

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Application of Transource Pennsylvania, LLC :
filed Pursuant to 52 Pa. Code Chapter 57, : Docket No. A-2017-_____
Subchapter G, for Approval of the Siting and :
Construction of the 230 kV Transmission Line :
Associated with the **Independence Energy** :
Connection-West Project in Portions of :
Franklin County, Pennsylvania :

**Transource Pennsylvania, LLC
Independence Energy Connection-West Project**

Statement No. 4

**Written Direct Testimony of
Barry A. Baker**

**Topics Addressed: Summary of the Siting Study for the IEC-West Project;
and
Selection of the Proposed Route for the IEC-West
Project.**

1 **I. INTRODUCTION**

2 **Q. Please state your name and business address.**

3 A. My name is Barry Alan Baker. My business address is 625 West Ridge Pike, Suite E-
4 100, Conshohocken, PA 19428.

5

6 **Q. By whom are you employed and in what capacity?**

7 A. I am employed by AECOM Corporation as an Associate Vice-President and Department
8 Manager for the Natural Resources Department and also serve as a Technical Lead in the
9 AECOM U.S. Transmission & Distribution and Impact Assessment & Permitting
10 practices.

11

12 **Q. What are your principal responsibilities in these positions?**

13 A. In these roles, I am a Certified Project Manager and manage projects for siting and
14 permitting of new transmission lines, power plants, and other facilities. I manage a
15 Department of approximately sixty (60) individuals responsible for environmental and
16 information technology services. Additionally I serve as a Technical Lead for
17 Transmission & Distribution and Impact Assessment & Permitting services on the east
18 coast of the United States.

19

20 **Q. Please explain what AECOM does in the context of transmission projects.**

21 A. AECOM provides comprehensive, life cycle services for transmission and distribution
22 projects, from alternative route analyses, licensing and permitting, conceptual
23 engineering, right-of-way services, and public involvement to detailed engineering and

1 design, geotechnical engineering and subsurface investigation, site preparation,
2 construction management, and regulatory compliance.

3
4 **Q. Please provide a summary of your education and professional work experience.**

5 A. I received a Bachelor of Science with Honors degree in Environmental Science from the
6 University of East Anglia in Norwich, England in 1996. A key focus was on the use of
7 GIS and computer applications for environmental problem solving.

8 I have been employed by AECOM for the last eleven years in the roles previously
9 discussed. In these positions I have been responsible for siting studies both as a Project
10 Manager and as a technical lead for transmission line siting as well as new power
11 development throughout the northeast region of the U.S., including: PA, NJ, MD, NY,
12 CT, OH, IL, VA, DE, and MA. I also manage the Pennsylvania Area Impact Assessment
13 & Permitting Department where I am responsible for a team of biologists, ecologists, and
14 GIS specialists. Additionally, I am an AECOM Technical Lead designated for
15 supporting and developing major transmission opportunities on the U.S. East Coast with
16 a focus in the northeast. Prior to joining AECOM, I held GIS and environmental
17 development positions for other environmental and government consultants.

18
19 **Q. Have you previously testified in public utility commission proceedings?**

20 A. Yes, I have provided siting testimony before the Pennsylvania Public Utility Commission
21 (“Commission” or “PUC”). I have also provided siting testimony before the New Jersey
22 Board of Public Utilities.

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

2 A. My testimony provides a summary of the Siting Study and explains the selection of the
3 proposed route for the Rice-Ringgold 230 kV Transmission Line associated with the
4 Independence Energy Connection-West Project (hereinafter, the “IEC-West Project”).

5
6 **Q. Were any portions of the siting application prepared by you or under your
7 supervision?**

8 A. Yes. I am sponsoring certain attachments to Transource PA, LLC’s (Transource PA)
9 IEC-West Siting Application. Specifically, I am responsible for portions of the following
10 attachments to the Siting Application:

- 11 • Attachment 1 PUC Cross-Reference
- 12 • Attachment 3 Siting Study
- 13 • Attachment 7 List of Government Agencies
- 14 • Attachment 8 Government Agencies Contacted
- 15 • Attachment 12 Agency Coordination

16 I was integrally involved in preparing these attachments to the Siting Application and
17 provided oversight to AECOM technical staff that was also involved with their
18 preparation. I also provided review for the complete Siting Application prior to assembly
19 and submission to the Commission.

20

21 **Q. What are your responsibilities in connection with the IEC-West Project?**

22 A. Transource PA retained AECOM to prepare a Siting Study for the development and
23 evaluation of Alternative Routes and selection of the Proposed Route for the IEC-West
24 Project. I led the team that conducted the Siting Study for the IEC-West Project. I was

1 integrally involved in preparing various attachments to the IEC-West Project Application,
2 most notably Attachment 3 - Siting Study. In this capacity, I reviewed and provided
3 oversight on all items prepared, coordinated and managed all team members, technical
4 experts and writers, and helped assemble the document submitted to the Commission.
5

6 **Q. Please provide an overview of the project.**

7 A. As explained in the written direct testimony of Company witness Mr. Kamran Ali
8 (Transource PA Statement No. 2) and Mr. Paul F. McGlynn (Transource PA Statement
9 No. 3), PJM identified a need to alleviate transmission congestion constraints in
10 Pennsylvania, Maryland, West Virginia, and Virginia. To address these congestion
11 constraints, PJM approved “Project 9A” as Baseline Upgrade Numbers b2743 and b2752.
12 The IEC Project is a major component of the PJM-approved Project 9A.¹

13 The IEC Project approved by PJM involves: (i) construction of two new
14 substations in Pennsylvania, the Rice Substation and the Furnace Run Substation; and (ii)
15 construction of two new overhead double-circuit 230 kV interstate transmission lines, the
16 Rice-Ringgold 230 kV Transmission Line and the Furnace Run-Conastone 230 kV
17 Transmission Line.

18 Upon receipt of all necessary approvals, the new Rice-Ringgold 230 kV
19 Transmission Line will extend approximately 29 miles, connecting the existing Ringgold
20 Substation located near Smithsburg, Washington County, Maryland, and the new Rice
21 Substation to be located in Franklin County, Pennsylvania. This transmission line project

¹ Project 9A also involves upgrades at existing transmission facilities in Pennsylvania and Maryland, which are the responsibility of other incumbent entities. The upgrades to existing facilities, while not part of the IEC Project, are inter-dependent components of the solution approved by PJM, and are described in more detail in Mr. Ali’s testimony (Transource PA Statement No. 2).

1 is referred to as Independence Energy Connection-West Project (“IEC-West Project”)
2 and is the subject of this Siting Application.

3 Upon receipt of all necessary approvals, the new Furnace Run-Conastone 230 kV
4 Transmission Line will extend approximately 16 miles, connecting the existing
5 Conastone Substation located near Norrisville, Harford County, Maryland, and the new
6 Furnace Run Substation to be located in York County, Pennsylvania. This transmission
7 line project is referred to as Independence Energy Connection-East Project (“IEC-East
8 Project”) and is the subject of a separately filed Siting Application.

9 As further explained by Mr. Kamran Ali (Transource PA Statement No. 2),
10 Transource PA is obligated and responsible for the construction, ownership, maintenance,
11 and operation of the two new substations in Pennsylvania; and the Pennsylvania portion
12 of the two new interstate transmission lines between Maryland and Pennsylvania.
13 Transource PA’s affiliate, Transource Maryland, LLC (“Transource MD”), is obligated
14 and responsible for the construction, ownership, maintenance, and operation of the
15 Maryland portion of the two new interstate transmission lines between Maryland and
16 Pennsylvania.

17
18 **II. SITING STUDY**

19 **Q. Please describe the purpose of the Siting Study prepared for the IEC-West Project.**

20 A. The purpose of the Siting Study is to develop feasible Alternative Routes for the IEC-
21 West Project, evaluate potential impacts associated with these Alternative Routes, and
22 identify a Proposed Route to be constructed to meet the need for the IEC-West Project.
23 The Siting Study provides Transource PA with a means to assess the human/built
24 environment, natural environmental, and engineering variables associated with the

1 different Alternative Routes identified for a transmission line alignment that connects the
2 existing Ringgold Substation located near Smithsburg, Washington County, Maryland,
3 and the new Rice Substation to be located in Franklin County, Pennsylvania so that a
4 Proposed Route can be determined. A complete copy of the Siting Study, along with
5 supporting materials and maps, is provided as Attachment 3 to the Siting Application.

6
7 **Q. Please summarize the route development process used in the Siting Study.**

8 A. The Siting Team conducted a detailed siting analysis to determine a location for the IEC-
9 West Project that best balances human/built, environmental, engineering considerations.
10 The route development process is inherently iterative with modifications made
11 throughout the siting analysis as a result of the identification of new constraints, input
12 from agencies, landowners, and other stakeholders, periodic re-assessment of routes with
13 respect to the siting criteria, and adjustments to the overall route network. This analysis
14 included the determination of a Study Area, the compilation of an environmental
15 inventory, identification and analysis of the Alternative Routes and, finally, selection of a
16 Proposed Route.

17 The first step in the route development process is to identify the Study Area. The
18 Study Area is the region in which transmission line route alternatives could be sited to
19 practicably meet the functional requirements of the project. The Study Area is selected
20 based on professional judgment, field reviews, the geographic characteristics of the
21 region, and the physical endpoints of the project (i.e., substation locations).

22 Once the Study Area has been determined, the next step is to identify large area
23 constraints and opportunity features within the Study Area. These areas are typically

1 identified using a combination of readily available public data sources. The Siting Team
2 uses this information to first develop an array of Conceptual Routes for the project
3 adhering to a series of general siting and technical guidelines and factors.

4 Where two or more of these Conceptual Routes intersect, Study Segments are
5 formed between two common nodes or points of intersection. As the route development
6 process progresses, the Siting Team continues to evaluate new data and modifies, if
7 necessary, the Study Segments included in the network. Eventually, feasible Alternative
8 Routes are developed by assembling the Study Segments that best meet the siting
9 guidelines and factors into individual routes for analysis.

10 Alternative Routes are assessed and compared with land uses, natural and cultural
11 resources, human/built environment, and engineering and construction concerns.
12 Ultimately, through a quantitative and qualitative analysis and comparison of the
13 Alternate Routes, the Siting Team identifies a Proposed Route.

14 A detailed description of the sources of information used to develop data for the
15 Siting Study is provided in Appendix A of Attachment 3 to the Application. A detailed
16 description of the route development process used for the IEC-West Project is provided
17 in Section 2.0 of Attachment 3 to the Siting Application.

18
19 **Q. Please summarize the guidelines and factors used to identify and evaluate the**
20 **potential routes.**

21 A. The Siting Team used a series of general siting guidelines and factors to direct the
22 development, evaluation, and ultimate selection of the routes. The following guidelines
23 and factors were used to identify and evaluate routes:

- 1 • Consider parallel alignments along existing utility rights-of-way or other
2 infrastructure, such as roadways and railroads.
- 3 • Maximize the distance from residential dwellings, schools, daycare facilities,
4 hospitals, and other community facilities.
- 5 • Consider stakeholder input.
- 6 • Minimize visibility from federal and state listed scenic roadways and designated
7 scenic resources.
- 8 • Minimize conflict with designated public resource lands, recreation lands, nature
9 preserves, or other conservation areas.
- 10 • Minimize conflict with existing and approved future development and land uses.
- 11 • Minimize potential environmental and land use impacts by avoiding circuitous
12 routes.
- 13 • Minimize new crossings of large wetland complexes, critical habitat, and other
14 unique or distinct natural resources.
- 15 • Minimize habitat fragmentation and impacts on designated areas of biodiversity
16 concern.
- 17 • Avoid crossing hazardous waste sites or sites with active mineral extraction
18 activities.

19 Using these established routing guidelines, the Siting Team identified opportunity and
20 constraint features within the Study Area that would take advantage of existing corridors
21 to the extent practicable and minimize potential impacts to the natural and human (or
22 built) environment. Details of the opportunity and constraints used to develop Study
23 Segments are included in Section 3.3 of Attachment 3 to the Application.

24

25 **Q. Please describe how the Proposed Route is selected.**

26 A. Once the feasible Alternative Routes were identified, the Siting Team undertook a
27 quantitative and qualitative analysis of potential impacts of each Alternative Route to the
28 human/built environment, the natural environment and engineering considerations. The

1 Alternative Routes were reviewed in detail and compared using a combination of
2 information collected in the field, GIS data sources, public and regulatory input, resource
3 documents referenced in the Siting Study, engineering considerations and the collective
4 knowledge and experience of the Siting Team.

5 The goal of the quantitative and qualitative analysis is to select a suitable route for
6 the project that minimizes the overall impacts on land use and natural and cultural
7 resources while avoiding circuitous routes, extreme costs, and non-standard design
8 requirements. However, in practice, it is not usually possible to minimize all potential
9 impacts. There are often inherent tradeoffs in potential impacts to every siting decision.
10 For example, in heavily forested study areas, the route that avoids the most developed
11 areas will likely have the greatest amount of forest clearing, while the route that has the
12 least impact on vegetation and wildlife habitats often impacts more residences or farm
13 lands. Thus, an underlying goal of comparative analysis is to reach a reasonable balance
14 between minimizing potential impacts on one resource versus increasing the potential
15 impacts on another.

16 Using the quantitative and qualitative analysis described above, the Siting Team
17 selects a Proposed Route that, on balance, best minimizes the overall impacts of the
18 project. The rationale for selecting the Proposed Route is derived from the accumulation
19 of the siting decisions made throughout the process, the knowledge and experience of the
20 Siting Team, comments from the public and regulatory agencies, and the comparative
21 analysis of potential impacts of each Alternative Route.

22 A detailed description of the process used to select the Proposed Route for the
23 IEC-West Project is provided in Section 3.0 of Attachment 3 to the Application.

1 **Q. Was public outreach part of the route selection process?**

2 A. Yes. Transource PA conducted extensive outreach with the public throughout the siting
3 process. Transource conducted two rounds of public open houses during different phases
4 of the siting process to inform the public about the Project and obtain information from
5 landowners about their properties. The first round of open houses were held June 12-15,
6 2017, and focused on a wide network of Study Segments with the goal to obtain
7 information from the public to help modify, eliminate or add Study Segments. Following
8 the first round of open houses and subsequent qualitative and quantitative analysis, the
9 second round of open houses were held August 7-8, 2017, and focused on a refined set of
10 Study Segments.

11 The open houses were an open format where the public could attend at any time
12 during the scheduled hours for each open house. All attendees were given comment
13 cards, and were encouraged to identify the location of their residences, places of business,
14 property of concern, or other sensitive resources on the printed maps. After the public
15 open house, handwritten comments were digitized and entered into a GIS database. In
16 addition, all comment cards were entered into a database with the unique identifier so the
17 comment and the parcel could easily be correlated. A description of the public open
18 houses held for the IEC-West Project is provided in Section 2.5 of Attachment 3 to the
19 Siting Application.

20 In addition to the open houses, Transource established an IEC Project website
21 which was updated throughout the various phases of the siting process. The website
22 provided access to maps. Through the website, members of the general public could
23 submit comments about the Project or add points to the map to provide specific

1 information about resources or structures on their property. The IEC Project website also
2 offered the public the ability to virtually review the printed materials presented at the
3 open houses such as the explanatory boards and the large format Project maps.
4 Transource PA monitored the comments provided through the website and provided
5 answers to questions from the public. A description of the IEC Project website is
6 provided in Section 2.5.2 of Attachment 3 to the Siting Application.

7
8 **Q. Did Transource PA consider local comprehensive plans and zoning ordinances in**
9 **selecting the Proposed Route for the IEC-West Project?**

10 A. Yes. Preliminarily, I note that I have been advised by counsel for Transource PA that
11 public utility facilities, such as transmission lines and substations, are generally exempt
12 from local municipal authority. However, as required by the Commission's interim siting
13 guidelines found at 52 Pa. Code, § 69.1101 (2)(3) and § 69.3104 (1), local zoning
14 ordinances and comprehensive land use plans were reviewed by Transource PA to
15 evaluate the impact of the Proposed Route on these local ordinances and plans.
16 Transource PA evaluated the Proposed Route's consistency with the zoning ordinances
17 and comprehensive plans of the government entities through which the Proposed Route
18 would pass. Transource PA has also reviewed the IEC-West Project with representatives
19 of Franklin County, Southampton Township, Greene Township, Guilford Township,
20 Quincy Township, and Washington Township Planning Commissions. A discussion of
21 Transource PA's review of the local zoning ordinances and land use comprehensive plans
22 is provided in Section 5.2.7 of Attachment 3 to the Siting Application.

1 **III. PROPOSED ROUTE**

2 **Q. Please describe the feasible Alternative Routes identified by the Siting Team for the**
3 **IEC-West Project.**

4 A. Using the siting process described above, the Siting Team identified three (3) Alternative
5 Routes for the IEC-West Project that were carried forward for further analysis to
6 determine a Proposed Route. These three Alternative Routes are illustrated in Figure 6 of
7 Attachment 3 and described in detail below.

8 **Alternative Route A (30.4 miles)**

- 9 • Alternative Route A exits the Rice Substation and immediately extends 0.1 mile across
10 Interstate 81 (I-81), and an active Norfolk Southern rail line. After crossing these linear
11 features, the route parallels the western side of the railroad for approximately 0.4 mile,
12 and then turns slightly west for another 1.2 miles. The route travels across agricultural
13 fields and crosses Pine Stump Road.
14
- 15 • After crossing Pine Stump Road, the route travels for approximately 0.1 mile through a
16 wooded area and then makes a sharp turn and extends 0.7 mile to the west, crossing
17 agricultural fields and Byers Road. At this point, Alternative Route A turns southwest for
18 approximately 0.6 mile across agricultural fields to the Cumberland Highway (State
19 Route (SR) 997).
20
- 21 • The route extends west for 0.2 mile past SR 997 and then turns south for 0.4 mile,
22 spanning Mickey Inn Road and Conococheague Creek, which is designated by PADEP as
23 a Cold Water Fisheries (CWF) stream.
24
- 25 • Turning to the southwest for 0.6 mile, Alternative Route A crosses a wooded area with
26 state-mapped wetlands before travelling across agricultural fields. This section avoids a
27 residential neighborhood that is located to the west.
28
- 29 • From here, Alternative Route A turns southeast and parallels the existing FE
30 Letterkenny-Grand Point 138 kV line for 0.4 mile, spanning Scotland Road and an
31 unnamed CWF tributary.
32

- 1 • Alternative Route A then turns southwest to span the existing electric lines and extends
2 for 0.4 mile across agricultural fields paralleling the existing Norfolk Southern railroad
3 line.
- 4
- 5 • Turning south, the route crosses the rail line, and travels approximately 0.9 mile across an
6 agricultural field, crossing Grand Point Road, and extending to the east side of I-81.
- 7
- 8 • Alternative Route A parallels I-81 for 0.2 mile and then turns south for 1.2 miles,
9 crossing Walker Road and Franklin Farms Lane, paralleling agricultural field edges, and
10 traversing through forested lands toward the commercial lined U.S. Route 30 crossing.
11 The Lost Acres Airport is located approximately 0.3 mile east of the route.
- 12
- 13 • After spanning the commercial areas around U.S. Route 30, the route travels 0.7 mile to
14 Falling Spring Road, crossing through forest, an agricultural field, and then spanning the
15 Falling Spring Branch Stream, designated as a high quality-cold water fisheries (HQ-
16 CWF) stream. This stream also has state-mapped wetlands within the wooded area that
17 surrounds the stream.
- 18
- 19 • After spanning Falling Spring Road, the route extends in a southwestern direction for
20 approximately 0.7 mile, crossing agricultural fields that contain two unnamed HQ-CWF
21 streams and associated mapped wetlands. Stanley Avenue is also crossed in this section.
- 22
- 23 • Alternative Route A then takes a sharp turn to the southeast and then south for
24 approximately 0.5 mile through an agricultural fields before crossing Garber Road.
- 25
- 26 • After crossing Garber Road, the route travels for 0.8 mile through the edge of the
27 Martin's industrial facility, across agricultural fields, over the existing FE Grand Point-
28 Allegheny Energy 138 kV transmission line, and over a warm water fishery stream
29 (WWF), before turning southwest toward Wayne Road (SR 316).
- 30
- 31 • After crossing SR 316, the route extends for 2.0 miles crossing open fields, spanning the
32 CSX Lurgan Division railroad line, paralleling and crossing Stone Quarry Road, crossing
33 New Franklin Road, and spanning the FE Fayetteville-Allegheny Energy 69 kV
34 transmission line, before turning sharply west to intersect with Helman Road.
- 35
- 36 • From Helman Road, Alternative Route A crosses open farm lands for 1.7 miles to the
37 southwest before turning sharply to the southeast to cross Swamp Fox Road (SR 914).
- 38

- 1 • After crossing SR 914, the route traverses approximately 5.3 miles to the southeast
2 through existing agricultural fields, making turns to avoid structures and spanning several
3 local roads, until it reaches the west side of the active CSX Lurgan Division railroad line.
4
- 5 • Alternative Route A parallels the west side of the CSX railroad tracks for approximately
6 0.9 mile to the Buchanan Trail East (SR 16) crossing, where the route crosses the
7 commercial-lined road and the railroad tracks to continue paralleling the east side of the
8 tracks for approximately 2.4 miles. The route crosses one unnamed WWF stream in this
9 section as well as crossing Barr Road and McDowell Road.
10
- 11 • The route turns sharply to the southeast for approximately 1.4 miles across predominantly
12 agricultural fields toward Leitersburg Road (SR 2002), crossing Marsh Run (a WWF)
13 and the FE Reid-West Waynesboro 69 kV transmission line along the alignment.
14
- 15 • After crossing SR 2002, the route spans the Pennsylvania/Maryland state line and turns
16 for 1.0 mile to the southeast to parallel Leiters Mill Road (was Leitersburg Road in
17 Pennsylvania) until it reaches Millers Church Road, where the route turns sharply east,
18 crossing both roads.
19
- 20 • The route continues east and southeast for 1.8 miles through agricultural fields, crossing
21 an unnamed tributary to Antietam Creek, Antietam Creek, and then paralleling
22 Battletown Road before intersecting with Leitersburg Pike (Maryland (MD) 60).
23
- 24 • After spanning MD 60, Alternative Route A extends 1.5 miles across agricultural lands to
25 Poplar Grove Road, spanning Ringgold Pike (MD 418) and three unnamed tributaries to
26 Little Antietam Creek.
27
- 28 • Turning east, the route extends for 0.6 mile over agricultural lands to intersect with the
29 Ringgold-West Waynesboro 138 kV transmission line, which it parallels to the southwest
30 for 0.4 mile. This section spans Newcomer Road and Gardenhour Road, crosses Little
31 Antietam Creek and two tributaries, and extends through an orchard.
32
- 33 • Extending out for 0.5 mile to the southwest from the transmission line, Alternative Route
34 A bypasses around residential structures along Rowe Road and traverses agricultural
35 lands before spanning over to the south side of the FE Reid-Ringgold 138 kV
36 transmission line.
37
- 38 • The route turns east for 0.8 mile and extends into the southeastern corner of the Ringgold
39 Substation, spanning the FE Ringgold-East Hagerstown 138 kV transmission line and
40 Smithsburg Pike (MD 64) along the alignment.

1 **Alternative Route B (31.9 miles)**

- 2 • Alternative Route B exits the Rice Substation from the southwest corner and heads south,
3 paralleling the east side of I-81 and spanning along the edge of agricultural fields for
4 approximately 2.2 miles; along this stretch Alternative Route B crosses Mountain Run,
5 designated a CWF.
6
- 7 • The route turns sharply east to cross SR 696 perpendicularly and travels approximately
8 0.6 mile to the east-southeast through an agricultural field before turning sharply to the
9 southwest.
10
- 11 • Travelling southwest for 0.7 mile, the route crosses Phillaman Run (CWF) and then
12 crosses Black Gap Road (SR 997) in a perpendicular fashion. Alternative Route B
13 follows the outer edge of the parking lot for the Chambersburg Mall for 0.6 mile on the
14 eastern and northern sides of the mall, and then heads west to intersect with I-81 again.
15
- 16 • After reaching the eastern side of I-81, Alternative Route B turns sharply south, and
17 parallels the interstate for approximately 1.4 miles; at this location I-81 and the route
18 generally travel in a western direction. Along this section, Alternative Route B traverses
19 the edge of agricultural fields and crosses an unnamed stream (CWF) and the
20 Conococheague Creek (CWF).
21
- 22 • Alternative Route B turns sharply to the southwest and travels 0.4 until it reaches the
23 existing FE Letterkenny-Grand Point 138 kV transmission line. The route stays to the
24 east of this system and parallels it south for approximately 1.6 miles toward U.S. Route
25 30, spanning along agricultural fields, around the Grand Point Substation, and over
26 Walker Road. The Lost Acres Airport is located approximately 0.6 mile west of the
27 route.
28
- 29 • Prior to crossing commercial lined U.S. Route 30, the route first crosses over to the west
30 side of the transmission line, which is now the FE Grand Point-Allegheny Energy 138 kV
31 line, and then spans the highway. The route turns sharply west and then south for 0.5
32 miles to bypass around the commercial building. After going around the building, the
33 route again parallels the FE Grand Point-Allegheny Energy 138 kV line for 0.5 mile.
34
- 35 • Alternative Route B deviates from the transmission line corridor for 1.1 mile to bypass
36 around homes along the line. Along this section, the route extends to the southwest and
37 spans Falling Spring Branch (HQ-CWF), crosses Falling Spring Road, and traverses
38 through a forested area that contains several home. Within the forest, the route turns
39 south, travels across an agricultural field and spans the FE Grand Point-Allegheny
40 Energy 138 kV line near Henry Lane.

- 1
- 2 • After crossing this road, Alternative Route B extends to the southeast for approximately
- 3 4.6 miles over agricultural fields to Yohe Road, where it intersects with the FE
- 4 Fayetteville-West Waynesboro 138 kV transmission line. This section involves crossing
- 5 of two unnamed WWF streams, one CWF stream, several local roadways, and the FE
- 6 Fayetteville-Allegheny 69 kV line.
- 7
- 8 • As the route crosses Yohe Road, it also spans to the east side of the FE Fayetteville-West
- 9 Waynesboro 138 kV transmission line and then turns sharply to the south to parallel this
- 10 existing line for approximately 1.0 mile; an unnamed CWF stream is crossed in this
- 11 section, as is Stamey Hill Road.
- 12
- 13 • At this point, Alternative Route B turns sharply to the west and spans to the west side of
- 14 the FE Fayetteville-West Waynesboro 138 kV transmission line and travels for
- 15 approximately 1.0 mile across agricultural fields, Buttermilk Road, and one CWF stream
- 16 and intersects with the CSX Lurgan Division railroad corridor.
- 17
- 18 • The route turns to the southwest and parallels the CSX railroad for approximately 4.5
- 19 miles, with some deviations to bypass around residential and agricultural facilities
- 20 adjacent to the railroad line. This stretch crosses Wayne Highway (SR 316), several local
- 21 roads, and three unnamed CWF streams.
- 22
- 23 • At this point, Alternative Route B crosses to the west side of the CSX rail line and
- 24 parallels the west side of the CSX railroad tracks for approximately 0.9 mile to the
- 25 Buchanan Trail East (SR 16) crossing, where the route crosses the commercial-lined road
- 26 and the railroad tracks to continue paralleling the east side of the tracks for approximately
- 27 2.4 miles. The route crosses one unnamed WWF stream in this section as well as
- 28 crossing Barr Road and McDowell Road.
- 29
- 30 • The route turns sharply to the southeast for approximately 1.3 miles across predominantly
- 31 agricultural fields toward Leitersburg Road (SR 2002), crossing Marsh Run (a WWF)
- 32 and the FE Reid-West Waynesboro 69 kV transmission line along the alignment.
- 33
- 34 • After crossing SR 2002, Alternative Route B spans the Pennsylvania/Maryland state line
- 35 and turns for 1.0 mile to the southeast to parallel Leiters Mill Road (was Leitersburg
- 36 Road in Pennsylvania) until it reaches Millers Church Road, where the route turns
- 37 sharply east, crossing both roads.
- 38

- 1 • The route continues east and southeast for 1.8 miles through agricultural fields, crossing
2 an unnamed tributary to Antietam Creek and Antietam Creek, and paralleling Battletown
3 Road before intersecting with Leitersburg Pike (Maryland (MD) 60).
4
- 5 • After spanning MD 60, Alternative Route B extends 1.5 miles across agricultural lands to
6 Poplar Grove Road, spanning Ringgold Pike (MD 418) and three unnamed tributaries to
7 Little Antietam Creek.
8
- 9 • Turning east, the route extends for 0.6 mile over agricultural lands to intersect with the
10 Ringgold-West Waynesboro 138 kV transmission line, which it parallels to the southwest
11 for 0.4 mile. This section spans Newcomer Road and Gardenhour Road, crosses Little
12 Antietam Creek and two tributaries, and extends through an orchard.
13
- 14 • Extending out for 0.5 mile to the southwest from the transmission line, Alternative Route
15 B bypasses around residential structures along Rowe Road and traverses agricultural
16 lands before spanning over to the south side of the FE Reid-Ringgold 138 kV
17 transmission line.
18
- 19 • The route turns east for 0.8 mile and extends into the southeastern corner of the Ringgold
20 Substation, spanning the FE Ringgold-East Hagerstown 138 kV transmission line and
21 Smithsburg Pike (MD 64) along the alignment.
22

23 **Alternative Route C (28.8 miles)**

- 24 • Alternative Route C exits the Rice Substation from the southwest corner and heads south,
25 paralleling the east side of I-81 and spanning along the edge of agricultural fields for
26 approximately 2.2 miles; along this stretch Alternative Route C crosses Mountain Run,
27 designated a CWF.
28
- 29 • Alternative Route C turns sharply east to cross SR 696 perpendicularly and travels
30 approximately 0.6 mile to the east-southeast through an agricultural field before turning
31 sharply to the southwest.
32
- 33 • Travelling southwest for 0.7 mile, Alternative Route C crosses Phillaman Run (CWF)
34 and then crosses Black Gap Road (SR 997) in a perpendicular fashion. Alternative Route
35 C traverses for 0.6 mile around the perimeter of the Chambersburg Mall, generally
36 following the outer edge of the parking lot on the northern and eastern sides of the mall,
37 and then heading west to parallel with I-81 again.
38

- 1 • After reaching the eastern side of I-81, Alternative Route C turns sharply south, and
2 parallels the interstate for approximately 1.4 miles and at this location I-81 and the route
3 generally travel in a western direction. Along this section, Alternative Route C traverses
4 the edge of agricultural fields and crosses an unnamed stream (CWF) and the
5 Conococheague Creek (CWF).
6
- 7 • Alternative Route C turns sharply to the southwest and travels 0.4 until it reaches the the
8 existing FE Letterkenny-Grand Point 138 kV transmission line. The route stays to the
9 east of this system and parallels it south for approximately 1.6 miles toward U.S. Route
10 30, spanning along agricultural fields, around the Grand Point Substation, and over
11 Walker Road. The Lost Acres Airport is located approximately 0.6 mile west of the
12 route.
13
- 14 • Prior to crossing commercial lined U.S. Route 30, Alternative Route C first crosses over
15 to the west side of the transmission line, which is now the FE Grand Point-Allegheny
16 Energy 138 kV line, and then spans the highway. The route turns sharply west and then
17 south for 0.5 miles spanning across a parking lot and bypassing around a commercial
18 building. After going around the building, the route again parallels the FE Grand Point-
19 Allegheny Energy 138 kV line for 0.5 mile.
20
- 21 • Alternative Route C deviates from the transmission line corridor for 1.1 mile to bypass
22 around homes along the line. Along this section, the route extends to the southwest and
23 spans Falling Spring Branch (HQ-CWF), crosses Falling Spring Road, and traverses
24 through a forested area where homes are present to the east. Within the forest, the route
25 turns south, travels across an agricultural field and spans the FE Grand Point-Allegheny
26 Energy 138 kV line near Henry Lane.
27
- 28 • After crossing this road, Alternative Route C extends to the southeast for approximately
29 4.6 miles over agricultural fields to Yohe Road, where it intersects with the FE
30 Fayetteville-West Waynesboro 138 kV transmission line. This section involves crossing
31 of two unnamed WWF streams, one CWF stream, several local roadways, and the FE
32 Fayetteville-Allegheny 69 kV line.
33
- 34 • As Alternative Route C crosses Yohe Road, it also spans to the east side of the FE
35 Fayetteville-West Waynesboro 138 kV transmission line and then turns sharply to the
36 south to parallel this existing line for approximately 1.7 mile; an unnamed CWF stream is
37 crossed in this section, as is Stamey Hill Road.
38

- 1 • A 0.6 mile deviation from the colocation is required in the vicinity of the Manheim Road
2 crossing due residential development that has built up adjacent to the transmission line
3 and the route then parallels the existing line for 0.5 miles on the eastern side.
4
- 5 • At Hess Benedict Road, Alternative Route C crosses over to the west side of the FE
6 Fayetteville-West Waynesboro 138 kV transmission line to avoid agricultural and
7 residential structures. The route parallels the line for another 3.7 miles, traversing
8 agricultural fields, crossing Orphanage Road, Wayne Highway (SR 316), and Buchanan
9 Trail East (SR 16), as well as an unnamed CWF stream.
10
- 11 • After crossing SR 16 and spanning the FE Antrim-West Waynesboro 69 kV lines,
12 Alternative Route C turns sharply to the west and parallels this line for approximately 0.4
13 mile. This stretch includes a crossing of Cold Springs Road and an unnamed CWF
14 stream.
15
- 16 • Turning to the south and then east, Alternative Route C extends for 1.2 miles to Marsh
17 Road. The route traverses an agricultural field to avoid agricultural and residential
18 structures, and crosses an unnamed CWF stream, the FE Reid-West Waynesboro 69 kV
19 line, and the FE Ringgold-West Waynesboro 138 kV line.
20
- 21 • After crossing Marsh Road and an unnamed CWF stream, Alternative Route C turns
22 sharply south to parallel the east side of the FE Ringgold-West Waynesboro 138 kV line
23 for 2.1 miles. Alternative Route C crosses agricultural fields, Hagerstown Road (SR
24 316), the FE West Waynesboro-East Waynesboro 138 kV line, and the West Branch
25 Antietam Creek (CWF) along this stretch. The route extends away from the transmission
26 line corridor to avoid residential structures near the southern end of this section prior to
27 crossing Lyons Road.
28
- 29 • Spanning to the west side of the FE Ringgold-West Waynesboro 138 kV line, Alternative
30 Route C turns south and crosses the Pennsylvania/Maryland state line. The route
31 generally parallels the transmission line for approximately 2.6 miles until it intersects
32 with Gardenhour Road. Some deviations are required along this stretch to avoid
33 agricultural operations and structures. The route in this section crosses Rocky Forge
34 Road, Ringgold Pike (SR 418), Poplar Grove Road, and Newcomer Road, as well as
35 numerous crossings of various tributaries to Little Antietam Creek.
36
- 37 • Alternative Route C crosses Gardenhour Road paralleling the existing transmission line
38 for 0.4 miles and traverses through an orchard.
39

- 1 • Alternative Route C extends out for 0.6 mile to the southwest from the transmission line
2 to bypasses around residential structures along Rowe Road and traverses agricultural
3 lands before spanning over to the south side of the FE Reid-Ringgold 138 kV
4 transmission line.
5
- 6 • Alternative Route C turns east for 0.8 mile and extends into the southeastern corner of the
7 Ringgold Substation, spanning the FE Ringgold-East Hagerstown 138 kV transmission
8 line and Smithsburg Pike (MD 64) along the alignment.
9

10 **Q. What route was selected as the Proposed Route for the IEC-West Project?**

11 A. Based on a qualitative and quantitative review of information obtained from GIS data,
12 field reconnaissance, agency consultation and public outreach as well as engineering
13 considerations for the Project, the Siting Team selected Alternative Route C as the
14 Proposed Route.
15

16 **Q. Please explain why Alternative Route C was selected as the Proposed Route.**

17 A. The Proposed Route has an approximate length of 28.8 miles (approximately 24.4 miles
18 in Pennsylvania and approximately 4.4 miles in Maryland). Being a more direct
19 alignment between the Rice and Ringgold Substations it will cross fewer parcels (147)
20 and impact less landowners (119) compared to the other alternatives. The alignment
21 avoids the more populated sections of the Project Study Area by crossing agricultural
22 lands adjacent to I-81 and paralleling an existing transmission line corridor south past
23 Waynesboro as it extends into the Ringgold Substation. Additionally, the Proposed
24 Route spans U.S. Route 30 in a commercial retail area thereby minimizing the
25 residentially dense areas along this corridor. As a result, the Proposed Route has the
26 fewest residences within 500 feet (115) compared to the other alternatives.

1 This more direct route will also help minimize impacts to agricultural lands,
2 farming operations, and orchard areas since many of the alignments across these areas
3 were identified during early coordination with the landowners. Key requests during this
4 coordination were to span fields or parallel property lines or access roads where feasible,
5 and to provide specially engineered structures near orchards to allow the orchard trees to
6 remain in production under the ROW.

7 Environmentally, the Proposed Route would span a low number of streams (23)
8 and have minimal impact on riparian areas. As noted previously, streams and floodplains
9 will be crossed at right angles and spanned with structures typically placed outside these
10 regulated areas. Since one of the streams crossed will be the HQ-designated Falling
11 Spring waterway, the construction of this alignment will involve additional stormwater
12 permitting requirements focused on the preservation of the water quality level. In terms
13 of wetlands, this alignment would cumulatively cross the least wetland area relative to the
14 other alternatives. Similar to streams and floodplains, wetland areas will be spanned to
15 further minimize potential impact.

16 The Proposed Route has the least amount of tree clearing and reduces the forest
17 fragmentation effects and potential impacts to T&E species that use forest habitats such
18 as T&E bat species. In terms of other potential T&E habitat areas, the Proposed Route
19 would cross three natural areas in Pennsylvania and one SSPRA area in Maryland, that
20 are comprised predominantly of open meadows which can be spanned by the
21 transmission lines therefore minimizing potential impacts on the plant or animal
22 communities.

1 From an engineering perspective, the Proposed Route parallels existing linear
2 features for 42% of the total length of the transmission line which may allow for the use
3 of existing access roads. Overall, the Proposed Route is the preferred route from an
4 engineering and constructability perspective. In addition, the Proposed Route will not
5 interfere with any airport operations or quarries. Although the Proposed Route crosses
6 more transmission lines, Transource will work with the incumbent utilities to ensure
7 proper clearances in order to safely operate and maintain the facilities.

8 A detailed explanation of the comparative analysis and selection of Alternative C
9 as the Proposed Route for the IEC-West Project is provided in Attachment 3 to the
10 Application.

11
12 **IV. COMPLIANCE WITH POTENTIAL PERMIT AND MITIGATION**
13 **REQUIREMENTS**

14 **Q. Please summarize Transource PA's efforts to minimize the anticipated impacts and**
15 **potential permit and mitigation requirements of the Proposed Route for the IEC-**
16 **West Project.**

17 **A.** Efforts were made during the siting process to minimize impacts on existing and future
18 land uses, as well as avoid sensitive natural resources such as wetlands and streams.
19 Where potential impacts are unavoidable, best management practices will be employed
20 and Transource PA will obtain and comply with any necessary permits.

21 As part of the permitting process, any required waterway, wetland, or floodplain
22 encroachment permits will be obtained from the applicable jurisdictional state and federal
23 agencies prior to construction and Transource PA will comply with all special conditions
24 placed on the permits. In addition, to address water quality standards within watersheds

1 along the IEC-Project corridor, Transource PA will comply with the regulations of the
2 National Pollutant Discharge and Elimination System permit program, obtain the
3 required soil erosion and sedimentation control permits, and follow the specified
4 conditions required for the permit.

5 A detailed discussion of Transource PA's efforts to minimize the anticipated
6 impacts and potential permit and mitigation requirements of the proposed IEC-West
7 Project is provided in Section 5.2 of Attachment 3 to the Siting Application, including
8 potential impacts to: land use; natural features; rare, threatened, and endangered species;
9 cultural resources; community features and conserved lands; and agency requirements
10 and permits.

11
12 **Q. Does this conclude your testimony at this time?**

13 **A.** Yes. I reserve the right to supplement my testimony as additional issues arise during the
14 course of this proceeding.