PART 6

COMMONWEALTH OF VIRGINIA

STATE CORPORATION COMMISSION

APPLICATION OF	)	
	)	
VIRGINIA ELECTRIC AND POWER COMPANY	)	
	)	
	)	Case No. PUR-2017-00078
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

Matthew B. Vinson

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

Amanda M. Mayhew

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 Matthew B. Vinson): 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-2017-00078

Q. Please state your name, business address and position with Virginia Electric and Power Company ("Dominion Energy Virginia" or the "Company").

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

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

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

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

A. In order to maintain the structural integrity and reliability of its transmission system in compliance with mandatory North American Electric Reliability Corporation ("NERC") Reliability Standards, and to provide flexibility to support the future overall growth in the area, Dominion Energy Virginia proposes to rebuild, entirely within an existing right-of-way and Company-owned property, approximately 8.5 miles of existing 115 kV transmission lines, Possum Point-Smoketown Line #18 and Possum Point-Smoketown Line #145, located between the existing 115 kV switch yard at the Company's Possum Point Power Station site (the "Possum Point Switching Station" or "Possum Point

Station") and the Northern Virginia Electric Cooperative ("NOVEC") Smoketown Delivery Point ("DP") entirely in Prince William County, Virginia, utilizing 230 kV design on all but the first 0.7-mile segment originating from the 115 kV switch yard at the Possum Point Power Station site, which will be rebuilt to 115 kV design in order to continue operating the line at 115 kV at present (the "Rebuild Project"). While the Rebuild Project proposes to construct the lines to be capable of operating at 230 kV, operation of the lines would continue at 115 kV until such time as needed to serve the Northern Virginia Load Area.

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

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

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 29 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: Matthew B. Vinson

Title: Transmission Line Engineer II – Electric Transmission Line Engineering

Summary:

Company Witness Matthew B. Vinson 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 I.G: This section provides the estimated cost 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 II.C: This section describes and furnishes plan drawings of the substation, switching station, and other ground facilities associated with the proposed project.
- Section IV: This section provides the health aspects of electric and magnetic field levels.

Additionally, Company Witness Vinson 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.

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

DIRECT TESTIMONY
OF
MATTHEW B. VINSON
ON BEHALF OF
VIRGINIA ELECTRIC AND POWER COMPANY
BEFORE THE STATE CORPORATION COMMISSION OF VIRGINIA
CASE NO. PUR-2017-00078

Q. Please state your name, business address and position with Virginia Electric and Power Company ("Dominion Energy Virginia" or the "Company").

A. My name is Matthew B. Vinson, and I am a Transmission Line Engineer II in the Electric Transmission Line Engineering Department for Dominion Energy Virginia. My office is located at 701 East Cary Street, Richmond, Virginia 23219. A statement of my qualifications and background is provided as Appendix A.

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

A. I am responsible for developing detailed designs, construction specifications for new projects, and material requirements and modifications to existing infrastructure with voltages ranging from 69 kV to 500 kV.

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

A. In order to maintain the structural integrity and reliability of its transmission system in compliance with mandatory North American Electric Reliability Corporation ("NERC") Reliability Standards, and to provide flexibility to support the future overall growth in the area, Dominion Energy Virginia proposes to rebuild, entirely within an existing right-of-way and Company-owned property, approximately 8.5 miles of existing 115 kV transmission lines, Possum Point-Smoketown Line #18 and Possum Point-Smoketown Line #145, located between the existing 115 kV switch yard at the Company's Possum

Point Power Station site (the "Possum Point Switching Station" or "Possum Point Station") and the Northern Virginia Electric Cooperative ("NOVEC") Smoketown Delivery Point ("DP") entirely in Prince William County, Virginia, utilizing 230 kV design on all but the first 0.7-mile segment originating from the 115 kV switch yard at the Possum Point Power Station site, which will be rebuilt to 115 kV design in order to continue operating the line at 115 kV at present (the "Rebuild Project"). While the Rebuild Project proposes to construct the lines to be capable of operating at 230 kV, operation of the lines would continue at 115 kV until such time as needed to serve the Northern Virginia Load Area.

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, I.G, II.A.3, II.B, II.C., and IV of the Appendix. I am also co-sponsoring Section I.A of the Appendix with Company Witness Mark R. Gill.

Q. Have you made calculations of the EMF for the proposed lines?

A. Yes, and they are shown in Section IV.A of the Appendix for various loading conditions expected to occur at the edges of the right-of-way. Magnetic field levels ranging from 53.7 milligauss ("mG") to 0.96 mG were calculated for the Project at the edges of the Possum Point-Smoketown right-of-way based on average and peak loading expected to occur in 2020 with the Rebuild Project in service.

Q. The information you have provided in Section IV.A of the Appendix shows the calculated maximum EMF at the edge of the rights-of-way. How do the strengths of the expected maximum magnetic fields at the edge of the right-of-way compare to magnetic fields found elsewhere?

A. The field strengths shown in Appendix Section IV.A can be compared to those created by other electrical sources. For example, a hair dryer produces 300 mG or more, a copy machine can produce 90 mG or more, and an electric power saw can produce 40 mG or more, depending on the circumstances and operation of these devices. The strength of the field received by the person operating these devices would, of course, depend on the distance between the device and the person operating it. Magnetic field strength diminishes rapidly as distance from the source increases.

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

A. Yes, it does.

APPENDIX A

BACKGROUND AND QUALIFICATIONS
OF
MATTHEW B. VINSON

Matthew B. Vinson graduated from the University of Virginia in 2010 with a Bachelor of Science in Civil Engineering. He worked for a private civil/site planning company for approximately a year and a half. In the fall of 2011 he was hired as a contractor at Dominion Energy Virginia in the Operation and Maintenance Department of Electric Transmission. After a year, he was hired fulltime by Dominion Energy Virginia in the Line Engineering Department of Electric Transmission, where he currently works.

Witness Direct Testimony Summary

Witness: Amanda M. Mayhew

Title: Senior Siting and Permitting Specialist – Electric Transmission Right-of-Way

Summary:

Company Witness Amanda M. Mayhew 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 Mayhew adopts and sponsors the DEQ Supplement provided as part of the Company's Application.

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

DIRECT TESTIMONY
OF
AMANDA M. MAYHEW
ON BEHALF OF
VIRGINIA ELECTRIC AND POWER COMPANY
BEFORE THE STATE CORPORATION COMMISSION OF VIRGINIA
CASE NO. PUR-2017-00078

Q. Please state your name, business address and position with Virginia Electric and Power Company ("Dominion Energy Virginia" or the "Company").

A. My name is Amanda M. Mayhew, and I am a Senior Siting and Permitting Specialist for the Company. My office is located at One James River Plaza, 701 East Cary Street, Richmond, Virginia 23219. A statement of my qualifications and background is provided as Appendix A.

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

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

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

A. In order to maintain the structural integrity and reliability of its transmission system in compliance with mandatory North American Electric Reliability Corporation ("NERC") Reliability Standards, and to provide flexibility to support the future overall growth in the area, Dominion Energy Virginia proposes to rebuild, entirely within an existing right-of-way and Company-owned property, approximately 8.5 miles of existing 115 kV transmission lines, Possum Point-Smoketown Line #18 and Possum Point-Smoketown Line #145, located between the existing 115 kV switch yard at the Company's Possum Point Power Station site (the "Possum Point Switching Station" or "Possum Point

Station") and the Northern Virginia Electric Cooperative ("NOVEC") Smoketown Delivery Point ("DP") entirely in Prince William County, Virginia, utilizing 230 kV design on all but the first 0.7-mile segment originating from the 115 kV switch yard at the Possum Point Power Station site, which will be rebuilt to 115 kV design in order to continue operating the line at 115 kV at present (the "Rebuild Project"). While the Rebuild Project proposes to construct the lines to be capable of operating at 230 kV, operation of the lines would continue at 115 kV until such time as needed to serve the Northern Virginia Load Area.

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

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

A. DEQ will conduct an environmental and permitting review of the Company's Application, including the solicitation of comments from relevant agencies. The Company developed the DEQ Supplement attached to the Application based on previous Company coordination with the DEQ. The DEQ Supplement contains, in addition to a brief description of the Rebuild Project, information on impacts and the status of agency review with respect to the following: air quality; water withdrawals and discharges; wetlands; solid and hazardous waste; natural heritage and threatened and endangered

species; erosion and sediment control; archeological, historic, scenic, cultural, and architectural resources; use of pesticides and herbicides; geology and mineral resources; wildlife resources; recreation, agricultural, and forest resources; and transportation infrastructure. The proposed route for the Rebuild Project is approximately 8.5 miles of existing transmission line corridor currently occupied by the existing 115 kV transmission Lines #18 and #145 within the existing right-of-way, including 0.1 mile of existing right-of-way for individual lines tapping three NOVEC DPs, and on Company-owned power station property so impacts will be reasonably minimized. The appropriate environmental studies will be made of these areas before construction begins. The DEQ Supplement also discusses the permits that will be required and comment letters and other materials the Company has obtained regarding the Rebuild Project from relevant agencies as a result of its own efforts.

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

A. Yes, it does.

APPENDIX A

BACKGROUND AND QUALIFICATIONS OF AMANDA M. MAYHEW

Amanda M. Mayhew graduated from the University of Connecticut in 2003 with a Bachelor of Science in Environmental Science. She also obtained a Master of Business Administration from Quinnipiac University in 2013. Ms. Mayhew joined the Company's Transmission Right-of-Way group in May 2014 as a Senior Siting and Permitting Specialist, the position she presently holds.

Prior to working for the Company, Ms. Mayhew worked as an environmental scientist for the Northeast Utilities Service Company in Connecticut. She worked in the Transmission Siting and Permitting group from 2003 to 2014, obtaining environmental permits and assisting in siting proceedings with the Connecticut Siting Council.

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