

**PUBLIC SERVICE COMMISSION
OF WEST VIRGINIA
CHARLESTON**

Case No. 07-0508-E-CN

TRANS-ALLEGHENY INTERSTATE LINE COMPANY

**Application of Trans-Allegheny Interstate Line
Company for a certificate of public convenience
and necessity under W. Va. Code § 24-2-11a
authorizing the construction and operation of the
West Virginia segments of a 500 kV electric
transmission line and related facilities in Monongalia,
Preston, Tucker, Grant, Hardy, and Hampshire
Counties, and for related relief**

**SUPPLEMENTAL DIRECT TESTIMONY OF
JACK HALPERN**

August 10, 2007

1 Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

2 A. My name is Jack Halpern, and my business address is 4511 South Ocean
3 Boulevard, Suite 507, Highland Beach, Florida 33487.

4
5 Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

6 A. I am employed by The Louis Berger Group, Inc. ("Berger"). Berger was retained
7 as a consultant on behalf of Trans-Allegheny Interstate Line Company
8 ("TrAILCo") to perform route selection for the West Virginia Segments, the Prexy
9 Segment, the Prexy 138 kV Lines, the Pennsylvania 502 Junction Segment and the
10 Virginia state line to Meadow Brook segment of the Trans-Allegheny Interstate
11 Line ("TrAIL"). Berger has also been retained to conduct a route evaluation with
12 respect to a possible alternative route for a portion of the West Virginia Segment
13 requested by the Consumer Advocate Division ("CAD") of the Public Service
14 Commission of West Virginia. I am the project director for Berger for all these
15 evaluations.

16
17 Q. DID YOU PREVIOUSLY SUBMIT TESTIMONY IN THIS PROCEEDING?

18 A. Yes, my Direct Testimony dated March 30, 2007, was filed as Appendix G, tab 5
19 to the Application in this proceeding. That Direct Testimony sponsored and

1 explained the report that described what route has been recommended for TrAIL
2 and why that particular route was selected.

3
4 PURPOSE OF TESTIMONY

5 Q. PLEASE DESCRIBE THE PURPOSE OF YOUR SUPPLEMENTAL DIRECT
6 TESTIMONY.

7 A. In connection with the Commission's review of TrAILCo's Application in this
8 proceeding, CAD filed a motion requesting that TrAILCo investigate suggested
9 alternative routes for a 26.1-mile segment of the Proposed Route between 502
10 Junction and Mt. Storm. CAD asked that TrAILCo specifically explore the
11 possibility of paralleling a portion of the existing north-south Ft Martin-Pruntytown
12 500 kV transmission line and the east-west Pruntytown-Mt. Storm 500 kV line in
13 Monongalia, Marion, Taylor, and Preston Counties, and evaluate other favorable
14 existing rights-of-way in the area for paralleling opportunities (collectively the
15 "Grafton Area Routes"). The purpose of my testimony is to sponsor and explain the
16 report that analyzes these route alternatives, identifies the best alternative of those
17 that fit CAD's request, and compares that alternative to the Proposed Route
18 identified in TrAILCo's Application

19 Q. WILL THE USE OF VARIOUS TERMS IN YOUR SUPPLEMENTAL DIRECT
20 TESTIMONY BE CONSISTENT WITH THE DEFINITIONS ASSIGNED TO

1 route evaluation studies and analysis of potential impacts included the study of
2 geology and soils, surface water resources and aquatic species/habitats, wetlands,
3 vegetation, wildlife and sensitive species, land use, recreation lands and
4 designated natural scenic resources, cultural resources, and aesthetics. Ultimately,
5 the Berger Team's efforts on the route evaluation study and environmental
6 assessment, as reflected in the GARE, resulted in identifying the best alternative
7 route that met CAD's criteria. The Berger Team also compared that best
8 alternative route to the Proposed Route filed by TrAILCo, and the results of that
9 comparison are also set forth in the GARE.

10 Q. PLEASE DESCRIBE THE ALTERNATIVE ROUTE THAT THE BERGER
11 TEAM FOUND TO BE BEST OF THOSE THAT MET THE CAD MOTION
12 CRITERIA.

13 A. Following study of aerial photography and existing GIS data, and after a field
14 review, the Berger Team identified a series of four alternative routes, designated
15 Grafton Area Routes A, B, C, and D, that met the criteria set forth in the CAD
16 motion. Based on an inventory of natural and cultural environmental data and the
17 judgment of the routing team, Grafton Area Route B was identified as the most
18 favorable of the alternative Grafton Area Routes.

19 Route B begins in southern Monongalia County at the sharp angle in the
20 Proposed Route north of River Road. This route avoids development in the

1 Smithtown area by extending to the south from the Proposed Route and passing
2 west of the Smithtown area to join the existing north-south Ft. Martin-Pruntytown
3 500 kV line 4.6 miles southeast of its starting point in the area of White Day Creek
4 south of Interstate Highway 79. Route B follows the west side of the existing 500
5 kV line to the south into Marion County for 5.1 miles and then crosses over to the
6 east side of the 500 kV line south of Prickets Creek Road. On the east side of the
7 existing line, the new 500 kV circuit would be double-circuited on new steel H-
8 frame structures for 2.7 miles with the existing Pruntytown-Martinka Tap 138 kV
9 line which parallels the 500 kV line in this area.

10 North of the crossing of Rock Lake-Valley Falls Road, Route B separates
11 from the 138 kV line, turns to the southeast, and follows the existing Lamp Plant-
12 Buckhannon 69 kV line for 2.8 miles to the southeast into Taylor County. This
13 segment of 69 kV line would also be double-circuited with the new 500 kV line on
14 steel H-frame structures. At a point northeast of Grafton, Route B turns to the east
15 and would be double-circuited for 2.4 miles with the Kingwood-Pruntytown 138
16 kV circuit, which parallels the east-west Pruntytown-Mt. Storm 500 kV line. East
17 of Fetterman Hollow Road, the route leaves the 138 kV line where the latter
18 angles away from the 500 kV line. Route B continues to the east paralleling the
19 500 kV line for 14.8 miles, crossing into Preston County to the point where the
20 Proposed Route is rejoined east of and crossing Frog Hollow Road.

1 Q. WHAT IS THE APPROXIMATE LENGTH OF ROUTE B AND WHAT ARE
2 ITS MAIN ENVIRONMENTAL IMPACTS?

3 A. Route B is 32.4 miles long. Route B would be required to diverge away from the
4 existing 500 kV line for 38.4 percent of its length and would be double-circuited
5 with the 138 kV and 69 kV lines for about 24.2 percent of its length.

6 About 20 miles of Route B would be on slopes of greater than 20 degrees.
7 The route would require one large river crossing and 33 small stream crossings, as
8 well as crossings of a small amount of wetlands (totaling less half a mile). No
9 recorded sites or sensitive species or habitats would be within 1,000 feet of the
10 route centerline, and 565 acres of forest would be cleared for the right-of-way.
11 Twenty-one (21) residences would be within 250 feet of the route centerline and
12 75 would be within 500 feet of the centerline. One historic architectural site
13 would be within ¼ mile of the route, and three recreation trails would be crossed.

14 Q. WHERE IS ROUTE B SET OUT IN THE GARE?

15 A. The detailed text description of the alternative is presented in Chapter 2.9
16 (Description of the Alternative Grafton Area Routes), along with maps. Chapter 4
17 (Environmental Analysis of the Grafton Area Route) of the GARE also provides
18 maps showing the locations, where information was publicly available, of
19 incorporated communities; public or private recreational areas, parks, forests,
20 hunting or fishing areas, or similar facilities; historic scenic areas or places; rivers,

1 lakes, streams, reservoirs and similar bodies of water within five miles of either
2 side of the center line of the proposed right-of-way.

3

4 EXPLANATION OF ROUTE EVALUATION PROCESS

5 Q. DID THE BERGER TEAM PERFORM THE SAME ANALYSES OF THE
6 GRAFTON AREA ROUTE ALTERNATIVES AS IT PERFORMED FOR THE
7 PROPOSED ROUTE AS SET FORTH IN THE LRE FILED WITH THE
8 APPLICATION?

9 A. Yes. The GARE sets forth the analyses that the Berger Team performed for the
10 alternatives that met the CAD motion criteria, and these parallel the analyses
11 performed for the Proposed Route as set forth in the LRE and described in my
12 March 30, 2007, Direct Testimony.

13 Q. DID THE BERGER TEAM EXAMINE OTHER POTENTIAL ROUTES WITH
14 RESPECT TO THE CAD MOTION CRITERIA?

15 A. Yes. In addition to Route B, the Berger Team identified three other routes that
16 met the CAD Motion criteria, as discussed in Chapter 2 (Grafton Area Route
17 Selection) of the GARE. These three other alternatives are described in Chapter
18 2.9 (Description of the Alternative Grafton Area Routes).

19 Q. WHAT ROUTE WAS SELECTED, AND WHY?

20 A. Route B was selected because:

- 1
- 2 ▪ Route B would have the least potential to cause soil erosion, and impacts to
- 3 wetlands and forests in terms of crossing the least length of steep soils,
- 4 wetlands, and forested lands of any of the Grafton Area Routes.
- 5
- 6 ▪ Route B would pass within 250 feet of 21 residences and within 500 feet of 75
- 7 residences, the least of any of the Grafton Area Routes.
- 8
- 9 ▪ Route B would have the fewest buildings of all types within 500 feet and
- 10 within 1,000 feet compared to the other Grafton Area Routes.
- 11
- 12 ▪ Route B would not require the removal of any residences, although two barns
- 13 would have to be removed.
- 14
- 15 ▪ Route B would have less impact on developed land use in terms of crossing
- 16 less developed land than the other Grafton Area Routes.
- 17

18 Q. HOW DOES ROUTE B COMPARE TO THE PROPOSED ROUTE FILED BY
19 TRAILCO?

20 A. The Proposed Route segment continues to be better than Route B in terms of
21 reduced impacts to the cultural and natural environment. The advantages of the
22 comparable segment of the Proposed Route are:

- 23 ▪ The Proposed Route segment is 6.3 (19.4 percent) miles shorter than Route B.
- 24 New right-of-way acreage subject to impact would be 633 acres on the Proposed
- 25 Route segment, compared to 706 acres for Route B.
- 26
- 27 ▪ The Proposed Route segment centerline would pass within 250 feet of 3 residences
- 28 and within 500 feet of 44 residences, compared to 21 and 75 residences,
- 29 respectively, for Route B.
- 30
- 31 ▪ The comparable segment of the Proposed Route would have an estimated 227
- 32 buildings of all types within 1,000 feet, compared to 467 for Route B.
- 33

- 1 ▪ While neither route would require the removal of any residences, Route B would
2 remove two barns.
3
4 ▪ While neither route would affect a significant amount of wetlands, the Proposed
5 Route segment crosses slightly less wetlands and streams than Route B.
6
7 ▪ The Proposed Route segment would require the clearing of 551 acres of forest,
8 compared to 565 acres for Route B¹.
9

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

13 A. Yes. Numerous potential routes were developed by the routing team and analyzed
14 using existing aerial photography and maps, from information gained from field
15 inspections, from governmental agency contacts, and from numerous
16 computerized data sources. The study conducted by Berger Team utilized the
17 latest technologies available for data acquisition and manipulation. Ultimately,
18 four Alternative Grafton Area Routes (Routes A through D) were identified.
19 These routes were analyzed using a wide range of environmental and cultural
20 factors to determine the best alignment for the transmission line in terms of
21 meeting the CAD motion criteria and minimizing impacts to the natural and

¹ Calculation based on forested land use proportion for each line (87% of the proposed route and 80% of the Grafton Route Alternative) and the amount of new right of way acreage required.

1 cultural environment. The GARE represents a study consistent with current siting
2 methods.

3 Q. IN YOUR EXPERT OPINION, IS THE GRAFTON AREA ROUTE BETTER
4 THAN THE ROUTE RECOMMENDED IN THE LRE AS THE APPROPRIATE
5 ROUTE FOR TRAIL?

6 A. No. To the contrary, the Proposed Route is better than even the best of the
7 alternative Grafton Area Routes examined in response to the CAD motion. As
8 detailed above, TrAILCo's Proposed Route is shorter, requires less new right-of-
9 way acreage and less clearing of forest, passes close to fewer residences and other
10 buildings, does not require the removal of any structures, and crosses less wetlands
11 and streams. Hence the Proposed Route is the appropriate route for TrAIL.

12 Q. DOES THIS CONCLUDE YOUR SUPPLEMENTAL DIRECT TESTIMONY?

13 A. Yes, it does.