

part 5

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Testimony

COMMONWEALTH OF VIRGINIA  
STATE CORPORATION COMMISSION

APPLICATION OF )  
 )  
VIRGINIA ELECTRIC AND POWER COMPANY )  
 ) Case No. PUR-2017-00002  
For approval and certification of electric transmission )  
facilities under Va. Code § 56-46.1 and the Utility )  
Facilities Act, Va. Code § 56-265.1 *et seq.* )

**IDENTIFICATION AND SUMMARIES OF DIRECT WITNESSES  
OF VIRGINIA ELECTRIC AND POWER COMPANY**

**Mark R. Gill**

Witness Direct Testimony Summary and Portions of Appendix Adopted and Supported  
Appendix A: Background and Qualifications

**Jacob G. Heisey**

Witness Direct Testimony Summary and Portions of Appendix Adopted and Supported  
Appendix A: Background and Qualifications

**Wilson O. Velazquez**

Witness Direct Testimony Summary and Portions of Appendix Adopted and Supported  
Appendix A: Background and Qualifications

**Courtney R. Fisher**

Witness Direct Testimony Summary and Portions of Appendix and DEQ Supplement  
Adopted and Supported  
Appendix A: Background and Qualifications

**Witness Direct Testimony Summary**

Witness: Mark R. Gill

Title: Consulting Engineer – Electric Transmission Planning

Summary:

Company Witness Mark R. Gill will adopt and sponsor those portions of the Appendix describing the Company’s transmission system and the need for, and benefits of, the proposed project, as follows:

- Section I.A (co-sponsored with Company Witness Jacob G. Heisey): This section details the engineering justifications for the proposed project.
- Section I.B: This section describes the present system and details how the proposed project will effectively satisfy present and future demand requirements.
- Section I.C: This section explains that the proposed project is the only feasible option to meet the identified need.
- Section I.E: This section provides a map showing the location and voltage of the Company’s existing transmission lines, substations, generating facilities, associated with the proposed project, and a map of the transmission system with the addition of the proposed project.
- Section I.F: This section provides the desired in-service date of the proposed project and the estimated construction time.
- Section I.H: Although not applicable to the proposed project, this section, when applicable, contains information for transmission lines interconnecting a Non Utility Generator.
- Section I.I: This section describes the new and existing generating sources, distribution circuits or load centers planned to be served by all new substations, switching stations and other ground facilities associated with the proposed project.

A statement of Mr. Gill’s background and qualifications is attached to this summary as Appendix A.

**DIRECT TESTIMONY  
OF  
MARK R. GILL  
ON BEHALF OF  
VIRGINIA ELECTRIC AND POWER COMPANY  
BEFORE THE STATE CORPORATION COMMISSION OF VIRGINIA  
CASE NO. PUR-2017-00002**

1   **Q.   Please state your name, business address and position with Virginia Electric and**  
2       **Power Company (“Dominion Virginia Power” or the “Company”).**

3   A.   My name is Mark R. Gill, and I am a Consulting Engineer in the Electric Transmission  
4       Planning Department for Dominion Virginia Power. My office is located at 701 East  
5       Cary Street, Richmond, Virginia 23219. A statement of my qualifications and  
6       background is provided as Appendix A.

7   **Q.   Please describe your areas of responsibility with the Company.**

8   A.   I have responsibility for planning the Company’s electric transmission system in the  
9       northern Virginia area for voltages of 69 kV through 500 kV.

10  **Q.   What is the purpose of your testimony in this proceeding?**

11  A.   In order to comply with mandatory North American Electric Reliability Corporation  
12       Reliability Standards and PJM Interconnection, L.L.C. reliability standards; to improve  
13       operational performance; and to maximize available land use to accommodate potential  
14       future transmission terminations and transformation at its existing Idylwood Substation  
15       located in Fairfax County, Dominion Virginia Power proposes to shift the existing  
16       substation footprint within Company-owned property to rebuild and rearrange Idylwood  
17       Substation from a straight-bus arrangement to a breaker-and-a-half arrangement using  
18       Gas Insulated Substation bus and breakers (collectively, the “Idylwood Substation  
19       Rebuild Project” or “Rebuild Project”).

1 The purpose of my testimony is to describe the Company's transmission system and the  
2 need for, and benefits of, the proposed Rebuild Project. I am sponsoring Sections I.B,  
3 I.C, I.E, I.F, I.H, and I.I of the Appendix. Additionally, I am co-sponsoring Section I.A  
4 of the Appendix with Company Witness Jacob G. Heisey.

5 **Q. Does this conclude your pre-filed direct testimony?**

6 **A.** Yes, it does.

**BACKGROUND AND QUALIFICATIONS  
OF  
MARK R. GILL**

Mark R. Gill received a Bachelor of Science degree in Electrical Engineering from the University of Virginia in 1989. He has been licensed as a Professional Engineer in the Commonwealth of Virginia since 1994. He has been employed by the Company for 26 years. Mr. Gill's experience with the Company includes Customer Service (1988-1992), Circuit Calculations/System Protection (1992-1999), Distribution Planning (1999-2007) and Transmission Planning (2007-Present).

Mr. Gill has previously testified before the Virginia State Corporation Commission.

### Witness Direct Testimony Summary

Witness: Jacob G. Heisey

Title: Transmission Line Engineer II – Electric Transmission Line Engineering

Summary:

Company Witness Jacob G. Heisey will adopt and sponsor those portions of the Appendix providing an overview of the design of the overhead transmission line components of the proposed electric transmission facilities from a transmission line engineering perspective, as follows:

- Section I.D: This section describes any lines or facilities that will be removed, replaced, or taken out of service upon completion of the proposed project.
- Section II.A.3: This section provides drawings of the right-of-way cross section showing existing and proposed transmission line structure placements referenced to the edge of the right-of-way.
- Section II.B: This section provides the line design and operational features of the proposed project.
- Section IV: This section provides the health aspects of electric and magnetic field levels.

Additionally, Company Witness Heisey adopts and co-sponsors the following portions of the Appendix:

- Section I.A (co-sponsored with Company Witness Mark R. Gill): This section details the engineering justifications for the proposed project.
- Section I.G (co-sponsored with Company Witness Wilson O. Velazquez): This section provides the estimated cost of the proposed project.

A statement of Mr. Heisey’s background and qualifications is attached to this summary as Appendix A.

**DIRECT TESTIMONY  
OF  
JACOB G. HEISEY  
ON BEHALF OF  
VIRGINIA ELECTRIC AND POWER COMPANY  
BEFORE THE STATE CORPORATION COMMISSION OF VIRGINIA  
CASE NO. PUR-2017-00002**

1 **Q. Please state your name, business address and position with Virginia Electric and**  
2 **Power Company (“Dominion Virginia Power” or the “Company”).**

3 A. My name is Jacob G. Heisey, and I am a Transmission Line Engineer II in the Electric  
4 Transmission Line Engineering Department for Dominion Virginia Power. My office is  
5 located at 701 East Cary Street, Richmond, Virginia 23219. A statement of my  
6 qualifications and background is provided as Appendix A.

7 **Q. Please describe your areas of responsibility with the Company.**

8 A. I am responsible for developing detailed design, construction specifications for new  
9 projects, and material requirements and modifications to existing infrastructure with  
10 voltages ranging from 115 kV to 500 kV.

11 **Q. What is the purpose of your testimony in this proceeding?**

12 A. In order to comply with mandatory North American Electric Reliability Corporation  
13 Reliability Standards and PJM Interconnection, L.L.C. reliability standards; to improve  
14 operational performance; and to maximize available land use to accommodate potential  
15 future transmission terminations and transformation at its existing Idylwood Substation  
16 located in Fairfax County, Dominion Virginia Power proposes to shift the existing  
17 substation footprint within Company-owned property to rebuild and rearrange Idylwood  
18 Substation from a straight-bus arrangement to a breaker-and-a-half arrangement using



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Gas Insulated Substation bus and breakers (collectively, the “Idylwood Substation Rebuild Project” or “Rebuild Project”).

The purpose of my testimony is to describe the design characteristics of the transmission facilities for the proposed Rebuild Project, and also to discuss electric and magnetic field (“EMF”) levels. I am sponsoring Sections I.D, II.A.3, II.B, and IV of the Appendix. I am also co-sponsoring Section I.A of the Appendix with Company Witness Mark R. Gill and Section I.G of the Appendix with Company Witness Wilson O. Velazquez.

**Q. Section IV.A. of the Appendix states that EMF levels for the proposed structures inside Idylwood Substation and in the immediate proximity are not available due to interferences from equipment within the substation. Why is this the case?**

A. The EMF calculations that the Company provides for typical linear projects are not available for the Rebuild Project. Specifically, the rearrangement of transmission facilities in the Rebuild Project occur on Idylwood Substation property that is in close proximity to substation facilities and equipment, which inhibits the Company’s ability to compute EMF levels on an individual line basis at the edge of the right-of-way independent of substation equipment.

Additionally, the Company proposes to rename and renumber Line #2164 from the split of Line #266 and locate three structures and a conductor within the existing right-of-way as part of the Rebuild Project. One of the structures will contain a temporary cellular antenna. Because these structures and the conductor do not change the characteristics of the transmission lines that currently exist within the right-of-way, they should not be considered new transmission facilities for EMF purposes.

1 Q. Does this conclude your pre-filed direct testimony?

2 A. Yes, it does.

**BACKGROUND AND QUALIFICATIONS  
OF  
JACOB G. HEISEY**

Jacob G. Heisey graduated from Virginia Polytechnic Institute and State University in 2013 with a Bachelor of Science degree in Civil and Environmental Engineering and a minor in Green Engineering. Since that time, Mr. Heisey has held various engineering titles with the Company in the Electric Transmission Line Engineering department.

Mr. Heisey has previously testified before the Virginia State Corporation Commission.

### Witness Direct Testimony Summary

Witness: Wilson O. Velazquez, PE

Title: Supervisor – Substation Engineering

Summary:

Company Witness Wilson O. Velazquez will adopt and sponsor those portions of the Appendix providing a description of the work required for all substation, switching station, and ground facilities associated with the proposed project, as follows:

- Section II.C: This section describes and furnishes plan drawings of the substation, switching station, and other ground facilities associated with the proposed project.

Additionally, Company Witness Velazquez adopts and co-sponsors the following portion of the Appendix:

- Section I.G (co-sponsored with Company Witness Jacob G. Heisey): This section provides the estimated cost of the project.

A statement of Mr. Velazquez's background and qualifications is attached to this summary as Appendix A.

**DIRECT TESTIMONY  
OF  
WILSON O. VELAZQUEZ  
ON BEHALF OF  
VIRGINIA ELECTRIC AND POWER COMPANY  
BEFORE THE STATE CORPORATION COMMISSION OF VIRGINIA  
CASE NO. PUR-2017-00002**

1 **Q. Please state your name, business address and position with Virginia Electric and**  
2 **Power Company (“Dominion Virginia Power” or the “Company”).**

3 A. My name is Wilson O. Velazquez, and I am a Supervisor in the Substation Engineering  
4 section of the Electric Transmission group of the Company. My business address is 2400  
5 Grayland Avenue, Richmond, Virginia 23220. A statement of my qualifications and  
6 background is provided as Appendix A.

7 **Q. Please describe your areas of responsibility with the Company.**

8 A. My responsibilities include the supervision of the Conceptual Substation Engineering  
9 group. The group is responsible for the conceptual design, scope development, and cost  
10 estimation for all new high voltage transmission switching stations, transmission  
11 substations and distribution substations.

12 **Q. What is the purpose of your testimony in this proceeding?**

13 A. In order to comply with mandatory North American Electric Reliability Corporation  
14 Reliability Standards and PJM Interconnection, L.L.C. reliability standards; to improve  
15 operational performance; and to maximize available land use to accommodate potential  
16 future transmission terminations and transformation at its existing Idylwood Substation  
17 located in Fairfax County, Dominion Virginia Power proposes to shift the existing  
18 substation footprint within Company-owned property to rebuild and rearrange Idylwood

1 Substation from a straight-bus arrangement to a breaker-and-a-half arrangement using  
2 Gas Insulated Substation bus and breakers (collectively, the “Idylwood Substation  
3 Rebuild Project” or “Rebuild Project”).

4 The purpose of my testimony is to provide a description of the work required for all  
5 substation, switching station, and ground facilities associated with the Rebuild Project. I  
6 am sponsoring Section II.C of the Appendix. I am also co-sponsoring Section I.G of the  
7 Appendix with Company Witness Jacob G. Heisey.

8 **Q. Does this conclude your pre-filed direct testimony?**

9 **A. Yes, it does.**

**BACKGROUND AND QUALIFICATIONS  
OF  
WILSON O. VELAZQUEZ**

Wilson O. Velazquez graduated in 1995 with a Bachelor's degree in Electrical Engineering from the Polytechnic University of Puerto Rico. He is a registered Professional Engineer in the state of Florida and Virginia. From 1993 to 2000, he worked for Alfa & Omega Electric, S.E. in Puerto Rico, where he held a position as Electrical Engineer for commercial and industrial projects, and was later promoted to the positions of Project Engineer and Project Manager. From 2001 to 2008, Mr. Velazquez worked as Project Manager at Terry's Electric, Inc. in Florida where his responsibilities included the preparation of estimates and the coordination and supervision of the construction or upgrade of new and existing substations. From 2008 to 2015, he has held various engineering titles in the substation engineering section. In 2015, Mr. Velazquez was promoted from Engineer III to Supervisor in the Substation Engineering section. In his current position, he is responsible for supervising the Conceptual Substation Engineering group and the conceptual design, scope development, and cost estimations for all new high voltage transmission switching stations, transmission substations and distribution substations.

Mr. Velazquez has previously testified before the Virginia State Corporation Commission.

### Witness Direct Testimony Summary

Witness: Courtney R. Fisher  
Title: Environmental Consultant  
Summary:

Company Witness Courtney R. Fisher will adopt and sponsor those portions of the Appendix providing an overview of the design of the route for the proposed project, as follows:

- Section II.A.1: This section provides the relevant lengths of each transmission line with relocated structures associated with the proposed project.
- Section II.A.2: This section provides a map showing the route of the proposed project.
- Section II.A.4-9: These sections provide detail regarding the right-of-way for the proposed project.
- Section III: This section details the impact of the proposed project on scenic, environmental, and historic features.
- Section V: This section provides information related to public notice of the proposed project.

Additionally, Company Witness Fisher adopts and sponsors the DEQ Supplement provided as part of the Company's Application.

A statement of Ms. Fisher's background and qualifications is attached to this summary as Appendix A.



**DIRECT TESTIMONY  
OF  
COURTNEY R. FISHER  
ON BEHALF OF  
VIRGINIA ELECTRIC AND POWER COMPANY  
BEFORE THE STATE CORPORATION COMMISSION OF VIRGINIA  
CASE NO. PUR-2017-00002**

1 **Q. Please state your name, business address and position with Virginia Electric and**  
2 **Power Company (“Dominion Virginia Power” or the “Company”).**

3 A. My name is Courtney R. Fisher, and I am an Environmental Consultant for Dominion  
4 Virginia Power. My office is located at 701 East Cary Street, Richmond, Virginia 23219.  
5 A statement of my qualifications and background is provided as Appendix A.

6 **Q. Please describe your areas of responsibility with the Company.**

7 A. My responsibilities include identification of appropriate routes for transmission lines and  
8 obtaining necessary federal, state, and local approvals, and environmental permits for  
9 those facilities.

10 **Q. What is the purpose of your testimony in this proceeding?**

11 A. In order to comply with mandatory North American Electric Reliability Corporation  
12 Reliability Standards and PJM Interconnection, L.L.C. reliability standards; to improve  
13 operational performance; and to maximize available land use to accommodate potential  
14 future transmission terminations and transformation at its existing Idylwood Substation  
15 located in Fairfax County, Dominion Virginia Power proposes to shift the existing  
16 substation footprint within Company-owned property to rebuild and rearrange Idylwood  
17 Substation from a straight-bus arrangement to a breaker-and-a-half arrangement using  
18 Gas Insulated Substation bus and breakers (collectively, the “Idylwood Substation  
19 Rebuild Project” or “Rebuild Project”).

1 The purpose of my testimony is to provide an overview of design of the route for and  
2 environmental impacts of the proposed Rebuild Project. I am sponsoring Sections II.A.1,  
3 II.A.2, II.A.4-9, III, and V of the Appendix. Additionally, I adopt and sponsor the DEQ  
4 Supplement provided as part of the Company's Application.

5 **Q. What activities have been or will be undertaken to reasonably minimize the**  
6 **environmental impact of the proposed Rebuild Project, and describe the**  
7 **environmental permitting process that will follow the State Corporation**  
8 **Commission (the "Commission") approval of the Rebuild Project?**

9 A. DEQ will conduct an environmental and permitting review of the Company's  
10 Application, including the solicitation of comments from relevant agencies. The  
11 Company developed the DEQ Supplement attached to the Application based on previous  
12 Company coordination with the DEQ. The DEQ Supplement contains, in addition to a  
13 brief description of the Rebuild Project, information on impacts and the status of agency  
14 review with respect to the following: air quality; water withdrawals and discharges;  
15 wetlands; solid and hazardous waste; natural heritage and threatened and endangered  
16 species; erosion and sediment control; archeological, historic, scenic, cultural, and  
17 architectural resources; use of pesticides and herbicides; geology and mineral resources;  
18 wildlife resources; recreation, agricultural, and forest resources; and transportation  
19 infrastructure. The Rebuild Project is located entirely on Company-owned property and  
20 within the existing right-of-way so impacts will be reasonably minimized. The  
21 appropriate environmental studies will be made of these areas before construction begins.  
22 The DEQ Supplement also discusses the permits that will be required and comment  
23 letters and other materials the Company has obtained regarding the Rebuild Project from

1 relevant agencies as a result of its own efforts.

2 **Q. Does this conclude your pre-filed direct testimony?**

3 **A. Yes, it does.**

**BACKGROUND AND QUALIFICATIONS  
OF  
COURTNEY R. FISHER**

Courtney R. Fisher graduated from Mary Washington College in 1995 with a Bachelor of Science Degree in Environmental Science. She joined the Company's Transmission Right-of-Way group in October 2006 as a Siting and Permitting Specialist, and was promoted to Senior Siting and Permitting Specialist in November 2008. In September of 2016, Ms. Fisher transitioned to an Environmental Consultant within the Company's Environmental Services Department as a liaison to the Electric Transmission Department.

Prior to working for the Company, Ms. Fisher worked as an Environmental Scientist/Planner for Engineering Design Associates from September 2004 to October 2006. Additionally, she was employed as the Environmental Programs Manager for the County of New Kent, Virginia from April 2001 to September 2004. Before that she worked as a Civil Engineer for the City of Danville, Virginia from November 1999 to March 2001. Prior to her work with the City, she was employed as the Conservation Specialist for the James River Soil and Water Conservation District from July 1997 to November 1999. She began her full time employment with Middlesex County, Virginia, working as an Environmental Enforcement Specialist from June 1996 to July 1997.

Ms. Fisher has previously testified before the Virginia State Corporation Commission.