

COMMONWEALTH OF VIRGINIA
BEFORE THE
STATE CORPORATION COMMISSION

APPLICATION OF)
)
TRANS-ALLEGHENY INTERSTATE LINE)
COMPANY) Case No. PUE-2007-000____
)
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.*)

APPLICATION OF
TRANS-ALLEGHENY INTERSTATE LINE COMPANY
FOR APPROVAL AND CERTIFICATION OF ELECTRIC FACILITIES FOR
THE
CONSTRUCTION OF 500 kV TRANSMISSION LINE

DIRECT TESTIMONY OF
CYRIL WELTER

April 19, 2007

1 Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

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

7 Q. PLEASE DESCRIBE YOUR PROFESSIONAL EXPERIENCE AND
8 EDUCATIONAL BACKGROUND.

9 A. I have a Bachelor of Arts degree in Economics from Wabash College (1972) and a
10 master’s degree in Urban and Regional Planning from the University of Wisconsin
11 (1977). I have also completed graduate work in Landscape Architecture at Kansas
12 State University. Since 1979, I have been a project manager at Burns &
13 McDonnell for major planning and environmental studies related to power
14 generation and transmission projects throughout the United States. I have prepared
15 siting studies and environmental and socioeconomic assessments and developed
16 public involvement programs, most of which have been for power-related projects.
17 More specifically, I have performed over 30 transmission line routing studies
18 ranging in voltage from 69 kV to 500 kV. I have also authored a number of articles
19 on transmission line routing and public involvement programs, and I am one of the
20 principal instructors for Burns & McDonnell’s training seminars on transmission
21 line routing.

1 In Virginia, I have prepared multiple transmission line routing studies.
2 These projects range from 230 kV taps to major 500 kV transmission projects.
3 Specifically, I was the Project Manager on the following Virginia projects: the
4 Elmont-Chickahominy 230 kV line, the Clover-Carson 500 kV line, the Joshua
5 Falls-Ladysmith 500 kV line, the Pleasant View-Hamilton 230 kV line, the Clifton
6 500 kV Substation, and the White Oak 230 kV tap. My involvement with these
7 projects included extensive public meetings and testifying before the State
8 Corporation Commission.

9 Q. WHAT PROFESSIONAL EXPERIENCE DOES YOUR FIRM HAVE WITH
10 TRANSMISSION LINE ROUTING PROJECTS?

11 A. Burns & McDonnell has performed many electrical transmission line projects
12 throughout the country, including route selection and environmental study projects
13 for over 7,300 miles of electrical transmission lines, ranging in voltage from 69 kV
14 to 500 kV. Our Environmental Studies and Permitting Group has completed more
15 than 600 major environmental studies throughout the United States and in foreign
16 countries.

17 Q. WHAT WERE YOU ASKED TO DO IN CONNECTION WITH THIS CASE?

18 A. Trans-Allegheny Interstate Line Company (“TrAILCo”) commissioned Burns &
19 McDonnell to conduct a routing study and environmental assessment for the
20 Meadow Brook – Appalachian Trail segment (“Meadow Brook Segment”) of the
21 Trans-Allegheny Interstate Line (“TrAIL”) 500 kV transmission line and produce a
22 report of such study and assessment.

1 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

2 A. The purpose of my testimony is to sponsor and explain the *Routing Study and*
3 *Environmental Assessment for the Meadow Brook-Loudoun 500 kV Transmission*
4 *Line, Meadow Brook Segment*, referred to as the line route evaluation (“LRE”),
5 which describes and explains the route that has been recommended for TrAIL. A
6 copy of the LRE is Exhibit CW-1 to this direct testimony.

7 Q. WILL THE USE OF VARIOUS TERMS IN YOUR TESTIMONY BE
8 CONSISTENT WITH THE DEFINITIONS ASSIGNED TO THOSE TERMS IN
9 THE TABLE OF NOMENCLATURE ATTACHED TO THE APPLICATION AS
10 EXHIBIT 2?

11 A. Yes.

12 Q. PLEASE BRIEFLY EXPLAIN BURNS & MCDONNELL’S ROLE IN
13 STUDYING POSSIBLE ROUTES FOR TRAIL.

14 A. Burns & McDonnell was retained by TrAILCo and Dominion Virginia Power to
15 perform route selection, public involvement and environmental assessment studies
16 for the Meadow Brook to Loudoun 500 kV line to be constructed by those
17 companies.. The report for TrAILCo specifically covers the portion of TrAIL to be
18 constructed by TrAILCo from the Meadow Brook Substation generally east to the
19 point where the responsibility for construction of the continuation of the line will
20 shift to Dominion Virginia Power (the “Meadow Brook Segment”). The effort
21 addressed both social and natural resources in the study area that could be affected
22 by the proposed project. Burns & McDonnell identified preliminary alternatives,

1 provided assistance at the public open houses, provided suggestions on the route
2 selection, and described the potential effects of the proposed and alternate routes
3 for this segment of the line.

4 Q. PLEASE DESCRIBE THE ROUTE THAT BURNS & MCDONNELL HAS
5 RECOMMENDED FOR THE MEADOW BROOK SEGMENT.

6 A. The Proposed Route for the Meadow Brook Segment to be constructed by
7 TrAILCo begins at the Meadow Brook Substation and follows an existing 500 kV
8 line southeast to a point approximately 300 feet west of the Appalachian Trail
9 property where Dominion Virginia Power would have responsibility for
10 constructing the remainder of the line. The Proposed Route is 15.8 miles long and
11 follows existing transmission line or distribution line right-of-way for its entire
12 length.

13 Q. WHERE IS THE ROUTE SET OUT IN THE LRE REPORT?

14 A. Chapter 4.0 describes the Proposed and Alternate Routes for the Meadow Brook
15 Segment. The Proposed Route is composed of segments 1, 2, 5, 8, 11, 13, 16, 20,
16 25, 28, 31, 33 as shown in Figure 4-1.

17 Q. DID BURNS & MCDONNELL ASSESS THE POTENTIAL
18 ENVIRONMENTAL IMPACTS OF THE CONSTRUCTION OF THE
19 MEADOW BROOK SEGMENT ALONG THE PROPOSED ROUTE?

20 A. Yes. Burns & McDonnell quantified and described the potential impacts in
21 Chapter 4.0 following Va. Code 56-46.1. The Proposed Route would follow
22 existing transmission or distribution lines for 100 percent of its length. The

1 Proposed Route would cross one major river (the Shenandoah), three streams and
2 several tributaries; cross one state scenic road (Route 55), pass two residences
3 within 0-150 feet and 32 residences within 151-500 feet; cross 0.2 acres of mapped
4 wetlands, 20.7 acres of forest land, and 4.6 acres of agricultural/open land. All
5 crossings would occur where there are already existing crossings by electric lines.
6 The Proposed Route has 13 eligible historic or archeological sites within one mile
7 and one federally-listed species may be present in the vicinity of the line.

8 Q. DID YOU SPECIFICALLY CONSIDER THE HABITAT AND TYPE OF
9 WILDLIFE, BOTH LAND AND AQUATIC, THAT MAY BE IN THE
10 MEADOW BROOK SEGMENT RIGHT-OF-WAY OR ADJOINING AREAS,
11 AND ANY KNOWN EFFECT THAT TRAIL MAY HAVE UPON THEM,
12 INCLUDING FEEDING AND BREEDING HABITS?

13 A. Yes. The potential impacts are described in Chapter 4.0 of the LRE. Section 4.3.4
14 Vegetation, Section 4.3.5 Threatened and Endangered Plant Species, Section 4.3.7
15 Wetlands, and Section 4.3.8 Threatened and Endangered Animal Species address
16 wildlife habitat and species. The Proposed Route would have minimal adverse
17 effects due to the fact it involves either rebuilding existing electric lines in existing,
18 previously developed right-of-way, or co-locating adjacent to the existing facilities.
19 Furthermore, TrAILCo's proposed construction methods would help minimize
20 impacts, as described in Chapter 5.0 Mitigation Measures, of the LRE.

1 Q. WILL THE CONSTRUCTION OF TRAIL HAVE ANY MATERIAL ADVERSE
2 EFFECTS UPON HUMAN AND DOMESTIC ANIMAL LIFE LOCATED
3 ALONG THE RIGHT-OF-WAY?

4 A. The construction and operation of the project would not materially affect the land
5 use or residences in the project area. Agriculture could still be conducted within
6 the right-of-way, particularly the use of fields for pasture. While the new line
7 would pass 34 residences within 0-500 feet of the center line, all of these residences
8 are already adjacent to one or more transmission lines. Other possible effects are
9 discussed in the testimony of TrAILCo witnesses William Bailey and Gary
10 Johnson.

11 Q. PLEASE DESCRIBE THE PUBLIC OUTREACH CONDUCTED WITH
12 RESPECT TO THE ROUTE SELECTION IN WHICH BURNS &
13 MCDONNELL PARTICIPATED, AND THE PUBLIC INPUT RECEIVED.

14 A. Burns & McDonnell attended the public outreach meetings which TrAILCo held in
15 Frederick County on December 6, 2006 and Warren County on December 4, 2006.
16 Burns & McDonnell provided exhibits showing the alternative routes on aerial
17 photographs, and discussed these alternatives with attendees at the meetings. Burns
18 & McDonnell staff also reviewed the questionnaires that were submitted at the
19 meetings. The majority of people who submitted questionnaires were concerned
20 about their residences, environmental impacts, and visibility.

21 Q. DID BURNS & MCDONNELL EXAMINE OTHER POTENTIAL ROUTES?

1 A. Yes. The process is described in Chapter 3.0 Alternatives Analysis. The team
2 began with a study area that began at Meadow Brook Substation and went east to
3 the Loudoun Substation. The team developed and refined the alternatives based on
4 data collection, aerial photography, field reconnaissance, and agency comments. A
5 reduced set of routes was shown to the public at the outreach meetings. Following
6 the outreach meetings the team made some adjustments in the routes, quantified the
7 potential impacts of the alternatives, and selected a Proposed and Alternate Route.
8 In addition, the team identified a set of segments (7,9,12) between the Meadow
9 Brook Substation and the Riverton Substation as an option for consideration, as
10 well another set of segments (14,18,22,24,26,29) that could be used between the
11 Riverton Substation and the Appalachian Trail.

12 Q. WHAT ROUTE WAS SELECTED, AND WHY?

13 A. The Proposed Route uses segments 1, 2, 5, 8, 11, 13, 16, 20, 25, 28, 31, 33 to go
14 from the Meadow Brook Substation to the Appalachian Trail transition point. This
15 route was selected primarily because it follows existing transmission or distribution
16 lines for 100 percent of its length. This route avoids historic districts, and uses the
17 maximum amount of existing transmission right-of-way to reduce the effects on
18 historic resources, scenic resources, and residences. The use of existing right-of-
19 way reduces all of the potential effects of the construction and operation of a
20 transmission line because every resource crossed has already been crossed by a
21 similar facility. The use of existing transmission corridors also provides access for

1 construction via the existing access roads. None of the alternates have these
2 advantages.

3 An Alternate Route was selected that follows the same alignment as the
4 Proposed Route until it reaches Interstate 66 (“I-66”). At that point the route
5 would follow I-66, within the highway right-of-way. This route depends on
6 approval from the Virginia Department of Transportation (“VDOT”).

7 The route selection process also included two short options that could be
8 considered to avoid some residential areas. These options (A3 and B1) are
9 described in the LRE and addressed in the discussion of environmental impacts.

10 Q. BASED UPON YOUR EXPERIENCE AND EXPERTISE, DOES THE LRE
11 CONSTITUTE A REASONABLE, THOROUGH STUDY CONSISTENT WITH
12 CURRENT SITING METHODS?

13 A. Yes. The LRE follows the guidelines provided by the State and Corporation
14 Commission is consistent with current siting practices. As stated above, the study
15 concluded with a Proposed Route, Alternate Route, and two possible sets of
16 alternate segments. The study included a review of the existing conditions in the
17 study area; incorporated social, environmental and public concerns in the selection;
18 addressed possible environmental impacts, and includes mitigation measures to
19 reduce possible impacts.

20 Q. PLEASE EXPLAIN HOW THE CONSTRUCTION OF THE MEADOW BROOK
21 SEGMENT ALONG THE ROUTE RECOMMENDED WOULD COMPLY WITH
22 THE FERC “GUIDELINES FOR THE PROTECTION OF NATURAL,

1 HISTORIC, SCENIC, AND RECREATIONAL VALUES IN THE DESIGN AND
2 LOCATION OF RIGHTS-OF-WAY AND TRANSMISSION FACILITIES”
3 REFERENCED IN THE COMMISSION’S GUIDELINES FOR TRANSMISSION
4 LINES AT II.A.8.

5 A. First, the Proposed Route makes maximum use of existing rights-of-way, which is
6 suggested by the Commission’s guidelines for transmission lines as well as the
7 Federal Energy Regulatory Commission guidelines referred to in the State
8 Corporation Commission’s guidelines. The process of agency contacts and
9 location of the alignment are consistent with the guidelines. The route does not
10 cross any National Register Historic Sites on new right-of-way. One site was
11 recently made eligible for the National Register, the Cedar Creek Battlefield
12 extends across the existing lines near the Meadow Brook Substation where the
13 existing line would be rebuilt within the existing right-of-way. By following
14 existing rights-of-way, the location of the line minimizes visual impacts, clearing
15 of vegetation, and the need for new access for construction.

16 Q. IN YOUR EXPERT OPINION, IS THE ROUTE RECOMMENDED IN THE
17 LRE THE APPROPRIATE ROUTE FOR THE MEADOW BROOK SEGMENT?

18 A. Yes. The Proposed Route would have the least overall impacts of any of the
19 alternatives because it takes advantage of the most existing transmission right-of-
20 way. The other alternatives either require new right-of-way and clearing (in the
21 case of the alternate segments) or require approval of the VDOT. Use of the

1 highway right-of-way would have higher visual impacts than following existing
2 transmission lines.

3 Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

4 A. Yes, it does.