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VIA ELECTRONIC DELIVERY

April 28, 2016

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Application of Virginia Electric and Power Company for approval and certification of electric facilities: Haymarket 230 kV Double Circuit Transmission Line and 230-34.5 kV Haymarket Substation
Case No. PUE-2015-00107

Dear Counsel:

Enclosed are the responses of Virginia Electric and Power Company to the Interrogatories and Requests for Production of Documents by the Staff of the State Corporation Commission (Third Set).

Should you have any questions regarding this matter, please do not hesitate to contact me.

Sincerely,

Charlotte P. McAfee
Senior Counsel

Enclosure

cc: Mr. Neil Joshipura
Will Reisinger, Esq.
Cliona Mary Robb, Esq.
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Virginia Electric and Power Company
Case No. PUE-2015-00107
Virginia State Corporation Commission Staff
Third Set

The following response to Question No. 3-24 of the Third Set of Interrogatories and Requests for Production of Documents Propounded by the Virginia State Corporation Commission Staff received on April 19, 2016 has been prepared under my supervision.

Jon Berkin
Routing Specialist
Natural Resource Group, LLC

The following response to Question No. 3-24 of the Third Set of Interrogatories and Requests for Production of Documents Propounded by the Virginia State Corporation Commission Staff received on April 19, 2016, has been prepared under my supervision as it pertains to legal matters.

Charlotte P. McAfee
Senior Counsel
Dominion Resources Services, Inc.

Question No. 24

In the Company's response to Staff Interrogatory No. 2-22, a process of evaluation was described; however, no quantitative analysis was offered. Please quantify in numerical terms the number of Homes and Commercial Structures that will continue to be visually impacted by the I-66 Overhead Line and its towers from the proposed location of the transition station to the Haymarket Substation once construction is completed.

Response:

The Company objects on the basis that this request requires original work. The Company has not conducted an analysis of the number of homes and commercial structures that "continue to be visually impacted by the I-66 Overhead Line…," and to do so would be voluminous and

unduly burdensome as further explained below. The Company also objects to this request to the extent that it seeks information that is not relevant or reasonably calculated to lead to the admission of relevant information in this proceeding.

Notwithstanding and subject to the foregoing objections, the Company provides the following response.

The Company's response to Staff Interrogatory No. 2-22 presented a Visual Impact Analysis Matrix of the residences within 100, 200, and 500 feet of the Overhead and Hybrid Routes for the Gainesville to Haymarket 230 kV Transmission Line and Substation Project. The Company defined the significance of visual impacts as a product of the sensitivity of affected resources and the magnitude of change associated with the Project. The analysis concluded that although the I-66 Overhead Alternative would have a "slight/moderate" visual impact on the closest residences, it would be generally visually compatible with the existing landscape.

The number of single family residential, multi-family residential, and commercial structures within 500 feet of the centerline of the I-66 Overhead Alternative Route and located between the proposed locations of the switching/terminal station for the I-66 Hybrid Alternative Route and the Haymarket Substation are presented in Table 1 below. These structures also are depicted on the map Attachment Staff Set 3-24. Please note proximity to the proposed project does not necessarily mean the residence or commercial structure will be "visually impacted" by proposed project.

Table 1

Gainesville to Haymarket 230kV Transmission Line Project

Residential and Industrial/Commercial Structure Counts Along the I-66 Overhead Alternative Route Between the Proposed Switching/Terminal Station and Haymarket Substation

Residential and Industrial/Commercial Structures	Unit	Count[a]
Single family Residential		
Single Family Residential within 500 feet	number	118
Single Family Residential within 200 feet	number	15
Single Family Residential within 100 feet	number	4
Multi-unit Residential		
Multi-unit Residential within 500 feet[a]	number	110
Multi-unit Residential within 200 feet	number	32
Multi-unit Residential within 100 feet	number	17
Industrial/Commercial Structures		
Industrial/Commercial within 500 feet	number	12
Industrial/Commercial within 200 feet	number	3
Industrial/Commercial within 100 feet	number	1

[a] The structure counts for each buffer distance are cumulative. Total structure counts are equal to the number of structures within 500 feet of the route centerline. The structure counts presented in this table in some cases differ from those presented in Table 4-1 of the Environmental Routing Study. The counts presented in this table are based on more recent aerial photography which became available after the completion of the Environmental Routing Study.

[b] Multi-unit Residential structures represent building counts, not individual dwelling units. The multi-unit residential category includes apartments, condos, and townhomes.

As indicated in Table 1, there are a total of 228 single family and multi-unit residential and 12 commercial structures within 500 feet of the centerline of the I-66 Overhead Alternative Route between the proposed locations of the switching/terminal station for the I-66 Hybrid Alternative Route and the Haymarket Substation.

It would be extremely labor intensive, costly, and time consuming to attempt to quantify the number of residences and commercial structures that would be "visually impacted" by the I-66 Overhead Alternative transmission line and its associated structures (the Project). In addition, it is debatable whether such an analysis would yield a meaningful and measureable result, especially since the assessment of visual impacts is not a completely objective metric.

This analysis would require the Company to obtain recent LIDAR data for the project area that included the heights of all surrounding structures in the vicinity of the project area. The Company would next have to construct an analytical model using geographic information software that would attempt to quantify the visual impacts on each structure in the project's viewshed. This model would also have to include the transmission structure heights, the heights of the wires between the structures, the current ground elevation, and the heights and locations of other features in the visual landscape (*e.g.*, the sound walls associated with I-66, trees, signage, etc.).

Current LIDAR data is not available for Prince William County. Therefore, the Company would need to collect this data by flying the route and using specialized equipment designed to acquire the LIDAR data. In addition, it is uncertain whether such a model as described above would be effective, since it would have to be precisely calibrated and require the input of a significant amount of data. It would take several months to acquire the appropriate data and then develop, run, and test such a model.

In addition, as illustrated by the map included as Attachment Staff Set 3-24, this segment of the I-66 Overhead Alternative Route between the proposed locations of the transition station for the I-66 Hybrid Alternative Route and the Haymarket Substation is heavily developed and already possesses extensive existing infrastructure features. The local viewshed already is dominated by both horizontal features (*e.g.*, I-66, sound walls, etc.) and vertical features (*e.g.*, road signs, interstate and off-ramp lights, etc.). Consequently, the visual effect of the Project on individual structures cannot be readily separated from the cumulative effect of the other development in the area. Given the extent of this development, the visual effect of the Project would be incremental and, as noted in the Company's response to Staff Interrogatory No. 2-22, would not contrast with the existing aesthetic conditions.