

**COMMONWEALTH OF VIRGINIA
BEFORE THE
STATE CORPORATION COMMISSION**

**APPLICATION OF)
)
TRANS-ALLEGHENY INTERSTATE LINE)
COMPANY)
)
For certificates of public convenience)
and necessity to construct facilities:)
500 kV Transmission Line from)
Virginia-West Virginia Boundary to)
Virginia Electric and Power Company)
Transmission Line #580)**

CASE NO. PUE-2007-00033

**REBUTTAL TESTIMONY OF
CYRIL WELTER**

February 5, 2008

1 Q. PLEASE STATE YOUR NAME, POSITION, PLACE OF EMPLOYMENT AND
2 BUSINESS ADDRESS.

3 A. My name is Cyril Welter. I am employed as a Senior Project Manager for the
4 Environmental Studies and Permitting Division of Burns & McDonnell Engineering
5 Company, Inc. ("Burns & McDonnell"), an engineering and environmental consulting
6 firm. My business address is 9400 Ward Parkway, Kansas City, Missouri 64114.

7 Q. DID YOU PRE-FILE DIRECT TESTIMONY ON APRIL 19, 2007, IN THIS CASE?

8 A. Yes.

9 Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

10 A. I will comment on Respondent and Staff testimony concerning cultural resources,
11 visual impacts and locality comprehensive plans.

12 Q. HAVE YOU REVIEWED THE TESTIMONY OF THE RESPONDENTS
13 RELATED TO CULTURAL RESOURCES?

14 A. Yes I have.

15 Q. WHAT IS YOUR GENERAL RESPONSE TO THE COMMENTS ON THE
16 APPROACH TAKEN IN THE "ROUTING STUDY AND ENVIRONMENTAL
17 ASSESSMENT" FILED AS EXHIBIT CW-1 TO YOUR DIRECT TESTIMONY
18 ATTACHED TO THE COMPANY'S APPLICATION ("LRE")?

19 A. The methodology used for the LRE prepared on behalf of Trans-Allegheny Interstate
20 Line Company (the "Company" or "TrAILCo") was based on the Commission Staff's

1 *Guidelines of Minimum Requirements for Transmission Line Applications Filed*
2 *Under Virginia Code Section 56-46.1 and The Utility Facilities Act ("Guidelines")*
3 and consultation with the Department of Historic Resources ("DHR"). These
4 Guidelines, and the correspondence from DHR, requested data on sites that are listed
5 on the State or National Register of Historic Places ("NRHP"). The normal process
6 also includes more detailed field studies and research after a project is approved, but
7 before construction. TrAILCo would certainly expect to do such investigation for the
8 designated route after Commission approval. Detailed field studies beforehand are
9 not typical because of limitations on access and the uncertainty of what the exact
10 route will be, until the project receives Commission approval.

11 The work performed to date (literature review, agency contacts, and field
12 reconnaissance) is considered Phase I of the cultural resource studies. Phase II would
13 be further research and shovel testing in the field as part of NRHP evaluation of sites,
14 which would occur after Commission approval. Phase III would be mitigation of any
15 unavoidable impacts that may occur. The Respondents are suggesting that all of these
16 studies should be performed in Phase I, which is not the protocol for a routing study.

17 Q. WHAT ABOUT THE RESPONDENTS' ASSERTION THAT FOLLOWING AN
18 EXISTING TRANSMISSION LINE DOES NOT LESSEN THE IMPACTS OF A
19 NEW LINE?

1 A. Although not the sole criterion in line routing, utilizing existing rights-of-way is a key
2 benefit of the Proposed Route. This collocation of facilities is promoted by Va. Code
3 §§ 56-46.1 and 56-259, and FERC Guideline #1, as well as the Appalachian Trail
4 Conference ("ATC") Policy on Roads and Utility Developments criteria (Criteria #2),
5 all of which encourage the use of existing rights-of-way. John Bailey, in Case No.
6 PUE-2007-00031 on behalf of Dominion Virginia Power and TrAILCo, addresses
7 these requirements in more detail in his rebuttal testimony. Staff witness Wayne D.
8 McCoy of Miller-Stephenson and Associates, P.C., agreed that following the existing
9 right-of-way would help reduce potential impacts to cultural resources. Staff witness
10 McCoy notes the benefit of paralleling existing corridors, especially in areas with
11 significant historic assets. While there will be an impact wherever this line is built,
12 Mr. McCoy noted that it will be only incremental where an existing transmission line
13 already exists, such as on the Proposed Route.

14 Even the counties in the area suggest following existing corridors, as shown in the
15 Fauquier County Comprehensive Plan, Policy Guidelines which state
16 "[g]as/petroleum pipelines and electrical transmission lines should be grouped in
17 designated utility corridors where appropriate to avoid scattered placement of these
18 utilities in the County," chapter 9, page 3-4 available at
19 [http://www.fauquiercounty.gov/Government/Departments/CommDev/index.cfm?acti](http://www.fauquiercounty.gov/Government/Departments/CommDev/index.cfm?action=compplan1)
20 [on=compplan1](http://www.fauquiercounty.gov/Government/Departments/CommDev/index.cfm?action=compplan1).

1 Q. TO THE EXTENT APPLICABLE TO THE ROUTE PROPOSED IN THIS
2 PROCEEDING, WHAT WAS THE BASIS FOR CHOOSING THE LOCATIONS
3 FOR THE VISUAL SIMULATIONS IN THE ASSESSMENT OF VISUAL
4 IMPACTS ("ASSESSMENT") PREPARED BY BURNS & MCDONNELL ON
5 BEHALF OF DOMINION VIRGINIA POWER AND TRAILCO AND FILED ON
6 SEPTEMBER 17, 2007, IN CASE NO. PUE-2007-00031?

7 A. DHR requested that we take photos from eligible sites that were within 1 mile of the
8 Proposed and Alternate Routes, if the line would be visible from those locations. We
9 determined the potential visibility from the viewshed analysis that we performed,
10 using GIS software. This analysis was also used to help determine the sites from
11 which to take the pictures because it indicated the degree of visibility as well, and we
12 selected areas of high visibility where possible. As requested by DHR, an
13 architectural historian accompanied the photographer on the trip to help select the
14 actual locations on the sites from which to take the pictures.

15 Q. WHAT WAS YOUR SOURCE OF INFORMATION FOR IDENTIFYING
16 CULTURAL RESOURCE SITES AND THEIR STATUS?

17 A. The primary source was DHR records -- the complete electronic data set was
18 purchased from DHR, which we used for mapping the location, area, and status of
19 sites. We also had our staff meet with various officials with DHR, the American
20 Battlefield Protection Program, and the Shenandoah Valley Battlefields National

1 Historic District. In addition, the architectural historian visited every site for which
2 visual simulations were prepared, as noted above.

3 Q. SOME WITNESSES, KIMBERLY ABE ON BEHALF OF THE PIEDMONT
4 ENVIRONMENTAL COUNCIL ("PEC") IN PARTICULAR, HAVE POINTED
5 OUT THAT THE DISCUSSION OF CULTURAL RESOURCES DID NOT
6 INCLUDE SCENIC ROADS OR RIVERS. WHY IS THAT?

7 A. Those resources are covered in the LRE under the headings Visual Character and
8 Hydrology; as opposed to the study for DHR. As noted in the introduction of the
9 Assessment, the study was prepared at the request of DHR, and is focused on historic
10 resources.

11 Q. DID YOU REVIEW THE RESPONDENTS' TESTIMONY REGARDING
12 POTENTIAL VISUAL IMPACTS OF THE PROJECT?

13 A. Yes I did.

14 Q. DO YOU AGREE WITH THE COMMENTS BY JOHN BEARDSLEY ON PAGES
15 2-3 OF HIS REPORT ON BEHALF OF POWER-LINE LANDOWNERS
16 ALLIANCE AND KRISTINA HILL, STARTING AT PAGE 3 OF HER
17 TESTIMONY ON BEHALF OF PEC, THAT YOU SHOULD HAVE
18 RIGOROUSLY APPLIED THE U. S. FOREST SERVICE METHODOLOGY
19 DESCRIBED IN *LANDSCAPE AESTHETICS, A HANDBOOK FOR SCENERY*
20 *MANAGEMENT* ("HANDBOOK")?

1 A. No. The LRE was conducted in accordance with the Guidelines of the Commission
2 and not required to follow the guidelines of the U.S. Forest Service ("Forest
3 Service"). The Handbook is primarily a tool for the Forest Service to manage their
4 lands, as the title states. We applied some of the principles of the Forest Service
5 approach for our LRE, not the wholesale methodology. This project is not under the
6 jurisdiction of the Forest Service, and the objective was not to develop a management
7 program for the study area.

8 While some of the witnesses belabor the idea of doing a scenic attractiveness index,
9 they do not mention the principles of visual contrast or visual absorption capability
10 which apply to determining the potential visual impact of a project. These principles
11 include the consideration of factors such as form, line, color, and texture in
12 determining the contrast, and consequently the visibility, of a project. Based on these
13 considerations, building next to a similar type of facility indeed helps to reduce the
14 visibility of a transmission line. These principles are covered in the Handbook, and in
15 the predecessor manuals, *National Forest Landscape Management, volume 1* and
16 *volume 2, Chapter 1: The Visual Management System.*

17 Q. PLEASE COMMENT ON THE RESPONDENTS' CONCERNS THAT THE NEW
18 STRUCTURES WILL BE TALLER THAN THE SURROUNDING TREES.

19 A. Although the visibility of the line is affected by whether it is taller than the trees, a
20 person standing on the ground cannot always see above the trees. The viewshed

1 analysis in the LRE takes the line of sight into account in determining whether the
2 line would be visible. Also, the rolling terrain in the area provides a screening factor
3 when the viewer's line of sight is blocked by a hill. Furthermore, neither the trees nor
4 the hills need to be taller than the transmission structures to obscure them from the
5 vantage point of a person standing on the ground. If the viewer's line of sight is
6 pushed upwards such that the angle of view would be above the structures (*i.e.*,
7 toward the sky), the line would not be visible to the viewer. These factors are all
8 incorporated into the viewshed analysis in the LRE.

9 Q. THE RESPONDENTS ARE CONCERNED ABOUT THE MONTHS WHEN THE
10 TREES WOULD BE WITHOUT LEAVES. WHAT IS YOUR COMMENT ON
11 THAT ISSUE?

12 A. The density of the trees in this area is such that the trunks and branches alone are
13 sufficient to hide or obscure objects with any significant depth of trees, say 50 feet or
14 more. The difference in visibility would be marginal, and may consist of a change in
15 status from hidden to obscured, but not a change from hidden to totally visible.

16 Q. PEC WITNESS MS. HILL, ON PAGE 11 OF HER TESTIMONY, REFERENCED
17 A VISUAL STUDY PERFORMED FOR A TRANSMISSION LINE IN RHODE
18 ISLAND. ARE YOU FAMILIAR WITH THAT STUDY?

1 A. Yes, I have reviewed it. The study, titled Visibility and Visual Impact Assessment,
2 Southern Rhode Island Transmission Project, was prepared by Environmental Design
3 & Research, P.C. ("EDR"), in October 2005.

4 Q. WHAT IS YOUR OPINION OF THE METHODOLOGY USED IN THE RHODE
5 ISLAND STUDY AND THE CONCLUSIONS OF THAT STUDY COMPARED
6 TO THE ONE BURNS & MCDONNELL PREPARED FOR DOMINION
7 VIRGINIA POWER AND TRAILCO?

8 A. The case and the methodology are very similar to the Meadow Brook – Loudoun
9 project. The Rhode Island project involved the construction of a new 115-kV
10 transmission line next to an existing line. The consultants did a viewshed analysis of
11 the existing line, then of the proposed line, and compared the two, just as we did for
12 this project. The distance used there was three miles, the same as we used. The
13 description of the setting included recreation areas, historic areas, residential areas,
14 and so forth, which are likewise included in our LRE in various sections. The
15 consultants then prepared visual simulations and rated the effect on the existing
16 conditions. While we did not use a numerical scale to rate the impacts, we did
17 include a description of the anticipated change for each instance.

18 Q. WHAT WERE SOME OF THE CONCLUSIONS OF THE RHODE ISLAND
19 STUDY?

1 A. The conclusions were almost identical in nature. The consultants rated the impacts as
2 low due to the presence of the existing line and existing vegetation. The Rhode
3 Island study found “[t]o a large extent the project’s adverse visual impact was
4 mitigated by its proximity to the existing transmission line and cleared ROW.
5 ...However, in no case did the level of adverse visual impact come close to
6 exceeding the threshold of allowable impact for any LSZ (landscape similarity zone)
7 within the study area. Consequently, the VIA (visual impact assessment) analysis
8 suggests that no additional actions/project modifications are necessary to mitigate
9 adverse visual impact.” EDR, p. 30.

10 While we recognize some potential visual impact from the project along the Proposed
11 Route, we agree with the principle that following the existing right-of-way is an
12 effective method to reduce those impacts.

13 Q. DID YOU REVIEW THE VIEWSHED FIGURES PREPARED BY WATSUN
14 RANDOLPH ON BEHALF OF PEC?

15 A. Yes, I did. They were similar to our figures, in large part because he used the data we
16 had produced. The main difference was labeling some of the forest as "seasonal,"
17 meaning deciduous. His exhibits do not distinguish degrees of visibility, as ours did.
18 Rather, he shows all areas the same. Also, there is no definition of "Seasonal Forest
19 Visibility," or source identified, so I cannot know how he arrived at that, or exactly

1 how visible such a designation means. As I stated earlier, a forest without leaves still
2 provides screening, especially at the density and depth found in this area.

3 Q. DOES A TRANSMISSION LINE CONFLICT WITH THE AGRICULTURAL USE OF
4 THE LAND?

5 A. Agriculture of all types is permitted, and is common, within transmission rights-of-way.
6 Much of the agricultural land in this area is pasture, and a transmission line would have
7 minimal impact on such use. Staff witness McCoy acknowledged this fact by finding
8 that farming is a compatible use based on his review of general zoning ordinance and
9 regulations.

10 Q. FREDERICK COUNTY DEPARTMENT OF PLANNING AND DEVELOPMENT
11 FILED A LETTER WITH THE VIRGINIA DEPARTMENT OF
12 ENVIRONMENTAL QUALITY ALLEGING THAT THE AGRICULTURAL AND
13 FORESTAL DISTRICT INFORMATION USED IN THE LRE WAS INCORRECT.
14 WAS THERE MORE UP-TO-DATE INFORMATION AVAILABLE AT THE
15 TIME THE APPLICATION WAS FILED?

16 A. No. The data used in the LRE were the most up-to-date available, provided by
17 Frederick County on March 22, 2007.

18 Q. DOES THIS CONCLUDE YOUR TESTIMONY?

19 A. Yes it does.