation above the Company's planning criterion for loss of a load substation (one voltage level plus transformers).<sup>13</sup>

Mr. Gill maintained that growth in the Northern Virginia area was contributing to the need for the Projects.<sup>14</sup> Mr. Gill reported that from 2000 to 2013, the summer peak load on the Warrenton Substation increased 60.5%, or by an average annual growth rate of 3.7%.<sup>15</sup> Mr. Gill stated that the projected average annual growth rate for the Warrenton Substation is between 1.2% and 2.0%, excluding block load additions and permanent load shifts.<sup>16</sup>

Mr. Gill confirmed that Dominion Virginia Power considered several alternatives to the proposed Projects including the following transmission projects.

- A new 230 kV overhead line from the Warrenton Substation to NOVEC's Wheeler Station ("Option A"), which was not chosen "because all four of the routes under evaluation were either encumbered by conservation easements or contained parcels owned by government entities."<sup>17</sup>
- An underground 230 kV line from the Warrenton Substation to the Wheeler Station, which was not chosen based on cost.<sup>18</sup>
- Replacement of the existing single circuit 230 kV line between the Remington CT Station and the Warrenton Substation with a double circuit 230 kV line, and replacement of the existing single circuit NOVEC line between the Gainesville DP and the Wheeler Substation with a double circuit 230 kV line ("Option B").<sup>19</sup> Option B was not chosen because it was not as "robust a solution" and due to the construction impact on property owners.<sup>20</sup>

Mr. Gill asserted that the proposed Projects will assure the future reliability of the Company's transmission system and NOVEC's system in the vicinity of the Projects, and supports local load growth and economic development.<sup>21</sup>

**H. Lee Willis** provided support for the load forecasts underlying the need for the Projects, and sponsored two studies titled: "Peak Load Forecast for Dominion Virginia Power's Warrenton Substation" and "Evaluation of NOVEC Load Forecasts."<sup>22</sup> Mr. Willis maintained

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<sup>13</sup> *Id.* at 10.

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

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

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

<sup>17</sup> *Id.* at 14-15.

<sup>18</sup> *Id.* at 16-17.

<sup>19</sup> *Id.* at 17-18.

<sup>20</sup> *Id.* at 19.

<sup>21</sup> *Id.* at 20-21.

<sup>22</sup> Exhibit No. 7, at 4.

that “[t]he need for the proposed transmission facilities is being driven by continued load growth in the Northern Virginia area.”<sup>23</sup> Mr. Willis confirmed that he reviewed the demand-side resources incorporated in the Company’s planning studies.<sup>24</sup>

**Robert J. Shevenock II** stated that the “Projects will result in two networked 230 kV transmission lines (existing Line #2086 and new Line #2155) on double circuit structures between Remington CT Station and Warrenton Substation, a single circuit networked 230 kV transmission line from the proposed Vint Hill Station to the proposed Wheeler Station (Line #2174) and a single circuit networked 230 kV transmission line from the proposed Wheeler Station bypassing Gainesville Substation and connecting to the existing Loudoun Switching Station (‘Loudoun Station’) (Line #2161).”<sup>25</sup> Mr. Shevenock advised that Line #2086, Line #2155, and Line #2174 will each have a transfer capacity of 1047 MVA.<sup>26</sup> As for Line #2161, Mr. Shevenock stated that the line will have a transfer capacity of 1047 MVA for sections between the proposed Wheeler Station and the dam at Lake Manassas (“Dam Junction”), and between the Company’s existing Gainesville Substation and the Loudoun Station.<sup>27</sup> However, Mr. Shevenock noted that Line #2161 between Dam Junction and Gainesville Substation will have a transfer capacity of 808 MVA.<sup>28</sup>

Mr. Shevenock testified that for the Remington CT-Warrenton Double Circuit 230 kV Line, Dominion Virginia Power will remove the existing single circuit structures for Line #2086 and replace them with double circuit structures.<sup>29</sup> For the Vint Hill-Wheeler-Loudoun 230 kV Lines, Mr. Shevenock stated NOVEC Line #922 will have its single circuit structures replaced with double circuit structures between NOVEC’s Wheeler substation and Dam Junction, and uprated and converted to 230 kV between Dominion Virginia Power’s proposed Wheeler Station and the Gainesville Substation and redesignated as Line #2161.<sup>30</sup> In addition, Mr. Shevenock confirmed that Dominion Virginia Power’s existing 115 kV Line #124 will be converted to 230 kV between Gainesville Substation and Loudoun Station with the new Line #2161.<sup>31</sup> Finally, Mr. Shevenock advised that the Company’s 230 kV Line #2101 will be looped in and out of the proposed Vint Hill Station to create as 230 kV Bristers-Vint Hill Line #2101 and a 230 kV Vint Hill-Liberty Line #2163.<sup>32</sup>

Mr. Shevenock testified that the proposed single shaft steel pole structure was chosen because it is similar in nature to the existing structures and will allow the installation of a second 230 kV line.<sup>33</sup>

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

<sup>24</sup> *Id.* at 5.

<sup>25</sup> Exhibit No. 21, at 3.

<sup>26</sup> *Id.* at 3-4.

<sup>27</sup> *Id.* at 4.

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

<sup>29</sup> *Id.*

<sup>30</sup> *Id.* at 5.

<sup>31</sup> *Id.*

<sup>32</sup> *Id.*

<sup>33</sup> *Id.*

Mr. Shevenock averred that Dominion Virginia Power considered an underground 230 kV line between its Warrenton Substation and NOVEC's Wheeler substation but rejected this option because its cost was greater than other, more electrically robust alternatives.<sup>34</sup>

Mr. Shevenock estimated the total cost for the Projects to be \$103.9 million, including \$76.3 million for transmission line construction.<sup>35</sup> Mr. Shevenock provided the following breakdown of the total cost for the Projects:

- The total cost for the Remington CT-Warrenton Double Circuit 230 kV Line is \$46.0 million, of which \$42.3 million is for transmission line construction.<sup>36</sup>
- Including the cost of acquiring Line #922 from NOVEC, the Vint Hill-Wheeler-Gainesville 230 kV Lines are \$57.9 million, of which \$34.0 million is for transmission line construction.<sup>37</sup>

Mr. Shevenock advised that the estimated construction time for the Projects is 16 months, and that 12 months will be needed for engineering, material procurement, right-of-way acquisition, and construction permitting.<sup>38</sup>

Mr. Shevenock calculated magnetic field levels to range from 5.412 milligauss ("mG") to 150.578 mG for existing lines at the edges of the right-of-way based on historical average and peak; and 1.770 mG to 95.987 mG for the proposed lines at the edges of the right-of-way based on projected average and peak loading for 2017.<sup>39</sup> Mr. Shevenock compared these field strengths to fields created by other electrical sources, such as a hair dryer (300 mG), a copy machine (90 mG), and an electric power saw (40 mG).<sup>40</sup> Furthermore, Mr. Shevenock maintained that magnetic field strengths diminish rapidly as the distance from the source increases; more specifically, the magnetic field strengths are proportional to the inverse square of the distance.<sup>41</sup> For example, Mr. Shevenock determined that a hypothetical magnetic field strength of 10 mG at the edge of a 100-foot right-of-way would decrease to 2.5 mG at a point 50 feet outside the right-of-way.<sup>42</sup>

**Wilson O. Velazquez** described the work to be performed as part of the Projects at the Company's existing and proposed switching stations and substations.<sup>43</sup> Mr. Velazquez outlined

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<sup>34</sup> *Id.* at 6.

<sup>35</sup> *Id.*, as corrected by Exhibit No. 6.

<sup>36</sup> *Id.*

<sup>37</sup> *Id.*, as corrected by Exhibit No. 6.

<sup>38</sup> *Id.* at 7.

<sup>39</sup> *Id.*

<sup>40</sup> *Id.*

<sup>41</sup> *Id.* at 8.

<sup>42</sup> *Id.* at 7-8.

<sup>43</sup> Exhibit No. 8, at 3.

the work to be performed by Dominion Virginia Power at its existing and proposed switching stations and substations as follows:

- Dominion Virginia Power's Remington CT Station - the Company will install one new 230 kV breaker with associated switches and relay panel, as well as Coupling Capacitor Voltage Transformers ("CCVTs") and associated equipment for the new line terminal.<sup>44</sup>
- Dominion Virginia Power's Warrenton Substation – the Company will expand the substation to accommodate 230 kV line terminals.<sup>45</sup>
- Dominion Virginia Power's Loudoun Station – the Company plans to: (i) upgrade the existing 115 kV straight bus for the termination of existing 115 kV Line #124 and Line #156 and a tap to the adjacent Mosby Switching Station; (ii) construct a new bus to meet the Company's 230 kV clearance requirements; and (iii) add one new 230 kV breaker with its associated switches, CCVTs and associated equipment.<sup>46</sup>
- Dominion Virginia Power's Gainesville Substation – the Company proposes to remove the breaker, line terminal and other equipment associated with Line #124, which will be reconfigured to bypass the Gainesville Substation.<sup>47</sup>
- Dominion Virginia Power's proposed Wheeler Station – the Company will construct the station with three 230 kV breakers in a ring bus configuration.<sup>48</sup>
- Dominion Virginia Power's proposed Vint Hill Station – the Company will construct the station with three 230 kV breakers in a ring bus configuration.<sup>49</sup>
- NOVEC's Wheeler substation will become a Dominion Virginia Power substation and will connect at 230 kV to Dominion Virginia Power's Wheeler Station.<sup>50</sup>

Mr. Velazquez testified that "[t]he station work described for the Company's proposed Projects is substantially similar to the work that would be required for the alternative configurations" considered by Dominion Virginia Power.<sup>51</sup>

Mr. Velazquez estimated the total cost of the Projects to be \$103.9 million, which includes \$16.8 million for station work.<sup>52</sup> Mr. Velazquez affirmed that the cost of the station

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<sup>44</sup> *Id.* at 3-4.

<sup>45</sup> *Id.* at 4.

<sup>46</sup> *Id.* at 4-5.

<sup>47</sup> *Id.* at 5.

<sup>48</sup> *Id.* at 6.

<sup>49</sup> *Id.*

<sup>50</sup> *Id.* at 6-7.

<sup>51</sup> *Id.* at 7.

work associated with the Remington CT-Warrenton Double Circuit 230 kV Line to be \$3.7 million and the cost of the station work associated with the Vint Hill-Wheeler-Loudoun 230 kV Lines to be \$13.1 million.<sup>53</sup>

**Diana T. Faison** addressed the selection of the proposed routes for the Projects.<sup>54</sup> Ms. Faison testified that to address issues related to Dominion Virginia Power's Warrenton and Gainesville Substations and NOVEC's Wheeler substation, the Company considered several study areas with dissimilar points of origin.<sup>55</sup> Ms. Faison stated that Dominion Virginia Power retained the services of NRG to collect information within the study areas and compare alternative routes.<sup>56</sup> Ms. Faison also noted that Dominion Virginia Power employed Cultural Resources, Inc. ("CRI"), and Williamsburg Environmental Group, Inc. ("WEG"), to identify cultural and environmental resources.<sup>57</sup> Ms. Faison testified that the Company sought input from a "wide array of community leaders" through a process referred to as the Community Advisory Group ("CAG").<sup>58</sup>

Ms. Faison advised that initially Dominion Virginia Power considered two electrical solutions: (i) **Option A**, which was a new overhead or underground 230 kV line between Dominion Virginia Power's Warrenton Substation and NOVEC's Wheeler substation; and (ii) **Option B**, which was the replacement of the existing 230 kV Remington-Warrenton Line #2086 with a double circuit 230 kV line, and the replacement of NOVEC's 115 kV Gainesville-Wheeler Line #922 with a double circuit 230 kV line.<sup>59</sup> Ms. Faison testified that the routing study area for **Option A** included significant residential and cultural resource constraints, numerous conservation easements, and properties owned by Fauquier County.<sup>60</sup> Ms. Faison found that there were no viable overhead routes available for **Option A**, "in large part due to the difficulty associated with obtaining easements across County-owned property."<sup>61</sup> As for an underground route for **Option A**, Ms. Faison pointed to: (i) the need for a new 30-foot-wide right-of-way; (ii) the significant, but temporary, impacts on adjacent residents; (iii) the significantly higher cost of an underground **Option A**; and (iv) uncertainty concerning whether Fauquier County would consider an underground line compatible with Fauquier County's open space conservation easements and property.<sup>62</sup>

In regard to **Option B**, Ms. Faison stated that this option was found to be "less electrically robust than the proposed Projects."<sup>63</sup>

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<sup>52</sup> *Id.*, as corrected by Exhibit No. 6.

<sup>53</sup> *Id.*, as corrected by Exhibit No. 6.

<sup>54</sup> Exhibit No. 10, at 3.

<sup>55</sup> *Id.* at 4.

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

<sup>57</sup> *Id.*

<sup>58</sup> *Id.*

<sup>59</sup> *Id.* at 5.

<sup>60</sup> *Id.*

<sup>61</sup> *Id.* at 6.

<sup>62</sup> *Id.*

<sup>63</sup> *Id.* at 7.

Ms. Faison stated that the proposed Projects initially were designated and studied as **Option C.**<sup>64</sup> Ms. Faison identified three potential routes between the Vint Hill and Wheeler Stations.<sup>65</sup>

**Option C-1.1** – the proposed route, which is the shortest route, uses less new right-of-way, crosses less forested land, crosses fewer parcels, and has fewer homes within 500 feet of the proposed center line; however, crosses land owned by Prince William County;

**Alternative Route C-1.2** – avoids crossing land owned by Prince William County, and is offered as an alternative in the event the Company and Prince William County are unable to complete a conveyance agreement; and

**Alternative Route C-2** – a constructable route approximately 6.2 miles long entirely on new right-of-way.

In addition, Ms. Faison presented three minor adjustments:

**Route Adjustment C-1.1a** – moves the proposed line farther from the homes of the Meadows at Morris Farm subdivision and is slightly shorter than proposed Option C-1.1. However, this route places structures in the middle of an open field and is within approximately 200 feet of one additional home;<sup>66</sup>

**Route Adjustment C-1.1b** – moves the proposed line farther from the homes of the Meadows at Morris Farm subdivision and is slightly shorter than proposed Option C-1.1. However, this route follows Rollins Ford Road and Vint Hill Road, and is within approximately 200 feet of three additional homes;<sup>67</sup> and

**Route Adjustment C-1.2a** – reduces the impact of the proposed line on a single property that would otherwise include 1.8 miles of new right-of-way. However, this route impacts a greater number of parcels, and would increase or decrease, in equal number, the impacts on several homes.<sup>68</sup>

Ms. Faison testified that the Remington CT-Warrenton Double Circuit 230 kV line will occupy the right-of-way of the existing 11.8-mile single circuit 230 kV Line #2086, but, during the wreck and rebuild, will require construction on a temporary line constructed on a temporary construction right-of-way, 20 feet wide and parallel to the existing right-of-way.<sup>69</sup> Ms. Faison

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<sup>64</sup> *Id.* at 7-8.

<sup>65</sup> *Id.* at 10.

<sup>66</sup> *Id.* at 11-12.

<sup>67</sup> *Id.*

<sup>68</sup> *Id.* at 12.

<sup>69</sup> *Id.* at 14, as corrected by Exhibit No. 6.

affirmed that the Vint Hill-Wheeler 230 kV line would be 5.4 miles long, including a new 100-foot right-of-way approximately 3.4 miles long between Dam Junction and Vint Hill Station.<sup>70</sup>

Ms. Faison acknowledged that DEQ will conduct an environmental and permitting review of the Application.<sup>71</sup> Ms. Faison stated that the Company included a DEQ Supplement in its Application based on previous coordination with DEQ.<sup>72</sup>

Ms. Faison asserted that Dominion Virginia Power complied with the requirements of § 15.2-2202 D of the Code by sending letters dated February 24, 2014, to local officials in Prince William, Fauquier, and Loudoun Counties advising of the Company's intent to file this Application and inviting the officials to a consultation with the Company concerning the Projects.<sup>73</sup>

**Douglas J. Lake** confirmed that NRG was engaged by Dominion Virginia Power to assist in the identification and evaluation of route alternatives to resolve the identified electrical need.<sup>74</sup> Mr. Lake sponsored the Environmental Routing Study, which is a part of the Application.<sup>75</sup>

### **First DEQ Report**

DEQ coordinated a review with other state and local agencies focusing on the environmental information provided in the Application.<sup>76</sup> On June 18, 2014, DEQ filed its First Report.<sup>77</sup> Because DEQ filed a Second Report on June 18, 2015, that addressed Staff's Supplemental Alternatives for Option A, only the Second DEQ Report will be summarized.

### **Dominion Virginia Power's First Supplemental Direct Testimony**

On June 25, 2014, Dominion Virginia Power filed the supplemental direct testimony of Diana T. Faison, which is summarized below:

**Diana T. Faison** reported on additional communications between the Company and Prince William County concerning the crossing of County-owned property at the planned Rollins Ford Park.<sup>78</sup> Ms. Faison testified that through meetings with Prince William County and neighboring property owners, Route Adjustment C-1.1c was developed for which Prince William County has approved the grant of an easement to the Company.<sup>79</sup> Ms. Faison advised that

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<sup>70</sup> *Id.* at 14-15, as corrected by Exhibit No. 6.

<sup>71</sup> *Id.* at 16-17.

<sup>72</sup> *Id.*

<sup>73</sup> *Id.* at 19.

<sup>74</sup> Exhibit No. 23, at 5.

<sup>75</sup> *Id.*

<sup>76</sup> Exhibit No. 39; Exhibit No. 40.

<sup>77</sup> Exhibit No. 39.

<sup>78</sup> Exhibit No. 11, at 1.

<sup>79</sup> *Id.* at 3.

Dominion Virginia Power supports Route Adjustment C-1.1c to replace Option C-1.1 as its Proposed Route (“Updated Proposed Route”).<sup>80</sup> Ms. Faison maintained that Route Adjustment C-1.1c is similar to Route Adjustment C-1.1, but with the placement of an angle structure closer to the planned Rollins Ford Park and farther from a residential development.<sup>81</sup> Ms. Faison confirmed that the impacts associated with the original Proposed Route along the Option C-1.1, as described in the DEQ Supplement, are substantially identical to the impacts associated with Route Adjustment C-1.1c.<sup>82</sup>

Ms. Faison testified that Dominion Virginia Power has entered into an easement agreement with Prince William County that provides that subject to Commission approval of Route Adjustment C-1.1c, Prince William County will sell a 100-foot-wide right-of-way across Prince William County-owned property for transmission facilities for \$1.8 million.<sup>83</sup> Ms. Faison argued that “[t]he execution of the [a]greement establishes Route Adjustment C-1.1c as the only route between the Vint Hill and Wheeler Stations along the C-1 alignment constructible by the Company.”<sup>84</sup>

### **Nokesville Public Hearing**

On August 20, 2014, a hearing to receive testimony from public witnesses was held at Patriot High School in Nokesville, Virginia, as scheduled. Twelve public witnesses presented testimony. The testimony of each witness is summarized below.

**Marilyn Hupp** of Culpeper, Virginia, testified that she is an heir to the property at the corner of Owls Nest Road and Vint Hill Road that will be impacted by the Company’s proposed route.<sup>85</sup> Ms. Hupp stated that her parents “were just poor dirt farmers,” and that the land is open.<sup>86</sup> Ms. Hupp asked for the line to be placed “a little bit more in the woods.”<sup>87</sup> Ms. Hupp expressed concern regarding the impact of the transmission line on the value of the property.<sup>88</sup> Ms. Hupp asserted: “We don’t think they’ve been fair about the route.”<sup>89</sup>

**Alden Gough** expressed concern for the impacts of the proposed transmission line on his “home place” on Owls Nest Road.<sup>90</sup> Mr. Gough contended that “the power line will take one

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<sup>80</sup> *Id.*

<sup>81</sup> *Id.* at 4.

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

<sup>83</sup> *Id.* at 5.

<sup>84</sup> *Id.* at 5-6.

<sup>85</sup> Hupp, Tr. at 8-9.

<sup>86</sup> *Id.* at 9.

<sup>87</sup> *Id.*

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

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

<sup>90</sup> Gough, Tr. at 10.



whole side of the property, on the back side of the property.”<sup>91</sup> Mr. Gough also questioned the impact of the line on the value of the property.<sup>92</sup>

**Roy Beckner** of Gainesville, Virginia, stated that he represented the Prince William County Chamber of Commerce and served on the CAG.<sup>93</sup> Mr. Beckner testified that the CAG worked on routing options and gave the public a sense of openness.<sup>94</sup> Mr. Beckner affirmed that the CAG met regularly for nearly a year to identify constraints and “planned and existing and entitled residential and commercial land uses.”<sup>95</sup> Mr. Beckner advised that although no votes were taken, the general consensus of the CAG was to support Dominion Virginia Power’s choice of Option C1.1.<sup>96</sup>

**Andrew Wack** of Owls Nest Road took exception to Mr. Beckner’s view of the CAG.<sup>97</sup> Mr. Wack maintained that from the first meeting of the CAG, the only route presented by Dominion Virginia Power that satisfied all needs was Option C.<sup>98</sup> Mr. Wack contended that the membership of the CAG was skewed with citizens heavily impacted by Options A and B.<sup>99</sup> Mr. Wack asserted that the Company was so certain of the CAG result that it purchased the land for the substation that is next to the NOVEC facility near Vint Hill Road.<sup>100</sup> Although he applauded the Company for being open and keeping people informed, Mr. Wack stated that “it was all done and over with at the very beginning.”<sup>101</sup> Mr. Wack recommended Option B, which would not involve a “land grab and eminent domain.”<sup>102</sup>

**Dan Durante** recommended that the transmission lines be buried.<sup>103</sup> Mr. Durante argued that with the lines buried, his property value would increase rather than decrease.<sup>104</sup> Mr. Durante also expressed concern over EMF associated with the transmission lines and urged that the Commission find ways to fund underground lines.<sup>105</sup>

**Frank Grimes** testified that for the last fourteen months he has been building his own home.<sup>106</sup> Mr. Grimes reported that when he attended a public meeting held by Dominion

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

<sup>92</sup> *Id.*

<sup>93</sup> Beckner, Tr. at 11.

<sup>94</sup> *Id.* at 12.

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

<sup>96</sup> *Id.* at 13.

<sup>97</sup> Wack, Tr. at 15.

<sup>98</sup> *Id.*

<sup>99</sup> *Id.* at 16.

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

<sup>101</sup> *Id.* at 17.

<sup>102</sup> *Id.*

<sup>103</sup> Durante, Tr. at 18-19.

<sup>104</sup> *Id.* at 19.

<sup>105</sup> *Id.* at 19-20.

<sup>106</sup> Grimes, Tr. at 20.

Virginia Power, the Company was unaware that his home was being built.<sup>107</sup> Mr. Grimes pointed out that other utilities, such as water, sewer, gas, and some telephone and cable companies profitably function with 95% of their assets underground.<sup>108</sup> Mr. Grimes questioned why underground transmission lines are such a hard thing for an electric company.<sup>109</sup>

**Kathleen Benson** of Nokesville, Virginia, testified that she has approximately twelve acres of land on Vint Hill Road and the proposed transmission line will run the entire distance of the back line of her property.<sup>110</sup> Ms. Benson stated that the proposed line “obviously severely impacts our life, our value, our property value, [and] the wildlife which has very little place to go now.”<sup>111</sup> Ms. Benson pointed out that there are other options, such as an underground line.<sup>112</sup> Ms. Benson also noted that the proposed line could go further into the farmland behind her property and have less of an impact on her property.<sup>113</sup>

**Alan Geoffrion** of Vint Hill Road questioned why there are plans for two substations side by side—one substation owned by NOVEC and the proposed substation in this case.<sup>114</sup> Mr. Geoffrion stated that it was his understanding that NOVEC has not obtained final approval for the substation from the Commission.<sup>115</sup> He also expressed concern about the rerouting since a major transmission line was “just put in in the last couple of years.”<sup>116</sup> Mr. Geoffrion finished his testimony by asking if the Commission, NOVEC, or the Company has “any data on the long-term effect of these transmission lines on property values over a 5, 10, 20, 30-year period just so people will know what this does.”<sup>117</sup>

**Delegate Robert G. Marshall** stated that he represented areas affected by the placement or alteration or construction of the proposed transmission line.<sup>118</sup> Delegate Marshall recommended that the report in this case contain the following: (i) any state or federal laws requiring that it is necessary to construct the proposed transmission line to ensure that electricity can be safely and effectively delivered; (ii) the methodological basis for identifying the estimated growth in power needs for the affected area; (iii) the rating system and weighing of factors used to determine the final placement of the line; and (iv) the impact of EMF associated with the proposed line.<sup>119</sup> Delegate Marshall maintained that “[i]n order to get the public confidence, . . .

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

<sup>108</sup> *Id.* at 21.

<sup>109</sup> *Id.* at 21-22.

<sup>110</sup> Benson, Tr. at 23.

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

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

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

<sup>114</sup> Geoffrion, Tr. at 24-25.

<sup>115</sup> *Id.* at 25.

<sup>116</sup> *Id.*

<sup>117</sup> *Id.* at 26.

<sup>118</sup> Marshall, Tr. at 33.

<sup>119</sup> *Id.* at 34-35.

you need to cover these things and acknowledge the known and acknowledge the unknown in any final report.”<sup>120</sup>

**Michael Coughlin, Esquire**, stated that he represented Robert Keith Morrison, Lynn M. Morrison, Alan Geoffrion, Danielle Geoffrion and Letzinger Property, LLC, in connection with property located at 13405 Vint Hill Road, Nokesville, Virginia.<sup>121</sup> Mr. Coughlin testified that Campbell House Stables has operated a successful full service horse boarding operation on this property for the prior eight and a half years. Mr. Coughlin advised that the horse boarding operation requires pastureland, some of which is located under existing power lines.<sup>122</sup> Mr. Coughlin expressed concern that if the pastureland “is disturbed to connect the substation to the power line, [Campbell House] will have to lay fallow for at least two years for the pasturage to recover.”<sup>123</sup> Mr. Coughlin contended that this will be the third time Campbell House has endured the additional cost for feed, hay, bedding, and labor due to a Dominion Virginia Power project.<sup>124</sup>

Mr. Coughlin affirmed that prior to 2010, there was one tower on the farm – now there are six towers.<sup>125</sup> Mr. Coughlin raised concern for the additional towers that will result from the approval of the Vint Hill Substation.<sup>126</sup> Mr. Coughlin asked that if the Commission approves the Vint Hill Substation to require Dominion Virginia Power to either acquire the property outright at full price, or compensate for the damage caused by repeated disturbance of the property.<sup>127</sup>

**Gina Ash** of Gainesville, Virginia, raised concerns regarding electrical emissions.<sup>128</sup> Ms. Ash confirmed that one of the routes is about 40 feet from her house.<sup>129</sup> Ms. Ash stated that a few years ago she underwent treatment for a very rare and aggressive type of cancer that has a high rate of recurrence.<sup>130</sup> Ms. Ash testified that “what may seem to some people as a negligible amount of increased risk is very frightening to me.”<sup>131</sup> Ms. Ash asserted that “there are probably others like me that are very concerned about any increased electrical risks.”<sup>132</sup>

**James Yankey** of Vint Hill Road confirmed that he was a member of the CAG and that CAG worked with the Company for over a year on routing.<sup>133</sup> Mr. Yankey verified that CAG

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<sup>120</sup> *Id.* at 35.

<sup>121</sup> Coughlin, Tr. at 36.

<sup>122</sup> *Id.* at 37.

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

<sup>124</sup> *Id.*

<sup>125</sup> *Id.* at 38.

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

<sup>127</sup> *Id.* at 39.

<sup>128</sup> Ash, Tr. at 40.

<sup>129</sup> *Id.* at 40-41.

<sup>130</sup> *Id.* at 41.

<sup>131</sup> *Id.*

<sup>132</sup> *Id.*

<sup>133</sup> Yankey, Tr. at 41.

“looked at more details on the C1 route where some of the land owners in the area tried to come up with a route that best suited this situation.”<sup>134</sup>

#### **Public Hearing of September 30, 2014**

On September 30, 2014, a hearing to receive testimony from public witnesses was held in the Commission’s courtroom in Richmond, Virginia, as scheduled. Nineteen public witnesses presented testimony. The testimony of each witness is summarized below.

**Robert Poe** of Warrenton, Virginia, testified that in 1984, he and his wife bought a 97-acre farm “hoping to come out, live in the country, be left alone, peace and quiet, and just try to enjoy the rest of our lives.”<sup>135</sup> Mr. Poe stated that one of the routes would run diagonally across the front of his property, which he contended will destroy the property.<sup>136</sup> Mr. Poe maintained that the area had to be viewed in person for the impacts to be properly gauged.<sup>137</sup> Mr. Poe recommended that transmission lines be placed underground and that if Northern Virginia needed the power, they should pay to have the lines underground.<sup>138</sup> Mr. Poe asked that new transmission lines be co-located with existing lines to preserve pristine areas.<sup>139</sup>

**Mother Eirene** of the Hermitage of Saint Mary Magdalene in Warrenton, Virginia, stated that sisters of the Hermitage of Saint Mary Magdalene also own Paws Awhile Pet Motel, a full-service boarding, grooming, and training facility for dogs and cats.<sup>140</sup> Mother Eirene expressed concern that the placement of the transmission line through their property would adversely affect the dogs, whose senses are more acute.<sup>141</sup> Mother Eirene advised that the transmission line would be approximately 120 feet from the reception room door and over an area used by clients and employees to walk dogs.<sup>142</sup> Mother Eirene testified that their clients come from as far away as Maryland and the District of Columbia “so that their dogs can vacation in the country.”<sup>143</sup> Mother Eirene asserted that the transmission line would also adversely affect “the wellbeing and financial security of all of our employees, our monastic community and ultimately Fauquier County because Paws Awhile is a for-profit, tax-paying entity.”<sup>144</sup> Mother Eirene asked that the transmission line “be buried or that the proposed route be adjusted so that it does not go through the Rock Springs Subdivision and our property.”<sup>145</sup>

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<sup>134</sup> *Id.* at 42.

<sup>135</sup> Poe, Tr. at 49.

<sup>136</sup> *Id.*

<sup>137</sup> *Id.* at 50.

<sup>138</sup> *Id.*

<sup>139</sup> *Id.*

<sup>140</sup> Eirene, Tr. at 51.

<sup>141</sup> *Id.* at 51-52.

<sup>142</sup> *Id.* at 52.

<sup>143</sup> *Id.* at 53.

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

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

**Linda Williams** of Warrenton, Virginia, confirmed that her family would be impacted by Option A, with the transmission line on either her property or on her neighbor's property.<sup>146</sup> Ms. Williams stated that she purchased the property over fifteen years ago for its privacy and scenic views, which would be lost if Option A is approved.<sup>147</sup> Ms. Williams contended that "[t]he charm and appeal of this group of mostly single-story homes will be forever destroyed by towering power lines."<sup>148</sup> Ms. Williams questioned the health effects of the transmission lines and the cost of lost property values and lost customers for businesses versus the cost of burying the lines.<sup>149</sup> Ms. Williams expressed surprise that Option A was being considered because it had been taken off the table in a November 2013 meeting at the Auburn Middle School.<sup>150</sup>

**Diana McDaniel Hardy** of Warrenton, Virginia, stated that Option A would cut a 120-foot wide swath through a forest of 40- to 50-year old trees through land near the corners of Dumfries Road, Riley Road, and Forrest Road.<sup>151</sup> Ms. Hardy testified that she moved "to Warrenton for the beauty, for the nature and for the open lands that are there that are no longer being kept for the communities in other counties."<sup>152</sup> Ms. Hardy affirmed that the adjacent forested land provides a sound barrier from the traffic on Dumfries Road and is a habitat for wildlife such as deer, raccoons, skunks, red-tailed hawks, and owls.<sup>153</sup> Ms. Hardy maintained that the proposed transmission line will destroy her property by cutting diagonally through her front yard.<sup>154</sup> Ms. Hardy cited to the impacts of Option A routes listed in the Company's Application and asserted that "Dominion rejected all of the Option As that have come out, and I don't understand why they are now being put back on the board again."<sup>155</sup> Ms. Hardy argued:

The state has the responsibility to make a decision that impacts the least number of taxpayers and destroys the least amount of habitat in prestanding forest and wetlands, and I urge the state to act wisely in making their decision to follow through with that.<sup>156</sup>

**Roy Beckner** of Gainesville, Virginia, testified that this project has been fully vetted by the Company, counties, and the CAG, but Staff, "in the cold light of the boardroom, their Richmond offices or somewhere dropped a bomb seeking a motion for order and a ruling . . . to initiate a restudy of Option A."<sup>157</sup> Mr. Beckner contended that it is a mistake for Staff to infer that the lack of speakers at the August 20<sup>th</sup> public hearing indicated that there is little or no

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<sup>146</sup> Williams, Tr. at 54.

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

<sup>148</sup> *Id.* at 55.

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

<sup>150</sup> *Id.* at 58.

<sup>151</sup> Hardy, Tr. at 59.

<sup>152</sup> *Id.* at 59-60.

<sup>153</sup> *Id.* at 60.

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

<sup>155</sup> *Id.* at 61.

<sup>156</sup> *Id.* at 62.

<sup>157</sup> Beckner, Tr. at 63.

opposition to Option A.<sup>158</sup> Mr. Beckner pointed out that Option A was not on the table at the time of the August 20<sup>th</sup> public hearing, and only a few people objected to Option C1.1.<sup>159</sup>

Mr. Beckner asserted that “Staff has created uncertainty that questions the propriety and the validity of the SCC process.”<sup>160</sup> Mr. Beckner maintained that Option A would adversely impact areas set aside for open space preservation and conservation, battlefields, and the more densely developed suburban areas.<sup>161</sup> Mr. Beckner argued that “[t]o restudy Option A is unnecessary and an intrusion that accomplishes nothing but uncertainty and ruin.”<sup>162</sup>

On cross-examination, Mr. Beckner confirmed that he was a member of CAG and that he does not own property that will be impacted by any of the possible transmission line routes.<sup>163</sup>

**Reta Rodgers** of Warrenton, Virginia, stated that Option A has been studied and found to be an unsuitable economic or environmental solution.<sup>164</sup> Ms. Rodgers advised that for the past three years she has been committed to the restoration of a historic 19<sup>th</sup> century farm called Eastwood, which is directly across from the Warrenton Substation, and thus the first farm to be impacted by Option A.<sup>165</sup> Ms. Rodgers maintained that Option A hurt her efforts to develop a boutique destination featuring historic agri-tourism and that the continuation of Option A would have a devastating impact on her family’s 900-acre properties, collectively.<sup>166</sup> Ms. Rodgers asked that her family be granted “the privilege of sustaining this undisturbed piece of heaven where we can continue to abide in a tranquil, stress-free environment.”<sup>167</sup>

Ms. Rodgers also read a letter from her daughter, Sara Rodgers Lubbe, in which Ms. Lubbe expressed her sense of anxiety and trepidation associated with Option A, and her “bewilderment that this matter continues in discussion today.”<sup>168</sup>

**Delegate Lee Scott Lingamfelter** stated that he was testifying in his official capacity as the elected representative of the 31<sup>st</sup> District, which includes both Prince William and Fauquier Counties, and that he had no financial interest in any land affected by the proposed routes.<sup>169</sup> Delegate Lingamfelter recommended against restudying Option A, and pointed to the work that has gone into Option C.<sup>170</sup> Delegate Lingamfelter testified that over a year ago, he urged the

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

<sup>159</sup> *Id.* at 63-64.

<sup>160</sup> *Id.* at 64.

<sup>161</sup> *Id.*

<sup>162</sup> *Id.* at 65.

<sup>163</sup> *Id.* at 65-66.

<sup>164</sup> R. Rodgers, Tr. at 67.

<sup>165</sup> *Id.* at 67-68.

<sup>166</sup> *Id.* at 68.

<sup>167</sup> *Id.* at 69.

<sup>168</sup> *Id.* at 70.

<sup>169</sup> Lingamfelter, Tr. at 75.

<sup>170</sup> *Id.* at 76.

Company to obtain robust input from the affected community.<sup>171</sup> Delegate Lingamfelter reported that such input resulted in a very diverse group of people settling on Option C.<sup>172</sup> Delegate Lingamfelter contended that such public input, as well as the support of Fauquier and Prince William Counties, should be given weight in favor of Option C.<sup>173</sup>

Delegate Lingamfelter maintained that Option A “would have irrevocably bad impacts on this community.”<sup>174</sup> Delegate Lingamfelter pointed to one gentleman that “stands to lose not a million but millions of dollars based on an Option A approval.”<sup>175</sup> Delegate Lingamfelter asked that the work of the citizens group be embraced and that Option C be supported.<sup>176</sup>

**Michael Platko** of Old Auburn Road testified he has spent nearly all of his “adult life in windowless vaults, computer rooms doing what I believed to be work in the Cold War.”<sup>177</sup> Mr. Platko stated that the Company, Fauquier County, Prince William County, and citizens “have come to a conclusion that doesn’t suit everybody perfectly well but we were in agreement that this is a way to proceed.”<sup>178</sup> Mr. Platko urged that such a process be respected.<sup>179</sup>

**Tom Rodgers** of Warrenton confirmed that he and his wife lived on 100 acres that would be directly impacted by Option A.<sup>180</sup> Mr. Rodgers stated that he was disheartened to hear that Staff was initiating a restudy of Option A.<sup>181</sup> Mr. Rodgers saw irony in placing his farm in a conservation easement to be “ruined by towers supporting our neighbors in the next county.”<sup>182</sup> Mr. Rodgers testified that there are better options that will protect the natural beauty of the area, preserve the historical integrity of the area and make better sense.<sup>183</sup>

**Wendy Rodgers** of Warrenton stated that her children are the fifth generation of her family to grow up and live in Warrenton.<sup>184</sup> Ms. Rodgers testified that her families’ adjoining properties are not different shapes on a flat sheet of paper, but “are made up of lush, green fields, farmland with beautiful fence rows, land full of beautiful, old trees, picturesque view, [and] habitats for many different animals.”<sup>185</sup> Ms. Rodgers maintained that “[t]his is no place for these

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<sup>171</sup> *Id.* at 77.

<sup>172</sup> *Id.*

<sup>173</sup> *Id.* at 78.

<sup>174</sup> *Id.* at 79.

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

<sup>176</sup> *Id.* at 80.

<sup>177</sup> Platko, Tr. at 81.

<sup>178</sup> *Id.* at 81-82.

<sup>179</sup> *Id.* at 82.

<sup>180</sup> T. Rodgers, Tr. at 82.

<sup>181</sup> *Id.* at 82-83.

<sup>182</sup> *Id.* at 83.

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

<sup>184</sup> W. Rodgers, Tr. at 84.

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

towers of steel.”<sup>186</sup> Ms. Rodgers pointed out that Dominion Virginia Power has already agreed that this is not the best option.<sup>187</sup>

**Luke Rodgers** of Warrenton confirmed that he is “one of thirteen grandchildren who appreciates every inch of this beautiful ground our family lives on.”<sup>188</sup> Mr. Rodgers testified that he enjoys hunting, fishing, and riding four-wheelers.<sup>189</sup> Mr. Rodgers described the beauty of the land and stated that “[t]o see it get destroyed with these electrical towers will seem heartbreaking to me.”<sup>190</sup>

**Charlotte Rodgers** of Warrenton testified that she loved outdoor activities such as riding horses, riding her bicycle, and four-wheeler rides.<sup>191</sup> Ms. Rodgers described the beauty of her family’s land as “better than any park I would ever travel to.”<sup>192</sup> Ms. Rodgers stated that she did “not like picturing big towers that sounded like robot bees.”<sup>193</sup>

**Ed Moore** of Dumfries Road advised that he and his partners control over 2,300 acres that includes over 1,500 residential homes along Option A.<sup>194</sup> Mr. Moore stated that Option A would cross over 200 lots, most of them have houses on them, most of them are approved, and most of them are sold.<sup>195</sup> Mr. Moore testified that the power line will go through the middle of the 600-acre farm on which he lives, through the middle of a thousand lot subdivision he has spent eight years developing, and through the middle of a three million square foot commercial, retail, independent, and assisted living development on an ex-Army base in which he is one of the owners.<sup>196</sup> Mr. Moore stated:

I would humbly urge you to choose a different route and not choose Option A.<sup>197</sup>

**Gavin Lubbe** of Warrenton, Virginia, contended that with a year-and-a-half study, there is an exhaustive amount of evidence that proves Option C is the most appropriate from a financial point of view.<sup>198</sup> Mr. Lubbe maintained that no organization would voluntarily elect a

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<sup>186</sup> *Id.*

<sup>187</sup> *Id.* at 85.

<sup>188</sup> L. Rodgers, Tr. at 85-86.

<sup>189</sup> *Id.* at 86.

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

<sup>191</sup> C. Rodgers, Tr. at 87.

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

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

<sup>194</sup> Moore, Tr. at 88.

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

<sup>196</sup> *Id.* at 88-89.

<sup>197</sup> *Id.* at 89.

<sup>198</sup> G. Lubbe, Tr. at 90.



more expensive option.<sup>199</sup> As for reliability, Mr. Lubbe deferred to Dominion Virginia Power's expertise.<sup>200</sup>

Mr. Lubbe faulted Staff's recommendation for failing to reference any of the natural environmental or historic areas affected by Option A.<sup>201</sup> Mr. Lubbe pointed to Article XI of the Virginia Constitution which requires the Commission to "preserve, protect and conserve the state's natural and historic resources."<sup>202</sup> Mr. Lubbe asserted that once the line is built, the scarring cannot be changed.<sup>203</sup> Mr. Lubbe cited to the Commission's mission statement and testified that it would be great if consumers could get the power they need, and the Company had the freedom to make the decision in the best interests of providing that power.<sup>204</sup> Mr. Lubbe also pointed to consideration of the citizens and the responsibility of being good stewards for the finances and taxes collected, and on the impact on natural and historic resources.<sup>205</sup> Mr. Lubbe recommended Option C as a win-win for everybody.<sup>206</sup>

**Steven Rodgers** of Warrenton, Virginia, thanked Dominion Virginia Power and NOVEC for choosing the route "that has the least impact on everyone and the environment."<sup>207</sup> Mr. Rodgers stated that the properties impacted by Option A are often requested to be on the Virginia Home and Garden tours, which attracts people from all over the country.<sup>208</sup> Mr. Rodgers maintained that most of these properties are kept manicured and in a pristine state by people who work hard on the land and for the land.<sup>209</sup> Mr. Rodgers testified that "[w]e have all chosen to live in this area because of its beauty and tranquility, and we have purposely chosen not to live in more congested areas."<sup>210</sup>

Mr. Rodgers recognized that more power is needed in Prince William County, but Dominion Virginia Power has determined that it can provide the power with existing easements and rights-of-way.<sup>211</sup> Mr. Rodgers questioned the wisdom of destroying beautiful properties and more of the environment.<sup>212</sup> Mr. Rodgers stated that he was adamantly opposed to Option A.<sup>213</sup>

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<sup>199</sup> *Id.*

<sup>200</sup> *Id.* at 91.

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

<sup>202</sup> *Id.* at 92.

<sup>203</sup> *Id.* at 92-93.

<sup>204</sup> *Id.* at 93.

<sup>205</sup> *Id.* at 93-94.

<sup>206</sup> *Id.* at 94.

<sup>207</sup> S. Rodgers, Tr. at 94-95.

<sup>208</sup> *Id.* at 95.

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

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

<sup>211</sup> *Id.* at 96.

<sup>212</sup> *Id.*

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

**Suzanne Scheer** of Catlett, Virginia, affirmed that she was a member of the CAG and represented citizens from Fauquier County as well as the Auburn Civil War Battlefields.<sup>214</sup> Ms. Scheer stated that the CAG met nine times over more than a year and made an intense investigation of Options A, B, and C.<sup>215</sup> Ms. Scheer reported that in the end, all agreed Option C was the right route with the least constraints.<sup>216</sup> Ms. Scheer maintained that Option A “had maximum impact on the environment, historic resources, public schools, Fauquier County land use, established residential communities . . . Civil War battlefields, open-space easements, wetlands, and historic districts.”<sup>217</sup> Ms. Scheer testified that because Option A would not address the future load needs at Haymarket, Option C would have to be built anyway.<sup>218</sup>

Ms. Scheer read a statement from David Blake, also a member of CAG.<sup>219</sup> Mr. Blake took issue with information cited by Staff in their Motion for Order, and contended that Staff failed to adequately consider the information developed by CAG.<sup>220</sup>

**Carolyn Fagnani** of Nokesville, Virginia, stated that she and her husband have run a small topsoil company from land on Rogues Road for 22 years as their sole means of support.<sup>221</sup> Ms. Fagnani advised that a special permit from Fauquier County requires a buffer of trees around their property.<sup>222</sup> Ms. Fagnani testified that if the line is built along Option A, she will lose the tree buffer along the front of her property.<sup>223</sup> Thus, Ms. Fagnani expressed concern that she may be forced out of business.<sup>224</sup>

**Mother Raphaela** of Warrenton, Virginia, questioned “why at this late hour this recommendation to change Route A and to relook at Route A when we had all been assured it was not viable . . . .”<sup>225</sup> Mother Raphaela advised that she lived in Houston, Texas, for 13 years with a transmission line approximately 100 feet behind her town house.<sup>226</sup> Mother Raphaela testified that each day she could predict the humidity based on the sound of the transmission line.<sup>227</sup> Mother Raphaela stated that Option A “would be devastating for us personally, for our business, for the animals we take care of, for the owners of these animals and for all of the other houses, individuals, [and] farmlands that are affected by it.”<sup>228</sup>

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<sup>214</sup> Scheer, Tr. at 97-98.

<sup>215</sup> *Id.* at 98.

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

<sup>217</sup> *Id.* at 99.

<sup>218</sup> *Id.* at 100.

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

<sup>220</sup> *Id.* at 101.

<sup>221</sup> Fagnani, Tr. at 112.

<sup>222</sup> *Id.* at 112-13.

<sup>223</sup> *Id.* at 113.

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

<sup>225</sup> Raphaela, Tr. at 114.

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

<sup>227</sup> *Id.* at 114-15.

<sup>228</sup> *Id.* at 115.

**Randy Leonard** of Greenwich, Virginia, asserted that need for this project is driven by development and customers that can only be addressed with Option C.<sup>229</sup> Mr. Leonard maintained that “this is the rare occasion that the people that have the need will be affected by the build.”<sup>230</sup> Mr. Leonard contended that the people impacted by Option A are not part of “this load requirement.”<sup>231</sup>

### **Dominion Virginia Power’s Second Supplemental Direct Testimony**

On November 14, 2014, Dominion Virginia Power filed its Supplemental Appendix to its Application; the Supplemental Direct Testimony of Mark R. Gill, Robert J. Shevenock II, Wilson O. Velazquez, and Douglas J. Lake; and the Second Supplemental Direct Testimony of Diana T. Faison. A summary of each supplemental direct testimony is provided below.

**Mark R. Gill** confirmed that Dominion Virginia Power conducted load flow studies of Staff’s recommendations that Option A and Option C terminate at the existing Gainesville Substation.<sup>232</sup> Mr. Gill reported that for Option C, termination at Gainesville as opposed to bypassing Gainesville and terminating at Loudoun, will remove the Haymarket load and Catharpin load from the original Vint Hill-Wheeler-Loudoun 230 kV Lines.<sup>233</sup> Mr. Gill advised that termination at Gainesville for Option A also removes the Haymarket and Catharpin loads.<sup>234</sup> Mr. Gill testified that Dominion Virginia Power now proposes to terminate the Projects at the Gainesville Substation based the electrical benefits to the network and the flexibility to address future Haymarket load.<sup>235</sup> Mr. Gill stated that the Company continues to support Option C, rather than Option A.<sup>236</sup>

Mr. Gill confirmed that the cost for construction of the Projects with Option C terminated at Gainesville is approximately \$93.1 million, and the cost with Option A terminated at Gainesville would be approximately \$80.7 million.<sup>237</sup>

As for Option B, Mr. Gill testified that because it already includes a Gainesville termination, Option B remains unchanged.<sup>238</sup>

**Robert J. Shevenock II** testified that Dominion Virginia Power now supports Option C terminating at Gainesville.<sup>239</sup> Mr. Shevenock also indicated that he was sponsoring portions of the Supplemental Appendix.<sup>240</sup>

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<sup>229</sup> Leonard, Tr. at 116.

<sup>230</sup> *Id.* at 116-17.

<sup>231</sup> *Id.* at 117.

<sup>232</sup> Exhibit No. 14, at 1-2.

<sup>233</sup> *Id.* at 3.

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

<sup>235</sup> *Id.* at 4-5.

<sup>236</sup> *Id.* at 6.

<sup>237</sup> *Id.* at 7, as corrected by Exhibit No. 6.

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

<sup>239</sup> Exhibit No. 22, at 1.

**Wilson O. Velazquez** described the work required at the Gainesville Substation in order to terminate the Projects at that location.<sup>241</sup> Mr. Velazquez stated that because of space limitations at the Gainesville Substation and the plan to convert Line #124 from Gainesville to Loudoun to 230 kV, the Company originally proposed to convert Line #124 to 230 kV from Wheeler, electrically bypassing the Gainesville Substation.<sup>242</sup> Mr. Velazquez advised that the Company reexamined the Projects based on Staff's suggested termination at Gainesville, and found that it is possible to terminate an additional 230 kV line at the Gainesville Substation due to the conversion of Line #172 to 230 kV, which will terminate at the new Liberty Switching Station instead of its current termination at Gainesville Substation.<sup>243</sup> Mr. Velazquez testified that the Company revised its Supplemental Appendix to reflect these changes.<sup>244</sup>

**Douglas J. Lake** compared, from a routing standpoint, the total electrical solution of the Projects through Option C-Gainesville using Route C-1.1c to the total electrical solution of Option A-Gainesville using A-2/3 Staff Route.<sup>245</sup> Mr. Lake maintained that Option C-Gainesville using Route C-1.1c best meets the criteria to reasonably minimize adverse impacts on the scenic assets, historic districts and environment; makes greater use of existing right-of-way than Option A-Gainesville using Staff A-2/3 Route; and presents minimal construction risks.<sup>246</sup>

Mr. Lake listed the construction activities with each of these options as provided below.

**Option A-Gainesville using A-2/3 Staff Route:**

- Reconductoring of 11.8 miles of Line #2086 between Remington CT Station and Warrenton Substation;
- The construction of a new single-circuit 230 kV transmission line between the existing Warrenton and Wheeler Substations;
- The acquisition of the existing Wheeler-Gainesville 115 kV Line #922 from NOVEC and the uprate and conversion of this line to 230 kV;
- The expansion of the existing Warrenton Substation on Company property; and
- The construction of a new switching station on property adjacent to NOVEC's Wheeler substation.<sup>247</sup>

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<sup>240</sup> *Id.* at 2.

<sup>241</sup> Exhibit No. 9, at 2.

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

<sup>243</sup> *Id.* at 3.

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

<sup>245</sup> Exhibit No. 24, at 1.

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

<sup>247</sup> *Id.* at 4.

### **Option C-Gainesville using Route C-1.1c:**

- The wreck and rebuild of approximately 11.8 miles of Line #2086 between the Remington CT Station and Warrenton Substation, which would require the use of 20 feet of additional temporary right-of-way during construction;
- The wreck and rebuild of approximately 2.0 miles of Line #922 between Wheeler Substation and Dam Junction and the uprate and conversion from 115 kV to 230 kV of the remaining 4.1 miles of Line #922 between Dam Junction and the Gainesville Substation;
- The construction of 3.4 miles of new 230 kV transmission line from the new Vint Hill Switching Station to Dam Junction, where the new line would connect with the rebuilt portion of Line #922 and continue to the new Wheeler Switching Station;
- The expansion of the existing Warrenton Substation on Company property;
- The construction of a new switching station on property adjacent to NOVEC's Wheeler substation; and
- The construction of a new switching station on property adjacent to the planned NOVEC Vint Hill Delivery Point.<sup>248</sup>

Mr. Lake highlighted the factors that favored Option C as reasonably minimizing adverse impacts to include that the Option C Projects are 6.3 miles shorter than Option A-Gainesville using 2/3 Staff Route, and would require less new greenfield right-of-way (3.4 miles versus 9.2 miles).<sup>249</sup> Mr. Lake pointed out that Option A-Gainesville using 2/3 Staff Route would have more homes within approximately 60 feet of the edge of the right-of-way (15, of which 10 are along the existing Remington CT-Warrenton line, versus 12 for the Option C Projects, with all twelve along the existing Remington CT-Warrenton line).<sup>250</sup> Mr. Lake confirmed that Option A-Gainesville using 2/3 Staff Route would cross more forested land (9.4 miles versus 5.1 miles); clear more acres of forested lands (93.1 acres versus 32.4 acres); cross more private lands and private land parcels; cross more areas listed by the National Park Service American Battlefield Protection Program ("ABPP") as potentially eligible for inclusion in the National Registry of Historic Places ("NRHP"); and would have adverse visual effects on boundary and core areas of Auburn/Coffee Hill NRHP-listed Historic District/battlefield.<sup>251</sup> Mr. Lake advised that Option A-Gainesville using 2/3 Staff Route would cross two planned developments and eight lots in the newly expanded Brookside development.<sup>252</sup>

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<sup>248</sup> *Id.* at 4-5.

<sup>249</sup> *Id.* at 7-8.

<sup>250</sup> *Id.* at 9.

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

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

Mr. Lake listed several qualitative issues the make Option A-Gainesville using 2/3 Staff Route more impactful than Option C.<sup>253</sup> Mr. Lake listed these issues to include: “constructability; increased development; tree clearing near homes; impacts to homes; and the potential for higher visual impact.”<sup>254</sup> Mr. Lake pointed to difficulties associated with the following: (i) the Dumfries Road crossing, (ii) the intersection of Riley Road and Albrecht Lane, (iii) the crossing of Frys Lane near Duhollow Road, and (iv) tree clearing at or near the crossings of Riley Road, Woodlawn Lane, Greenbrier Road, Canter Lane, Redturn Lane, and Rogues Road.<sup>255</sup>

**Diana T. Faison** testified that the termination of the Projects at the Gainesville Substation does not require additional public notice.<sup>256</sup> Ms. Faison maintained that the notice prescribed by the Commission in its Order for Notice and Hearing issued on May 29, 2014, already contemplates a route that electrically bypasses the Gainesville Substation.<sup>257</sup> Ms. Faison stated that “[b]ecause the routing impacts of electrically bypassing the Gainesville Substation on existing transmission line corridors are exactly the same as electrically terminating at the Gainesville Substation, there are no additional properties affected, and therefore no additional notice should be required.”<sup>258</sup> In addition, Ms. Faison asserted that “[t]he impacts presented in the DEQ Supplement are representative of the impacts associated with the modified proposal presented in this supplemental filing.”<sup>259</sup>

### **Staff’s Direct Testimony**

On April 14, 2015, Staff filed the direct testimony of Michael W. Martin, principal utilities engineer in the Commission’s Division of Energy Regulation; John W. Chiles, a principal in GDS Associates, Inc. (“GDS”); and Wayne D. McCoy, president of Mid Atlantic Environmental LLC (“MAE”). Each testimony is summarized below.

**Michael W. Martin** presented the Staff Report, which he prepared and attached to his testimony.<sup>260</sup> In the Staff Report, Mr. Martin noted that the Projects have not been approved by PJM Board of Managers (“Board”), but are expected to be presented at the Board’s April 2015 meeting.<sup>261</sup> Mr. Martin reported the total cost of Option C-1.1c to be \$106.6 million, and the total cost of Option A-2/3 Staff Route to be \$91.6 million, \$94.7 million, or \$97.8 million, for right-of-ways with a width of 80 feet, 100 feet, and 120 feet, respectively.<sup>262</sup>

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<sup>253</sup> *Id.* at 10.

<sup>254</sup> *Id.*

<sup>255</sup> *Id.* at 11.

<sup>256</sup> Exhibit No. 12, at 1.

<sup>257</sup> *Id.* at 2.

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

<sup>259</sup> *Id.* at 4.

<sup>260</sup> Exhibit No. 48, at 1.

<sup>261</sup> Exhibit No. 48, Attached Staff Report, at 3.

<sup>262</sup> *Id.* at 4.

Mr. Martin testified that when Dominion Virginia Power began its search for solutions to forecasted excessive loads at its Warrenton and Gainesville Substations, the Company initially identified a single project to connect the two substations, which are separated by seven miles.<sup>263</sup> Mr. Martin identified the single project as Option A, and noted that the Company rejected Option A due to “routing difficulty.”<sup>264</sup>

As for Option B, which Dominion Virginia Power found to be a viable alternative, but not as robust as Option C, Mr. Martin pointed out that information in the Company’s Supplemental Appendix now shows forecasted loads for the Option B network in excess of the 300 MW planning limit by 2017.<sup>265</sup> Mr. Martin asserted that “Option B is infeasible,” and is not viable.<sup>266</sup>

Mr. Martin attached an interrogatory response on possible bulk electric system projects, subsequent to either Option A or Option C, based on a 2018-2023 planning period.<sup>267</sup> Mr. Martin maintained that because Option A requires only one subsequent project, and Option C requires four projects, Option A is electrically superior to Option C.<sup>268</sup> Mr. Martin presented a chart showing that the cost of the additional projects would add \$38.0 million to the cost of Option C.<sup>269</sup> Mr. Martin also took issue with the width of the Option A right-of-way. Mr. Martin testified that the Company typically constructs a 230 kV pole-type transmission line on a 100-foot-wide right-of-way.<sup>270</sup>

Mr. Martin stated that “the Company’s proposed Option C solution is not the best electrical solution for Warrenton Substation because it does not provide a true networking of the Warrenton Substation.”<sup>271</sup> Mr. Martin asserted that providing two connections to the same supply (as in Option C) creates a double-circuit radial supply.<sup>272</sup> Mr. Martin contended that two supplies from two different sources (as in Option A) “should generally be better.”<sup>273</sup>

Mr. Martin recommended that “the Commission evaluate Option A against the Company’s proposed Option C.”<sup>274</sup> Mr. Martin also took the position that if the Commission favors Option C, “that it not approve [the Company’s] Warrenton project component at this time, but rather instruct the Company to employ load-reduction measures at the Warrenton Substation that delay the need for a project there.”<sup>275</sup>

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<sup>263</sup> *Id.* at 13.

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

<sup>265</sup> *Id.* at 18.

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

<sup>267</sup> *Id.* at 20.

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

<sup>269</sup> *Id.* at 22.

<sup>270</sup> *Id.* at 24.

<sup>271</sup> *Id.* at 25.

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

<sup>273</sup> *Id.*

<sup>274</sup> *Id.* at 29.

<sup>275</sup> *Id.*

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**John W. Chiles** stated that he conducted an independent analysis of the Company's power flow results.<sup>276</sup> More specifically, Mr. Chiles compared the Option A and Option C line loading issues. Mr. Chiles reported the following.<sup>277</sup>

1. GDS successfully duplicated the Company results under the N-1 contingency analysis and is comfortable that the results have been verified.
2. With respect to the Tower Line Outage Cases, GDS was able to successfully replicate the trend analysis seen by the Company. Even though the line loading percentages were not exact, the GDS analysis identified the same conditions and same relative benefits of Option A versus Option C. GDS asserts that the results have been verified.
3. Differences in the N-1-1 power flow solution techniques between the Company TARA software and the GDS PSS/E and PSS/MUST software did not permit an exact replication of the Company results. GDS successfully conducted a manual assessment of the contingencies identified by the Company and agrees with the Company findings.
4. Similar to the Tower Line Outage Cases, GDS was able to successfully replicate the trend analysis seen by the Company in the N-2 power flow analysis. Even though the line loading percentages were not exact, the GDS analysis identified the same conditions and same relative benefits of Option A versus Option C. GDS asserts that the results have been verified.
5. Under the N-1 single contingency conditions, Option C performed better for the loss of Line 2077, but the overall performance of Option A that resulted in reduced loading on identified facilities suggests that Option A has better overall performance than Option C under loss of single transmission system elements (NERC Category B events).
6. Under Tower Line outages (NERC Category C events), Option A is electrically superior to Option C due to reduced line loading on similarly identified system problems.
7. For N-1-1 outage conditions (NERC Category C events), GDS power flow results support the Company finding that Option A

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<sup>276</sup> Exhibit No. 54, at 3.

<sup>277</sup> *Id.* at 4-5.



performed better than Option C with respect to reducing flows on overload elements and eliminating overloaded lines under certain contingencies.

8. The N-2 analysis is inconclusive regarding the benefits of Option A versus Option C. It is recommended that the Liberty outage cases be studied in more detail if the Company were to solely rely on the N-2 results for project justification.
9. The Panda Stonewall generation project status appears to be negligible to the effectiveness of Option A versus Option C, since the loading issues and impact of the two options appear to be similar regardless of the status of this generation facility whether on-line or off-line.

**Wayne D. McCoy** presented a report on the environmental aspects of the Remington CT-Warrenton 230 kV Double Circuit transmission line, Vint Hill-Wheeler and Wheeler-Gainesville 230 kV transmission lines, 230 kV Vint Hill switching station, and 230 kV Wheeler switching station.<sup>278</sup> Mr. McCoy disagreed with the Company's contention that Option A is unbuildable and offered a Staff-proposed route that did not have the unbuildable constraints.<sup>279</sup> Mr. McCoy advised that this new alignment is identified as Option A-2/3 Staff Route and is addressed in the Dominion Virginia Power's second supplemental direct testimony and Supplemental Appendix.<sup>280</sup>

Mr. McCoy took the position that the Company should have studied Option 2/3 Staff Route with a 100-foot right-of-way, consistent with Route C-1.1c, instead of a 120-foot right-of-way.<sup>281</sup> Mr. McCoy agreed with Dominion Virginia Power that Option C-1.1c-Gainesville has less environmental impact than Option 2/3 Staff Route.<sup>282</sup> However, because Option C-1.1c may require as many as four additional projects, as opposed to the one additional project required for the long-term reliability of Option A 2/3 Staff Route, Mr. McCoy stated that "[w]e therefore cannot assess the total environmental impacts, as the additional projects are undefined as of this date."<sup>283</sup>

### **Public Hearing of April 20, 2015**

On April 20, 2015, a hearing to receive testimony from public witnesses was held in the Commission's courtroom in Richmond, Virginia, as scheduled. Nineteen public witnesses presented testimony. The testimony of each witness is summarized below.

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<sup>278</sup> Exhibit No. 55, at 2.

<sup>279</sup> *Id.* at 4-5.

<sup>280</sup> *Id.* at 5.

<sup>281</sup> *Id.* at 6.

<sup>282</sup> *Id.* at 7.

<sup>283</sup> *Id.*

**Gregory Livesay**, director of facilities for the Schools opposed Staff's Option A Staff route.<sup>284</sup> Mr. Livesay stated that he was a member of CAG, which supported Option C-1.1c.<sup>285</sup> Mr. Livesay contended that Staff's Option A will traverse Kettle Run High School and Greenville Elementary School, as well as the Authority's monitoring wells.<sup>286</sup> Mr. Livesay expressed concern regarding geological conditions near Kettle Run High School and public fears regarding transmission lines near schools.<sup>287</sup>

**Gregory Howard** of Warrenton, Virginia, testified that Staff's Option A routes will run through protected wetland areas running through the Brookside neighborhood.<sup>288</sup> Mr. Howard maintained that the Option A routes will follow the natural path of the creek and wetlands, and could potentially have some flooding implications.<sup>289</sup>

**Maureen Riordan** of Warrenton, Virginia, appeared as an elected member of the School Board, a member of the Authority's board, and as a resident of Brookside.<sup>290</sup> Ms. Riordan affirmed that the Option A routes will directly impact Kettle Run High School, Auburn Middle School, and Greenville Elementary School.<sup>291</sup> Ms. Riordan described the "tremendous backlog of traffic" at 7:00 a.m. on Rogues Road near Kettle Run High School and contended that Option A would place transmission lines where a right-hand turning lane is planned.<sup>292</sup> Ms. Riordan maintained that the A-2/3 Staff Route would traverse a property off Ringwood Road that, if developed, may provide a second entrance for Kettle Run High School.<sup>293</sup>

Ms. Riordan also opposed the Option A routes on the possible impact of EMF on children's health.<sup>294</sup>

As for the Authority, Ms. Riordan pointed out that Fauquier County's water supply is limited to groundwater.<sup>295</sup> Ms. Riordan confirmed that the New Baltimore Service District is served by wells that will be impacted by the Option A routes.<sup>296</sup> Ms. Riordan asserted that with the Option A-2/3 route, "we would probably lose the use of our wells as well as approximately 40 percent of our storage capacity."<sup>297</sup> Ms. Riordan testified that in the 2011 earthquake, the Authority lost two wells.<sup>298</sup> Ms. Riordan warned that any type of construction near or around the

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<sup>284</sup> Livesay, Tr. at 130.

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

<sup>286</sup> *Id.* at 131.

<sup>287</sup> *Id.*

<sup>288</sup> Howard, Tr. at 133.

<sup>289</sup> *Id.*

<sup>290</sup> Riordan, Tr. at 134.

<sup>291</sup> *Id.* at 135.

<sup>292</sup> *Id.* at 135-36.

<sup>293</sup> *Id.* at 136.

<sup>294</sup> *Id.* at 137.

<sup>295</sup> *Id.*

<sup>296</sup> *Id.*

<sup>297</sup> *Id.* at 138.

<sup>298</sup> *Id.*

Authority's wells and the wetlands could change the flow of the aquifer and cause the loss of a well.<sup>299</sup>

**Phillip D. Farley**, general manager of the Authority confirmed that the proposed routing for the transmission line in the vicinity of Rogues Road and Greenville Road would be built immediately adjacent to the Authority's water storage tank, communication tower, and two monitoring well lots.<sup>300</sup> Mr. Farley expressed concern regarding potential drilling and blasting on the area's water supply.<sup>301</sup>

**Robert Holder Trumbo, Jr.**, Scott District member of the Fauquier County Board of Supervisors, objected to the proposed Option A routes.<sup>302</sup> Mr. Trumbo pointed out that people affected by these routes had been led to believe that Option A was not viable.<sup>303</sup> Mr. Trumbo testified that there are objections to proposed Option A routes "based on the impact of placing these lines so close to homes, to three schools, over protected natural resources like wetlands; and . . . damage to the view sheds and environment caused by the removal of an inordinate amount of trees."<sup>304</sup> Mr. Trumbo also advised that the proposed Option A routes cross the Auburn Battlefield.<sup>305</sup>

Mr. Trumbo maintained that the root of the objections to the proposed Option A routes is Fauquier County's managed growth that for decades has directed new development to specific areas.<sup>306</sup> Mr. Trumbo noted Fauquier County's objection to the overhead transmission lines in heavily populated areas of the county and asked that other less impactful options be considered.<sup>307</sup>

**Paul Tice** of Warrenton, Virginia, stated that he purchased a new home in 2014 in Brookside.<sup>308</sup> Mr. Tice asserted that his house and many other houses now exist, but are not shown on the routes posted on the website.<sup>309</sup> Mr. Tice testified that he was unaware of a proposal for high-power transmission lines through the neighborhood, and would not have purchased the house if he had known.<sup>310</sup> Mr. Tice affirmed that the Option A-2/3 route would place a transmission tower 38 yards from his house.<sup>311</sup>

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<sup>299</sup> *Id.* at 139.

<sup>300</sup> Farley, Tr. at 140-41.

<sup>301</sup> *Id.* at 141.

<sup>302</sup> Trumbo, Tr. at 143.

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

<sup>304</sup> *Id.*

<sup>305</sup> *Id.* at 143-44.

<sup>306</sup> *Id.* at 144.

<sup>307</sup> *Id.* at 145.

<sup>308</sup> P. Tice, Tr. at 146.

<sup>309</sup> *Id.*

<sup>310</sup> *Id.* at 146-47.

<sup>311</sup> *Id.* at 147.

**Kim Tice**, of Warrenton, Virginia, cited to the 2014 DEQ Report and focused on the loss of mature trees for the proposed Option A routes.<sup>312</sup> Ms. Tice contended that mature trees absorb and funnel water into the Fauquier system.<sup>313</sup> Ms. Tice asserted that clear-cutting large mature trees would cause water runoff and increase costs for Fauquier County residents due to increases in monitoring to understand the new absorption pattern.<sup>314</sup> Ms. Tice maintained that the loss of mature trees would reduce natural filtration, and also increase costs for additional monitoring of water contamination.<sup>315</sup> In addition, Ms. Tice testified that the loss of mature trees will drastically alter the wildlife ecosystem.<sup>316</sup> Finally, Ms. Tice took the position that the loss of mature trees will put residents of Brookside in noncompliance with zoning codes that require a certain percentage of tree save areas.<sup>317</sup>

**Mother Eirene** of Warrenton, Virginia, testified on behalf of the Hermitage of St. Mary Magdalene, Holy Wisdom Orthodox Church, and Paws Awhile Pet Motel.<sup>318</sup> Mother Eirene stated that based on the Hearing Examiner's Ruling dated October 1, 2014, that denied publishing notice for the Option A routes, Paws Awhile has borrowed several hundred thousand dollars to complete renovations and has begun the process of putting the property in a conservation easement.<sup>319</sup> Mother Eirene reported that since the April 9<sup>th</sup> Ruling that directed notice for the Option A routes, "98 percent of our clients who have come in to drop off their pets have stated in writing that having these high-power transmission lines anywhere in the vicinity of Paws Awhile would affect their continued patronage."<sup>320</sup> Mother Eirene expressed fear that a transmission line built along the Option A routes would put Paws Awhile out of business, which would eliminate the sole source of income for the convent and the primary source of income for the parish.<sup>321</sup> Mother Eirene asserted that "this is not a question of just aesthetic or property value but rather our livelihood and survival."<sup>322</sup>

**Carolyn Fagnani** of Nokesville, Virginia, stated that Option A threatens her business, as it would remove a tree buffer required by a special use permit.<sup>323</sup> Ms. Fagnani also pointed out that the trees to be removed from her property are mature trees located in a wetland.<sup>324</sup> Ms. Fagnani expressed a sincere fear of living near a transmission line that will cross in front and down the side of her house.<sup>325</sup>

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<sup>312</sup> K. Tice, Tr. at 148-49.

<sup>313</sup> *Id.* at 149.

<sup>314</sup> *Id.* at 149-50.

<sup>315</sup> *Id.* at 150.

<sup>316</sup> *Id.* at 150-51.

<sup>317</sup> *Id.* at 151.

<sup>318</sup> Eirene, Tr. at 152.

<sup>319</sup> *Id.* at 152-53.

<sup>320</sup> *Id.* at 153.

<sup>321</sup> *Id.* at 153-54.

<sup>322</sup> *Id.* at 155.

<sup>323</sup> C. Fagnani, Tr. at 155-56.

<sup>324</sup> *Id.* at 156.

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

**Daniel Heller** of Warrenton, Virginia, stated that he is a Brookside resident and the father of two girls.<sup>326</sup> Mr. Heller asserted that his neighbors and the Brookside development are good stewards of the environment and would be devastated by the proposed transmission lines.<sup>327</sup> Mr. Heller testified that he was “terrified of the proposition of this, not just for the environment but, more importantly, for the safety and health of my children and my wife, who already suffer . . . health issues and autoimmune diseases.”<sup>328</sup> Mr. Heller maintained that many studies have shown living next to high-voltage power lines increases the risk of cancer.<sup>329</sup> Mr. Heller also expressed concern that the proposed transmission lines would destroy property values, threaten schools, and threaten water supplies. Mr. Heller advised that he is a physician who has done some research on this issue, and reported that “[t]he National Institute of Environmental Health Sciences after an exhaustive review concluded that extremely low-frequency electromagnetic field exposure cannot be recognized as entirely safe because of weak scientific evidence that exposure may pose a leukemia hazard.”<sup>330</sup>

**Juan Archilla** advised that he was a resident of Brookside and that his home is next to the proposed Option A-2/3 route.<sup>331</sup> Mr. Archilla opposed both Option A routes and asserted that Option A has the most negative overall environmental impact and does not reasonably minimize impact on scenic assets, historic districts, and the environment.<sup>332</sup> Mr. Archilla highlighted the wetlands and streams of Brookside, including four lakes, several ponds, streams, and Virginia’s largest privately owned wetlands.<sup>333</sup> Mr. Archilla stated that he chose his lot “to be adjacent to the natural beauty of the protected forested wetland areas that includes the Kettle Run stream that is now threatened beyond repair by Option A-2/3.”<sup>334</sup> Mr. Archilla contended that Option A-2/3 is an environmentally unreasonable route because it runs directly along Kettle Run for half a mile.<sup>335</sup> Mr. Archilla argued that it is more costly to construct transmission structures in wetlands and the two Option A routes have more wetlands than any of the other routes.<sup>336</sup>

**Andrew Wack** of Nokesville, Virginia, accused Dominion Virginia Power of changing the basis for this Project from reliability, to engineering, to cost, to constraints and impacts, to regulatory authorities and energy exchange markets.<sup>337</sup> Mr. Wack maintained that the CAG was an extra legal process put together by the Company.<sup>338</sup> Mr. Wack expressed concern for

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<sup>326</sup> Heller, Tr. at 157.

<sup>327</sup> *Id.* at 157-58.

<sup>328</sup> *Id.* at 158.

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

<sup>330</sup> *Id.* at 160-61.

<sup>331</sup> Archilla, Tr. at 162.

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

<sup>333</sup> *Id.* at 162-63.

<sup>334</sup> *Id.* at 163.

<sup>335</sup> *Id.* at 164.

<sup>336</sup> *Id.* at 165.

<sup>337</sup> Wack, Tr. at 166-68.

<sup>338</sup> *Id.* at 168-69.

Dominion Virginia Power's manipulation of the CAG.<sup>339</sup> Mr. Wack recommended that the Commission disregard any CAG endorsement, as the CAG did not have any disinterested parties, such as Staff.<sup>340</sup> Mr. Wack opposed Option C-1.1c and supported Staff's recommendations.<sup>341</sup>

**Kevin Madden** of Warrenton, Virginia, advised that he lived in Brookside, along Milepost 5.3 to 5.8, along a stream that feeds into Kettle Run.<sup>342</sup> Mr. Madden maintained that due to the narrowness of these wetlands, Dominion Virginia Power would need to clear-cut all of the forested land.<sup>343</sup> Mr. Madden reported that the Prince William County Department of Public Works Environmental Services advocates for Option B, and if not Option B, then Option C.<sup>344</sup> Mr. Madden stated that the reason Option A is opposed is that its impact is too adverse.<sup>345</sup> Mr. Madden questioned whether Dominion Virginia Power was aware of the stream to be followed by the proposed transmission line.<sup>346</sup> Mr. Madden contended that many birds and wildlife have been observed in this wetland including a red-shouldered hawk, and an eagle.<sup>347</sup>

**Frank Grimes** of Nokesville, Virginia, testified that he has been a resident of Prince William County for 47 years, and currently lives on land on which he hunted and camped as a young boy.<sup>348</sup> Mr. Grimes stated that he designed and built his home "with my own two hands."<sup>349</sup> Mr. Grimes expressed concern about legal retaliation and physical intimidation.<sup>350</sup> Mr. Grimes asserted that the process "smells bad and feels slimy."<sup>351</sup> Mr. Grimes accused the Company of "ruining the landscape and countryside all in the name of money, regardless of the label, reliability, redundancy, safety, system load, *et cetera*."<sup>352</sup> Mr. Grimes cited to a report by the Edison Electric Institute, titled "Disruptive Challenges," and questioned the accuracy of future needs due to future distributed solar energy.<sup>353</sup>

**Scott Russell** of Warrenton, Virginia, confirmed that he is a member of the Brookside community and opposed to Option A.<sup>354</sup> Mr. Russell based his opposition on the impact of the transmission lines on the undisturbed wetlands under the care of the Army Corps of Engineers.<sup>355</sup> Mr. Russell stated that the Company would be required to clear-cut a wetland more than a half-

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<sup>339</sup> *Id.* at 169.

<sup>340</sup> *Id.* at 170.

<sup>341</sup> *Id.* at 171.

<sup>342</sup> Madden, Tr. at 172.

<sup>343</sup> *Id.* at 173.

<sup>344</sup> *Id.*

<sup>345</sup> *Id.* at 174.

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

<sup>347</sup> *Id.*

<sup>348</sup> Grimes, Tr. at 176.

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

<sup>350</sup> *Id.*

<sup>351</sup> *Id.* at 177.

<sup>352</sup> *Id.*

<sup>353</sup> *Id.* at 177-78.

<sup>354</sup> Russell, Tr. at 179.

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

mile long that is covered with trees that average 60 feet in height.<sup>356</sup> Mr. Russell advised that these large trees are also located within a tree save conservation area, required by Fauquier County.<sup>357</sup>

**Suzanne Sloane** of Pebble Run Road in Brookside stated that she has two children in the school system and expressed concern about the transmission lines running through the Brookside community and near the schools.<sup>358</sup> Ms. Sloane questioned the accuracy of the routing maps, which she updated to reflect the location of additional homes.<sup>359</sup> Ms. Sloane reported that Option A-2/3 is within 0 to 100 feet of 15 lots; within 200 feet of 31 lots, 15 existing; and within 500 feet of 46 lots, 26 existing, that are not shown on the routing maps.<sup>360</sup> Similarly, the Option A-2/3 Staff route is within 0 to 100 feet of 11 lots; within 200 feet of 18 lots, 2 existing; and within 500 feet of 32 lots, 12 existing, that are not shown on the routing maps.<sup>361</sup>

**John Tracy Sloane** of Pebble Run Road testified that he walked the Option A line, starting within 200 feet of Auburn Middle School, through wetlands, through the community, through more wetlands, across Rogues Road, through more wetlands, across the community's wells, and through a school zone.<sup>362</sup> Based on his walk, Mr. Sloane asserted that Option A was not a viable solution.<sup>363</sup> Mr. Sloane then walked Option C and contended that Morris Farms subdivision already has transmission lines running through the community and the Option C route "would be some 700 yards away from the very last home in the Morris Farms subdivision."<sup>364</sup> Mr. Sloane strongly opposed Option A.<sup>365</sup>

**Jason Kane** of Warrenton, Virginia, stated that he is a resident of Brookside, a federal government employee, and a "previous military proud person who always tries to do the right thing by his neighbor."<sup>366</sup> Mr. Kane expressed confusion and irritation regarding Option A being a viable option.<sup>367</sup> While Mr. Kane found that it may be true that Option A is electrically superior and less costly, he could find no evidence that Option A is constructible or reasonably minimizes adverse impacts.<sup>368</sup> Mr. Kane cited to statements by Dominion Virginia Power that Option A-2/3 Staff could take 8 to 20 months longer to construct and would not be in service in time to resolve the Gainesville NERC violation.<sup>369</sup> Mr. Kane testified that "what is actually quite

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<sup>356</sup> *Id.* at 180.

<sup>357</sup> *Id.*

<sup>358</sup> S. Sloane, Tr. at 182.

<sup>359</sup> *Id.* at 182-83.

<sup>360</sup> *Id.* at 183.

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

<sup>362</sup> J. Sloane, Tr. at 185-86.

<sup>363</sup> *Id.* at 186.

<sup>364</sup> *Id.* at 186-87.

<sup>365</sup> *Id.* at 187.

<sup>366</sup> Kane, Tr. at 188.

<sup>367</sup> *Id.* at 189.

<sup>368</sup> *Id.* at 189-90.

<sup>369</sup> *Id.* at 191.

appalling is there's no mention of the general public, to include the community for which all of my residents have sat here and said will significantly impact them."<sup>370</sup>

**Deborah Cruger** of Warrenton, Virginia, confirmed that she was a resident of Brookside and a mother of three young children.<sup>371</sup> Ms. Cruger opposed Option A and expressed concern regarding EMF and any possibility that it is linked to cancer and childhood leukemia.<sup>372</sup> Ms. Cruger pointed to the World Health Organization EMF project and asserted that "[n]umerous studies time and time again conclude children are most vulnerable, particularly to leukemia."<sup>373</sup> Ms. Cruger testified that as a cancer patient herself, "doctors have advised that exposing myself to these power lines is not an option for me due to the extreme treatments I have already endured."<sup>374</sup>

## Second DEQ Report

On June 18, 2015, DEQ filed its Second Report, in which it included consideration of Staff's Supplemental Alternatives.<sup>375</sup> DEQ advised that the proposed transmission line would likely require the following permits and approvals:<sup>376</sup>

### 1. Water Permits:

- a. Section 404 permit (e.g. Nationwide Permit 12, if appropriate). Required pursuant to the federal Clean Water Act and issued by the U.S. Army Corps of Engineers for impacts to jurisdictional wetlands and/or waters of the United States.
- b. Virginia Water Protection Permit (9 VAC 25-210 *et seq.*) issued by DEQ for impacts to waters and jurisdictional wetlands, including isolated wetlands.

### 2. Subaqueous Lands Management:

Subaqueous Lands Permit pursuant to § 28.2-1204 of the Code. Issued by the Virginia MRC for encroachments in, on or over state-owned subaqueous beds.

### 3. Chesapeake Bay Preservation Act Compliance:

The conditions set out in 9 VAC 25-830-150.B apply to the exemption of transmission lines.

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<sup>370</sup> *Id.* at 192.

<sup>371</sup> Cruger, Tr. at 194.

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

<sup>373</sup> *Id.* at 195.

<sup>374</sup> *Id.*

<sup>375</sup> Exhibit No. 40.

<sup>376</sup> *Id.* at 3-5.



4. Erosion and Sediment Control, and Stormwater Management Plans:

- a. General erosion and sediment control specifications pursuant to § 62.1-44.15:55 of the Code. General erosion and sediment control specifications are subject to annual approval by DEQ.
- b. Erosion and Sediment Control Plans for construction of facilities not covered under § 62.1-44.15:55 of the Code that are subject to approval by the appropriate plan approving authority.

5. Stormwater Management Permit:

Virginia Stormwater Management Program (“VSMP”) General Permit for Discharges of Stormwater from Construction Activities (9 VAC 25-880-70 *et seq.*) of the Virginia Stormwater Management Program Permit Regulations (9 VAC 25-870 *et seq.*) involving land disturbance of one acre or more. Coverage under this general permit is approved by DEQ.

6. Air Quality Permits or Approvals:

- a. Open Burning Permit (9 VAC 5-130 *et seq.*). For open burning involving demolition debris.
- b. Fugitive dust emissions (9 VAC 5-50-60 *et seq.*). Governs abatement of visible emissions.
- c. Fuel-burning equipment (9 VAC 5-80, Article 6, Permits for New and Modified Sources) governs the installation of fuel-burning equipment (boilers, generators, compressors, etc.) or any other air pollution emitting equipment.

7. Solid and Hazardous Waste Management:

- a. Applicable state laws and regulations include:
  - Virginia Waste Management Act (§ 10.1-1400 *et seq.* of the Code);
  - Virginia Hazardous Waste Management Regulations (9 VAC 20-60);
  - Virginia Solid Waste Management Regulations (9 VAC 20-81); and
  - Virginia Regulations for the Transportation of Hazardous Materials (9 VAC 20-110).
- b. Applicable Federal laws and regulations include:
  - Resource Conservation and Recovery Act – 42 U.S.C. § 6901 *et seq.*, and the applicable regulations contained in Title 40 of the Code of Federal Regulations; and
  - U.S. Department of Transportation Rules for Transportation of Hazardous Materials (49 CFR Part 107).

8. Open-Space Land Act:

Section 10.1-1704 of the Code requires that land designated as open space shall not be converted or diverted from open-space land use unless the public body that designated the land as open-space finds that the conversion or diversion meets several criteria.

9. Historic and Archaeological Resources:

Section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulation (36 CFR 800) requires that federally licensed and permitted projects consider its effects on properties that are listed or eligible for listing on the National Register of Historic Places. Section 106 applies if there is federal involvement such as the issuance of a Section 404 Clean Water Act permit, including Nationwide Permits. The applicability of Section 106 to the entire project or any portion thereof must be determined by the responsible federal agency.

10. VDOT Right-of-Way Permit:

The General Rules and Regulation of the Commonwealth Transportation Board (24 VAC 30-151) are adopted pursuant to the authority of § 33.1-12 of the Code. These rules and regulations provide that no work of any nature shall be performed on any real property under the ownership, control or jurisdiction of VDOT until written permission has been obtained from VDOT.

11. Commission Consideration of Local Comprehensive Plans

Section 56-46.1 A states, "In every proceeding under this subsection, the Commission shall receive and give consideration to all reports that relate to the proposed facility by state agencies concerned with environmental protection; and if requested by any county or municipality in which the facility is proposed to be built, to local comprehensive plans that have been adopted pursuant to Article 3 (§ 15.2-2223 *et seq.*) of Chapter 22 of Title 15.2."

In regard to the overall route recommendations, DEQ recommended selection of C-1.1 (proposed route) or C-1.2 (alternative route) because they have the least potential impacts to wetlands.<sup>377</sup> DGIF recommended "choosing the alternative that results in the fewest impacts upon interior forest, wetlands, streams and other natural resources as well as co-locating the line within already-disturbed corridors."<sup>378</sup> DOF recommended the selection of Route A-5 underground due to the impact on forest resources.<sup>379</sup> DHR recommended Option C-1.1c, but "Option B sufficiently minimizes impacts to recorded significant historic resources."<sup>380</sup>

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

<sup>378</sup> *Id.*

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

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

Furthermore, DHR stated “that Options A-2/3 and A-2/3 Staff appear to have the most overall potential for negative impact to recorded historic resources and does not recommend their selection.”<sup>381</sup> In the First DEQ Report, Prince William County supported Option B, but supported either routes C-1.1 or C-1.2 if Option C is selected.<sup>382</sup>

DEQ provided the following summary of other recommendations:

- Conduct an on-site delineation of all 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 avoid and minimize impacts to wetlands and streams.<sup>383</sup>
- 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.<sup>384</sup>
- Coordinate with DCR’s Division of Natural Heritage regarding its recommendations to protect natural heritage resources as well as for updates to the Biotics Data System database if a significant amount of time passes before the project is implemented.<sup>385</sup>
- Coordinate with DGIF regarding its recommendations to protect wildlife resources.<sup>386</sup>
- Coordinate with the VOF regarding its recommendation for additional consultation as necessary.<sup>387</sup>
- Coordinate with DOF regarding its recommendation to protect forested resources.<sup>388</sup>
- Coordinate with DHR regarding its recommendations to protect historic and archaeological resources.<sup>389</sup>
- Contact VDOT regarding its recommendation to coordinate with VDOT districts.<sup>390</sup>
- Follow the principles and practices of pollution prevention to the maximum extent practicable.<sup>391</sup>

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

<sup>382</sup> Exhibit No. 39, at 7.

<sup>383</sup> Exhibit No. 40, at 6, 9-11.

<sup>384</sup> *Id.* at 6, 16.

<sup>385</sup> *Id.* at 6, 19.

<sup>386</sup> *Id.* at 6, 20-21.

<sup>387</sup> *Id.* at 6, 21.

<sup>388</sup> *Id.* at 7, 22.

<sup>389</sup> *Id.* at 7, 26-27.

<sup>390</sup> *Id.* at 7, 28.

<sup>391</sup> *Id.* at 7, 29-30.

- Limit the use of pesticides and herbicides to the extent practicable.<sup>392</sup>
- Coordinate with Prince William County regarding its recommendations.<sup>393</sup> Attached to the Second DEQ Report is a letter dated June 5, 2015, from Prince William County in which the county staff members state that “we would like our comments outlined in our letter dated June 4, 2014 to remain under consideration.”<sup>394</sup> Prince William County’s recommendations listed in the First DEQ Report include recommendations concerning archaeological surveys and reports, GIS landscape analysis, minimization of temporary construction impacts, keeping transmission lines out of planned road rights-of-way in the Comprehensive Plan Thoroughfare Plan, and restoration of any damaged trails.<sup>395</sup>

### Schools’ Direct Testimony

On June 19, 2015, Schools filed the direct testimony of Maureen Riordan, a trial lawyer for the United States Department of Justice, and school board member; and Gregory Livesay, director of facilities for Schools. A summary of the testimony of each witness is provided below.

**Maureen Riordan** stated that she is a resident of the Brookside subdivision, which will be impacted by Staff’s Supplemental Alternatives.<sup>396</sup> Ms. Riordan advised that both of Staff’s Supplemental Alternatives will pass within a few hundred feet of Auburn Middle School.<sup>397</sup> Ms. Riordan confirmed that Route A-2/3 will cross along the front and over the only entrance and exit for Kettle Run High School and Greenville Elementary School campuses.<sup>398</sup> Ms. Riordan affirmed that there are approximately 1,200 Kettle Run High School students and 600 Greenville Elementary School students that create significant congestion every morning with cars turning right from Rogues Road onto Academic Avenue.<sup>399</sup> Ms. Riordan maintained that the Schools have been considering a right turn lane on Rogues Road, but the turning lane will be within the right-of-way for Route A-2/3.<sup>400</sup>

Ms. Riordan testified that Route A-2/3 Staff will go behind Kettle Run High School and Greenville Elementary School and cross through a property off Ringwood Road.<sup>401</sup> Ms. Riordan stated that the developers of the Ringwood Road property have discussed the construction of additional entrances and exits for the schools if the property is developed.<sup>402</sup> Ms. Riordan maintained that such discussions will likely terminate if Route A-2/3 Staff is constructed.<sup>403</sup>

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<sup>392</sup> *Id.* at 7, 30.

<sup>393</sup> *Id.* at 7, 30-31.

<sup>394</sup> Exhibit No. 40, Attachment.

<sup>395</sup> Exhibit No. 39 at 35-36.

<sup>396</sup> Exhibit No. 25, at 3.

<sup>397</sup> *Id.* at 4-5.

<sup>398</sup> *Id.* at 4.

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

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

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

<sup>402</sup> *Id.* at 4-5.

<sup>403</sup> *Id.* at 5.

Ms. Riordan expressed concern for the impact on the students that will be spending significant amounts of time next to the transmission lines.<sup>404</sup> Ms. Riordan pointed out that the students that attend these schools also live in neighborhoods that will be impacted by the proposed transmission line, thus these students “will be surrounded by these power lines at home and at school.”<sup>405</sup>

Ms. Riordan contended that Staff’s Supplemental Alternatives will greatly impact many areas of Fauquier County.<sup>406</sup> Among other things, Ms. Riordan maintained that these routes will: (i) result in the purchase or condemnation of private homes, (ii) cross historical properties and conservation easements, and (iii) threaten the water supply for approximately 2,800 residents.<sup>407</sup> Ms. Riordan stated that Route C-1.1c connects two existing power lines, does not impact schools, water wells and storage, and does not enter any existing neighborhoods.<sup>408</sup> In addition, Ms. Riordan advised that Prince William County has agreed to sell a right-of-way across a proposed, but nonexistent park.<sup>409</sup>

Ms. Riordan affirmed that on June 8, 2015, the Schools adopted a resolution opposing Staff’s Supplemental Alternatives.<sup>410</sup> Furthermore, Ms. Riordan advised that the Schools would not support the acquisition of its property for Route A-2/3.

**Gregory Livesay** confirmed that Route A-2/3 crosses Schools’ property near Kettle Run High School and Greenville Elementary School, and Route A-2/3 Staff crosses property immediately adjacent to Kettle Run High School and Greenville Elementary School “where we have not only athletic fields, but easement agreements with the [Authority] for water mains, sanitary force mains and supply/monitoring wells on [Schools] Property.”<sup>411</sup> Mr. Livesay expressed concern that Route A-2/3 Staff may impact or damage wetlands and the aquifer that supplies water to the schools.<sup>412</sup>

Mr. Livesay testified of his experience at an elementary school in Bealeton, Virginia, located a quarter of a mile from a transmission line.<sup>413</sup> Mr. Livesay stated that “[v]alid or not, the division still receives occasional inquiries from the parent community and staff as to the health effects from electromagnetic fields (“EMFs”) given the proximity of the transmission lines to the school.”<sup>414</sup> Mr. Livesay also expressed concern for the impact of the actual

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

<sup>405</sup> *Id.* at 6.

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

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

<sup>408</sup> *Id.* at 7.

<sup>409</sup> *Id.*

<sup>410</sup> *Id.* at Attached Exhibit B.

<sup>411</sup> Exhibit No. 26, at 3.

<sup>412</sup> *Id.* at 4.

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

<sup>414</sup> *Id.* at 4-5.

construction of the transmission lines on the traffic flows in and around Kettle Run High School and Greenville Elementary School.<sup>415</sup>

### **Brookside's Direct Testimony**

On June 24, 2015, Brookside filed the direct testimony of Edward R. Moore, III, president of the Brookside entities;<sup>416</sup> Mark Headly, environmental scientist and operations manager at Wetland Studies and Solutions, Inc. ("WSSI"); and Edward Barry Wright, Jr., real estate appraiser and broker.<sup>417</sup> A summary of the testimony of each witness is provided below.

**Edward R. Moore, III**, described the Brookside property and the impact Staff's Supplemental Alternatives will have on Brookside.<sup>418</sup> Mr. Moore advised that of the twenty-two Brookside entities involved with development in Fauquier County, ten are directly impacted by Staff's Supplemental Alternatives.<sup>419</sup> Mr. Moore outlined examples of developments or planned developments where the number of lots impacted make development impractical.<sup>420</sup> These examples included three parcels just past mile marker 3.8, which are in the process of being subdivided into eleven lots.<sup>421</sup> Mr. Moore reported that the proposed Option A route crosses four of the planned building lots and two large parcels that will become open space conservation easements.<sup>422</sup>

As for the Brookside Community, Mr. Moore confirmed that Route A-2/3 will pass directly through nine fully developed building lots that are under contract for sale.<sup>423</sup> Mr. Moore stated that this route crosses wetlands in the Brookside Community that are subject to an Army Corp. of Engineers Wetland Easement.<sup>424</sup> In addition, Mr. Moore testified that the Brookside Declaration of Covenants establishes tree preservation areas, a number of which are crossed by the proposed transmission line.<sup>425</sup> Mr. Moore affirmed that the Amended and Restated Declaration of Covenants, Conditions Restrictions, and Reservation of Easements for Brookside prohibit the installation of above ground poles, wires and conduits for the transmission of electricity and telephone messages.<sup>426</sup> Mr. Moore argued that "[t]hese conditions and restrictions provide benefit to all of the approximately 750 existing homes in Brookside, the violation of which would damage the value of all of those homes."<sup>427</sup>

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<sup>415</sup> *Id.* at 5.

<sup>416</sup> The Brookside entities consist of twenty-two single purpose LLCs and corporations involved with the development of over 2,300 acres in Fauquier County. Exhibit No. 38, at 3.

<sup>417</sup> Messrs. Headly and Wright were co-sponsored by Brookside and Neighbors.

<sup>418</sup> Exhibit No. 38, at 3.

<sup>419</sup> *Id.* at 4.

<sup>420</sup> *Id.* at 5.

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

<sup>422</sup> *Id.*

<sup>423</sup> *Id.* at 6.

<sup>424</sup> *Id.* at 6-7.

<sup>425</sup> *Id.* at 7.

<sup>426</sup> *Id.* at 7-8.

<sup>427</sup> *Id.* at 8.

In regard to Route A-2/3 Staff, Mr. Moore maintained that this route goes directly over nine lots and completely devalues four more lots.<sup>428</sup>

Mr. Moore advised that Route A-2/3 Staff will directly impact Ringwood Farm, LLC, (“Ringwood”) which has been in the planning and approval stages for over 18 months.<sup>429</sup> At Ringwood, the proposed transmission line would pass directly over 15 of the 43 lots, and would destroy the viability of the entire subdivision.<sup>430</sup>

Mr. Moore contended that Staff failed to take into consideration the increased cost and increased timing associated with Route A-2/3 Staff.<sup>431</sup> In support, Mr. Moore pointed to a discovery response from Dominion Virginia Power that stated that its estimated costs are average costs.<sup>432</sup> Based on the testimony of Brookside witnesses Headly and Wright, Mr. Moore maintained that the cost of the Option A routes would be higher than average.<sup>433</sup>

Mr. Moore recommended that “the Commission . . . reject the Staff Supplemental [Alternatives] based on their much greater environmental impact and greater costs as compared to Route C-1.1c, [Dominion Virginia Power’s] preferred route.”<sup>434</sup>

**Mark Headly** addressed the environmental impacts of Staff’s Supplemental Alternatives (*i.e.*, Route A-2/3 and Route A-2/3 Staff) and Route C-1.1c.<sup>435</sup> Among other things, Mr. Headly prepared a table that compares the impacts of the routes to each other and to Staff’s report and tables.<sup>436</sup>

Mr. Headly concluded that Staff underestimated the negative impact of Route A-2/3 Staff and overestimated the negative impact of Route C-1.1c.<sup>437</sup> Mr. Headly faulted Staff witness McCoy for including the impacts of the 2.3 miles of Route C-1.1c that are located within an existing utility corridor.<sup>438</sup> As for forested land crossed, Mr. Headly found that Route A-2/3 Staff would impact 90.3 acres or 7.4 miles of forested land as compared to 21.7 acres or 1.5 miles of forested land impacted by Route C-1.1c.<sup>439</sup> Mr. Headly maintained that Staff witness McCoy made a comparison of only portions of routes with totals for the entire routes and reported that Route A-2/3 Staff impacted only 45.8 acres or 4.3 miles of forested land.<sup>440</sup> In

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

<sup>429</sup> *Id.* at 9.

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

<sup>431</sup> *Id.* at 10.

<sup>432</sup> *Id.* at 11.

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

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

<sup>435</sup> Exhibit No. 42, at 2-3.

<sup>436</sup> *Id.* at 3.

<sup>437</sup> *Id.* at 4.

<sup>438</sup> *Id.*

<sup>439</sup> *Id.* at 5.

<sup>440</sup> *Id.*

addition, Mr. Headly pointed to the nature of the forested areas impacted and testified that the habitat for Forest Interior Dwelling (“FID”) species, is defined as areas at least 50 acres in size and at least 300 feet from a forest edge.<sup>441</sup> Mr. Headly reported that the impacted FID species habitat along Route A-2/3 Staff was 34.2 acres or 2.8 miles, compared to 3.7 acres or 0.3 miles impacted by Route C-1.1c.<sup>442</sup>

Mr. Headly disagreed with Staff witness McCoy’s claim that Route A-2/3 Staff has 0.3 more miles of wetlands, but impacts 1.4 fewer acres of wetlands.<sup>443</sup> Based on a 100 foot right-of-way, Mr. Headly contended that Route A-2/3 Staff has approximately 5.15 acres within the right-of-way, including 3.6 acres of forested wetlands (that will be cleared and not allowed to grow back), compared to 3.8 acres of wetlands within the Route C-1.1c right-of-way, with no forested wetlands.<sup>444</sup> Furthermore, Mr. Headly maintained that Route A-2/3 Staff had a greater impact on streams based on length (0.73 mile versus 0.17 mile for Route C-1.1c) and based on longitudinal crossings as opposed to perpendicular crossings.<sup>445</sup>

Mr. Headly disagreed with Staff witness McCoy’s report that no Sensitive Species and Habitat is known to be affected by Route A-2/3 Staff.<sup>446</sup> Mr. Headly pointed out that on May 4, 2015, the U.S. Fish and Wildlife Services listed the Northern Long Eared bat as a federally threatened species, which is more likely to be impacted by Route A-2/3 Staff due to its disturbing a larger area of forested land (90.3 acres versus 21.7).<sup>447</sup>

Mr. Headly advised that Route A-2/3 Staff impacts more homes, with the number of homes impacted increasing with distance.<sup>448</sup> Mr. Headly reported the number of homes impacted as follows: (i) within 60 feet of the right-of-way edge, Route A-2/3 Staff had 4 houses, Route C-1.1c had none; (ii) within 200 feet of the right-of-way centerline, Route A-2/3 Staff had 19 houses, Route C-1.1c had 8 houses; and (iii) within 500 feet of the right-of-way centerline, Route A-2/3 Staff had 150, Route C-1.1c had 31 houses.<sup>449</sup>

Mr. Headly disagreed with Staff witness McCoy’s finding that both routes have equivalent impacts on cultural resources and that the impact of Route A-2/3 Staff on the Auburn/Coffee Hill Historic District/Battlefield should be ignored.<sup>450</sup> Mr. Headly contended that the impacts of Route C-1.1c on the Buckland Mills Battlefield are where the proposed line is co-located within an existing utility corridor.<sup>451</sup> Mr. Headly advised that “[t]he Auburn/Coffee Hill Historic District/Battlefield should not be ignored because every undertaking

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<sup>441</sup> *Id.* at 6.

<sup>442</sup> *Id.*

<sup>443</sup> *Id.* at 6-7.

<sup>444</sup> *Id.* at 7.

<sup>445</sup> *Id.* at 8.

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

<sup>447</sup> *Id.* at 8-9.

<sup>448</sup> *Id.* at 9.

<sup>449</sup> *Id.* at 9-10, 12.

<sup>450</sup> *Id.* at 10.

<sup>451</sup> *Id.* at 10-11.



(project/development) which is subject to Section 106 of the National Historic Preservation Act that has the potential to affect historic properties must be considered.”<sup>452</sup>

Mr. Headly noted that Staff witness McCoy offered no opinion as to the visual screening of the identified homes.<sup>453</sup> Mr. Headly confirmed that WSSI performed a balloon survey and provided photographs as an attached exhibit to his testimony.<sup>454</sup> Mr. Headly stated that the WSSI study transmission towers on Route A-2/3 Staff are visible from observation points up to 1,000 feet from the right-of-way.<sup>455</sup>

Mr. Headly concurred with Dominion Virginia Power and Staff that Route A-2/3 Staff “has far greater adverse environmental impacts than Route C-1.1c.”<sup>456</sup>

**Edward Barry Wright, Jr.**, testified that he has over ten years of experience appraising or evaluating properties affected by power lines or other utility projects.<sup>457</sup> Mr. Wright provided a preliminary estimate of the overall potential cost of acquisition of real estate along Staff’s Supplemental Alternatives and the Company’s proposed Route C-1.1c.<sup>458</sup> Mr. Wright contended that the real estate cost of Route C-1.1c is \$1.35 million, which is significantly below the \$10.5 million cost of Route A-2/3 Staff.<sup>459</sup> Likewise, Mr. Wright maintained that the social and economic cost of Staff’s Supplemental Alternatives “greatly exceed those of Route C-1.1c because it is much longer and affects many more parcels and houses causing greater disruption.”<sup>460</sup> Mr. Wright advised that his analysis focuses on privately held land and does not include the agreement between Dominion Virginia Power and Prince William County for a 2/10<sup>th</sup> of a mile right-of-way across the county-owned and undeveloped Rollins Ford Park.<sup>461</sup> Mr. Wright stated that increasing the right-of-way from 100 feet to 120 feet would increase the cost estimate of Route A-2/3 Staff from \$10.5 million to \$11 million.<sup>462</sup>

Mr. Wright noted that Staff witness McCoy testified that Route C-1.1c had a greater impact on the Rural Crescent than Route A-2/3 Staff, (5.2 miles to 0.5 miles).<sup>463</sup> Mr. Wright pointed out that the Rural Crescent is wholly located within Prince William County, and is not a zoning or restricted area.<sup>464</sup> Mr. Wright asserted that “intrusion into the area known as the

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<sup>452</sup> *Id.* at 11.

<sup>453</sup> *Id.*

<sup>454</sup> *Id.* at 12, Attached Exhibit MH-2.

<sup>455</sup> *Id.* at 12.

<sup>456</sup> *Id.* at 13.

<sup>457</sup> Exhibit No. 44, at 1.

<sup>458</sup> *Id.* at 3-4.

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

<sup>460</sup> *Id.* at 5.

<sup>461</sup> *Id.*

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

<sup>463</sup> *Id.* at 6.

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

“Rural Crescent” that is zoned A-1, (Agricultural) would be less intrusive than to Fauquier’s agriculturally zoned property.”<sup>465</sup>

Mr. Wright disagreed with Staff witness McCoy’s contention that collocation opportunities are minimally different at 0.5 miles longer for Route A-2/3 as compared to Route C-1.1c.<sup>466</sup> Mr. Wright pointed to the existing transmission line along Route C-1.1c, and the input of the Morris Farm homeowner’s association in the alignment of Route C-1.1c, and argued that collocation along Route C-1.1c offers a more optimal solution for minimizing impacts.<sup>467</sup>

Mr. Wright disagreed with Staff witness McCoy’s finding that Route C-1.1c impacts common open space easements, non-common open space easements, and conservation easements in Fauquier County and also impacts open space easements in Prince William County, while Route A-2/3 Staff has none of these impacts.<sup>468</sup> Mr. Wright maintained that the only open space easement affected in Prince William County is the yet undeveloped Rollins Ford Park.<sup>469</sup> In addition, Mr. Wright contended that Route C-1.1c is wholly within Prince William County.<sup>470</sup> Moreover, Mr. Wright pointed out that Route A-2/3 Staff impacts common open space easement in the Brookside and Ringwood developments, non-common open space easements in the Sterling Valley Farm project and along Old Auburn Road.<sup>471</sup>

### **Authority’s Direct Testimony**

On June 24, 2015, the Authority filed the direct testimony of Philip D. Farley, general manager for the Authority; and Mary Sherrill, director of engineering for the Authority. A summary of the testimony of each witness is provided below.

**Philip D. Farley** stated that Staff’s Supplemental Alternatives would be built either in or immediately adjacent to several of the Authority’s existing utility easements, water lines and facilities, notably the Rogues Road Water Storage Tank, a communications tower, a public supply well, and two monitoring well lots.<sup>472</sup> Mr. Farley described the Authority as an independent political subdivision of the Commonwealth, pursuant to the Virginia Water and Waste Authorities Act,<sup>473</sup> established to provide utility service throughout Fauquier County.<sup>474</sup> Mr. Farley confirmed that the Authority serves approximately 6,091 water service accounts and 4,069 sewer service accounts.<sup>475</sup> Mr. Farley noted that the water supplied to customers in the New Baltimore Service District is comprised entirely of groundwater extracted from surface

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

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

<sup>467</sup> *Id.*

<sup>468</sup> *Id.* at 7-8.

<sup>469</sup> *Id.* at 8.

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

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

<sup>472</sup> Exhibit No. 36, at 2.

<sup>473</sup> Section 15.2-5100 *et seq.* of the Code.

<sup>474</sup> Exhibit No. 36, at 3.

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

wells.<sup>476</sup> Mr. Farley expressed concern regarding any disturbance of the subsurface rock in order to install the foundations for the transmission line.<sup>477</sup> Mr. Farley testified that construction of the transmission line could interfere with the Authority's ability to provide water to existing customers.<sup>478</sup>

**Mary Sherrill** outlined the impacts of constructing the proposed transmission line along either Route A-2/3 or Route A-2/3 Staff.<sup>479</sup> For Route A-2/3, Ms. Sherrill stated that the line will run along Rogues Road and require the relocation of water and sewer lines.<sup>480</sup> Ms. Sherrill confirmed that the transmission right-of-way will partially overlay the existing Rogues Road storage tank and pump station and cause the loss of space for planned future treatment facilities.<sup>481</sup>

For Route A-2/3 Staff, Ms. Sherrill asserted that significant foundation construction for an angle transmission structure will be required in the vicinity of one of the Authority's main supply wells, designated as H-1, for the New Baltimore Service District's 2800 residents.<sup>482</sup> Ms. Sherrill advised that this supply well "may be particularly sensitive to contamination from surface waters because of shallow fractured bedrock and proximity to the floodplain."<sup>483</sup> Ms. Sherrill pointed to a nearby well that has bacteriological contamination due contaminated surface water traveling through near surface fractures that are connected with subsurface fractures, and into ground water in the wells.<sup>484</sup> Ms. Sherrill asserted that transmission tower foundation construction near the Authority's H-1 well will encounter shallow bedrock that will likely require a combination of pounding, drilling, or blasting.<sup>485</sup> Ms. Sherrill testified that such activity would lead either to damage to the well structure itself, or open up new fractures in the subsurface.<sup>486</sup> Ms. Sherrill pointed out that the Authority lost two wells to E. coli contamination following the 2011 Earthquake centered in Louisa County, Virginia.<sup>487</sup> Ms. Sherrill stated that the loss of the H-1 well would create a major shortfall in water supply for four years, which is the time to construct such a treatment facility.<sup>488</sup>

### **Neighbors' Direct Testimony**

On June 24, 2015, Neighbors filed the direct testimony of Roy O. Beckner, Jr., director for business development for S.W. Rodgers, Co. Inc.; Paul Kurtis Rodgers, president and CEO of

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<sup>476</sup> *Id.* at 4.

<sup>477</sup> *Id.*

<sup>478</sup> *Id.* at 5.

<sup>479</sup> Exhibit No. 37, at 2.

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

<sup>481</sup> *Id.*

<sup>482</sup> *Id.* at 3.

<sup>483</sup> *Id.*

<sup>484</sup> *Id.* at 3-4.

<sup>485</sup> *Id.* at 4-5.

<sup>486</sup> *Id.* at 5.

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

<sup>488</sup> *Id.* at 6.

S.W. Rodgers, Co.; Mother Eirene, nun and co-owner of All God's Creatures Pet Center, LLC, d/b/a Paws Awhile Pet Motel; Robert Poe, a farmer; and Diana McDaniel Hardy, a writer. A summary of the testimony of each witness is provided below.

**Roy O. Beckner, Jr.**, stated that he was a member of the CAG and coordinated the formation of Neighbors after the April 9<sup>th</sup> Ruling called for notice of Staff's Supplemental Alternatives.<sup>489</sup> Mr. Beckner described Neighbors as the property owners most impacted by Staff's Supplemental Alternatives.<sup>490</sup> Mr. Beckner identified parcels owned by members of Neighbors on routing maps provided as Exhibit ROB-4 to his testimony.<sup>491</sup>

Mr. Beckner confirmed that he represented the Prince William County Chamber of Commerce as a member of the CAG.<sup>492</sup> Mr. Beckner agreed with Dominion Virginia Power's decision to take Option A routes out of consideration based on "costs, viewshed and visibility, environmental conservation, preservation and open space easements, historic landmarks and battlefields, public and government-owned lands and facilities such as schools, parks, and the like as well as planned and existing and entitled residential and commercial land uses."<sup>493</sup> Mr. Beckner recognized that Route A-2/3 Staff avoids some of the government easements, but asserted that Route A-2/3 Staff creates new difficulties.<sup>494</sup>

Mr. Beckner took issue with Staff witness McCoy's testimony that Route A-2/3 Staff has less impact within the Rural Crescent area than Option C-1.1c.<sup>495</sup> Mr. Beckner asserted that all that Mr. McCoy's statement shows is that Route C-1.1c is in Prince William County, where there is a Rural Crescent designation, and Route A-2/3 Staff is in Fauquier County, where there is no Rural Crescent designation.<sup>496</sup> Mr. Beckner also took issue with the apparent weight Mr. McCoy gave to the testimony of Andrew Wack on the bias of the CAG.<sup>497</sup> Mr. Beckner contended that the CAG supported Option C based on the relative impacts.<sup>498</sup> For example, Mr. Beckner referred to the June 2<sup>nd</sup> Route Tour and maintained "along Staff's Supplemental Alternatives we saw houses where the route would literally cross a few feet from front doors, while along Route C-1.1c, we saw the Morris Farm community pool where the route was so far in the distance that tree cover would entirely shield it from view when the pool was being used, and without tree cover the lines would barely be visible above the tree tops."<sup>499</sup>

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<sup>489</sup> Exhibit No. 34, at 3.

<sup>490</sup> *Id.* at 4.

<sup>491</sup> *Id.* at 5-7, Attached Exhibit ROB-4.

<sup>492</sup> *Id.* at 8.

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

<sup>494</sup> *Id.* at 8-9.

<sup>495</sup> *Id.* at 9.

<sup>496</sup> *Id.*

<sup>497</sup> *Id.* at 9-10.

<sup>498</sup> *Id.* at 10.

<sup>499</sup> *Id.* at 10-11.

Mr. Beckner disagreed with Staff's consideration of the benefits and costs of future projects in this proceeding.<sup>500</sup> Mr. Beckner argued that "[t]here is no dispute that [Dominion Virginia Power's] preferred route is the only route that satisfies the need and also reasonably minimizes environmental impacts."<sup>501</sup>

**Paul Kurtis Rodgers** stated that S.W. Rodgers, Co., is a Heavy/Highway Civil Contractor, providing sitework services for commercial, residential, industrial, military and municipal projects throughout Virginia.<sup>502</sup>

Mr. Rodgers testified that Staff's Supplemental Alternatives would impact the contiguous land owned by his family.<sup>503</sup> Mr. Rodgers confirmed that five generations of his family live in Warrenton, and that for the past 25 years they have helped to preserve a picturesque landscape by owning contiguous property comprising almost 900 acres.<sup>504</sup> Mr. Rodgers stated that as stewards of the land, his family members have taken steps to preserve the landscape for generations including: (i) placing 100 acres of Eastwood Farm in Non-Common Open Space Easement, (ii) placing 34 acres of Mr. Rodgers' sister Sarah's land in Non-Common Open Space Easement, and (iii) placing the entire 100 acres of Mr. Rodgers' brother Tom's farm in a County Conservation Easement.<sup>505</sup> Mr. Rodgers advised that after providing for homesites for his children, he intends to place his land in a conservation easement as well.<sup>506</sup> Mr. Rodgers contended that Staff's Supplemental Alternatives will run through the locations he intends to give to his children "so that they may one day build their family homes on this beautiful and serene family compound."<sup>507</sup>

Based on his experience in the construction industry and his comparisons of the terrain for Route A-2/3 Staff and Route C-1.1c, Mr. Rodgers concurred with Company witness Allen that it could take anywhere from 8 to 20 months longer to build Route A-2/3 Staff than Route C-1.1c.<sup>508</sup> More specifically, Mr. Rodgers pointed to the removal of the dense, mature trees and installation of erosion control measures would cause Route A-2/3 Staff to require an additional 8-12 months alone.<sup>509</sup> Mr. Rodgers also asserted that the construction costs of Route A-2/3 Staff would be significantly higher than the construction costs of Route C-1.1c, and estimated these additional costs to be \$4,784,000.<sup>510</sup>

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<sup>500</sup> *Id.* at 11-12.

<sup>501</sup> *Id.* at 12.

<sup>502</sup> Exhibit No. 32, at 1.

<sup>503</sup> *Id.* at 3.

<sup>504</sup> *Id.* at 3-4.

<sup>505</sup> *Id.* at 4.

<sup>506</sup> *Id.*

<sup>507</sup> *Id.* at 5.

<sup>508</sup> *Id.*

<sup>509</sup> *Id.*

<sup>510</sup> *Id.* at 5-6.

**Mother Eirene** testified that Paws Awhile has an active client data base of 8,453 families, and on a typical day, on average, serves over 100 dogs and cats.<sup>511</sup> Mother Eirene confirmed that she was also Abbess of the Hermitage of St. Mary of Magdalene, an Orthodox Christian monastic community that relies solely on the income from Paws Awhile for its financial support.<sup>512</sup> Mother Eirene stated that Paws Awhile employs ten full-time employees, four part-time employees, and six additional full-time employees during the holidays and the summer.<sup>513</sup> Mother Eirene reported gross annual receipts for the prior year of \$877,093.<sup>514</sup>

Mother Eirene advised that under the Staff's Supplemental Alternatives, the transmission line will run on a diagonal across the southwestern corner of the front 10 acres of the property, which will destroy the sound buffer and threaten a White Water Drip septic system.<sup>515</sup> Mother Eirene asserted that the transmission line would be approximately 150 feet from the dog boarding area.<sup>516</sup> Mother Eirene expressed concern that the hum from the lines will make the dogs anxious.<sup>517</sup> In addition, Mother Eirene maintained that 98% of the customers of Paws Awhile since the April 9<sup>th</sup> Ruling have signed a petition stating that the presence of the power lines on the property would prevent their continued patronage.<sup>518</sup> Mother Eirene testified that the loss of customers "would close our business."<sup>519</sup>

Mother Eirene stated that when Staff's requested notice was initially denied in the October 1<sup>st</sup> Ruling, \$340,000 was borrowed to finance renovations at Paws Awhile.<sup>520</sup> Mother Eirene contended that Staff's Supplemental Alternatives threaten the loss of support and to be left with significant debt and no way to repay it.<sup>521</sup>

**Robert Poe** stated that he and his wife own a small 97-acre farm they purchased about 31 years ago.<sup>522</sup> Mr. Poe advised that he and his wife moved into the home they had constructed near the middle of the farm and rent out the original farm house.<sup>523</sup> Mr. Poe testified that he raises Black Angus cattle, and does woodwork in the winter to keep busy.<sup>524</sup> Mr. Poe asserted that "[m]y future plans are to stay here until the next move is to the graveyard."<sup>525</sup>

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<sup>511</sup> Exhibit No. 27, at 1.

<sup>512</sup> *Id.* at 3.

<sup>513</sup> *Id.*

<sup>514</sup> *Id.*

<sup>515</sup> *Id.* at 4.

<sup>516</sup> *Id.*

<sup>517</sup> *Id.*

<sup>518</sup> *Id.* at 5.

<sup>519</sup> *Id.* at 6.

<sup>520</sup> *Id.*

<sup>521</sup> *Id.*

<sup>522</sup> Exhibit No. 29, at 2.

<sup>523</sup> *Id.* at 3.

<sup>524</sup> *Id.* at 4.

<sup>525</sup> *Id.*

Mr. Poe reported that both of Staff's Supplemental Alternatives will go diagonally across the front of his property.<sup>526</sup> Mr. Poe contended that this will destroy his property.

If this is done, the property is destroyed. It will be right out in the open. It will be the only thing I see when I get up in the morning and when I go to bed at night. I simply won't have peace and tranquility anymore.<sup>527</sup>

In addition, Mr. Poe expressed concern for the impact the route will have on the woods near Cedar Run.<sup>528</sup> Mr. Poe asserted that Cedar Run is prone to flooding, even with a mature tree covering.<sup>529</sup>

**Diana McDaniel Hardy** stated that when she purchased her home she was looking for "a location that provided a sense of privacy with mature trees, a location protected from busy roads and road noise, a friendly neighborhood, and visually appealing property – front, back and sides."<sup>530</sup> Ms. Hardy confirmed that her property is buffered from the noise of Dumfries Road by a dense 9.7 acre forest.<sup>531</sup> Ms. Hardy testified that the bulk of her 1.5-acre property lies in the front approach, which is a meticulously cared for lawn, that also serves as the location for a 35-year-old septic drain field.<sup>532</sup>

Ms. Hardy advised that "Staff's Supplemental Alternatives would have a detrimental impact to the visual aesthetics of our property, property value, and our desire to remain in our home and neighborhood."<sup>533</sup> Mr. Hardy asserted that the new right-of-way will funnel traffic noise from Dumfries Road, and entice local ATV owners, which increases the potential for trespassing, property destruction and lack of privacy.<sup>534</sup> Ms. Hardy also noted that an angle pole will be placed within feet of her property line, permanently reducing the property's value.<sup>535</sup> Ms. Hardy stated that Staff's Supplemental Alternatives would put her existing drain field in the right-of-way, as well as a potential reserve field.<sup>536</sup> Ms. Hardy expressed concern that if heavy trucks drive across the drain field, they may be damaged, but proving such damage may be difficult.<sup>537</sup> For example, Ms. Hardy pointed to the Company's sample Transmission Right of Way Agreement she received from Dominion Virginia Power, which limits the Company's

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<sup>526</sup> *Id.*

<sup>527</sup> *Id.*

<sup>528</sup> *Id.* at 5.

<sup>529</sup> *Id.*

<sup>530</sup> Exhibit No. 30, at 2.

<sup>531</sup> *Id.*

<sup>532</sup> *Id.* at 3.

<sup>533</sup> *Id.* at 4.

<sup>534</sup> *Id.*

<sup>535</sup> *Id.* at 5.

<sup>536</sup> *Id.*

<sup>537</sup> *Id.*

liability to damages reported by a land owner within 60 days.<sup>538</sup> Ms. Hardy was doubtful whether septic field damage would surface in that time frame.<sup>539</sup>

Furthermore, Ms. Hardy testified that Staff's Supplemental Alternatives, and the noise produced in humid conditions, "would be a detriment to my productivity and ultimately to my occupation."<sup>540</sup> Finally, Ms. Hardy described the loss of close friends and her support group if one of Staff's Supplemental Alternatives is chosen and she decides to move.<sup>541</sup>

### **Fauquier County's Direct Testimony**

On June 24, 2015, Fauquier County filed the direct testimony of R. Holder Trumbo, supervisor for the Scott magisterial district of Fauquier County; Kimberley Fogle, director of the Department of Community Development for Fauquier County; and Wendy Wheatcraft, preservation planner for Fauquier County. A summary of the testimony of each witness is provided below.

**R. Holder Trumbo** stated that he was elected to the Board of Supervisors in 2007, and served on the Fauquier County Planning Commission beginning in 2004.<sup>542</sup> Mr. Trumbo maintained that the Staff's Supplemental Alternatives will have an adverse effect on Fauquier County's Comprehensive Plan ("Comprehensive Plan") and asked the Commission to reject the Option A routes.<sup>543</sup> Mr. Trumbo advised that the Comprehensive Plan seeks to preserve and protect the rural character of Fauquier County and to guide growth into nine designated service districts.<sup>544</sup> Mr. Trumbo confirmed that the New Baltimore Service District is the closest to Routes 29 and I-66, which are major commuter routes to the Washington Metropolitan area.<sup>545</sup>

Mr. Trumbo contended that the Staff's Supplemental Alternatives would undermine Fauquier County's efforts to create and maintain an attractive and viable New Baltimore Service District.<sup>546</sup> Mr. Trumbo asserted that development in the New Baltimore Service District serves to reduce development pressure in Fauquier County's rural areas.<sup>547</sup> Mr. Trumbo pointed to the significant citizen opposition to Staff's Supplemental Alternatives as evidence that the transmission line "will significantly detract from the desirability of the New Baltimore Service District."<sup>548</sup> Mr. Trumbo pointed out that Option A-2/3 Staff passes through the Ringwood subdivision, which is in the development process, as well as a portion of a proposed phase of a

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<sup>538</sup> *Id.* at 6.

<sup>539</sup> *Id.*

<sup>540</sup> *Id.*

<sup>541</sup> *Id.* at 6-8.

<sup>542</sup> Exhibit No. 41, at 1.

<sup>543</sup> *Id.* at 2.

<sup>544</sup> *Id.*

<sup>545</sup> *Id.* at 3.

<sup>546</sup> *Id.*

<sup>547</sup> *Id.*

<sup>548</sup> *Id.*



subdivision in Brookside.<sup>549</sup> Mr. Trumbo affirmed that Option A-2/3 Staff would reduce the number of available units and harm Fauquier County's ability to relieve the growth on its rural areas.<sup>550</sup>

Moreover, Mr. Trumbo asserted that the CAG's opposition to the Option A routes "represent the diverse voices of residents of both the service districts and . . . [Fauquier] County's rural areas."<sup>551</sup> Mr. Trumbo provided a copy of Fauquier County's resolution opposing Staff's Supplemental Alternatives.<sup>552</sup> Mr. Trumbo confirmed that Fauquier County is not willing to convey property to facilitate Option A-2/3.<sup>553</sup> In addition, Mr. Trumbo noted that Fauquier County must approve Dominion Virginia Power's proposed changes to the Warrenton substation.<sup>554</sup> Mr. Trumbo warned that "it is my personal opinion that it would be extremely difficult for [Dominion Virginia Power] to obtain legislative land use approval from the County which facilitated any of the A Routes."<sup>555</sup>

**Kimberley Fogle** stated that the concept of service districts as part of the Comprehensive Plan has been in place since the 1960s.<sup>556</sup> Ms. Fogle confirmed that service districts function to relieve growth pressure on the rural agricultural areas of Fauquier County.<sup>557</sup> Ms. Fogle contended that the Staff's Supplemental Alternatives "degrade historical, scenic and agricultural resources outside of the County's designated service districts, make the service districts less desirable, and reduce the land available for higher density development."<sup>558</sup> Thus, Ms. Fogle testified that Staff's Supplemental Alternatives are not consistent with the Comprehensive Plan and should be rejected.<sup>559</sup>

In addition, Ms. Fogle pointed out that in July of 1982, the Company obtained a special exception from Fauquier County authorizing construction of the Warrenton substation.<sup>560</sup> Ms. Fogle opined that the new facilities that are to be constructed at the substation pursuant to Staff's Supplemental Alternatives are not authorized by the 1982 special exemption and the Company "must either obtain an amendment of the 1982 special exception or file an application for a new special exception."<sup>561</sup>

**Wendy Wheatcraft** outlined the historic resources that will be damaged by Staff's Supplemental Alternatives including: (i) the Auburn II Battlefield, (ii) the Rappahannock

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<sup>549</sup> *Id.* at 4.

<sup>550</sup> *Id.*

<sup>551</sup> *Id.*

<sup>552</sup> *Id.* at 5, Attached Exhibit A.

<sup>553</sup> *Id.* at 5.

<sup>554</sup> *Id.*

<sup>555</sup> *Id.*

<sup>556</sup> Exhibit No. 46, at 2.

<sup>557</sup> *Id.*

<sup>558</sup> *Id.* at 3.

<sup>559</sup> *Id.*

<sup>560</sup> *Id.*

<sup>561</sup> *Id.* at 4.

Station I Battlefield, (iii) the Buckland Mills Battlefield, (iv) the Village of Frytown, (v) Vint Hill Farms Station, (vi) Eastwood Farm, (vii) Mt. Sterling Farm, (viii) Lunceford House, and (ix) Foster House.<sup>562</sup> Ms. Wheatcraft asserted that many of these resources are eligible or potentially eligible for listing in the Virginia Landmarks Register and the National Register of Historic Places.<sup>563</sup> Ms. Wheatcraft testified that “[a]n undertaking adversely affects a historic property when it directly or indirectly alters or diminishes any of the characteristics that qualify a property for inclusion in the National Register of Historic Places, including aspects of integrity that are important to conveying its significance.”<sup>564</sup> Ms. Wheatcraft advised that Fauquier County believes that Staff’s Supplemental Alternatives will have an adverse effect on the historic properties within a half-mile radius of the proposed routes.<sup>565</sup>

Ms. Wheatcraft stated that Chapter 2 of the Comprehensive Plan promotes the protection of historic resources and discourages development that results in undesirable impacts to significant scenic areas and viewsheds.<sup>566</sup> Ms. Wheatcraft noted that Chapter 7 of the Comprehensive Plan promotes the protection of natural features and historic properties within and around Fauquier County villages, such as the Village of Frytown, a known late 19<sup>th</sup> century African American community.<sup>567</sup> Ms. Wheatcraft also pointed to Chapter 8 of the Comprehensive Plan, which promotes the protection of scenic viewsheds and vistas, as well as significant archeological sites and historic areas.<sup>568</sup>

Ms. Wheatcraft agreed with the CAG’s recommendation against the Option A routes and found that they were “sound and represented a collective vision of the community that the important historic resources I have cited in my testimony should not be degraded.”<sup>569</sup>

### **Staff’s Supplemental Direct Testimony**

On July 8, 2015, Staff filed the Supplemental Testimony of Wayne D. McCoy. Mr. McCoy’s supplemental testimony is summarized below.

**Wayne D. McCoy** clarified that Route A-2/3 Staff was developed by Dominion Virginia Power and its consultant NRG in response to Staff’s request to develop a route to avoid Fauquier County-owned properties.<sup>570</sup> Mr. McCoy pointed out that in its analysis of Staff’s Supplemental Alternatives, the Company used a 120-foot right-of-way, while using a 100-foot right-of-way for its analysis of Option C.<sup>571</sup> Mr. McCoy contended that use of a 100-foot right-of-way for Staff’s

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<sup>562</sup> Exhibit No. 47, at 2.

<sup>563</sup> *Id.*

<sup>564</sup> *Id.* at 3.

<sup>565</sup> *Id.*

<sup>566</sup> *Id.* at 4.

<sup>567</sup> *Id.*

<sup>568</sup> *Id.* at 5.

<sup>569</sup> *Id.* at 5-6.

<sup>570</sup> Exhibit No. 56, at 2.

<sup>571</sup> *Id.*

Supplemental Alternatives would reduce the number of homes within 60 feet of the right-of-way.<sup>572</sup>

Mr. McCoy advised that if Dominion Virginia Power constructs its proposed Option C-1.1c-Gainesville option, four additional projects whose impacts have yet to be identified will be required.<sup>573</sup> Mr. McCoy stated that these additional projects “may render the Option C-1.1c-Gainesville option more impactful, but, inasmuch as these necessary additional projects have not yet been designed, there is no basis upon which to compare those impacts.”<sup>574</sup> Nonetheless, Mr. McCoy continued to believe that Route C-1.1c-Gainesville is the least impacting option.<sup>575</sup>

Furthermore, Mr. McCoy offered several suggested adjustments to Route A-2/3 Staff that have the potential to reduce impacts. These suggested adjustments are as follows:

1. Between Mileposts 0.2 and 0.3, shift the alignment slightly to the southeast to increase the distance between the edge of the right-of-way and the home currently within 60 feet of the right-of-way;<sup>576</sup>
2. At Milepost 1.1, move the alignment to the north on the western edge of an open field and reconnect to the northeast after paralleling the open field between Milepost 1.8 and 1.9;<sup>577</sup>
3. Straightening the angle just past Milepost 3.4, to pass south of the identified home within 60 feet and a white-roofed building to eliminate the passing of the line between homes within 60 feet of the right-of-way;<sup>578</sup> In addition, at Milepost 4.5 the alignment could be moved away from a home within 60 feet of the right-of-way by extending the distance the route passes through the wooded parcels between Milepost 4.4 and 4.5;<sup>579</sup>
4. At Milepost 4.6 the alignment could be changed to continue south from Milepost 4.5 to 4.6 and through the woods northeast of Brookmoor Drive to avoid the pet boarding facility and the newly developed lots in Brookside;<sup>580</sup>
5. At Milepost 7.1 the alignment could be changed to span, with no structures, the area between two of the Authority’s wells, with an angle structure in the northern open field to rejoin the alignment at Milepost 7.6;<sup>581</sup> and

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<sup>572</sup> *Id.*

<sup>573</sup> *Id.* at 3.

<sup>574</sup> *Id.*

<sup>575</sup> *Id.* at 4.

<sup>576</sup> *Id.*

<sup>577</sup> *Id.* at 5.

<sup>578</sup> *Id.*

<sup>579</sup> *Id.* at 5-6.

<sup>580</sup> *Id.* at 6.

<sup>581</sup> *Id.* at 7.

6. At Milepost 7.9 the alignment could be shifted slightly west and an 80-foot right-of-way used to move the proposed line away from a home that is within 60 feet of the 120-foot right-of-way.<sup>582</sup>

Mr. McCoy noted that on May 4, 2015, the northern long eared bat was listed by the U.S. Fish and Wildlife Service as a threatened species.<sup>583</sup> Mr. McCoy recommended “further investigation and identification of the species in this area, prior to impacting the habitat, is warranted.”<sup>584</sup>

In summary, Mr. McCoy stated:

Clearly, Option C-1.1c-Gainesville is the least impacting of the alternatives under consideration in this proceeding, but may not be the least impacting over the long term if other projects become needed because of its comparative reliability inferiority.<sup>585</sup>

### **Dominion Virginia Power’s Rebuttal Testimony**

On July 22, 2015, Dominion Virginia Power filed the rebuttal testimony of Mark R. Gill; Donald E. Koonce, principal engineer in the Electric Transmission Reliability Department for the Company; Harrison S. Potter, engineer III in the Distribution System Planning Department for the Company; Robert J. Shevenock II; Mark S. Allen, director of electric transmission construction for the Company; Anita M. Wilson, a real estate specialist for the Company; Douglas J. Lake; and Diana T. Faison. A summary of the rebuttal testimony of each witness is provided below.

**Mark R. Gill** testified that the Company’s Transmission Planning Criteria is audited by FERC and consistent with NERC and Regional Planning Standards, as well as FERC-approved Transmission Owner criteria.<sup>586</sup> Mr. Gill stated that its current Transmission Planning Criteria defines a radial transmission line as “a single line that originates in a substation, serves load and does NOT tie to any other transmission line or substation.”<sup>587</sup> Mr. Gill advised that the Company’s Transmission Planning Criteria “continues to require additional transmission source once loading on a radial line exceeds 100 MW, but also clarifies that an acceptable transmission source for that purpose includes, without limitation, networking from a separate substation source (preferred), looping back to the same transmission substation source, and a normally open network or loop transmission sources.”<sup>588</sup> Mr. Gill rejected Staff’s network definition provided in footnote 11 of the Staff Report.<sup>589</sup> Mr. Gill also disagreed with Staff’s contention that the

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<sup>582</sup> *Id.* at 7, Attachment WDM-1, at 15.

<sup>583</sup> *Id.* at 7.

<sup>584</sup> *Id.* at 7-8.

<sup>585</sup> *Id.* at 9.

<sup>586</sup> Exhibit No. 60, at 3.

<sup>587</sup> *Id.* at 4.

<sup>588</sup> *Id.*

<sup>589</sup> *Id.* at 5.

Remington CT Station acts as a source to its end of the network, and pointed out that there are multiple 230 kV lines that network it to the rest of the transmission system.<sup>590</sup>

Mr. Gill corrected the Staff Report's description of the Option B network as a Gainesville-Wheeler-Haymarket-Loudoun local network to reflect that Option B would not include a line extension to the proposed Haymarket Substation, which will be the subject of a separate application.<sup>591</sup> Mr. Gill maintained that Option B is viable in that it resolves the Gainesville load issue and NOVEC's Line #922 radial issue, but agreed that the additional load from the planned Haymarket Substation will require the Vint Hill-Wheeler transmission line.<sup>592</sup>

As for Option A, Mr. Gill agreed with Staff that connecting Warrenton to Wheeler would assist in moving electric power from the Remington CT area to the Northern Virginia area.<sup>593</sup> Nonetheless, Mr. Gill stated that Option A is not needed to meet growing local load needs, and that "[t]he reliability issues that are driving this proceeding are related to threshold violations involving load greater than 100 MW on a radial source and 300 MW directly connected to a substation at the same voltage level."<sup>594</sup> Mr. Gill disagreed with Staff's characterization of the Remington CT-Warrenton Double Circuit 230 kV line as a "double-circuit radial supply."<sup>595</sup> Mr. Gill maintained that the lines that will feed Warrenton will be networked through a breaker at Warrenton.<sup>596</sup> Mr. Gill advised that the Remington CT-Warrenton Double Circuit 230 kV line is an acceptable planning solution "and will allow load to continue to be served in the event that one of the network lines is out of service."<sup>597</sup>

Mr. Gill disagreed with Staff's assertion that two supplies from two different sources should generally be better than a double-circuit radial supply.<sup>598</sup> Mr. Gill contended that with new sectionalizing technology, the sustained outage rates for the Remington CT-Warrenton Double Circuit 230 kV line should be zero.<sup>599</sup> Indeed, Mr. Gill testified that "the Company rejects the assertion [it is] somehow less reliable than an Option A solution."<sup>600</sup>

Mr. Gill disagreed with Staff's recommendation that the Company reverse the August 2014 load transfer of 8 MW from Gainesville Substation to Warrenton Substation.<sup>601</sup> Mr. Gill explained that the load shift was made to create capacity at Gainesville to serve a new block load and not to address a NERC transmission reliability issue.<sup>602</sup>

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<sup>590</sup> *Id.* at 6.

<sup>591</sup> *Id.* at 7.

<sup>592</sup> *Id.* at 8-9.

<sup>593</sup> *Id.* at 10.

<sup>594</sup> *Id.*

<sup>595</sup> *Id.* at 11.

<sup>596</sup> *Id.*

<sup>597</sup> *Id.*

<sup>598</sup> *Id.* at 12.

<sup>599</sup> *Id.*

<sup>600</sup> *Id.* at 15.

<sup>601</sup> *Id.*

<sup>602</sup> *Id.*

Mr. Gill addressed Staff witness Chiles' review of system reliability benefits of Option A versus Option C.<sup>603</sup> Mr. Gill responded to Mr. Chiles' finding that the N-2 analysis was inconclusive and his recommendation that the Liberty outage cases be studied in more detail if the Company were to solely rely on the N-2 results for project justification, by pointing out that "the need for the project is driven by threshold violations of 100 MW on a radial line and 300 MW on a single voltage level at a substation at Warrenton and Gainesville, respectively, and is not driven by contingency results for outages involving the Liberty Switching Station."<sup>604</sup> In regard to Mr. Chiles' assessment that Option A and Option C appear to perform equally in the 2018 N-1 analysis, Mr. Gill pointed out that Option A created a violation contingency involving Line #2077 that was not an issue in the Base Case or for Option C, and that although Option A performed slightly better for the #568 outage contingency, both Option A and Option C resulted in a criteria violation that must be resolved.<sup>605</sup> Likewise, for the 2023 N-1 Results, Mr. Gill advised that the difference in loading reduction between Option A and Option C for the Line 201, 201A, and 2095 contingencies is less than 1.5% and Option A resulted in a criteria violation that must be resolved.<sup>606</sup> Mr. Gill further confirmed that because the violation also occurs with Option A, there would be no savings to customers due to a delay in the need for a future transmission project as asserted by Mr. Chiles.<sup>607</sup>

Mr. Gill disagreed with Staff witness Chiles' assessment for the 2023 Tower results that except for three instances, Option A proved to be the more robust electrical solution.<sup>608</sup> Mr. Gill questioned the relevance of loading branches multiple buses away from the study area.<sup>609</sup> In addition, Mr. Gill pointed out that "[e]ven considering only the results of the Company's analysis for the 2023 Tower contingencies, Option A does not distinguish itself because it provides only a 1% reduction over Option C and is still 14% over the 100% criteria for a Tower violation."<sup>610</sup>

Mr. Gill agreed with Staff witness Chiles that Option A provides electrical benefits over Option C in the 2018 N-1-1 analysis.<sup>611</sup> However, Mr. Gill testified that "[s]ince the overload on these branches all exceed 100% of Rate C, and the loading differences between the Base, Option A, and Option C cases are relatively insignificant (0.2-0.5%), these violations are not considered to be impacted by either Option A or Option C."<sup>612</sup>

Mr. Gill disagreed with Staff witness McCoy's contention that the CAG was not informed that Option C would require additional projects to support reliability.<sup>613</sup> Mr. Gill stated

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<sup>603</sup> *Id.* at 17.

<sup>604</sup> *Id.* at 17-18.

<sup>605</sup> *Id.* at 19.

<sup>606</sup> *Id.* at 20.

<sup>607</sup> *Id.*

<sup>608</sup> *Id.*

<sup>609</sup> *Id.* at 20-21.

<sup>610</sup> *Id.* at 21.

<sup>611</sup> *Id.*

<sup>612</sup> *Id.* at 21-22.

<sup>613</sup> *Id.* at 24.

that the initial load driving the need for the Haymarket Substation would not have cause Option C to be in violation upon its energization, but would cause Option A to be violation upon its energization, assuming one of the source line terminals being at the Loudoun Switching Station.<sup>614</sup>

Mr. Gill disagreed with the testimony of Neighbors witness Beckner opposing consideration of the cost and benefits of future projects.<sup>615</sup> Mr. Gill maintained that it is appropriate for the Company to consider future projects. Nonetheless, Mr. Gill stated that he disagreed with Staff's support of Option A based on the number and cost of "subsequent" projects.<sup>616</sup> Mr. Gill contended that "other options could resolve the issues identified by the 2023 analysis that would require further evaluation before a final solution is selected."<sup>617</sup>

**Donald E. Koonce** disagreed with Staff's position that the proposed double circuit network line from Remington CT to Warrenton is less reliable and more susceptible to failure than the transmission lines designed for Option A.<sup>618</sup> Mr. Koonce asserted that the Company's Facility Connection Requirements comply with all relevant industry and federal standards and permit a loop to go back to the same transmission substation and use the same towers.<sup>619</sup> Mr. Koonce also contended "that separate transmission lines actually face greater reliability issues than transmission lines using common towers."<sup>620</sup> Mr. Koonce pointed out that a double circuit line on common towers has a smaller "exposure footprint" than separate lines whose footprint may be twice the size of the double circuit line.<sup>621</sup> Mr. Koonce maintained that a larger exposure footprint provides a larger lightning contact exposure, which is the single greatest cause of momentary outages to the Company's transmission system.<sup>622</sup> In addition, Mr. Koonce noted that exposure to trees falling on lines, and vehicular or other third-party contacts are greater for separate transmission lines than for double circuit lines.<sup>623</sup>

Mr. Koonce responded to Neighbors witness Eirene's testimony on the impacts of EMF.<sup>624</sup> Mr. Koonce stated that "Dominion Virginia Power is sensitive to public concern about possible health effects from exposure to EMF."<sup>625</sup> Mr. Koonce advised that its Application included data on electric and magnetic fields produced by the proposed facilities along the proposed route.<sup>626</sup> Mr. Koonce pointed to recent findings by Commission hearing examiners and

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<sup>614</sup> *Id.* at 24-25.

<sup>615</sup> *Id.* at 25.

<sup>616</sup> *Id.* at 26.

<sup>617</sup> *Id.*

<sup>618</sup> Exhibit No. 64, at 2.

<sup>619</sup> *Id.* at 3.

<sup>620</sup> *Id.*

<sup>621</sup> *Id.*

<sup>622</sup> *Id.* at 3-4.

<sup>623</sup> *Id.* at 4.

<sup>624</sup> *Id.*

<sup>625</sup> *Id.*

<sup>626</sup> *Id.*

the DOH there is no conclusive and convincing evidence that exposure to EMF emanating from a high voltage transmission line causes adverse health effects.<sup>627</sup>

**Harrison S. Potter** disagreed with Staff's contention that the Remington CT-Warrenton Double Circuit 230 kV line could be delayed if the Company transferred some, or all of the 8 MW of load that had been shifted from Gainesville to Warrenton in August 2014, back to Gainesville.<sup>628</sup> Mr. Potter confirmed that the Company shifted the 8 MW to reduce the load at the Gainesville Substation to alleviate circuit loading issues on the Gainesville 34.5 kV circuit #379 due to a substantial new block load addition of 20 MW.<sup>629</sup> Mr. Potter advised that "[n]either Gainesville 34.5 kV circuit #379 nor any other Gainesville 34.5 kV circuit will have sufficient capacity to shift any of the 8 MW prior to the successful energization of Haymarket Substation (anticipated in summer 2018)."<sup>630</sup>

Mr. Potter also testified that in December 2014, the Company received an additional 5 MW block load request at Warrenton from a large government customer.<sup>631</sup> Thus, Mr. Potter stated that "even if the Company were to shift the 8 MW back to Gainesville Substation, the shift would not resolve the need for the Remington CT-Warrenton Double Circuit 230 kV line."<sup>632</sup>

Mr. Potter disagreed with Staff's recommendation that should the Commission favor Option C, that it not approve its Warrenton project component at this time, but instruct the Company to employ load-reduction measures at the Warrenton Substation.<sup>633</sup> Mr. Potter contended that Company does not have sufficient capacity to shift load out of the Warrenton Substation and that the Warrenton Substation will be above the 100 MW limitation by 2018, at either a 1.2% or 2.0% load growth and will increase by the additional 5 MW recently requested by a large government customer.<sup>634</sup>

**Robert J. Shevenock II** provided a breakdown of the total costs of the Projects for both Route A-2/3 Staff and Route C-1.1c, which are summarized in the table below.

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<sup>627</sup> *Id.* at 4-5.

<sup>628</sup> Exhibit No. 59, at 2.

<sup>629</sup> *Id.*

<sup>630</sup> *Id.* at 2-3.

<sup>631</sup> *Id.* at 3.

<sup>632</sup> *Id.*

<sup>633</sup> *Id.* at 4.

<sup>634</sup> *Id.*



	Route A-2/3 Staff <sup>635</sup>	Route C-1.1c <sup>636</sup>
Remington CT-Warrenton	\$17,470,871	\$42,312,669
Route A-2/3 Staff	45,815,008	
Route C-1.1c		28,003,593
Wheeler-Gainesville	6,260,292	5,952,927
Substations	11,200,000	16,847,200
Total Project Cost	\$80,746,171	\$93,116,389

Mr. Shevenock defended the use of a 120-foot right-of-way for Option A based on the use of H-frame structures to reduce tower heights.<sup>637</sup> Mr. Shevenock affirmed that use of single-shaft steel poles could be placed within a 100-foot right-of-way, but such poles would be approximately 20 feet higher than the H-frame structures.<sup>638</sup> Overall, Mr. Shevenock testified that a 120-foot right-of-way: (i) minimizes the height of the structures along the new right-of-way; (ii) provides the maximum design flexibility; (iii) maximizes span lengths to minimize the number of structures; and (iv) reduces the number of danger trees that would need to be removed outside of the right-of-way.<sup>639</sup>

Mr. Shevenock expressed concerns with Staff witness McCoy's use of a 100-foot right-of-way for all alignments as the basis of his impacts comparison.<sup>640</sup> Mr. Shevenock advised that if lower height H-frame structures are used in a 100-foot right-of-way, the outer phase conductors will be located 10 feet closer to the right-of-way edge and could result in the required clearing of additional danger trees outside the right-of-way.<sup>641</sup>

In response to Neighbors witnesses Hardy and Mother Eirene concerning the audible effect of high voltage transmission lines, Mr. Shevenock advised that the Company's standard conductors were selected to meet audible noise requirements and will conform to local noise ordinances and any relevant regulations or requirements.<sup>642</sup>

**Mark S. Allen** asserted that the Company's proposed Projects using Route C-1.1c are superior to Option A using Route A-2/3 Staff from both a construction and impact prospective.<sup>643</sup> Mr. Allen contended that the Route A-2/3 Staff would be more difficult to construct due to its length and its dense tree and vegetation cover.<sup>644</sup> Mr. Allen pointed out that

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<sup>635</sup> Exhibit No. 67, at 3.

<sup>636</sup> *Id.* at 2.

<sup>637</sup> *Id.* at 4.

<sup>638</sup> *Id.*

<sup>639</sup> *Id.* at 5.

<sup>640</sup> *Id.* at 6.

<sup>641</sup> *Id.* at 6-7.

<sup>642</sup> *Id.* at 7.

<sup>643</sup> Exhibit No. 68, at 4.

<sup>644</sup> *Id.*

Route A-2/3 Staff will require new and more extensive access points and roads.<sup>645</sup> Mr. Allen maintained that specific obstacles, such as the intersection of Frys Lane and Duhollow Road and the Brookside development, make it impractical to construct Route A-2/3 Staff.<sup>646</sup>

Mr. Allen testified that “neither of the Option A routes can be constructed by the required target date of May 2017.”<sup>647</sup> Mr. Allen affirmed that it will take 30 months of construction time after the issuance of the Certificate by the Commission to construct either of the Option A routes.<sup>648</sup> Furthermore, Mr. Allen noted that the reconductoring of the Remington CT-Warrenton 230 kV line will take an additional 10 months and cannot begin until after the line following Route A-2/3 or Route A-2/3 Staff is in place.<sup>649</sup> Thus, Mr. Allen stated that the total construction time for Staff’s Supplemental Alternatives is 40 months from the issuance of the Certificate.<sup>650</sup> On the other hand, Mr. Allen confirmed the total construction time for Vint Hill-Wheeler-Gainesville 230 kV Lines using Route C-1.1c will be 16 months, while the Remington CT-Warrenton Double Circuit 230 kV line will take 28 months, which can occur simultaneously with the construction of the Vint Hill-Wheeler-Gainesville 230 kV Lines.<sup>651</sup>

In regard to the concerns raised by the Authority, Mr. Allen stated that “construction along the Option A routes could impact those water facilities.”<sup>652</sup> Mr. Allen advised that if rock is encountered, blasting may be the preferred method for foundation construction.<sup>653</sup> Mr. Allen testified that other foundation construction methods options include: (i) a “Down Hole Hammer,” which generates significant levels of noise and a large amount of dust; and (ii) to pre-drill numerous three-inch diameter holes inside the foundation footprint to allow breakout of the rock with conventional rock augers and core barrel drill bits.<sup>654</sup>

Mr. Allen maintained that “it is difficult to predict from a construction standpoint precisely what impact blasting and other foundation construction will have on Fauquier County’s water supply facilities.”<sup>655</sup> Nonetheless, Mr. Allen contended that “the anticipated foundation construction techniques for this project are not expected to result in a significant impact to the water supply wells.”<sup>656</sup>

**Anita M. Wilson** advised that Dominion Virginia Power estimated the right-of-way acquisition cost using a “per mile” or “per acre” assessment based on actual cost information

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<sup>645</sup> *Id.* at 5.

<sup>646</sup> *Id.* at 5-6.

<sup>647</sup> *Id.* at 6.

<sup>648</sup> *Id.*

<sup>649</sup> *Id.* at 7.

<sup>650</sup> *Id.*

<sup>651</sup> *Id.*

<sup>652</sup> *Id.* at 8.

<sup>653</sup> *Id.*

<sup>654</sup> *Id.* at 9.

<sup>655</sup> *Id.* at 10.

<sup>656</sup> *Id.* at 11.

from the Company's recent electric transmission line easement acquisition projects in the area.<sup>657</sup> Ms. Wilson estimated the acquisition and real estate payments for Route C-1.1c at approximately \$5.8 million, including \$1.8 million to be paid to Prince William County for an easement across the Rollins Ford Park Property.<sup>658</sup> Ms. Wilson estimated the acquisition and real estate payments for Route A-2/3 Staff at approximately \$12.9 million.<sup>659</sup>

**Douglas J. Lake** disagreed with Staff witness McCoy's comparison of collocation opportunities of Option C-1.1c, which he reported as 17.9 miles and 84% of the total route, and those of Option A-2/3 Staff, which he reported as 18.4 miles and 66.7% of the total route.<sup>660</sup> Mr. Lake pointed out that 17.9 miles for both routes related to the Remington CT to Warrenton segments, with the additional half mile associated with Option A-2/3 Staff related to "locating the new facilities near or adjacent to small segments of multiple road ways."<sup>661</sup> Mr. Lake contended that it is more meaningful to consider the new greenfield transmission corridors to be built, or 3.4 miles for Option C-1.1c, and 9.2 miles for Option A-2/3 Staff.<sup>662</sup>

Mr. Lake disagreed with Staff witness McCoy's comparison of the total wetlands potentially disturbed by Option C-1.1c of 36.7 acres and by Option A-2/3 Staff of 35.3 acres.<sup>663</sup> Mr. Lake maintained that most of the potentially disturbed wetland acres counted by Mr. McCoy are in existing rights-of-way or will be temporarily affected as part of a temporary right-of-way.<sup>664</sup> Mr. Lake stated that wetland impacts permanently affected along new build sections of Option C-1.1c and Option A-2/3 Staff would be 3.4 acres and 7.6 acres, respectively.<sup>665</sup> Mr. Lake advised that there several different wetland types including palustrine emergent, scrub-shrub, and forested wetlands, with forested wetlands being the most sensitive and highly valued from a hydro-geomorphic ("HGM") function perspective.<sup>666</sup> Mr. Lake reported that Option C-1.1c would permanently impact 2.4 acres of forested wetlands, while Option A-2/3 Staff would permanently impact 5.5 acres of forested wetlands.<sup>667</sup>

Mr. Lake disagreed with Staff witness McCoy's contention that Option A-2/3 is buildable.<sup>668</sup> Mr. Lake testified that the Option A-2/3 route crosses two non-common open space easements, and land owned by Schools.<sup>669</sup> Mr. Lake also stated that the A-2/3 route crosses portions of Rappahannock Stations I, Buckland Mills, and Auburn II battlefields, which are each

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<sup>657</sup> Exhibit No. 57, at 2.

<sup>658</sup> *Id.* at 2-3.

<sup>659</sup> *Id.* at 3.

<sup>660</sup> Exhibit No. 69, at 2.

<sup>661</sup> *Id.* at 2-3.

<sup>662</sup> *Id.* at 3.

<sup>663</sup> *Id.* at 4.

<sup>664</sup> *Id.* at 5.

<sup>665</sup> *Id.*

<sup>666</sup> *Id.* at 6.

<sup>667</sup> *Id.*

<sup>668</sup> *Id.* at 8.

<sup>669</sup> *Id.*

designated as potentially eligible for listing in the NRHP by the ABPP.<sup>670</sup> Mr. Lake maintained that without the ability to use condemnation to obtain all of the necessary right-of-way, and given the significant adverse impacts, Option A-2/3 is not a viable route or buildable.<sup>671</sup>

As for the Option A-2/3 Staff route, Mr. Lake acknowledged that it does not cross any publicly-controlled lands where condemnation is an issue, but asserted that the Option A-2/3 Staff route is much more impactful than the Company's proposed C-1.1c route.<sup>672</sup>

Mr. Lake provided routing maps and comments on each of Staff witness McCoy's suggested route adjustments.<sup>673</sup> Mr. Lake's comments on Mr. McCoy's suggested route adjustments are provided below and are numbered to correspond to the numbers used to summarize Mr. McCoy's Supplemental Testimony above.

- For suggested route adjustment one, which is to make a slight shift to the southeast between Mileposts 0.2 and 0.3, to increase the distance between the edge of the right-of-way and the home currently within 60 feet of the right-of-way, Mr. Lake stated that this adjustment would move the centerline of the right-of-way 17 feet further from the house in question and would be lightly beneficial to the homeowner.<sup>674</sup> Mr. Lake did not identify any routing impediment to this suggested adjustment.<sup>675</sup>
- For suggested route adjustment two, which at Milepost 1.1 moves the alignment to the north on the western edge of an open field and reconnects to the northeast after paralleling the open field between Milepost 1.8 and 1.9, Mr. Lake observed that the adjustment would reduce the amount of trees to be cleared, but would significantly increase the visibility of the transmission line and double the wetland area crossed.<sup>676</sup> Mr. Lake did not concur with this suggested adjustment.<sup>677</sup>
- For suggested route adjustment three, which straightens the angle just past Milepost 3.4, to pass south of the identified home within 60 feet and a white-roofed building to eliminate the passing of the line between homes within 60 feet of the right-of-way, Mr. Lake noted that this adjustment would put the centerline within 38 feet of a third house, and near a fourth house located east of the white-roofed building.<sup>678</sup> Mr. Lake did not concur with this suggested adjustment.<sup>679</sup> In addition, Mr. Lake stated that at Milepost 4.5, Mr. McCoy recommended a minor

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<sup>670</sup> *Id.* at 8-9.

<sup>671</sup> *Id.* at 9.

<sup>672</sup> *Id.*

<sup>673</sup> *Id.* at 11, Attached Rebuttal Schedule 2.

<sup>674</sup> *Id.* at 11-12, Attached Rebuttal Schedule 2, at 1.

<sup>675</sup> *Id.* at 12.

<sup>676</sup> *Id.* at 12, Attached Rebuttal Schedule 2, at 2.

<sup>677</sup> *Id.* at 12.

<sup>678</sup> *Id.* at 12-13, Attached Rebuttal Schedule 2, at 3.

<sup>679</sup> *Id.* at 13.

adjustment to the alignment away from a home located on Woodlawn Lane.<sup>680</sup> Mr. Lake did not identify any routing impediment to this minor change.<sup>681</sup>

- For suggested route adjustment four, which is located between Mileposts 4.57 and 5.05 and was offered to avoid the crossing of newly developed lots in Brookside and to increase the distance from the pet boarding facility, Mr. Lake maintained that the locations of existing houses along Brookmoor Drive and Kettle Run, and associated riparian forested wetlands would preclude this as a reasonable route.<sup>682</sup> Mr. Lake asserted that ten additional property owners would need to be noticed if this suggested route adjustment were considered.<sup>683</sup>
- For suggested route adjustment five, which at Milepost 7.1 changes the alignment to the north to cross between two Authority well sites, then turns east to reconnect with A-2/3 Staff Route adjacent to the Kennedy and Greenwich Road intersection, Mr. Lake confirmed that this adjustment would increase the distance of the nearest angle structure to the existing H-1 well site by about 780 feet, but introduces a large angle structure to the intersection of Kennedy and Greenwich Road.<sup>684</sup> Mr. Lake confirmed that this adjustment would require notice to one additional property owner.<sup>685</sup>
- For suggested route adjustment six, at Milepost 8.9, where A-2/3 Staff crosses Rouges Road next to a house located within 60 feet of the right-of-way, Mr. McCoy recommended reducing the width of the right-of-way to 80 feet and moving the centerline slightly north to reduce the impact on the house, Mr. Lake testified that it is possible to reduce the right-of-way to 80 feet at this crossing, but it may necessitate the need for a mid-span structure.<sup>686</sup> Mr. Lake did not identify a routing impediment to this change, but noted that movement of the centerline away from the house would be limited.<sup>687</sup>

Mr. Lake updated his Supplemental Direct Testimony in which he stated that the A-2/3 Staff route would cross two planned developments and the newly expanded Brookside development, to reflect two additional planned developments, Sterling Farm, consisting of 13 residential lots and a large common open space easement, and Ringwood, consisting of 43 lot subdivision.<sup>688</sup> Mr. Lake confirmed that both Staff Supplemental Alternatives would cross five lots in Sterling Farm, while A-2/3 Staff would cross 15 lots in Ringwood.<sup>689</sup>

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<sup>680</sup> *Id.*

<sup>681</sup> *Id.*

<sup>682</sup> *Id.* at 13-14, Attached Rebuttal Schedule 2, at 4.

<sup>683</sup> *Id.* at 14.

<sup>684</sup> *Id.* at 14-15, Attached Rebuttal Schedule 2, at 5; Lake, Tr. at 729.

<sup>685</sup> Exhibit No. 69, at 15.

<sup>686</sup> *Id.*

<sup>687</sup> *Id.* at 16.

<sup>688</sup> *Id.*

<sup>689</sup> *Id.*

Mr. Lake agreed with Brookside witness Moore that Route A-2/3 will cross an area subject to an Army Corps of Engineers Wetland easement that prohibits the cutting of trees or the building of structures.<sup>690</sup> Nonetheless, Mr. Lake advised that Army Corps of Engineers and DEQ can approve certain construction activities within the easement.<sup>691</sup>

Mr. Lake addressed Neighbors/Brookside witness Headly's testimony that because Route A-2/3 Staff impacts more forested land, it will have a greater impact on the endangered northern long eared bat.<sup>692</sup> Mr. Lake noted that the bat's habitat is all wooded lands, and the Company should not have any difficulty obtaining permission from the U.S. Fish and Wildlife Service for tree clearing between October 15 and March 31.<sup>693</sup>

Mr. Lake did not necessarily agree with Neighbors/Brookside witness Wright's contention that routing into the Rural Crescent would be less intrusive than routing through Fauquier County's agriculturally zoned property because the Rural Crescent routinely allows development.<sup>694</sup> Nonetheless, Mr. Lake pointed out that the Option A-2/3 Staff route will have more of an impact on rural zoned land than Option C-1.1c due to it crossing more rural zoned land.<sup>695</sup>

Mr. Lake did not completely agree with Neighbors witness Poe's testimony that Option A could worsen flooding on certain properties because of the removal of mature trees.<sup>696</sup> Mr. Lake stated that Option A crosses two forested wetlands on Mr. Poe's property and that matures trees within a forested wetland area can affect the seasonal hydrology on a seasonal basis, as opposed to short-term basis.<sup>697</sup> Mr. Lake maintained that areas prone to short-term flooding from intense rains are not impacted by the loss of trees, except that mature trees could reduce the time the land remains flooded.<sup>698</sup>

Mr. Lake responded to the concern raised by Neighbors witness Mother Eirene that construction of an Option A line across her property would damage its White Water Drip septic system.<sup>699</sup> Mr. Lake advised that the line across Mother Eirene's property would be in a wooded area, while the septic system is likely located in the open field to the north of the proposed right-of-way.<sup>700</sup> Mr. Lake testified that "[i]f this route is approved for construction, the Company

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<sup>690</sup> *Id.* at 17.

<sup>691</sup> *Id.*

<sup>692</sup> *Id.*

<sup>693</sup> *Id.*

<sup>694</sup> *Id.* at 18.

<sup>695</sup> *Id.* at 18-19; Exhibit No. 6, at 5.

<sup>696</sup> Exhibit No. 69, at 19.

<sup>697</sup> *Id.*

<sup>698</sup> *Id.* at 19-20.

<sup>699</sup> *Id.* at 20.

<sup>700</sup> *Id.*