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STATEMENT 1

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Application of Transource Pennsylvania, LLC :
filed Pursuant to 52 Pa. Code Chapter 57, :
Subchapter G, for Approval of the Siting and : Docket No. A-2026-_____
Construction of the 230 kV Transmission Line :
known as Project 9A West in a Portion of :
Franklin County, Pennsylvania :
:

**Transource Pennsylvania, LLC
Project 9A West
Statement No. 1**

**Direct Testimony of
Evan K. Dean**

Topics Addressed: Description of Siting Application Testimony and Exhibits; Description of Transource Pennsylvania, LLC; Summary of 9A West Project; Process to Develop 9A West Project, Siting Application Components and Related Filings; Construction, Operations and Maintenance of the 9A West Project; Status of Right-of-Way Acquisitions; and CPC Application

Dated: May 21, 2026

1 **I. INTRODUCTION**

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

3 A. My name is Evan K. Dean. My business address is 8500 Smiths Mill Road, New Albany,
4 OH 43054.

5 **Q. What is your position at American Electric Power (“AEP”)?**

6 A. I am employed by American Electric Power Service Corporation (“AEPSC”) as the
7 Managing Director, Transmission Joint Ventures Governance and Operations. In this
8 capacity I provide services to Transource Energy, LLC (“Transource Energy”), the parent
9 of Transource Pennsylvania, LLC (“Transource PA” or the “Company”).

10 **Q. Please briefly describe your primary areas of responsibility as Managing Director,
11 Transmission Joint Ventures Governance and Operations.**

12 A. As Managing Director, Transmission Joint Ventures Governance and Operations, I serve
13 as the primary governance liaison between AEP and its joint venture partners, boards, and
14 regulatory bodies; negotiate and manage joint venture agreements, operational protocols,
15 and commercial terms; lead development and execution of joint venture governance
16 frameworks, including board reporting, compliance, and operating protocols; shape and
17 align long-term joint venture strategy with AEP’s company-wide transmission growth
18 objectives and regulatory commitments; provide executive oversight of joint venture
19 operational performance, including reliability, asset management, compliance, and system
20 planning; drive performance metrics, benchmarking, and continuous improvement across
21 joint venture operations; lead engagement with state and federal regulatory agencies related
22 to joint venture governance, planning, and operations; represent AEP in industry forums,
23 RTO/ISO working groups, and stakeholder processes related to joint venture activities; and

1 monitor and assess regulatory and policy developments impacting joint venture operations
2 or future opportunities.

3 **Q. Please briefly describe your prior educational background and business experience.**

4 A. I earned a Bachelor’s degree in Business Administration from The Ohio State University
5 and a Juris Doctor from Capital University Law School. I am a member of the Ohio Bar,
6 the US District Court for the Southern District of Ohio, and U.S. Court of Appeals for the
7 DC Circuit. Previously, I was employed by FirstEnergy Service Company (“FirstEnergy”)
8 from August 2013 to June 2025. As Senior Corporate Counsel at FirstEnergy, I represented
9 FirstEnergy affiliates on electric transmission rate and policy issues, secured regulatory
10 approvals for asset acquisitions and sales, supported wholesale power market initiatives,
11 secured regulatory approvals for debt and equity, and Uniform System of Accounts issues.
12 Previously, I was Manager, State Regulatory Outreach for the Edison Electric Institute
13 (“EEI”) where I managed outreach to state utility regulators officials on federal energy
14 policy issues. I also worked for the North American Reliability Corporation in Compliance
15 Enforcement.

16 **Q. What is the subject matter of your direct testimony?**

17 A. My testimony addresses the following subjects:

- 18 • An overview of the testimony and Attachments filed by Transource PA in support
19 of the Siting Application that has been filed with the Pennsylvania Public Utility
20 Commission (“Commission” or “PUC”).
- 21 • A description of Transource PA and other related entities.
- 22 • A brief overview of the 9A West Project (“9A West Project”).
- 23 • A summary of the process to develop the 9A West Project, Siting Application
24 components and related filings.

- 1 • An explanation of how Transource PA will oversee the construction, operation, and
2 maintenance of the 9A West Project.
- 3 • An update on the status of Transource PA’s right-of-way acquisitions for the 9A
4 West Project.
- 5 • A summary of the CPC Application, including why Transource PA meets the
6 requirements for issuance of a CPC to commence service as an electric
7 transmission-only public utility in Franklin County, Pennsylvania as requested in
8 the CPC Application under Chapter 11 of the Public Utility Code, 66 Pa. C.S. §101
9 *et seq.* (“Code”).

10 Finally, I note that all of the testimony and Attachments being submitted in
11 connection with Transource PA’s Siting Application should be considered to be in support
12 of Transource PA’s CPC Application. As noted above, the CPC Application was filed
13 simultaneously with the Siting Application, and a Petition for Confirmation of an
14 Exemption from Local Zoning Regulation and for the Construction of Buildings (“Zoning
15 Petition”). Transource PA has requested that the Applications and Zoning Petition be
16 consolidated for hearing and disposition by the Commission.

17 **II. DESCRIPTION OF THE TESTIMONY AND EXHIBITS**

18 **Q. Please describe the Siting Application filed by Transource PA in this proceeding.**

19 **A.** As explained below, the 9A West Project involves: (i) construction of the Rice Substation,
20 and (ii) construction of the Rice-Ringgold 230 kV Transmission Line, both in Franklin
21 County, Pennsylvania. Through this Siting Application, Transource PA seeks Commission
22 approval to site and construct the 9A West Project.

23 The 9A West Project involves the construction of the new Rice-Ringgold 230 kV
24 Transmission Line that extends approximately 29 miles, connecting the existing Ringgold
25 Substation located near Smithsburg, Washington County, Maryland, and the new Rice
26 Substation to be located in Franklin County, Pennsylvania. The Siting Application

1 provides, among other things, an overview of the 9A West Project, an explanation of the
2 need for the 9A West Project, a summary of the process of selecting the Proposed Route
3 for the transmission line associated with the 9A West Project, a description of the Proposed
4 Route for the 9A West Project, and a description of the design and safety of the transmission
5 line.

6 **Q. Please describe the Attachments filed with the Siting Application.**

7 A. Accompanying the Siting Application are several Attachments, including an aerial map that
8 shows the transmission line route selected by Transource PA for the proposed 9A West
9 Project. The Attachments to the Siting Application include the following:

- 10 • Attachment 1 Commission Regulation Cross-Reference Matrix
- 11 • Attachment 2 Necessity Statement
- 12 • Attachment 2.1 Map and Electrical Schematic
- 13 • Attachment 2.2 Electrical Schematic
- 14 • Attachment 3 Designated Entity Agreement (“DEA”)
- 15 • Attachment 4 Siting Study
- 16 • Attachment 5 Engineering Description and Safety Practices
- 17 • Attachment 5.1 Structures
- 18 • Attachment 6 List of Owners of Property within the Right-of-Way
- 19 • Attachment 7 Agency Requirements
- 20 • Attachment 8 List of Governmental Agencies, Municipalities, and Other
21 Public Entities Receiving the Application
- 22 • Attachment 9 List of Governmental Agencies, Municipalities, and Other
23 Public Entities Contacted
- 24 • Attachment 10 List of Public Locations where the Siting Application can be
25 Viewed by the Public

- 1 • Attachment 11 Electric and Magnetic Fields Policy and Practices of
- 2 Transource Pennsylvania and Transource Maryland
- 3 • Attachment 12 Vegetation Management
- 4 • Attachment 13 Agency Coordination
- 5 • Attachment 14 Public Notice Requirements
- 6 • Attachment 15 Notice of Filing

7 **Q. Are you responsible for the oversight and preparation of any of the attachments or**
8 **exhibits filed with the Siting Application?**

9 A. Yes. I am responsible for overseeing the preparation of the entire Siting Application and
10 supporting Attachments.

11 **Q. Please describe the testimony submitted with the Siting Application.**

12 A. Transource PA is submitting a total of six statements, including this one, in support of the
13 Siting Application for the 9A West Project and the CPC Application. These Statements
14 provide additional explanation of the matters addressed in the Siting Application and
15 identify the witness who is sponsoring each portion of the Siting Application.

16 Transource PA St. No. 1: Evan Dean, Managing Director Joint
17 Ventures Governance and Operations for AEPSC – Provides an
18 overview of the 9A West Project; provides a description of
19 Transource PA and other related entities; describes the process
20 employed by Transource PA in developing, preparing and filing this
21 Siting Application; explains the decision making process within
22 Transource PA for selecting the transmission line route; explains
23 how Transource PA will oversee the construction, operations and
24 maintenance of the 9A West Project; provides a status on the
25 right-of-way acquisitions and support for the granting of the CPC
26 Application.

27 Transource PA St. No. 2: Eric Williams, Planning Engineer for AEP
28 – Explains the need for the 9A West Project; describes the 9A West
29 Project selected by PJM Interconnection, L.L.C. (“PJM”); and
30 describes the obligation of Transource PA to complete the project

1 timely, and the reliability benefits of the 9A West Project for
2 Pennsylvania.

3 Transource PA St. No. 3: Timothy J. Horger, Senior Director,
4 Forward Market Operations for PJM – Explains the PJM Process;
5 explains the need for the 9A West Project; and describes how the 9A
6 West Project was selected by PJM to be built.

7 Transource PA St. No. 4: Barry A. Baker, AECOM Corporation,
8 Vice President – Environmental Planning & Permitting – Eastern
9 U.S. – Explains the environmental assessment, siting analysis,
10 public outreach, evaluation of the Alternative Routes, and selection
11 of the Proposed Route for the new double-circuit 230 kV
12 transmission line associated with the 9A West Project.

13 Transource PA St. No. 5: Jacob Clouse – Transmission Line
14 Engineer for Burns & McDonnell – Explains the design features of
15 the 9A West Project; and describes the design and safety features
16 and Electric and Magnetic Fields and Practices of Transource PA for
17 the 9A West Project, including the new 230 kV transmission line.

18 Transource PA St. No. 6: Michael Mechler – Director of Right-of-
19 Way and Infrastructure, Western Land Services Inc. – Explains the
20 process used by Transource PA to attempt to acquire the
21 rights-of-way and easements necessary for the 9A West Project; and
22 provides a summary of the status of negotiations with landowners.

23
24 **III. DESCRIPTION OF TRANSOURCE PA**

25 **Q. Please describe Transource PA.**

26 A. Transource PA is a limited liability company organized and existing under the laws of
27 Delaware. Transource PA is a wholly-owned direct subsidiary of Transource Energy, LLC
28 (“Transource Energy”). Transource PA was formed to construct, own, operate, and
29 maintain electric transmission facilities and equipment within the Commonwealth of
30 Pennsylvania. Specifically, upon receipt of all necessary approvals, Transource PA will
31 construct, own, operate, and maintain one new Pennsylvania substation and the
32 Pennsylvania portion of the new Rice-Ringgold 230 kV interstate Transmission Line as

1 key components of the 9A West Project. As further explained below, Transource PA’s
2 affiliate, Transource Maryland, LLC (“Transource MD”), will construct, own, operate, and
3 maintain the Maryland portion of the 9A West Project.

4 **Q. Is Transource PA a Pennsylvania Public Utility?**

5 A. Yes. Transource PA is an existing regulated transmission-only public utility in
6 Pennsylvania having been issued a Certificate of Public Convenience (“CPC”) by the PUC
7 on December 19, 2024 in the matter *Authorizing approval to Transource Pennsylvania,*
8 *LLC to begin to offer, render, furnish, or supply electric transmission service to the public*
9 *in Peach Bottom Township, York County, Pennsylvania,* PUC Docket No. A-2024-
10 3049272. However, a new CPC will be required in connection with the 9A West Project,
11 and Transource PA is simultaneously filing with the Siting Application the CPC
12 Application in connection with the proposed 9A West Project.

13 I should also note that the PUC provisionally granted Transource PA a CPC in an
14 order entered on January 23, 2018 at Commission Docket Nos. A-2017-2587821 and G-
15 2017-2587822 in connection with the 9A West Project, together with the separately
16 docketed 9A East Project, then collectively called “Project 9A.” Together, the
17 Pennsylvania portions of Project 9A were known as the Independence Energy Connection
18 (“IEC”) Project. However, the provisionally-granted CPC was rescinded when the PUC
19 denied Transource PA’s separate applications for the siting of the proposed IEC Project in
20 an order entered May 24, 2021, at PUC Docket Nos. A-2017-2640195 (the 9A East Project)
21 and A-2017-2640200 (the 9A West Project or Project 9A West) (collectively, “IEC
22 Proceeding”).

1 **Q. Please describe Transource PA’s resources and experience in siting and constructing**
2 **transmission facilities.**

3 A. Transource PA and its affiliates have significant experience in successfully siting,
4 constructing, owning, and operating transmission facilities. As explained above,
5 Transource PA is the direct subsidiary of Transource Energy, which is indirectly owned by
6 a partnership between two investor-owned utilities, American Electric Power Company,
7 Inc. (“AEP”) and Evergy, Inc., formed to develop and invest in competitive electric
8 transmission projects across the United States.

9 AEP, through its subsidiaries, serves more than 5.6 million customers in eleven
10 states, and owns and operates more than 40,000 circuit miles of electric transmission lines
11 and approximately 252,000 miles of electric distribution lines, and has nearly 30,000 MW
12 of generating capacity.

13 Evergy, headquartered in Kansas City, Missouri, was formed from the merger of
14 Great Plains Energy Incorporated and Westar Energy, Inc. in 2018. Evergy’s regulated
15 utility units operate as Evergy Metro, Inc. (f/k/a Kansas City Power & Light Company
16 (“KCP&L)), Evergy Missouri West, Inc. (f/k/a KCP&L Greater Missouri Operations, Inc.)
17 and Evergy Kansas Central, Inc. (f/k/a Westar Energy, Inc.). The Evergy operating
18 companies have served customers in Kansas and Missouri for more than 100
19 years. Evergy’s vertically integrated, regulated electric utilities serve approximately 1.7
20 million customers in Kansas and Missouri with 10,200 circuit miles of transmission lines
21 and about 61,200 circuit miles of distribution lines.

22 AEP and Evergy operate their transmission assets with the highest standards of
23 reliability, safety, and North American Electric Reliability Corporation (“NERC”)

1 compliance. Both AEP and Evergy operate multiple, fully-functional control centers and
2 employ more than 1000 personnel in field operations to maintain, operate and restore
3 transmission systems.

4 AEP and Evergy currently employ approximately 645 people in transmission
5 project management and construction management functions. Combined, AEP and Evergy
6 annually manage more than \$5.95 billion in projects and have extensive experience in
7 projects of a magnitude comparable to the 9A West Project. Further, AEP and Evergy have
8 developed best-in-industry skills through over a 100+ year history of siting, designing,
9 constructing, and operating transmission grids consisting of approximately 50,200 circuit
10 miles of transmission lines.

11 In addition, as part of its current business practice, AEP has established partnerships
12 with third-party engineering consultants who are trained in the appropriate application of
13 AEP specifications and standards. Moreover, AEP has extensive experience in providing
14 oversight to external consultants and third-party contractors, with industry-leading
15 capabilities to effectively oversee all types of transmission siting, permitting, design and
16 construction completed by outside firms.

17 **Q. Will Transource PA be able to draw on the experience and resources of its affiliates**
18 **for the siting, construction, ownership, operation, and maintenance of the 9A-West**
19 **Project?**

20 A. Yes. Transource PA will be able to draw on the significant resources and experience of
21 AEP and Evergy, including their rigorous and proven project management practices.

22

1 **IV. SUMMARY OF THE 9A WEST PROJECT**

2 **Q. Can you please provide an overview of the 9A West Project?**

3 A. Yes. As explained in the written direct testimony of Company witness Timothy J. Horger
4 (Transource PA Statement No. 3), PJM identified a need to alleviate transmission
5 congestion constraints in Pennsylvania, Maryland, West Virginia, and Virginia. To address
6 these congestion constraints, PJM approved what was originally called “Project 9A” (or
7 the IEC Project) as Baseline Upgrade Numbers b2743 and b2752. Project 9A West was a
8 major component of the PJM-approved Project 9A.

9 When the PUC denied Transource PA’s separate applications for the siting of the
10 former IEC/9A Project in an order entered May 24, 2021, at PUC Docket Nos. A-2017-
11 2640195 (the 9A East Project) and A-2017-2640200, PJM suspended Project 9A, which
12 included the 9A West Project. This process – including bringing the 9A West Project out of
13 suspension - is described in greater detail by Mr. Horger in Transource PA St. No. 3.

14 The 9A West Project that has now been removed from suspension and directed by PJM to
15 be constructed by Transource PA is more limited in scope and involves (i) construction of
16 the new Rice Substation, and (ii) construction of the Rice-Ringgold 230 kV Transmission
17 Line, both in Franklin County, Pennsylvania.

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
22 is referred to as the 9A West Project and is the subject of this Siting Application.

23 As further explained by Eric S. Williams (Transource PA Statement No. 2),
24 Transource PA is obligated and responsible for the construction, ownership, maintenance,

1 and operation of the new Rice-Ringgold Substation in Pennsylvania; and the
2 Rice-Ringgold 230 kV Transmission Line in Pennsylvania. Transource MD is obligated
3 and responsible for the construction, ownership, maintenance, and operation of the
4 Maryland portion of the new interstate Rice-Ringgold 230 kV Transmission Line between
5 Maryland and Pennsylvania.

6 The total estimated cost of the 9A West Project is approximately \$231.3 million,
7 which includes approximately \$108.7 million for substation work and approximately
8 \$122.6 million for the new Rice-Ringgold 230 kV Transmission Line.

9 The scheduled in-service date for Project 9A West is January 19, 2029.
10 Construction is scheduled to begin as soon as practical following PUC approval of the
11 Siting Application and the CPC Application in a final order not subject to appeal or other
12 legal challenge. The engineering and design of the 9A West Project are further explained
13 in Attachment 4 to the Siting Application and in Jacob Clouse's written direct testimony
14 (Transource PA Statement No. 5).

15 **V. PROCESS TO DEVELOP THE 9A WEST PROJECT, SITING APPLICATION**
16 **COMPONENTS AND RELATED FILINGS**

17 **Q. Please describe the major tasks Transource PA must undertake to construct the 9A**
18 **West Project.**

19 A. There are many tasks that must be organized and completed before service can begin. Chief
20 among these are resource acquisition, contract management, cost and schedule
21 management, transmission line siting, public outreach, design, right-of-way acquisition,
22 material procurement, permitting, regulatory approvals, construction, and commissioning.

23 The 9A West Project Siting Study (Attachment 4 to the Siting Application) was
24 performed in accordance with the process described below and is fully discussed in the

1 direct testimony of Mr. Barry A. Baker, Vice President – Environmental Planning &
2 Permitting – Eastern U.S., of AECOM (Transource PA Statement No. 4). AECOM was
3 hired due to its extensive expertise in siting large linear projects in Pennsylvania and
4 elsewhere. AECOM provides comprehensive, life-cycle services for transmission and
5 distribution projects, including alternative route analyses, licensing and permitting,
6 conceptual engineering, right-of way services, public involvement, detailed engineering
7 and design, geotechnical engineering and subsurface investigation, site preparation,
8 construction management, and regulatory compliance. The siting process involves
9 selecting a proposed route that (1) reasonably minimizes adverse impacts on area land uses
10 and the natural and cultural environment; (2) minimizes special engineering design
11 requirements and unreasonable costs; and (3) can be constructed and operated in a safe,
12 timely, and reliable manner.

13 As further described in Attachment 4 to the Siting Application, consistent with our
14 customary practices, Transource PA conducted extensive public outreach for the 9A West
15 Project, which included a series of open houses, a project website, a virtual open house,
16 direct mailings, newspaper notifications, and automated phone calls as part of the siting
17 process for the transmission line.

18 The 9A West Project design was undertaken in increasing levels of complexity,
19 which started with a magnitude design and ended with a detailed design that incorporates
20 soil conditions and other field elements, such as topography and access roads. Design for
21 the 9A West Project, at AEP's direction, continues to be led by Burns & McDonnell, a
22 recognized industry leader in the design of electric transmission infrastructure, with
23 support from AEP's internal engineering staff. Burns & McDonnell is an employee-owned

1 engineering, architecture and construction firm that designs, and builds electric
2 transmission and distributions systems throughout North America.

3 There are a total of 102 landowners (85 in Pennsylvania) and 129 parcels (108 in
4 Pennsylvania) along the route selected for the proposed 9A West Project. The process to
5 secure the rights-of-way necessary for the 9A West Project is further described in the
6 written direct testimony of Michael Mechler, Director of Right-of-Way and Infrastructure,
7 Western Land Services Inc. (Transource PA Statement No. 6).

8 **Q. Please summarize the principal permits and approvals required for the 9A West**
9 **Project.**

10 A. Attachment 7 to the Siting Application lists the local, state and federal agency requirements
11 for permits, approvals or documentation. At the state level, cultural resource investigation
12 approvals, waters/wetland encroachment permits, Submerged Lands License Agreements,
13 state threatened and endangered species consultation and approvals will be required for the
14 9A West Project. Also, at the state level, Transource PA must receive PUC approval for the
15 siting and construction of the transmission line. Transource MD is already in receipt of
16 approval from the Maryland Public Service Commission concerning the Maryland portions
17 of the 9A West Project. At the federal level, approvals may be required from the U.S. Army
18 Corps of Engineers and the U.S. Fish and Wildlife Service. These requirements are
19 discussed more fully in Attachments 4 and 7 to the Siting Application.

20 **Q. Please summarize the 9A West Project schedule.**

21 A. A project schedule is generally dictated by the terms of Schedule 6 of PJM's Amended and
22 Restated Operating Agreement, and a Designated Entity Agreement ("DEA"). A DEA is a
23 contract required to be entered into between PJM and the entity required to complete a

1 PJM-directed project. In connection with Project 9A West, Transource PA has executed a
2 DEA with PJM for the 9A West Project as described by Eric S. Williams in Transource PA
3 Statement No. 2. Transource PA expects the 9A West Project to be in service by January
4 19, 2029. Accordingly, Transource PA currently is planning for a 14-month construction
5 schedule commencing with right-of-way clearing and line construction by July 26, 2027.

6 **Q. Please summarize Transource PA’s process for selecting the route for the 9A West**
7 **Project.**

8 A. As further described in Barry Baker’s direct testimony (Transource PA Statement 4) and
9 the Siting Study (Attachment 4 to the Siting Application), the Siting Team conducted a
10 detailed siting analysis to determine a location for the 9A West Project that best balances
11 construction, environmental, and engineering considerations. The purpose of the Siting
12 Study was to gain an understanding of the opportunities and constraints in the Study Area
13 to facilitate the development of feasible Alternative Routes, evaluate potential impacts
14 associated with these Alternative Routes, and identify a Proposed Route to be constructed
15 to meet the need for the 9A West Project.

16 Ultimately, through a quantitative and qualitative analysis and comparison of the
17 feasible Alternate Routes, the Siting Team identified “Alternative Route C” as the Proposed
18 Route for the 9A West Project. Alternative C continues to be the recommended Proposed
19 Route. The Proposed Route was determined to be the route that best minimizes the overall
20 impact of the 9A West Project on the natural and human/built environments.

21 **Q. What was your role on the Siting Team for purposes of the 9A West Project?**

22 A. My role is to provide general oversight of the Siting Team and provide directional guidance
23 on siting related to the 9A West Project.

1 VI. **CONSTRUCTION, OPERATION AND MAINTENANCE OF THE 9A WEST**
2 **PROJECT**

3 Q. **Please explain how Transource PA will oversee the construction of the 9A West**
4 **Project, if approved by the PUC.**

5 A. Transource PA has assigned a Project Director that will oversee all aspects of construction
6 for the 9A West Project for Transource PA. The Project Director is responsible for
7 overseeing the planning and execution of the project work from the preliminary designs
8 through to energization. The Project Director also serves as the single point of contact with
9 the client, owner, and utility. The Project Director will develop a detailed work plan and
10 schedule based upon the specific project requirements, including the environmental and
11 construction permitting as well as any specific right-of-way requirements.

12 The Project Director will be responsible for all aspects of project execution
13 including overall project management; engineering; permitting; right-of-way acquisition;
14 material procurement; construction; checkout and commissioning; right-of-way restoration
15 and project closeout; and handover to operations.

16 Transource PA will provide an experienced Construction Manager to oversee the
17 construction effort and manage day-to-day activities in the field. The Construction
18 Manager will be responsible for all construction and will report to the Project Director.
19 The Construction Manager will be responsible for overseeing the on-site completion of
20 work. The Construction Manager's primary role will be to ensure that day-to-day
21 construction operations are executed safely and efficiently. The Construction Manager will
22 assure that project resources, including material and manpower, are coordinated to meet
23 the project objectives. The Construction Manager will oversee construction activities on
24 both the substation and transmission line work utilizing qualified inspectors and

1 coordinators. These inspectors and coordinators will oversee vegetation clearing, site
2 preparation and development, building of access roads, transmission tower and substation
3 foundations, substation steel and equipment erection, transmission tower, hardware
4 installation and line pulling, and commissioning activities on site.

5 Safety is the most important responsibility of the Construction Project Management
6 Team. Transource PA firmly believes that no project objectives or milestones can ever
7 come before the safety of the workforce and general public. The Project Director,
8 Construction Manager, and Inspection Team will ensure that performance of the
9 construction activities adhere to the rigorous and proven project management and safety
10 practices of Transource Energy and its affiliates, which represent a proven approach to safe
11 work practices.

12 In addition to safety, the Construction Project Management Team is responsible for
13 quality assurance and resource management to ensure the 9A West Project is executed
14 successfully on-time and on-budget. Transource PA will follow its established and
15 proven-successful practices in performance of the work.

16 **Q. Please explain how Transource PA will maintain the 9A West Project, if approved by**
17 **the PUC.**

18 A. Transource PA will own, operate, and provide the maintenance for the Rice Substation as
19 well as the portions of the 230 kV Rice-Ringgold 230 kV Transmission Line located in
20 Pennsylvania. Transource PA will use a combination of highly-qualified internal and
21 external resources to accomplish these tasks in a safe, timely, and efficient manner.

22 Transource PA has access to a network of 5 Transmission Dispatch and System Control
23 Centers that employ over 250 dedicated employees and is available 24 hours a day, 365

1 days a year. Transource PA will continuously monitor the operating functionality of the
2 substation equipment remotely from one of these System Control Centers. In addition to
3 our remote monitoring, Transource PA will perform thorough periodic physical
4 maintenance checks with qualified personnel.

5 In Pennsylvania, Transource PA will establish a service agreement with a locally
6 based, qualified, dedicated services contractor to provide systematic routine maintenance
7 checks as well as immediate operation and maintenance services as needed.

8 In the event of a storm, outage, or an emergency situation involving the new
9 substation or transmission lines, Transource PA will be able to respond immediately to
10 provide restoration support. Transource PA will provide a dedicated/assigned phone
11 number that will be monitored 24 hours a day, 365 days a year to use in case of a storm
12 event or responding to an outage. Transource PA will immediately call our dedicated
13 services contractor to coordinate the issuance of resources to support the response effort.
14 When responding to an event, the dedicated services contractor will call on its local crews,
15 for a timely response.

16 Transource PA recognizes that a crucial element in meeting customers' electric
17 service requirements is its ability to react promptly to a storm or other emergency situation
18 and the capacity to restore service as quickly and economically as possible. The dedicated
19 service provider will be structured to respond to any request for assistance 24 hours a day,
20 365 days a year.

1 **VII. STATUS OF RIGHTS-OF-WAY**

2 **Q. Please describe the right-of-way requirements for the 9A West Project.**

3 A. Right-of-way requirements are discussed more fully in the direct testimony of Michael
4 Mechler (Transource PA Statement No. 6). Transource PA's standard right-of-way width
5 for a double circuit 230 kV transmission line is approximately 130 feet, 65 feet either side
6 of the proposed centerline of the transmission line. A cross section of the proposed
7 rights-of-way required for the 9A West Project is provided in Attachment 4 to the Siting
8 Application. The aerial maps of the route selected for the 9A West Project are provided in
9 Attachment 4, which shows the location of the Proposed Route and identifies the properties
10 that are traversed by the proposed route. Additionally, a list of all persons owning property
11 within the proposed rights-of-way is included in Attachment 6 to the Siting Application.

12 **Q. Is Transource PA acquiring rights-of-way and easements for the 9A Project?**

13 A. Yes. As explained in the direct testimony of Michael Mechler (Transource PA Statement
14 No. 6), Transource PA is continuing to negotiate with all affected landowners along the
15 Proposed Route to reach a reasonable and mutually acceptable right-of-way agreement.
16 However, at the time Transource PA prepared this filing, it had not yet been able to acquire
17 all of the rights-of-way and easements necessary for the 9A West Project.

18 **Q. Please explain why Transource PA has not been able to acquire all the rights-of-way
19 and easements necessary for the 9A West Project.**

20 A. As noted earlier, the 9A West Project has been under suspension by PJM since 2021 and
21 has only recently been released from suspension. Given the uncertain status of the 9A West
22 Project during suspension, Transource PA ceased discussions with impacted landowners.
23 Now that the 9A West Project has been released from suspension, Transource PA is actively

1 assessing the status of necessary rights-of-way and is committed to obtaining those rights
2 by mutual agreement sufficiently in advance of the 9A West Project's in-service date of
3 January 19, 2029.

4 **Q. Is Transource PA seeking to condemn rights-of-way and easements necessary for the**
5 **9A West Project?**

6 A. Not at this time. Transource PA will continue to negotiate with the remaining affected
7 landowners along the Proposed Route with whom we do not presently have an agreement
8 to reach a reasonable and mutually acceptable right-of-way agreement and, thereby, avoid
9 the need to condemn rights-of-way across the properties traversed by the 9A West Project.
10 In the event Transource PA is unable to acquire the rights-of-way needed for the 9A West
11 Project, Transource PA will promptly file separate applications seeking PUC approval to
12 exercise the power of eminent domain to acquire rights-of-way and easements for the
13 proposed 9A West Project. If any such condemnation applications become necessary,
14 Transource PA will request that they be consolidated and considered with this Siting
15 Application for the 9A West Project.

16 **VIII. CPC APPLICATION**

17 **Q. Is Transource PA requesting issuance of a CPC to provide transmission-only service**
18 **in Franklin County, Pennsylvania?**

19 A. Yes. Transource PA is already certificated to provide transmission service as a public
20 utility in Peach Bottom Township, York County, Pennsylvania. The Commission's historic
21 practice has been to grant CPC's to transmission-only public utilities for each geographic
22 area where they intend to construct and operate facilities to serve the public. I incorporate
23 by reference into this testimony the Transource PA CPC Application and its related

1 Appendices, as well as the material submitted in this Siting Application, in support of
2 approval of the CPC Application.

3 **Q. Is Transource PA technically, financially and legally fit to provide electric**
4 **transmission service in Franklin County, Pennsylvania?**

5 A. Yes. As mentioned above, Transource PA is already certificated and fully authorized to
6 conduct business as a transmission service public utility in Peach Botton Township, York
7 County, Pennsylvania. In order to obtain that CPC, Transource PA previously
8 demonstrated to the Commission that it possesses the legal, technical and financial fitness
9 necessary to be a certificated public utility in Pennsylvania.

10 Relative to legal fitness in connection with the current CPC Application,
11 Transource PA and its affiliates are in compliance in all material respects with federal and
12 state laws in the jurisdictions in which it operates. Upon receipt of a CPC authorizing
13 service in Franklin County, it will continue to be legally fit to own and operate electric
14 transmission facilities in the Commonwealth of Pennsylvania.

15 The Company is also technically fit. As described in the Appendices to the CPC
16 Application, Transource PA, its parent Transource Energy and related affiliates, have
17 abundant managerial and technical experience to own and operate the 9A West Project and
18 its related equipment and facilities to render electric service in Franklin County. AEP has
19 extensive experience in transmission projects comparable to the 9A West Project.
20 Transource Energy operates its transmission assets with the highest standards of reliability,
21 safety and North American Electric Reliability Corporation (“NERC”) compliance.

22 Transource Energy and Transource PA also have the financial fitness necessary to
23 construct, own, maintain and operate Project 9A West. Specifically, Appendix 3 of the

1 CPC Application, Transource PA's FERC Form 1, demonstrates that the Company has the
2 necessary financial fitness and resources to construct and operate Project 9A West.
3 Borrowing capacity can be sized as needed and is more than sufficient to accommodate the
4 anticipated debt financing for construction of the 9A West Project. Confidential Appendix
5 4 to the CPC Application demonstrates sufficient borrowing capacity and Appendix 5 of
6 the CPC Application shows Transource Energy's current Moody's credit rating is A2. The
7 strong balance sheets of Transource PA's ultimate parents (AEP and Evergy) and their
8 credit ratings history shown in Appendix 6, Appendix 7 and Confidential Appendix 8 of
9 the CPC Application also confirm Transource PA's financial fitness.

10 **Q. Is Project 9A West needed?**

11 A. Yes. Based on PJM's finding that Project 9A West is necessary to relieve congestion and
12 improve market efficiency and that Transource PA is obligated to construct Project 9A
13 West under the executed DEA, the project is necessary for service, accommodation and
14 convenience of the public. In determining the need for Project 9A West, PJM's process
15 considered the costs and benefits of the project.

16 **Q. Does Project 9A West provide any additional value?**

17 A. Yes. As noted and described further in the Direct Testimony of Eric S. Williams, Transource
18 PA Statement No. 2, Project 9A West will bolster electric reliability in the area, particularly
19 until further electric transmission lines are constructed and placed in service. In addition,
20 based on our preliminary evaluation, Franklin County will experience economic benefits
21 during the construction phase of the 9A West Projects based on the anticipated amount to
22 be spent by Transource PA in Franklin County. These economic benefits are in the tens of

1 millions of dollars and include the creation of hundreds of direct and indirect jobs, labor
2 income, overall local economy impacts and benefits, and additional state and local taxes.


3 **Q. Does this conclude your direct testimony?**

4 A. Yes, it does. However, I reserve the right to file such additional testimony as may be
5 necessary or appropriate during the course of this proceeding.

VERIFICATION

I, Evan K. Dean, Managing Director, Transmission Joint Ventures Governance and Operations, hereby state that the facts set forth above are true and correct to the best of my knowledge, information and belief, and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities).

Date: May 21, 2026

By: 
Evan K. Dean, Managing Director
Transmission Joint Ventures Governance
and Operations

STATEMENT 2

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Application of Transource Pennsylvania, :
LLC filed Pursuant to 52 Pa. Code Chapter :
57, Subchapter G, for Approval of the Siting : Docket No. A-2026-_____
and Construction of the 230 kV Transmission :
Line known as Project 9A West in a Portion :
of Franklin County, Pennsylvania :
:

**Transource Pennsylvania, LLC
9A West Project
Statement No. 2**

**Direct Testimony of
Eric S. Williams**

**Topics Addressed: Brief Description of the 9A West Project Support for
PJM Planning Obligation of Transource PA to
Complete the 9A West Project Reliability Benefits of the
9A West Project for Pennsylvania Designated Entity
Agreement**

Dated May 21, 2026

1 **I. INTRODUCTION**

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

3 A. My name is Eric S. Williams. My business address is 8500 Smiths Mill Road, 2nd Floor,
4 New Albany, OH 43054.

5 **Q. What is your position at American Electric Power?**

6 A. I am employed by American Electric Power Service Corporation (“AEPSC”) as a Regional
7 Transmission Planning Engineer. In this capacity, I provide services to Transource Energy,
8 LLC, the parent of Transource Pennsylvania, LLC (“Transource PA” or the “Company”).

9 **Q. What are your current responsibilities?**

10 A. I am responsible for the design and development of regional, interregional, and competitive
11 transmission planning activities in various Regional Transmission Organizations (“RTO”),
12 including PJM Interconnection, L.L.C. (“PJM”), Midcontinent Independent System
13 Operator (“MISO”), and the Southwest Power Pool (“SPP”) regions.

14 **Q. Please provide your educational background.**

15 A. I earned a B.S. – Electrical Engineering (2005) and M.S - Electrical Power Systems (2008)
16 from the Colorado School of Mines located in Golden, Colorado.

17 **Q. Please describe your professional experience.**

18 A. I have been employed by AEPSC for 5 years as a regional transmission planning engineer.
19 Prior to my employment with AEPSC, I was employed in various electrical utility focused
20 roles with previous companies including economic resource planning (Tri-State
21 Generation and Transmission Assoc.), North American Electric Reliability Corporation
22 (“NERC”) reliability coordination operations (Western Electricity Coordinating Council

1 and Peak Reliability Coordination), and distribution construction design (Consumers
2 Energy).

3 **Q. What is the subject matter of your Direct Testimony?**

4 A. My Direct Testimony supports the Siting Application filed by Transource PA with the
5 Commission for the 9A West Project by: (i) briefly describing the “9A West Project”, (ii)
6 describing how Transource PA supports PJM’s regional transmission planning process,
7 (iii) addressing Transource PA’s obligation to complete the Pennsylvania portion of the 9A
8 West Project, and (iv) identifying the reliability benefits of the 9A West Project for
9 Pennsylvania, beyond the need for the 9A West Project described by Transource PA
10 witness Timothy Horger in Transource PA Statement No. 3.

11 **Q. Have you testified previously in any proceedings before the Pennsylvania Public
12 Utility Commission (“PaPUC” or “Commission”) or any other administrative
13 agencies?**

14 A. No.

15 **Q. Are you responsible for the preparation of any of the Attachments or exhibits filed
16 with the Siting Application?**

17 A. Yes. I am responsible for Attachment 2 of the Siting Application, the Necessity Statement
18 and Attachment 2.1 that includes a map of the 9A West Project and a single line electrical
19 schematic. I also sponsor Attachment 3, which contains the Designated Entity Agreement
20 (“DEA”) with PJM for the 9A West Project.

1 **II. DESCRIPTION OF THE PROPOSED 9A WEST PROJECT**

2 **Q. Please describe the 9A West Project approved by PJM.**

3 A. The 9A West Project involves (i) construction of the Rice Substation in Pennsylvania; and
4 (ii) construction of the new overhead double-circuit Rice-Ringgold 230 kV Transmission
5 Line.

6 Upon receipt of all necessary approvals, the new Rice-Ringgold 230 kV
7 Transmission Line will be sited to extend approximately 29 miles, connecting the existing
8 Ringgold Substation located near Smithsburg, Washington County, Maryland, and the new
9 Rice Substation to be located in Franklin County, Pennsylvania. This transmission line
10 project is the subject of this Siting Application.

11 **Q. Please describe the elements of the 9A West Project for which Transource PA is**
12 **responsible.**

13 A. With respect to the 9AWest Project, Transource PA will construct, own, operate, and
14 maintain the new Rice Substation. The new Rice Substation will be a 500-230 kV
15 substation located in Franklin County, Pennsylvania that will be tied into the existing
16 Hunterstown-Conemaugh 500 kV Transmission Line. The Rice Substation will also be
17 interconnected with and provide the 230 kV supply to the proposed new Rice-Ringgold
18 230 kV Transmission Line.

19 Transource PA will also construct, own, operate, and maintain the Pennsylvania
20 portion of the new Rice-Ringgold 230 kV Transmission Line. Transource PA’s affiliate,
21 Transource Maryland, LLC (“Transource MD”), will construct, own, operate, and maintain
22 the Maryland portion of the Rice-Ringgold 230 kV Transmission Line.

1 **Q. Is the 9A West Project expected to resolve certain transmission congestion issues**
2 **identified by PJM?**

3 A. Yes. The 9A West Project is intended to directly address transmission congestion on the
4 AP South Reactive Interface.¹ How and why the 9A West Project will relieve this
5 identified congestion is described in greater detail by Transource PA witness Timothy
6 Horger in Transource PA Statement No. 3.

7 **III. TRANSOURCE PA SUPPORT FOR PJM'S PLANNING PROCESS**

8 **Q. Can you briefly describe PJM's planning process and the Company's role and**
9 **responsibilities in that process?**

10 A. Yes. PJM, as the regional transmission organization, conducts a coordinated Regional
11 Transmission Expansion Planning ("RTEP")² process and administers the Generator
12 Interconnection Process ("GIP")³ to identify reliability violations and market efficiency
13 needs, evaluate candidate solutions, and allocate costs through an open stakeholder
14 process. The Company supports PJM by providing timely and accurate models, topology,
15 ratings, load forecasts and study data; participating in PJM studies and stakeholder reviews;
16 identifying and proposing owner-sponsored solutions for local needs; and, when assigned
17 responsibility to construct a project, by designing, permitting, constructing, testing and
18 placing approved transmission upgrades into service in accordance with PJM timelines,
19 tariff rules and cost-recovery mechanisms.

¹ The AP South Reactive Interface is a 500 KV transmission interface in the PJM interconnection consisting of four 500 KV lines designed to manage voltage stability and electricity flows from western, lower-cost generation to eastern load centers such as Maryland, Virginia and the District of Columbia. It is considered a persistent transmission bottleneck that causes consistent congestion.

² PJM's RTEP process is a comprehensive 15-year planning cycle designed to ensure grid reliability, meet demand, and improve market efficiency across the PJM footprint. <https://insidelines.pjm.com/pjm-publishes-updated-brochure-explaining-pjms-rtep-process/>

³ The GIP is explained in PJM Manual 14G.

1 Q. **How does the Company help PJM meet its obligation to ensure reliable transmission**
2 **service?**

3 A. In addition to providing timely, accurate information and constructing and placing into
4 service RTEP facilities as discussed above, the Company supplies real-time
5 SCADA⁴/EMS⁵ telemetry, coordinates outages and switching; maintains protection,
6 control and voltage/reactive resources; executes preventive maintenance and vegetation
7 management; and delivers emergency response, blackstart⁶ and mutual aid while meeting
8 PJM/NERC/Federal Energy Regulatory Commission (“FERC”) reporting, cost-allocation
9 and stakeholder engagement requirements.

10 Q. **How does the Company help PJM meet its obligation to ensure efficient transmission**
11 **service?**

12 A. The Company supports PJM’s efficiency goals by supplying accurate models, forecasts
13 and constraint data that enable market-efficient studies and resource dispatch; identifying
14 and proposing cost-effective, owner-sponsored transmission alternatives that minimize
15 total system costs; providing constructability, cost and schedule input to ensure selected
16 solutions are least-cost and timely; operating and maintaining assets (including dynamic
17 ratings, volt/VAR controls, and reactive devices) to reduce congestion and losses;
18 coordinating outage scheduling and switching to preserve market operations and limit
19 redispatch costs; integrating and enabling non-wires solutions, storage and Distributed

⁴Supervisory Control and Data Acquisition (“SCADA”) is a control system architecture comprising computers networked data communications and graphical user interfaces for high-level supervision of machines and processes.

⁵ Endpoint Management Software (“EMS”) provides a centralized console to monitor, secure, and manage diverse devices—laptops, desktops, and smartphones—across an organization’s network.

⁶ Blackstart capability is the ability of a power plant, generator, or battery system to start up and restore operations independently, without relying on an external, functional power grid.

1 Energy Resources (“DERs”)⁷ where they provide lower-cost outcomes; and participating
2 in stakeholder and tariff processes to support transparent cost allocation and efficient
3 market signals.

4 **IV. ADDITIONAL BENEFITS OF THE 9A WEST PROJECT**

5 **Q. Are you addressing any Pennsylvania benefits from the 9A West Project?**

6 A. Yes.

7 **Q. Will the 9A West Project provide any additional benefits to, for or within**
8 **Pennsylvania?**

9 A. Yes. Although the primary benefits from the 9A West Project relate to regional market
10 efficiency and the reduction of congestion costs, as discussed by Timothy Horger in
11 Transource PA Statement No. 3, the new transmission facilities associated with the 9A
12 West Project will also enhance the electrical strength and reliability of the transmission
13 system by virtue of the new transmission facilities in the area that will be part of the
14 interconnected transmission grid. The 9A West Project will provide additional and
15 alternative paths for electricity in the event of outages on other Pennsylvania transmission
16 facilities. The 9A West Project also will enable the interconnection of potential future
17 reliability and generation projects in the area.

⁷DERs are small-scale, localized electricity generation or storage technologies—such as solar panels, batteries, and wind turbines—situated near the point of use, typically behind the utility meter.

1 **Q. How did Transource PA determine whether there are reliability benefits for**
2 **Pennsylvania from the 9A West Project?**

3 A. The Pennsylvania reliability benefits were evaluated and determined using PJM's
4 published Power System Simulation for Engineers ("PSSE") powerflow models to
5 examine the local electricity load flow in the 9A West Project footprint and nearby
6 electrical systems. PSSE is a software power analytics computer program published by
7 Siemens. It is an industry accepted transmission planning and analysis software that allows
8 transmission planners to optimize power supply, mitigate risk and provide valuable
9 information before making major investment decisions. PSSE supports large-scale grid
10 modeling with power flow analysis for up to 200,000 buses, contingency and fault analysis,
11 substation node-breaker modeling and integrated plotting and visualization tools.

12 **Q. Please describe your experience in operating PSSE and interpreting the results of its**
13 **analytical process.**

14 A. In my current role, I routinely use PSSE to visualize and simulate the steady state power
15 flow of the transmission system, and to measure the impacts of changes on the bulk power
16 system.

17 **Q. What is the nature and form of the inputs into and outputs from PSSE?**

18 A. The primary inputs into PSSE are load, generation, and transmission network parameters.
19 PSSE performs a mathematical analysis and generates a steady state power flow solution
20 that simulates and calculates power flows across transmission elements and substation bus
21 voltages. PJM coordinates the construction of these models with the entities across its
22 footprint to assemble these models for transmission planning and needs forecasting.

1 **Q. How is the output from PSSE used to evaluate and determine the benefits of any**
2 **particular transmission line or facility?**

3 A. The simulated transmission flow output from PSSE can be analyzed to determine if any
4 element in the network is overworked or operating outside normal reliable system
5 parameters; examples include too much power flowing on a line or the voltage at a node in
6 the system being too high or low. These issues can arise from various stresses placed on
7 the transmission system, such as the introduction of new loads, facility parameter changes,
8 or contingency analysis.

9 A new transmission project may be required to ameliorate or strengthen the
10 transmission network if the system is operating beyond reliable parameters.

11 **Q. Please describe how you deployed PSSE in connection with the 9A West Project and**
12 **the results of your work.**

13 A. My analysis involved reviewing and evaluating PJM's RTEP 2025 series power flow
14 models that forecasted summer peak power flows in the year 2030. I specifically measured
15 how the local electric load flows have changed over time since the original 9A Project
16 proposal, and how the power flows would change again with the construction and operation
17 of the Transource 9A West Project.

18 My analysis demonstrates the following Pennsylvania reliability benefits:

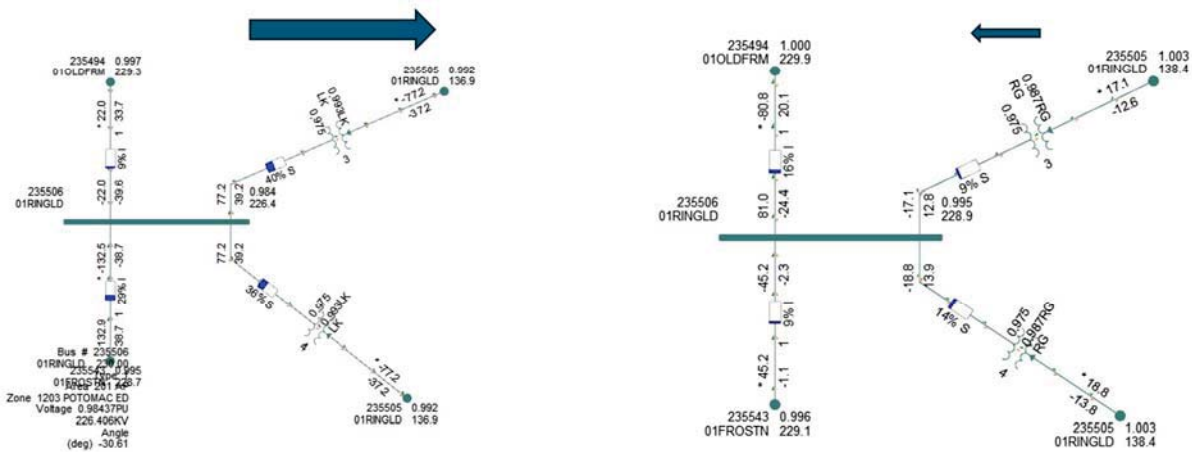
19 i) When the 9A West Project was initially approved, the Ringgold
20 Substation located in Smithburg MD, was an electrical source to the PA south and MD
21 north local areas via the 230kV connection to Doubs Substation approximately 26 miles
22 south, and power flowed across the Ringgold Substation transformers from high voltage to
23 low voltage. The most recent PSSE models published by PJM show this power flow

1 reversing, with power flowing from low voltage to high across the Ringgold Substation
2 transformers. This is called backfeeding and is an indication that the local electric system
3 reliability may be at risk, or that unintended flows are occurring across the system due to
4 the physical laws of electrical flow. Chart ESW-1 below shows the changes in power flows
5 at the Ringgold Substation transformers in 2016 and 2026:

6

7 **ESW Chart-1**

Ringgold 2016 vs 2025



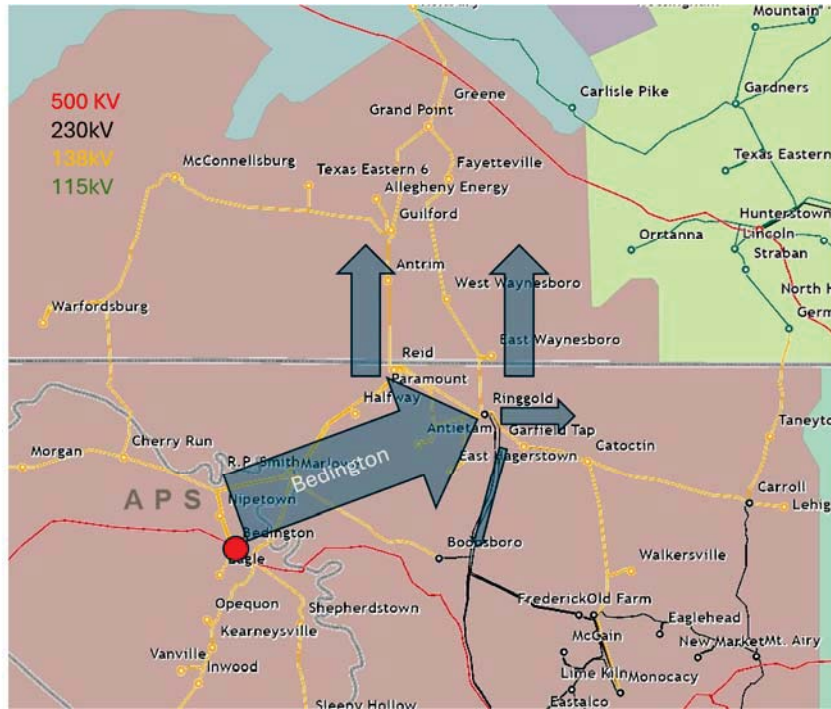
8

9 In this instance, power that was intended to use higher voltage transmission paths
10 is using lower voltage lines. The addition of the 9A West Project will restore the Ringgold
11 Substation transformers to their original design of serving local area load instead of
12 becoming a parallel path for high voltage transmission.

13

1 Chart ESW-2

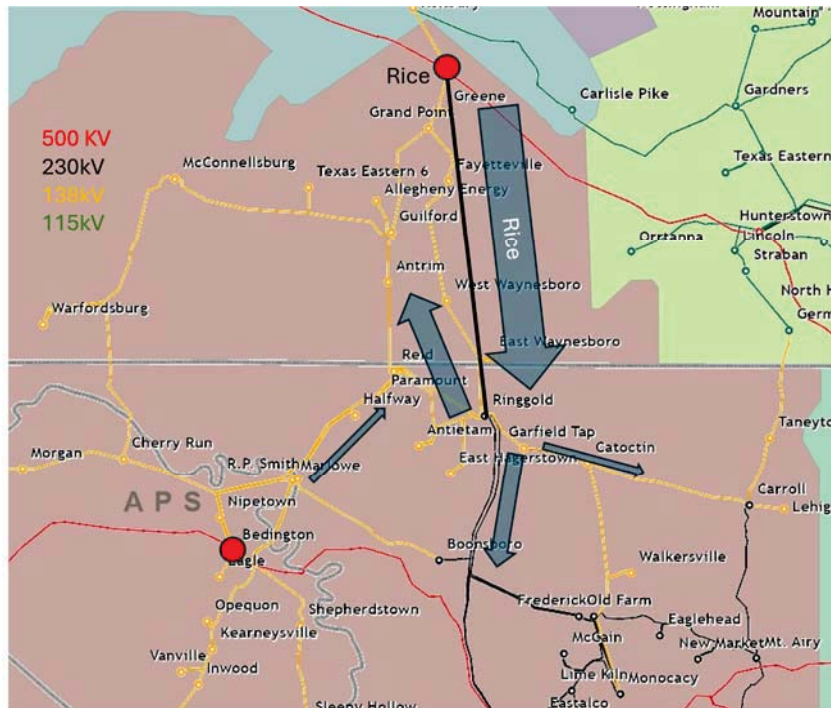
Existing



2

3 Chart ESW-3

With 9A



4

1 ii) If the Ringgold Substation transformers are backfeeding, that substation
2 that was once an electrical “source” for the region is now a “sink”. An electric source is
3 a device, entity, or geographical location that *injects power* into the electrical network. In
4 contrast, an electric sink is a device, entity, or geographical location that *absorbs or*
5 *consumes* power from the electrical network. This change in the operating function of the
6 Ringgold Substation transformers reduces the quantity of electrical sources in the PA south
7 /MD north region and increases the likelihood and severity of an N-1 or N-1-1 event that
8 would result in an unplanned interruption of customers’ electric service known as
9 “loadshed”.⁸

10 iii) The new primary electrical source for the PA south /MD north region
11 has now become the Bedington Substation located near Bedington West Virginia, as shown
12 in Chart ESW-2 and Chart ESW-4 below.

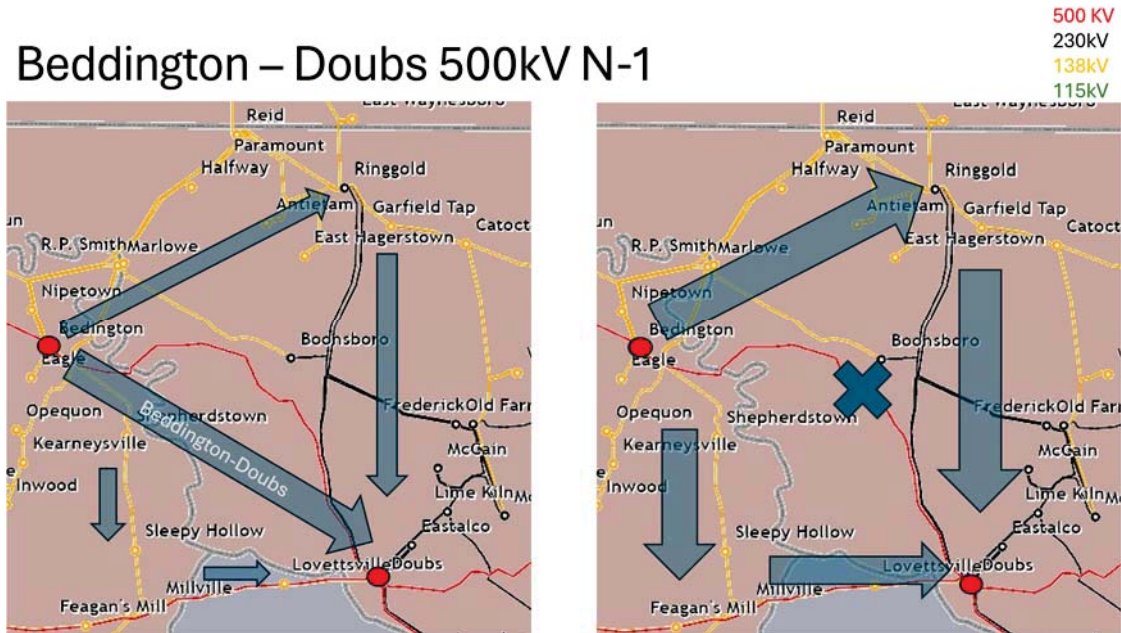
13 For certain contingencies associated with the 500kV transmission system, the
14 resulting power must flow between the Bedington and Ringgold Substations across the
15 lower voltage lines. This introduces the risk of overload on these lower voltage lines; and
16 can constrain the capability of power to safely flow across the 500kV electrical system as
17 well as increasing the potential for cascading N-1 contingencies that may result in loadshed
18 near the Ringgold substation. This phenomenon is illustrated by the diagram below.

⁸ An N-1 power system contingency is a grid reliability standard requiring that the system continue operating normally without load loss or voltage issues, even if any single critical component—such as a line, transformer, or generator—fails. An N-1 contingency represents the failure or loss of any given power system element in normal electric system conditions. N-1-1 represents the loss of two sequential elements in extreme conditions like extreme weather or emergency electric system conditions.

1

Chart ESW-4

Beddington – Doubs 500kV N-1



3

4

The above diagram shows how power flows over lower voltage 138kV lines when the power system experiences a contingency with the higher 500kV transmission system. The introduction of the 9A West Project will reduce the severity of power flowing on the 138kV network between Beddington and Ringgold by creating a higher voltage 230kV path for power to flow in the event of this specific contingency.

9

Reliability solutions that address 500kV N-1 violations along the 500kV corridor are moving forward, but the in-service date for those projects will not occur within the studied 5-year time horizon. In the meantime, the 9A West Project will provide reliability support in the Ringgold area until the larger solutions can be placed in service, and will work in tandem to provide reliability support to the Ringgold area with these larger solutions in the future.

14

1 **Q. How does Transource PA’s analysis of Pennsylvania benefits from the 9A West**
2 **Project relate to the need determination made by PJM that is discussed in Transource**
3 **PA Statement No. 3 from Timothy Horger?**

4 A. Mr. Horger’s testimony focuses on the beneficial economic impacts of the 9A West Project
5 at a macro-level, the bulk electric system, while I analyzed the local electrical reliability
6 benefits in Pennsylvania that would result from the construction of the 9A West Project.

7 **V. TRANSOURCE PA’S OBLIGATION TO COMPLETE THE 9A WEST PROJECT**

8 **Q. Who will construct, own, and operate the 9A West Project?**

9 A. As explained above, Transource PA will construct, own, operate, and maintain the
10 Pennsylvania portion of the 9A West Project, and Transource MD will construct, own,
11 operate, and maintain the Maryland portion of the 9A West Project.

12 **Q. Are Transource PA and Transource MD required to build the 9A West Project?**

13 A. Yes. Transmission projects that originate through PJM’s RTEP utilize a DEA to assign
14 construction responsibility for the identified project to the “Designated Entity.” The DEA
15 is a two-party agreement between the Designated Entity and PJM. The terms and
16 conditions of the agreement govern the construction period of the transmission project and
17 define specific rights and obligations of the parties. On April 2, 2026, PJM and Transource
18 Energy⁹, on behalf of Transource PA and Transource MD, completed and executed a DEA
19 for the 9A West Project. The DEA for the 9A West Project is included as part of
20 Attachment 3 of the Application.

⁹ Transource Energy is the parent company of Transource PA and Transource MD.

1 **Q. Please summarize the primary terms and conditions of the DEA for the 9A West**
2 **Project.**

3 A. The DEA between PJM and Transource, among other things, obligates Transource to
4 “design, engineer, procure, install, construct, own, operate and maintain” the 9A West
5 project within the agreed upon cost constraints and timelines defined by the two parties.
6 The DEA has appendices that contain relevant project details, such as the scope of work,
7 the development schedule and cost commitments.

8 **Q. Is the DEA for the 9A West Project expected to be filed with the FERC?**

9 A. Yes. The fully executed DEA for the 9A West Project was filed with FERC on May 1,
10 2026. Assuming there are no objections to the DEA, we expect the agreement to be
11 accepted 60 days after filing. We will continue to apprise the PaPUC and all parties to this
12 proceeding on the status of FERC’s consideration of the DEA and will supplement the
13 record with any new information pertinent to that agreement.

14 **Q. Does this conclude your direct testimony?**

15 A. Yes, it does. However, I reserve the right to submit such additional testimony as may be
16 necessary or appropriate during the course of this proceeding.

17

VERIFICATION

I, Eric S. Williams, Regional Transmission Planning Engineer, American Electric Power Corporation, hereby state that the facts set forth above are true and correct to the best of my knowledge, information and belief, and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities).

Date: May 21, 2026

By: **Eric S Williams**
Eric S. Williams
Regional Transmission Planning Engineer
American Electric Power Corporation

STATEMENT 3

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Application of Transource Pennsylvania, LLC filed :
Pursuant to 52 Pa. Code Chapter 57, Subchapter G, : Docket No. A-2026-_____
for Approval of the Siting and Construction of the :
230 kV Transmission Line known as Project 9A :
West in a Portion of Franklin County, Pennsylvania :
:

**Transource Pennsylvania, LLC
9A West Project
Statement No. 3**

**Direct Testimony of
Timothy J. Horger**

**Topics Addressed: The PJM Process
The Selection of the 9A West
Project
The Continued and Current Need for the 9A West
Project**

Dated: May 21, 2026

1 **I. INTRODUCTION**

2 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

3 A. My name is Timothy J. Horger, and my business address is 2750 Monroe Boulevard,
4 Audubon, Pennsylvania 19403-2497.

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

6 A. I am employed by PJM Interconnection, L.L.C. (“PJM”), a Regional Transmission
7 Organization (“RTO”), as Senior Director, PJM Forward Market Operations.

8 **Q. PLEASE DESCRIBE YOUR PROFESSIONAL EXPERIENCE AND**
9 **EDUCATIONAL BACKGROUND.**

10 A. In my current role as Senior Director, PJM Forward Market Operations, I oversee PJM’s
11 Financial Transmission Rights (“FTR”), Capacity, and Demand Side Markets, including
12 the design, development, and execution of those markets, the facilitation of PJM
13 stakeholder initiatives related to those markets, and the professional development of PJM
14 staff who work in the departments administering those markets. I am also responsible for
15 overseeing all activities associated with the Market Efficiency Economic Planning process
16 at PJM. In addition, I am responsible for efforts associated with Strategic Market
17 initiatives.

18 I have been employed by PJM for over twenty-three years. Prior to being Senior
19 Director, PJM Forward Market Operations, I was the Director of Energy Market
20 Operations. In that position, I was responsible for overseeing the execution of the PJM
21 Market systems, including the Day-ahead, Real-time, FTR, Market Efficiency, and
22 Interregional Market Operations areas. In addition, I was responsible for the design and

1 development of the PJM market systems, facilitation of stakeholder initiatives, strategic
2 market initiatives, and development of staff. Before that, I was the manager of the PJM
3 Interregional Market Operations department, manager of the PJM Market Simulation
4 department, and the Senior Lead Engineer of the Auction Revenue Rights (“ARR”) and
5 FTR group. In the role of Interregional Market Operations Manager, my responsibilities
6 included overseeing all market activities associated with interregional market coordination
7 with neighboring areas including Market-to-Market daily congestion management,
8 Congestion Management Process, Joint and Common Market, Interchange Distribution
9 Calculator Working Group, North America Energy Standards Board, and project support.

10 In my role as Market Simulation Manager, I was also responsible for overseeing all
11 activities associated with the ARR/FTR Markets and the Market Efficiency Economic
12 Planning process at PJM. This included responsibility for execution and design of the
13 Market Efficiency Analysis, Annual FTR Auctions, ARR Allocations, Long Term and
14 Monthly FTR Auctions, and Incremental ARR analysis. I was responsible for the market
15 efficiency analysis associated with the Transource Pennsylvania LLC’s (“Transource PA”)
16 Project 9A West.

17 In my role as Senior Lead Engineer for the ARR/FTR group, I was responsible for
18 leading and conducting all activities related to ARR and FTR functions including
19 Incremental ARR analysis, FTR Auction setup and clearing, software design, and
20 stakeholder support. I was also responsible for daily locational marginal price verification,
21 Day-ahead market clearing, power flow analysis, and market congestion studies.

22 Prior to joining PJM in 2002, I was a Power Systems and Control Engineer at Laser
23 Technology, Inc. where I designed Power and Control Systems for Electric Industry

1 equipment. I also developed power distribution schematics, designed Programmable Logic
2 Controllers, programmed Multiple Axis Motion Control Systems, and designed CE/UL
3 certified equipment.

4 In addition, I was previously employed at Lockheed Martin Government Electronic
5 Systems as an Electrical Integration Engineer where I led and performed electrical
6 integration design for the U.S. Naval AEGIS Combat System.

7 **Q. WHAT ACADEMIC DEGREES DO YOU HOLD?**

8 A. I hold a Bachelor of Science degree in Electrical Engineering from Drexel University,
9 conferred in 1997, and a Master of Science degree in Systems Engineering from
10 Pennsylvania State University, conferred in 2002.

11 **Q. PLEASE DESCRIBE THE PURPOSE OF YOUR TESTIMONY.**

12 A. I have been asked by Transource Pennsylvania, LLC (“Transource PA”)¹ to describe PJM
13 and its Regional Transmission Expansion Plan (“RTEP”) process. I have also been asked
14 to explain why PJM determined that Transource PA’s market efficiency project,² which I
15 will refer to as Market Efficiency Project 9A West (“Project 9A West”) in the context of
16 the RTEP and why Project 9A West, as analyzed in 2025, is needed to alleviate
17 transmission congestion in PJM.

¹ Transource PA and its Maryland affiliate, Transource Maryland, LLC (“Transource MD”), are responsible for the construction, ownership, maintenance, and operation of certain components of Project 9A West, as described in more detail in this testimony.

² For purposes of this testimony, a “market efficiency project” is a transmission enhancement or expansion that is developed pursuant to section 1.5.7 of Schedule 6 of the Amended and Restated Operating Agreement of PJM Interconnection, L.L.C. (“Operating Agreement”), and that is needed to relieve transmission constraints that have an economic impact (“economic constraints”).

1 **Q. HAVE YOU TESTIFIED PREVIOUSLY BEFORE THE PENNSYLVANIA**
2 **PUBLIC UTILITY COMMISSION (“PaPUC”) OR BEFORE ANY OTHER**
3 **ADMINISTRATIVE AGENCIES?**

4 A. Yes. In 2020, I provided testimony in PaPUC Docket Nos. A-2017-2640195; A-2017-
5 2640200; P-2018-3001878; P-2018-3001883; and A-2018-3001881, which concerned the
6 original Project 9A. I have also offered testimony in regulatory proceedings before the
7 Maryland Public Service Commission concerning the original Project 9A. And, I have
8 provided testimony to the Federal Energy Regulatory Commission.

9 **Q. PLEASE BRIEFLY SUMMARIZE YOUR TESTIMONY AND CONCLUSIONS.**

10 A. In this testimony, I will describe PJM’s role and responsibility as a Federal Energy
11 Regulatory Commission (“FERC”)-approved RTO to identify and address needed
12 transmission system enhancements in its Region. I will explain how PJM, in performing
13 that role, uses a FERC-approved RTEP process to evaluate and select necessary projects. I
14 explain how PJM evaluated and selected the original Project 9A as a needed project to
15 address market efficiency concerns caused by persistent transmission congestion. I explain
16 how PJM’s RTEP process identified a need for part of Project 9A called Project 9A West—
17 the subject of these proceedings—to alleviate transmission constraints causing congestion
18 in PJM’s Region.

19 **Q. PLEASE PROVIDE AN OVERVIEW OF THE ORIGINAL PROJECT 9A AND**
20 **PROJECT 9A WEST.**

21 A. PJM initially selected Project 9A (the “Original Project 9A”) to address significant
22 transmission constraints with economic impacts identified in PJM’s 2014/15 Long Term

1 Proposal Window. The Original Project 9A was composed of two components that were
2 collectively referred to as the Independence Energy Connection Project (“IEC Project”).
3 The IEC Project/Project 9A involved: (i) construction of two new substations in
4 Pennsylvania—the Rice Substation and the Furnace Run Substation; and (ii) construction
5 of two new overhead double-circuit 230 kV interstate transmission lines—the Rice-
6 Ringgold 230 kV transmission line and the Furnace Run-Conastone 230 kV transmission
7 line.

8 As I will discuss below, however, after the PJM Board of Managers (“PJM Board”)
9 approved the Original Project 9A for inclusion in the RTEP, and while that project was
10 placed in suspension during the pendency of related siting proceedings, the PJM
11 transmission system continued to evolve. In December 2023, the PJM Board approved
12 some new transmission facilities that occupy the same physical location, or rights-of-way,
13 as the eastern portion of the Original 9A Project or that otherwise would perform a similar
14 function to the eastern portion of the project. Specifically, (i) the Transource PA Furnace
15 Run-Conastone 230 kV transmission line was proposed to be located on the same rights-
16 of-way as those that will be used by the Chanceford-Conastone 500 kV transmission line
17 (approved as part of 2022 Window 3), and (ii) the Chanceford 500kV substation (also
18 approved as part of 2022 Window 3) will be located in close proximity to, and will serve
19 similar objectives as, the Transource PA Furnace Run 500 kV substation. These later-
20 approved facilities rendered the eastern portion of the Original 9A Project redundant and
21 no longer necessary.

22 As such, and after additional analysis and following review in PJM’s Transmission
23 Expansion Advisory Committee (“TEAC”), which I describe further below, the PJM Board

1 approved a modified scope of Project 9A in July 2025 and indicated that PJM would
2 proceed only with the still-needed new Rice-Ringgold transmission line. That line will be
3 sited to extend approximately 29 miles, connecting the existing Ringgold Substation
4 located near Smithsburg, Washington County, Maryland, and the new Rice Substation to
5 be located in Franklin County, Pennsylvania.

6 As further explained in the direct testimony of Mr. Eric S. Williams (Transource
7 PA Statement No. 2) Transource PA will construct, own, operate, and maintain the
8 Pennsylvania portion of the new transmission lines associated with Project 9A West and
9 Transource PA's affiliate, Transource MD, will construct, own, operate, and maintain the
10 Maryland portion of the new transmission lines associated with Project 9A West.

11 **Q. WHAT WAS YOUR ROLE IN THE DEVELOPMENT OF THE ORIGINAL**
12 **PROJECT 9A AND THE CURRENT PROJECT 9A WEST?**

13 A. On December 27, 2017, PJM Witness Mr. Paul McGlynn submitted Direct Testimony in
14 the proceedings before the PaPUC in Docket Nos. A-2017-2640195 and A-2017-2640200
15 concerning the Original Project 9A. In his testimony, he described PJM and its RTEP.
16 More specifically, Mr. McGlynn discussed Original Project 9A in the context of the RTEP
17 and why Original Project 9A was needed and selected as a market efficiency project to
18 alleviate transmission congestion in eastern PJM. Mr. McGlynn eventually moved to
19 another role within PJM and has since retired.

20 Since that time, and still today, I have been responsible for the market efficiency
21 analysis associated with Original Project 9A. Because of my role in market operations and
22 my involvement with the market efficiency analysis, I offered rebuttal testimony in the
23 PaPUC proceeding at Docket Nos. A-2017-2640195 and A-2017-2640200, adopting parts

1 of Mr. McGlynn’s Direct Testimony relative to PJM’s regional planning process for the
2 Original Project 9A.

3 In my current role as Senior Director, PJM Forward Market Operations, I continue
4 to have managerial responsibility for the PJM staff that performed the 2025 re-evaluation
5 of costs and benefits establishing the continued need for the 9A West Project that PJM
6 continues to include in the RTEP for market-efficiency reasons.

7 **Q. WHAT TOPICS WILL YOU DISCUSS IN YOUR TESTIMONY?**

8 A. In general terms, I will explain that, as a federally approved independent RTO, PJM is
9 responsible for maintaining the reliable and efficient operation of the electric transmission
10 system in the PJM Region. In order to maintain reliable transmission service, PJM prepares
11 an annual RTEP and applies applicable reliability criteria, including North American
12 Electric Reliability Corporation (“NERC”)³ Reliability Standards, to evaluate the
13 reliability of the PJM transmission system. PJM determines the required transmission
14 enhancements and expansions that are needed to maintain transmission system reliability
15 in compliance with the NERC Reliability Standards and other applicable reliability criteria.

16 In addition to the reliability analysis, PJM’s RTEP includes a separate market
17 efficiency analysis to identify proposed transmission facilities that may have economic
18 wholesale market benefits, such as by reducing transmission congestion. Pursuant to
19 FERC⁴ authority, PJM directs, as appropriate, the construction of new transmission
20 projects or upgrades to maintain grid reliability and efficiency. In my direct testimony, I

³ NERC is defined further below.

⁴ FERC is an independent agency that regulates the interstate transmission of electricity, natural gas, and oil. FERC also reviews proposals to build liquefied natural gas terminals and interstate natural gas pipelines as well as licensing hydropower projects. See <https://www.ferc.gov/what-ferc-does>. FERC has approved the PJM RTEP process.

1 will show that the PJM planning process is open to the public, transparent, and
2 collaborative.

3 I will also describe the continuing need for Project 9A West (which is a portion of
4 Original Project 9A). PJM's 2025 study results show that the Project 9A West portion of
5 Original Project 9A remains needed, and PJM supports Transource PA's request for the
6 PaPUC's siting approval of Project 9A West in this proceeding to address longstanding
7 transmission congestion concerns within the PJM Region.

8 **Q. WHAT IS TRANSMISSION CONGESTION?**

9 A. Transmission congestion, also called "congestion," results from constraints in the
10 transmission system. It occurs when available, least-cost energy cannot be delivered to all
11 load (*i.e.*, wholesale customers demanding electricity) because existing transmission
12 facilities are inadequate to deliver that energy to one or more areas. PJM provides resources
13 that explain the concept of transmission congestion.⁵

14 The consequence of transmission congestion is that lower-cost generation cannot
15 serve the load, requiring PJM to dispatch higher-cost generation in the transmission-
16 constrained area to meet the load. Therefore, wholesale customers in transmission-
17 constrained areas experience higher costs for power as a result of congestion.

18 As I will explain further in this testimony, the Original Project 9A and the portion
19 of that project now called Project 9A West are needed to reduce transmission congestion
20 that prevents lower-cost electrical generation from serving load in constrained areas.

⁵ See, e.g., Transmission Congestion Can Increase Costs, available at <https://www.pjm.com/-/media/DotCom/about-pjm/newsroom/fact-sheets/congestion-fact-sheet.pdf>.

1 **Q. HOW IS YOUR TESTIMONY ORGANIZED?**

2 A. My testimony is organized into the following sections:

- 3 • Section I provides the reasons why PJM selected Original Project 9A to address,
4 among other things, persistent transmission congestion across the Maryland and
5 Pennsylvania border.
- 6 • Section II includes an overview of PJM, including its role as an independent RTO.
- 7 • Section III describes PJM's transmission planning process.
- 8 • Section IV describes PJM's market efficiency analysis as part of the RTEP process.
- 9 • Section V explains how application of PJM's RTEP process identified the need for
10 the Original Project 9A, and today's continuing need for Project 9A West.

11 **II. SUMMARY OF REASONS WHY PJM SELECTED ORIGINAL PROJECT 9A**

12 **Q. PLEASE SUMMARIZE THE PRIMARY REASONS FOR PJM'S**
13 **DETERMINATION OF NEED FOR ORIGINAL PROJECT 9A.**

14 A. In this direct testimony, I will describe the process PJM uses to perform its RTEP market
15 efficiency analysis. This background helps explain why PJM found the Original Project
16 9A to be needed and continues to find Project 9A West needed. Project 9A West was
17 originally part of Project 9A, and the reasons why Project 9A was selected remain relevant
18 and compelling today with respect to Project 9A West:

- 19 • In October 2014, PJM opened the 2014/15 Long Term Proposal Window to solicit
20 proposals to address, among other things, transmission congestion across the AP-
21 South Interface (an area of the PJM transmission grid including the Pennsylvania
22 and Maryland border, described more in detail below) and related constraints
23 (collectively, the "AP-South Reactive Interface"). This transmission congestion

1 has existed for years and continues to result in significant transmission congestion
2 costs ultimately borne by residents, commercial businesses and industrial
3 customers in the eastern part of the PJM Region.

- 4 • After extensive evaluation of alternatives and review with stakeholders, PJM
5 selected the Original Project 9A (of which, as noted, Project 9A West is a part) to
6 address the needs identified in PJM's 2014/15 Long Term Proposal Window
7 because it provided the highest Benefit/Cost Ratio in terms of reductions in load
8 market payments compared to the project's cost. In addition, examinations of other
9 metrics and a range of modeled assumptions showed the project was expected to
10 produce high levels of transmission congestion savings, and reductions in the
11 variable cost of generation supply to the market. The Original Project 9A was
12 approved by the PJM Board on August 2, 2016.
- 13 • On June 30, 2020, the Maryland Public Service Commission approved a settlement
14 agreement regarding the Maryland portions of the Original Project 9A pending
15 regulatory approvals by the PaPUC and final approval by the PJM Board of
16 Managers.
- 17 • On May 24, 2021, the PaPUC rescinded Transource PA's provisional certificate of
18 public convenience associated with the Pennsylvania portion of the Original Project
19 9A, which PaPUC had issued in 2018. Litigation in the courts followed.
- 20 • On September 22, 2021, the PJM Board endorsed PJM's recommendation to
21 suspend the Original Project 9A and remove the project from the RTEP base models
22 beginning in 2022, pending further developments in the regulatory process, in order
23 to allow PJM to plan for system-wide reliability impacts and interconnection queue

1 analysis while legal appeals and challenges relating to the Pennsylvania portion of
2 the Original Project 9A were pending before the courts.

3 Original Project 9A remained in suspension through 2024, and not part of the RTEP
4 base models.

5 As described more fully in my testimony below, PJM re-evaluations in the RTEP
6 process in 2025 identified that Project 9A West—but not the eastern portion of the Original
7 Project 9A—was still needed to alleviate transmission congestion in PJM’s Region.

8 **III. DESCRIPTION AND OVERVIEW OF PJM**

9 **Q. PLEASE DESCRIBE PJM.**

10 A. PJM is an independent RTO regulated by FERC. As a FERC-approved RTO, PJM is
11 responsible for the planning, operation, and reliability of the interstate electric transmission
12 system under its functional control, which spans all or portions of 13 states and the District
13 of Columbia in the mid-Atlantic region.⁶ PJM’s mission is to provide reliable electricity
14 through competitive markets and to plan the system for the future. The PJM system serves
15 approximately 67 million people across 13 states and the District of Columbia, and PJM
16 dispatches more than 185,989 megawatts (“MW”) of generation capacity over more than
17 88,417 miles of transmission lines.

18 PJM presently has more than 1,110 members. These members include generation
19 owners, transmission owners (“TOs”), electricity distributors, other suppliers, and end-use
20 consumers.⁷ PJM has no financial or ownership interest in any PJM member. PJM’s role

⁶ The PJM Region includes all or portions of Delaware, District of Columbia, Maryland, New Jersey, Ohio, Pennsylvania, Virginia and West Virginia, and portions of Illinois, Indiana, Kentucky, Michigan, North Carolina, and Tennessee. The PJM Region and its transmission zones are shown in Attachment J to the PJM Tariff.

⁷ PJM also has stakeholders. PJM stakeholders include [PJM members](#), certain state officials and

1 as a federally regulated RTO means that it acts independently and impartially in operating
2 and planning the regional transmission system and in overseeing the wholesale electricity
3 market.

4 **Q. WHAT IS THE BASIS FOR PJM'S AUTHORITY TO CARRY OUT ITS**
5 **RESPONSIBILITIES?**

6 A. PJM is one of a handful of FERC-approved and federally regulated RTOs. PJM has
7 specific duties and responsibilities established by federal law and FERC decisions, and by
8 PJM's own FERC-accepted tariffs, agreements, and procedures. PJM's duties include,
9 among other things, maintaining the reliability of the transmission grid in the PJM Region,
10 ensuring the efficiency of energy markets in its region, and operating the regional
11 transmission system in a manner consistent with the applicable laws, regulations, and
12 tariffs. PJM's authority with respect to its planning process is based on its role as a FERC-
13 approved RTO and on its authority and responsibilities under the PJM Operating
14 Agreement, the PJM Tariff, and the PJM Consolidated Transmissions Owners Agreement,
15 each of which has been filed with and accepted by FERC.

16 PJM is also responsible for implementing other standards and regulations. For
17 example, PJM is responsible for planning the regional transmission system for the
18 provision of reliable electric service in accordance with NERC Reliability Standards, as
19 well as PJM and Transmission owner reliability and operational criteria.

20 PJM is registered in the ReliabilityFirst and SERC regions for the following
21 reliability functions, as defined in the NERC Reliability Functional Model: Balancing

advocates, and others. PJM stakeholders have a "seat at the table" to discuss PJM's operations, markets and reliability, as well as issues concerning the broader electricity industry.

1 Authority, Interchange Authority, Planning Coordinator, Reliability Coordinator, Resource
2 Planner, Transmission Operator, Transmission Planner, and Transmission Service
3 Provider.

4 **Q. WHAT BENEFITS DO MEMBERS DERIVE FROM PJM MEMBERSHIP?**

5 A. PJM operates and plans the transmission system as a single system. This means that PJM
6 does not consider corporate and state boundaries when taking operational action or making
7 planning decisions. Considerable benefits accrue to PJM’s members and their customers
8 through PJM’s functions, including its centralized security-constrained economic dispatch,
9 reserve requirements, and coordinated planning. These activities are estimated to produce
10 approximately \$5 billion per year in benefits and economic value for the region PJM
11 serves.⁸

12 **IV. PJM’S TRANSMISSION PLANNING PROCESS**

13 **Q. WHAT IS PJM’S ROLE IN TRANSMISSION PLANNING?**

14 A. As part of its ongoing responsibilities as an RTO, PJM conducts its regional transmission
15 planning pursuant to the RTEP Protocol in Operating Agreement, Schedule 6 (“RTEP
16 Protocol”), which is designed to maintain the reliable and efficient operation of the bulk
17 electric system on a forward-looking basis. The RTEP evaluates transmission needs driven
18 by multiple considerations, including reliability criteria, market efficiency, and public
19 policy considerations. Reliability planning is undertaken to maintain compliance with
20 NERC Reliability Standards, as well as additional relevant reliability and planning criteria
21 to which PJM plans the PJM transmission system, to address forecasted violations of

⁸ See The Value of PJM, available at <https://www.pjm.com/-/media/DotCom/about-pjm/the-value-of-pjm.pdf>.

1 thermal, voltage and stability limits. PJM has been applying the NERC Reliability
2 Standards and the PJM deliverability standards, codified in the PJM Tariff and PJM
3 Transmission Planning Manuals (Manuals 14A through 14H),⁹ on a mandatory basis since
4 the initiation of the RTEP process. PJM's public policy planning evaluates transmission
5 solutions needed to support state or federal public policy objectives identified through the
6 State Agreement or other processes.

7 Additionally, and as relevant to this proceeding, PJM also conducts market
8 efficiency planning to identify transmission solutions that reduce the overall cost of serving
9 load by alleviating congestion on the transmission system. Congestion occurs when lower-
10 cost generation cannot be fully dispatched due to transmission constraints, resulting in the
11 dispatch of higher-cost resources and increased energy costs to consumers. Market
12 efficiency projects are designed to relieve such constraints where doing so produces net
13 economic benefits.

14 As set forth in Operating Agreement, Schedule 6, section 1.5.7, PJM's market
15 efficiency analysis is performed using production cost simulation models that compare a
16 baseline system against scenarios that include potential system upgrades. These studies
17 evaluate the extent to which a proposed project reduces congestion over a defined planning
18 horizon. The benefits of a project are quantified as the reduction in total system production
19 costs, while the costs include the capital and operating costs of the proposed transmission
20 facility. PJM applies a benefit-to-cost ratio framework to ensure that only projects that are
21 expected to produce net benefits to customers are selected.

⁹ The PJM Transmission Planning Manuals are available on PJM's website at <https://www.pjm.com/library/manuals>.

1 Through this process, PJM identifies transmission upgrades that not only enhance
2 the physical capability of the system, but also improve its economic performance. Market
3 efficiency projects, therefore, play an important role in making sure that customers benefit
4 from access to the lowest-cost generation resources across the PJM Region.

5 **Q. WHAT IS THE BASIS OF PJM’S TRANSMISSION PLANNING FUNCTION AND**
6 **AUTHORITY?**

7 A. PJM’s authority and obligation to perform this function are established in the FERC-
8 approved PJM Tariff, PJM Operating Agreement and other related agreements, and PJM
9 business manuals. The transmission planning process is overseen by the PJM Board and
10 regulated by FERC.

11 **Q. DOES PJM HAVE A WRITTEN PROTOCOL FOR ITS PLANNING PROCESS?**

12 A. Yes. The RTEP Protocol and PJM’s planning role are set forth in Schedule 6 of the PJM
13 Operating Agreement. The purpose and objective of Schedule 6 is stated at section 1.1 and
14 states in pertinent part as follows:

15 This Regional Transmission Expansion Planning Protocol shall
16 govern the process by which the Members shall rely upon the Office
17 of the Interconnection to prepare a plan for the enhancement and
18 expansion of the Transmission Facilities in order to meet the
19 demands for firm transmission service, and to support competition,
20 in the PJM Region. The [RTEP] . . . to be developed shall enable
21 the transmission needs in the PJM Region to be met on a reliable,
22 economic and environmentally acceptable basis.
23

1 **Q. WHAT ARE THE PRIMARY ELEMENTS OF PJM’S PLANNING PROCESS?**

2 A. The RTEP process integrates transmission, generation and demand-side resources to
3 address transmission system constraints involving reliability and persistent congestion.

4 The result is one process that integrates many system factors, including:

- 5 • Forecasted load growth, demand-side-response efforts and distributed generation
6 additions;
- 7 • Interconnection requests by developers of new generating resources and merchant
8 transmission facilities;
- 9 • Solutions to mitigate transmission congestion and to ensure adequate allocation and
10 funding of long-term financial transmission rights;
- 11 • Long-term firm transmission service requests;
- 12 • Generation retirements and other deactivations;
- 13 • Transmission Owner-initiated improvements; and
- 14 • Load-serving entity capacity plans.

15 This process identifies the projects that PJM staff recommends to the PJM Board as
16 more efficient or cost-effective solutions (which is the standard required by FERC Order
17 No. 1000 and PJM’s FERC-accepted Operating Agreement, Schedule 6) to address the
18 various transmission system needs. Upon considering the recommendations, the PJM
19 Board then uses its authority pursuant to PJM’s Operating Agreement to designate to
20 incumbent Transmission Owners or Nonincumbent Transmission Developers¹⁰ the
21 responsibility to construct, own, operate, and maintain the projects it approves.

¹⁰ Non-incumbent transmission developers are “(1) a transmission developer that does not have an existing Zone in the PJM Region as set forth in PJM’s Tariff, Attachment J; or (2) a TO that proposes a transmission project outside of its existing Zone in the PJM Region, as set forth in Tariff, Attachment J.”

1 **Q. DOES THE RTEP PROCESS INVOLVE OTHERS OUTSIDE OF THE PJM**
2 **ORGANIZATION AND ITS MEMBERS?**

3 A. Yes. The RTEP Protocol provides for robust and continuous engagement in the RTEP
4 process from start to finish. This engagement is primarily conducted through PJM's
5 Transmission Expansion Advisory Committee ("TEAC") and the Subregional RTEP
6 Committees¹¹ that provide the primary forum for the ongoing exchange of ideas, discussion
7 of issues, and presentation of planning findings between PJM staff and stakeholders.

8 The TEAC operates under specific provisions of the PJM Operating Agreement.
9 TEAC activities are at the core of stakeholder input in the RTEP process. The scope of the
10 TEAC's responsibility includes the review and the provision of comments and input on the
11 following:

- 12 • Scope and assumptions of RTEP studies, including the review of PJM's
- 13 identification of reliability violations and its economic/market efficiency analysis;
- 14 • RTEP analysis at defined points during the RTEP cycle;
- 15 • RTEP recommendations to be proposed to the PJM Board for approval; and
- 16 • Specified RTEP process matters as requested by the PJM Board.

17 TEAC participation is open to all Transmission Owners, Nonincumbent
18 Developers, transmission customers, all PJM members, transmission customers, any other
19 entity proposing to provide transmission facilities to be integrated into the PJM Region, all
20 PJM members, representatives of state commissions, the agencies and offices of state
21 consumer advocates of states in the PJM Region, *and any other interested parties*. This

¹¹ The Subregional RTEP Committees focus on local planning concerns, focusing on below 230 kV transmission facilities.

1 broad group of constituents fosters a wide range of opinions, comments and advice on
2 RTEP development and recommendations for PJM Board approval.

3 Following the presentation of analysis assumptions or results and project
4 recommendations to the TEAC, stakeholders are invited to provide written comments and
5 feedback. These comments are provided to the PJM Board for its consideration and serve
6 as the basis for on-going dialogue at subsequent TEAC meetings. This process was used
7 in the development of Project 9A West.

8 **Q. AFTER THE PROCESS IS COMPLETE, HOW IS THE RTEP APPROVED?**

9 A. Following completion of PJM's planning analyses and stakeholder engagement process,
10 PJM presents the recommended transmission solutions to the PJM Board for review and
11 approval. The PJM Board's consideration is informed by the underlying technical
12 analyses, the identified system needs, the evaluation of alternatives, and the stakeholder
13 feedback received through the TEAC and Subregional RTEP Committees processes. PJM
14 staff provide the Board with its recommended transmission solutions, including the
15 applicable planning drivers—reliability, market efficiency or public policy—and the
16 rationale supporting the proposed solutions. The Board exercises independent judgment
17 in determining whether to approve the recommended solutions. Upon approval by the
18 Board, the selected projects are incorporated into the RTEP. Approval for the current
19 projects, and historical projects, has always occurred through a consensus of the PJM
20 Board.

1 **Q. FOR CONTEXT, CAN YOU SUMMARIZE THE NATURE AND EXTENT OF**
2 **THE RTEP PROJECTS ORDERED BY THE PJM BOARD SINCE THE**
3 **INCEPTION OF THE RTEP PROCESS?**

4 A. Since the RTEP was implemented in 2000, the PJM Board has approved transmission
5 system enhancements or expansions totaling approximately \$70.8 billion to ensure
6 compliance with planning criteria set by NERC as well as criteria of regional and local
7 Transmission Owners. This includes \$61.1 billion of baseline transmission enhancements
8 throughout the RTO region to address market efficiency congestion relief and \$9.7 billion
9 of network facilities enabling new generation to interconnect reliably.¹²

10 **Q. HOW DOES THE PJM RTEP PROCESS DETERMINE WHETHER THERE IS A**
11 **NEED FOR A NEW TRANSMISSION FACILITY?**

12 A. A proposed project must meet one or more specific criteria as set forth in the PJM
13 Operating Agreement to be included in the RTEP. These criteria include:

14 1. Reliability standards. The RTEP must “conform at a minimum to the applicable
15 reliability principles, guidelines and standards of NERC, ReliabilityFirst

¹² Baseline transmission enhancements are regional transmission projects in PJM’s footprint that are required to address the following: (i) NERC, SERC, ReliabilityFirst, PJM, and other applicable reliability criteria, including operational performance; (ii) individual Transmission Owner planning criteria as filed in the Transmission Owner’s respective FERC Form No. 715; (iii) criteria to address economic constraints; and (iv) State Agreement Approach (public policy) expansions or enhancements as set forth in the Operating Agreement at Schedule 6, section 1.5.9. After PJM identifies a baseline transmission need—including for market efficiency—PJM may open a competitive proposal window, depending on a project’s required in-service date, voltage level, and scope.

- 1 Corporation (“RFC”),¹³ and SERC Reliability Corporation (“SERC”),¹⁴ and
2 those of the transmission owners in accordance with the planning and operating
3 criteria and other procedures detailed in the PJM Manuals.¹⁵
- 4 2. Market efficiency. If new facilities can lower costs to customers, and benefits
5 of the project exceeds its costs by or above a certain required ratio, then PJM
6 has the authority to require new transmission facilities to be built.¹⁶
- 7 3. Operational performance. PJM can act when difficult, complex, or restrictive
8 operating actions (*e.g.*, excessive switching, complex or limiting protection
9 schemes) are required to meet minimum reliability criteria.¹⁷
- 10 4. Addressing long-term congestion hedging. PJM uses a locational pricing
11 system to manage congestion. Transmission facilities must be built as required
12 to maintain feasibility of Stage 1A ARR, a key feature of this system.¹⁸
- 13 5. State Public Policy through the State Agreement Approach specified in the
14 Operating Agreement.

¹³RFC is one of [six regional organizations](#) which, in conjunction with the [NERC](#), are known as the Electric Reliability Organization (“ERO”) Enterprise, responsible for ensuring the reliability and security of the [North American Bulk Electric System](#). RFC promotes the reliability and security of the electric grid through standards, outreach, training and analysis, that includes partnership with communities and experts. RFC is based in Cleveland, Ohio, and has a footprint that includes the Great Lakes and Mid-Atlantic areas of the United States.

¹⁴ SERC is specifically responsible for the reliability and security of the electric grid across the southeastern and central regions of the United States. This area covers approximately 630,000 square miles and serves a population of more than 100 million. It includes all or portions of Florida, Georgia, Alabama, Mississippi, Louisiana, Texas, Oklahoma, Arkansas, Missouri, Iowa, Illinois, Kentucky, Tennessee, Virginia, North Carolina, and South Carolina.

¹⁵ Section 1.2(d) of Schedule 6 to the PJM Operating Agreement

¹⁶ Section 1.5.7(d) of Schedule 6 to the PJM Operating Agreement. There are strict metrics governing market efficiency projects and in PJM the Benefit/Cost Ratio must be greater than or equal to 1.25.

¹⁷ Section 1.5.3(d) of Schedule 6 to the PJM Operating Agreement.

¹⁸ Section 1.5.3(h) of Schedule 6 to the PJM Operating Agreement.

1 Finally, the RTEP also includes enhancements or expansions required as a result of
2 coordination with other neighboring planning regions.¹⁹

3 **Q. ON WHAT BASIS DID PJM THROUGH THE RTEP PROCESS DETERMINE**
4 **THAT PROJECT 9A AND PROJECT 9A WEST WERE NECESSARY?**

5 A. The Original Project 9A and more recently Project 9A West were deemed necessary under
6 the RTEP's market efficiency analysis, which is set forth in the RTEP Protocol (Operating
7 Agreement, Schedule 6, section 1.5.7).

8 **V. PJM'S MARKET EFFICIENCY ANALYSIS**

9 **Q. PLEASE PROVIDE AN OVERVIEW OF PJM'S MARKET EFFICIENCY**
10 **PROCESS.**

11 A. PJM's market efficiency analysis is performed as part of the overall RTEP process to
12 accomplish the following two objectives:

13 1. Determine which reliability upgrades, if any, have an economic benefit if
14 accelerated (*i.e.*, placed in service prior to their reliability need date).

15 2. Identify new transmission upgrades that may result in economic benefits.

16 PJM performs a market efficiency analysis under a 24-month planning cycle. Following
17 the availability of the appropriate updated RTEP power-flow model resulting from the
18 reliability analysis, PJM performs its market efficiency analyses to identify market
19 efficiency needs on the PJM system. PJM solicits proposals to address identified market
20 efficiency issues at the end of the first year of the 24-month cycle. During the second year
21 of the 24-month cycle, the market efficiency models are updated with the latest

¹⁹ Section 1.5.5 of Schedule 6 to the PJM Operating Agreement.

1 assumptions, and the proposals are evaluated using those updated models. As a result,
2 there is a mechanism in place for regularly identifying transmission enhancements or
3 expansions that will relieve relevant future transmission congestion as forecasted in the
4 market efficiency analysis.

5 In the market efficiency analysis, PJM compares the costs and benefits of the
6 economic-based transmission improvement proposals in its Region. To calculate the
7 benefits of these potential economic-based enhancements, PJM performs and compares
8 market simulations with and without the newly proposed economic-based enhancements
9 for selected future years within the RTEP's 15-year planning horizon. The relative benefits
10 and costs of the economic-based enhancement or expansion must meet the Benefit/Cost
11 Ratio threshold test to be included in the RTEP recommended to the PJM Board for
12 approval. This test and its implementation are described in detail below.

13 PJM presents all the RTEP market efficiency enhancements and annual re-
14 evaluations to the TEAC for review and comment. Subsequent to TEAC review, PJM
15 considers stakeholder comments and presents the final recommended market efficiency
16 projects and annual re-evaluations to the PJM Board, along with the advice, comments,
17 and recommendations of the TEAC, for Board approval.

1 **Q. WHO IS ELIGIBLE TO BE DESIGNATED TO DEVELOP A PROJECT TO**
2 **ADDRESS A NEED IDENTIFIED AS PART OF THE MARKET EFFICIENCY**
3 **ANALYSIS?**

4 A. While not a requirement to propose competitive projects, an entity must pre-qualify for
5 Designated Entity²⁰ status in order to construct, own, operate, maintain and finance
6 competitive planning projects, including market efficiency projects. The prequalification
7 requirements are set forth in the RTEP Protocol (Operating Agreement, Schedule 6, section
8 1.5.8(a)). Any qualifying entity (consistent with PJM Operating Agreement Schedule 6
9 provisions) may formally submit market efficiency proposals in the RTEP proposal
10 window for evaluation under the market efficiency analysis. All proposals submitted in a
11 competitive window are posted on the PJM Website.

12 **Q. PLEASE DESCRIBE IN DETAIL PJM'S MARKET EFFICIENCY ANALYSIS.**

13 A. PJM's market efficiency analysis involves several phases. The process begins with the
14 determination of the transmission congestion drivers that may signal market inefficiencies.
15 PJM identifies, collects, and publicly posts relevant drivers. In addition, PJM performs
16 market simulations to determine projections of future congestion based on the anticipated
17 RTEP upgraded system. This process facilitates concurrent PJM and stakeholder review
18 of the same information PJM considers in preparation for PJM's solicitation of proposals
19 for system upgrades that may economically alleviate market inefficiencies. Following the
20 evaluation of transmission congestion drivers and solicitation of proposals, PJM evaluates

²⁰ For purposes of this testimony, a "Designated Entity" means an entity, including an existing Transmission Owner or Nonincumbent Developer, designated by PJM with the responsibility to construct, own, operate, maintain, and finance projects developed pursuant to the RTEP Protocol (Operating Agreement, Schedule 6, section 1.5.8), including market efficiency projects.

1 the economic costs and benefits of any identified new potential upgrades targeted
2 specifically at economic efficiency. This is essentially a competitive process that selects
3 the more efficient or cost-effective solution.

4 **Q. PLEASE DESCRIBE IN GREATER DETAIL THE BENEFIT/COST ANALYSIS**
5 **THAT PJM PERFORMS AS PART OF ITS MARKET EFFICIENCY ANALYSIS.**

6 A. PJM uses a Benefit/Cost Ratio test to determine whether an economic-based enhancement
7 or expansion (*i.e.*, a market efficiency project) will be included in the RTEP. Specifically,
8 for a proposed market efficiency project to be included in the RTEP recommended to the
9 PJM Board for approval, the relative benefits and costs of the economic-based
10 enhancement or expansion must meet or exceed a Benefit/Cost Ratio threshold of at least
11 1.25:1. That means, in non-technical terms, that there must be at least \$1.25 of benefit to
12 \$1.00 of cost for the project to be included in the RTEP.

13 The Benefit/Cost Ratio is calculated by dividing the present value of the total
14 annual benefit for each of the first 15 years of the life of the enhancement or expansion, on
15 the one hand, by the present value of the total annual cost for each of the first 15 years of
16 the life of the enhancement or expansion, on the other. Assumptions for determining the
17 present value of the benefits and costs (*e.g.*, discount rate and annual revenue requirement)
18 are among the assumptions that are considered by the PJM Board each year to be used in
19 the economic planning process. The Benefit/Cost Ratio is expressed as follows:

20
$$\text{Benefit/Cost Ratio} = \frac{\text{[Present value of the Total Annual Enhancement Benefit for the 15 year period starting with the RTEP Year (defined as current year plus five) minus benefits for years when the project is not yet in-service]}}{\text{[Present value of the Total Enhancement Cost for the same 15 year period]}}$$

1 The purpose of a Benefit/Cost Ratio threshold is to hedge against the uncertainty
2 of estimating benefits in the future and to provide a degree of assurance that a project with
3 a 15-year net benefit near zero will not be approved. At the same time the threshold is not
4 so restrictive as to unreasonably limit the economic-based enhancements or expansions
5 that would be eligible for inclusion in the RTEP.

6 **Q. HOW IS THE BENEFIT COMPONENT OF THE BENEFIT/COST RATIO**
7 **CALCULATED?**

8 A. The benefit component of the Benefit/Cost Ratio (“Total Annual Enhancement Benefit”)
9 is the sum of two metrics: the “Energy Market Benefit” and the “Reliability Pricing Model
10 (“RPM”) Benefit.” By including these two metrics, the analysis captures the benefits to
11 customers in the PJM Region arising from reductions in both energy prices and capacity
12 prices attributable to an economic-based enhancement or expansion. This comprehensive
13 test captures customers’ benefits in both the energy and capacity markets, reflecting their
14 responsibility to obtain reasonably priced energy and adequate capacity.

15 **Q. HOW DOES PJM CONDUCT THE ENERGY MARKET BENEFIT ANALYSIS?**

16 A. PJM conducts the energy-market benefit analysis by using an energy market simulation
17 tool that models the hourly least-cost, security-constrained commitment and dispatch of
18 generation over a future annual period. A detailed generation, load, and transmission
19 system model is used as input into the simulation tool. This simulation mimics the hourly
20 commitment and dispatch of generation to meet load, while recognizing constraints
21 imposed on the economic commitment and dispatch of generation by the physical
22 limitations of the transmission system. PJM performs and compares market simulations

1 with and without the proposed enhancement for selected future years within the planning
2 horizon of the RTEP. This analysis measures the benefits of proposed economic-based
3 transmission enhancements. A comparison of these simulations identifies the annual
4 economic impact of the enhancement for each of the future study years. An interpolation
5 and extrapolation of these results provides a projection of annual benefits for each of the
6 first 15 years of the life of the enhancement.

7 The Energy Market Benefit component of the Benefit/Cost Ratio for Regional
8 Projects is expressed as:

$$\text{Energy Market Benefit} = [.50] * [\text{Change in Total Energy Production Cost}] + [.50] * [\text{Change in Load Energy Payment}]$$

11 The Energy Market Benefit component of the Benefit/Cost Ratio for Lower Voltage
12 Projects is expressed as:

$$\text{Energy Market Benefit} = [1] * [\text{Change in Load Energy Payment}]$$

14 The Change in Total Energy Production Cost is the difference in estimated total annual
15 fuel costs, variable operation and maintenance (“O&M”) costs, and emissions costs of the
16 dispatched resources in the PJM Region without and with the enhancement or expansion.
17 Costs for purchases from outside of the PJM Region and sales to outside the PJM Region
18 will be captured if appropriate. Purchases will be valued at the Load Weighted Locational
19 Marginal Price (“Load Weighted LMP”) and sales will be valued at the Generation
20 Weighted Locational Marginal Price (“Generation Weighted LMP”).

21 The Change in Load Energy Payment is the difference between the annual sum of
22 the hourly estimated zonal load megawatts for each PJM transmission zone multiplied by

1 the hourly estimated zonal Locational Marginal Price (“LMP”)²¹ for each PJM
2 transmission zone²² minus the value of Transmission Rights for each PJM transmission
3 zone with and without the economic-based enhancement or expansion. In determining the
4 Change in Load Energy Payments, only zones that show a decrease will be considered in
5 determining the Change in Load Energy Payments.

6 **Q. HOW IS THE COST COMPONENT OF THE BENEFIT/COST RATIO**
7 **CALCULATED?**

8 A. The annual cost of the enhancement is the revenue requirement of the enhancement. The
9 enhancement’s annual revenue requirement is developed by PJM and presented to the
10 TEAC for discussion and review. As stated earlier, the benefits and costs will be
11 considered over the same time period (for each of the first 15 years of the life of the
12 expansion, starting with the RTEP Year, which is defined as the current year plus five).

13 **Q. AFTER APPROVAL, DOES PJM CONTINUE TO EVALUATE MARKET**
14 **EFFICIENCY PROJECTS?**

15 A. Yes. To ensure that projects selected by the PJM Board for market efficiency purposes
16 continue to be economically beneficial, both the costs and benefits of these projects will be
17 reviewed periodically, nominally on an annual basis up until the point at which either (a) a
18 certificate of public convenience and necessity or its equivalent is granted by the state or
19 relevant regulatory authority in which such market efficiency project will be located; or (b)

²¹LMP is the marginal price for energy at the location where the energy is delivered or received. LMP is a pricing approach that addresses transmission system congestion and loss costs, as well as energy costs.

²² PJM zones are predominantly based on the service territories of major transmission owners (*i.e.*, utilities) within the PJM Region. For market efficiency and emergency procedures, PJM organizes these zones into three major regional groups: Mid-Atlantic Region; Western Region; and Southern Region.

1 if a certificate of public convenience and necessity or its equivalent is not required by the
2 state or relevant regulatory authority in which a market efficiency project will be located,
3 once construction activities commence at the project site. Substantive changes in the costs
4 and/or benefits of the approved market efficiency projects will be reviewed with the TEAC
5 at a subsequent meeting to determine if these projects continue to provide economic
6 benefits relative to their costs and should remain in the RTEP.

7 **Q. DOES PJM EVALUATE RELIABILITY BENEFITS OF PROPOSED MARKET**
8 **EFFICIENCY PROJECTS IN ITS RTEP ANALYSIS?**

9 A. As a matter of course, PJM does not consider or study the potential reliability benefits of
10 projects selected on a market efficiency basis. But projects approved on a market efficiency
11 basis can and often have reliability benefits. PJM does perform reliability analysis on all
12 Market Efficiency projects before they are approved to ensure the projects don't cause
13 adverse reliability impacts.

14 **VI. SELECTION OF PROPOSED PROJECT**

15 **Q. PLEASE DESCRIBE HOW THE ORIGINAL PROJECT 9A WAS IDENTIFIED**
16 **THROUGH PJM'S MARKET EFFICIENCY ANALYSIS.**

17 A. As part of the 24-month RTEP cycle ending December 31, 2015, PJM evaluated market
18 efficiency proposals submitted as part of the long-term proposal window opened from
19 October 30, 2014, through February 27, 2015. The window sought technical solution
20 alternatives to certain reliability criteria violations as well as alleviation of certain market
21 efficiency congestion drivers identified in PJM's long-term simulation results.

1 **Q. PLEASE DESCRIBE CONGESTION AS USED IN THIS CONTEXT.**

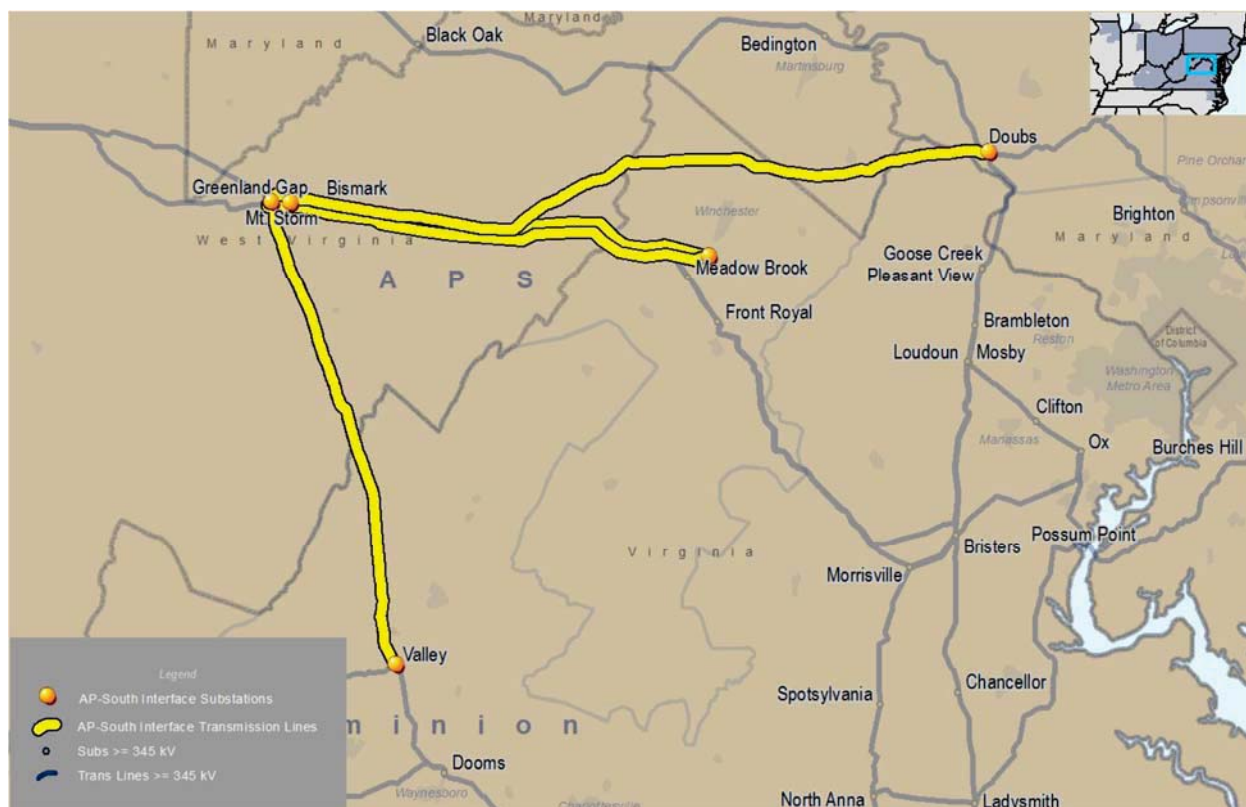
2 A. As described above, market efficiency congestion (*i.e.*, transmission congestion) occurs
3 when the least costly resources that are available to serve load in a given region cannot be
4 dispatched because the physical limits of certain transmission facilities constrain power
5 flow on the system. This is particularly true in PJM where power often flows from lower-
6 priced generating resources in western zones to load centers in the East. The lowest-priced
7 energy is often constrained from flowing freely to those load centers. When this occurs,
8 PJM's system operator must dispatch higher-cost resources to serve load. This results in
9 LMP differences and congestion on the system. The congestion generally increases system
10 production costs and LMPs. It also results in increased wholesale customer payments for
11 electric energy.

12 PJM's market efficiency studies look at persistent projected congestion over a 15-
13 year planning horizon in order to identify the potential economic benefit of proposed
14 transmission projects. PJM conducts market simulations that show the extent to which
15 congestion is mitigated under a set of given assumptions including fuel costs, emissions
16 costs, load forecasts, demand resource projections, generation projections and expected
17 future transmission topology.

18 **Q. PLEASE DESCRIBE THE CONGESTION PROBLEM PJM SOUGHT TO**
19 **ADDRESS THROUGH ITS 2014/15 LONG-TERM PROPOSAL WINDOW.**

20 A. The 2014/15 Long Term Proposal Window solicited proposals to address, among other
21 things, congestion on the AP-South Reactive Interface and related constraints. The AP-
22 South Reactive Interface is a set of four 500 kV lines that originate in West Virginia and
23 terminate in Maryland and Virginia. The lines are depicted on the map below. The

1 primary goal of the proposal window was to solicit proposals to reduce congestion on the
 2 AP-South Reactive Interface and related constraints, which is one of the most historically
 3 congested flowgates in PJM.²³



4
 5 *Figure 1: The AP-South Reactive Interface*

6 The cost of congestion affecting the AP-South Reactive Interface since 2017 is shown on
 7 the following table, which also shows related congestion costs. The columns other than
 8 “AP South Congestion” show the historic costs of congestion on other transmission lines—

²³ A flowgate is a transmission facility or transmission element that limits the amount of power that can be reliably transferred over the bulk transmission system. A flowgate is typically a specified line, set of lines, or combination of lines and other transmission assets that link two nodes (busses) in the power system over which power flows.

1 not part of the AP-South Reactive Interface—that are in the same “electrical
2 neighborhood” as the AP-South Reactive Interface.

3

| Congestion (\$M) | | | | | |
|------------------|----------------|----------------|---------------------------|----------------------------------|--------------------------------------|
| | AP South | Bla-Bed | Juniata-Dauphin 230 kV | Yorkana-Brunner Island 230 kV | Three Mile Island- Jackson 230 kV |
| 2017 | 21.6 | - | - | 7.4 | 2.1 |
| 2018 | 20.5 | - | - | 1.3 | 1.6 |
| 2019 | 14.5 | - | - | 3.5 | 1.3 |
| 2020 | 0.4 | - | 2.5 | - | 0.7 |
| 2021 | 0.2 | - | 5.4 | 0.3 | 0.4 |
| 2022 | 122.2 | 63.8 | 51.1 | - | - |
| 2023 | 24.6 | 19.2 | 8.2 | 0.9 | - |
| 2024 | 69.1 | 36.3 | 5.3 | 6.3 | 4.6 |
| 2025 | 93.7 | 135.4 | 3.6 | 31.8 | 6.5 |
| Total | \$366.8 | \$254.7 | \$76.0 | \$51.5 | \$17.2 |

4

5 **Q. PLEASE FURTHER DESCRIBE THE CONGESTION ASSOCIATED WITH THE**
6 **REACTIVE INTERFACES, INCLUDING THE AP-SOUTH REACTIVE**
7 **INTERFACE AND RELATED CONSTRAINTS.**

8 A. Voltage or reactive constraints can limit the amount of energy that can be transferred into
9 an area. In operations, PJM establishes limits on the total power flow over lines or
10 combinations of lines to ensure that voltages on the system remain within acceptable levels.
11 These lines or combinations of lines that are monitored to ensure voltages on the system
12 remain within acceptable limits are often referred to as a reactive interface. Congestion
13 occurs on these interfaces when more expensive generation must be turned on to control
14 the flow across the lines that make up the reactive interface.

15 Specifically for the AP-South Reactive Interface and related constraints, if the sum
16 of the flow on the four 500 kV lines that make up the interface exceeds calculated limits,
17 it may result in a voltage collapse. In operations, PJM determines the AP-South Reactive

1 Interface and related constraints limitations based on system conditions. If the flows across
2 the interface are expected to exceed the established limits, PJM operators will direct the
3 operation of higher cost generation in Maryland and Virginia to increase output, while
4 lower cost generation output will be reduced in other parts of PJM to prevent the flows
5 across the interface from exceeding the established limits.

6 Original Project 9A (of which Project 9A-West is a part) was found to reduce
7 congestion on the AP-South Reactive Interface and related constraints by providing a
8 parallel path for energy to flow to eastern load centers, primarily in Maryland and Virginia.
9 Project 9A West continues to provide this parallel path for energy to flow to those load
10 centers, thus reducing congestion.

11 **Q. HOW MANY MARKET EFFICIENCY PROJECTS WERE CONSIDERED AND**
12 **APPROVED IN RESPONSE TO PJM'S 2014/2015 LONG-TERM PROPOSAL**
13 **WINDOW?**

14 A. There were 93 proposals submitted to address market efficiency needs in the 2014/15
15 Long-Term Proposal Window. Of those 93 proposals, 41 project proposals were submitted
16 specifically to address congestion on the AP-South Reactive Interface.

17 **Q. HAVE THE PROJECT 9A EAST OR PROJECT 9A WEST PORTIONS OF THE**
18 **ORIGINAL PROJECT 9A BEEN BUILT?**

19 A. No. The PaPUC denied Transource PA's separate applications for the siting of the
20 proposed Project 9A in an order entered May 24, 2021, at PUC Docket Nos. A-2017-
21 2640195 and A-2017-2640200. After the PUC rejected the siting of Original Project 9A in
22 2021, PJM placed Original Project 9A into a suspended status and removed the project

1 from the models in order to allow PJM to plan for system-wide reliability impacts and
2 interconnection queue analysis while the PaPUC's decision was pending before the courts.
3 In 2025, PJM completed its annual re-evaluation of Original Project 9A, determined that
4 the western portion (Project 9A West) was still needed, and that the benefit/cost ratio of
5 the Project 9A West had increased.

6 **Q. PLEASE DESCRIBE THE STUDY AND ANALYSIS PJM CONDUCTED TO**
7 **DETERMINE THAT PROJECT 9A WEST SHOULD BE REMOVED FROM**
8 **SUSPENDED STATUS AND BUILT.**

9 A. Since Original Project 9A was placed in suspension, a number of other RTEP projects have
10 been approved or constructed that occupy the same physical location or right-of-way as the
11 Original Project 9A's eastern components. Original Project 9A's Furnace Run-Conastone
12 230 kV lines are on the same rights-of-way that are now being utilized for the Chanceford-
13 Conastone area 500 kV (2022 Window 3 Approved Projects). Furthermore, Chanceford
14 500 kV substation ties into the Peach Bottom-TMI 500 kV line, located in close proximity,
15 and serves similar objectives to 9A-East's Furnace Run 500 kV substation but with 500 kV
16 transmission. In 2025, this caused PJM to explore whether to modify Project 9A to remove
17 the eastern portion and retain the western portion to, among other things, address the
18 persistent congestion that remains on the AP-South Reactive Interface and related facilities.

19 Notwithstanding the developments in the RTEP that made proceeding with the
20 eastern portion of Original Project 9A impractical given the subsequently approved
21 upgrades, the 2025 re-evaluation of Original Project 9A and related configurations
22 indicated a continued benefit-to-cost ratio greater than 1.25 for the configurations

1 constituting Project 9A West and demonstrating its continued need and ability to address
2 persistent congestion at the AP-South Reactive Interface.

3 Although it was no longer practical to build the eastern portion of Original Project
4 9A, PJM's analysis determined that Project 9A West standing alone exceeded the 1.25
5 benefit-to-cost ratio—the 2025 re-evaluation showed a benefit-to-cost ratio of 3.85 for
6 Project 9A West, with a projected load payment benefit of \$1.107 billion over 15 years.
7 Project 9A West therefore continues to address the market-efficiency planning needs on
8 the AP-South Reactive Interface and related facilities to reduce persistent transmission
9 congestion. Based on these findings, PJM recommended to the PJM Board in July 2025
10 that Original Project 9A be modified to remove the eastern portion and retain the western
11 portion of the project.

12 On July 30, 2025, PJM obtained PJM Board approval to modify the scope of
13 Original Project 9A to retain the western portion and remove the eastern portion of the
14 project, terminate the project's suspended status, and restore the western portion of the
15 project to the RTEP models.

16 **Q. WHEN DID PJM APPROVE PROJECT 9A AND PROJECT 9A WEST?**

17 A. The Original Project 9A was approved by the PJM Board on August 2, 2016, with an
18 estimated cost of \$320.19 million and a required in-service date by June 1, 2020. The
19 expected 15-year congestion and load payment savings at that time were approximately
20 \$622 million and \$269 million, respectively. As noted earlier, since that time continued
21 system planning identified reliability-driven transmission solutions that addressed the
22 needs previously served by the eastern portion of Original Project 9A. However, the
23 congestion underlying the Project 9A West portion continues to require a solution, as

1 confirmed by PJM’s most recent analyses in 2025. This is why, on July 30, 2025, the PJM
2 Board approved PJM’s recommendation to modify the scope of Original Project 9A to
3 retain the western portion of Original Project 9A and remove the eastern portion of Original
4 Project 9A, terminating the project’s suspended status and restoring the project, as so
5 modified, to the RTEP models.

6 **Q. WERE TRANSOURCE PA AND/OR OTHER PJM TRANSMISSION OWNERS**
7 **DIRECTED TO CONSTRUCT PROJECT 9A WEST BY A SPECIFIC DATE?**

8 A. Yes. After the PJM Board approves a proposed market efficiency project, the successful
9 project bidder (in this case, Transource Energy, Transource PA’s direct parent) is obligated
10 to complete the project once PJM and the successful entity execute a Designated Entity
11 Agreement (“DEA”). Transmission projects that originate through an RTEP proposal
12 window utilize the DEA to assign construction responsibility for the identified project to
13 the “Designated Entity.” The DEA is a two-party agreement between the Designated Entity
14 and PJM. The terms and conditions of the agreement govern the construction period of the
15 transmission project and define specific rights and obligations of the parties. On March 31,
16 2026, PJM and Transource Energy, on behalf of Transource PA and Transource MD,
17 executed an amended DEA that is limited to the western portion of the Original 9A Project
18 (*i.e.*, Project 9A West). On May 1, 2026, PJM filed the amended DEA with FERC for its
19 review and acceptance.


20 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

21 A. Yes, it does. However, I reserve the right to submit such additional testimony as may be
22 necessary or appropriate.

VERIFICATION

I, Timothy J. Horger, Senior Director, PJM Forward Market Operations, hereby state that the facts set forth above are true and correct to the best of my knowledge, information and belief, and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities).

Date: May 21, 2026

By: 
Timothy J. Horger, Senior Director
PJM Forward Market Operations

STATEMENT 4

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Application of Transource Pennsylvania, LLC :
filed Pursuant to 52 Pa. Code Chapter 57, :
Subchapter G, for Approval of the Siting and :
Construction of the 230 kV Transmission Line : Docket No. A-2026-_____
known as 9A West Project in a Portion of :
Franklin County, Pennsylvania :
:

**Transource Pennsylvania, LLC
9A West Project
Statement No. 4**

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

**Topics Addressed: Summary of the Siting Study for the 9A West Project;
and Selection of the Proposed Route for the 9A West
Project.**

Dated: May 21, 2026

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-100,
4 Conshohocken, PA 19428.

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

6 A. I am employed by AECOM Technical Services Corporation (“AECOM”) as a Vice
7 President and Eastern United States (“U.S.”) Regional Practice Lead for the Environmental
8 Planning & Permitting Practice. I also serve as a Senior Project Manager and Technical
9 Lead in the AECOM energy market sector.

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

11 A. In these roles, I am a Certified Project Manager and manage projects for siting and
12 permitting of new electric transmission lines, substations, power plants, and other facilities.
13 I manage a practice of approximately four hundred individuals who are responsible for
14 environmental, cultural resources, and information technology services. Additionally, I
15 serve as a Technical Lead for electric transmission and distribution services on the east
16 coast of the United States.

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

18 A. AECOM provides comprehensive life cycle services for electric transmission, substation,
19 and distribution projects, from alternative route analyses, licensing and permitting,
20 conceptual engineering, right-of-way services, and public involvement to detailed
21 engineering and design, geotechnical engineering and subsurface investigation, and
22 regulatory compliance.

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

2 A. I received a Bachelor of Science with Honors degree in Environmental Science from the
3 University of East Anglia in Norwich, England. A key focus of my education was on the
4 use of Geographic Information Systems (“GIS”) and computer applications for
5 environmental problem solving. Additional continuing education relevant to my current
6 position includes the following courses and programs:

- 7 • AECOM Lead Verifier for Environmental Planning and Permitting;
- 8 • AECOM Independent Technical Reviewer for Environmental Planning and
9 Permitting;
- 10 • Over 50 Project Management Classes necessary for formal certification;
- 11 • Creating and Integrating Data for Natural Resource Applications (ESRI);
- 12 • Geoprocessing with ArcGIS Desktop (ESRI);
- 13 • Spatial Hydrology Using ArcView (ESRI);
- 14 • Introduction to ArcIMS (ESRI); and
- 15 • System Architecture Design for GIS (ESRI).

16 I have been employed by AECOM for the last twenty years in the roles previously
17 discussed. In these positions, I have been responsible for electric transmission line siting
18 studies, both as a Project Manager and as a technical lead for transmission line siting, as
19 well as new power development throughout the eastern and mid-western U.S., including
20 Pennsylvania, New Jersey, Maryland, New York, Connecticut, Ohio, Illinois, Virginia,
21 Delaware, Massachusetts, Rhode Island, Wisconsin, West Virginia, and Florida. I also
22 manage the Eastern U.S. Environmental Planning & Permitting Practice where I am
23 responsible for a team of biologists, ecologists, and GIS specialists. Additionally, I am an
24 AECOM Technical Lead designated for supporting and developing major electric
25 transmission projects on the U.S. East Coast. Prior to joining AECOM, I held GIS and
26 environmental development positions for other environmental and government
27 consultants.

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

2 A. Yes. I have provided siting testimony before the Pennsylvania Public Utility Commission
3 (“Commission” or “PaPUC”). I have also provided electric transmission line siting
4 testimony before the New Jersey Board of Public Utilities (“BPU”) and the Maryland Public
5 Service Commission (“MD PSC”), along with testimony before the Virginia State
6 Corporation Commission (“VA SCC”). These projects have included:

7 FirstEnergy: Carroll-Hunterstown Improvements Project (Docket #A-2025-
8 3056951);

9 FirstEnergy: East Germantown–Germantown Project (Docket #A-2025-3053163);

10 PECO: Brandon Shores Project (Docket # A-2024-3051463);

11 FirstEnergy: Hunterstown–Orrtanna Project (Docket #A-2021-3025450);

12 FirstEnergy: Bedford North–Central City West Project (Docket #A-2016-2565296);

13 PPL Electric Utilities: Lake Naomi–Lake Harmony Project (Docket #A-2013-
14 2367521);

15 PPL Electric Utilities: Northeast Pocono Project (Docket #A-2012-2340872);

16 PPL Electric Utilities: Blooming Grove - Jackson and Peckville - Jackson Project
17 (Docket # A-2012-2304631);

18 PPL Electric Utilities: Effort Mountain Project (Docket #A-2010-2152104); and

19 PPL Electric Utilities: Appenzell Project (Docket #A-2010-2164476).

20 Transource PA, LLC: Independence Energy Connection Project (Docket #A-2017-
21 2640195 & #A-2017-2640200);

22 Transource MD, LLC: Independence Energy Connection Project (Case No. 9471)

1 FirstEnergy: Carroll-Hunterstown Improvements Project (MD PSC Case Number
2 9803)

3 Public Service Electric & Gas (“PSE&G”): North Central Reliability Project (BPU
4 Docket #EO11050323)

5 New Jersey Natural Gas: Southern Reliability Link Project (BPU Docket
6 #GE15040402)

7 Dominion: Evergreen Mills 230 kV Transmission Line Project (Virginia) PUR-
8 2019-00191

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

10 A. My direct testimony provides a summary of the Siting Study and explains the selection of
11 the Proposed Route for the Rice-Ringgold 230 kV Transmission Line (the “9A West
12 Project”), all in support for the application filed by Transource Pennsylvania, LLC’s
13 (“Transource PA”) with the Commission for authorization to construct and site the 9A
14 West Project (“Siting Application”).

15 **Q. Were any portions of the Siting Application prepared by you or under your
16 supervision?**

17 A. Yes. I am sponsoring certain attachments to Transource PA’s Siting Application.
18 Specifically, I am responsible for portions of the following attachments to the Siting
19 Application:

- 20 • Attachment 1 Commission Cross-Reference
- 21 • Attachment 4 Siting Study
- 22 • Attachment 7 Agency Requirements

1 Study to address the new input and changes in the landscape and the data. The field reviews
2 confirmed the need for modifying Alternative Route A due to new development and that
3 the other alternatives, including the Proposed Route (as defined below), were still viable
4 alternatives. Field reviews and evaluation of the revised metrics supported the 2018 Siting
5 Study conclusion to select Alternative Route C as the Proposed Route for the current 9A
6 West Project. I led the team that conducted the 2018 Siting Study and I am leading the
7 current team updating the assessment and creating the new 2026 Siting Study for the 9A
8 West Project. I was integrally involved in updating various attachments to the Siting
9 Application, most notably Attachment 4 - Siting Study. In this capacity, I reviewed and
10 provided oversight on all items prepared, coordinated and managed all team members,
11 technical experts and writers, and helped assemble the documents submitted to the
12 Commission.

13 **Q. Please provide an overview of the 9A West Project.**

14 A. As explained in the written direct testimony of Company witness Mr. Eric S. Williams
15 (Transource PA Statement No. 2) and Mr. Timothy J. Horger (Transource PA Statement
16 No. 3), PJM Interconnection L.L.C. (“PJM”), the regional transmission organization
17 responsible for electrical grid planning and operation, identified a need to alleviate
18 electrical network congestion constraints in Pennsylvania, Maryland, West Virginia, and
19 Virginia. Electrical network congestion is a limitation on existing transmission line
20 facilities that prevent power from flowing in the most optimal fashion for the economic
21 efficiency of the system. To address these congestion constraints, PJM approved “Project

1 9A” as Baseline Upgrade Numbers b2743 and b2752. The 9A West Project is a major
2 component of PJM’s originally approved Project 9A.¹

3 The 9A West Project approved by PJM involves (i) construction of the Rice
4 230/500 kV Substation and (ii) construction of the new Rice-Ringgold overhead, steel
5 monopole, double-circuit 230 kV Transmission Line, typically 130 feet tall.

6 Upon receipt of all necessary approvals, the new Rice-Ringgold 230 kV
7 Transmission Line will extend approximately 28 miles (of which 23.5 miles is located in
8 PA), connecting the new Rice Substation to be located in Franklin County, Pennsylvania
9 to the existing Ringgold Substation located near Smithsburg, Washington County,
10 Maryland. This transmission line project is the 9A West Project that is the subject of the
11 Siting Application. Specifically, Transource PA is seeking approval for the approximate
12 24-mile transmission line portion to be located in PA and the new Rice Substation to be
13 located in PA.

14 As further explained by Mr. Eric S. Williams (Transource PA Statement No. 2) and
15 Mr. Timothy Horger (Transource PA Statement No. 3), Transource PA is obligated and
16 responsible for the construction, ownership, maintenance, and operation of the new Rice
17 Substation in Pennsylvania, and the Pennsylvania portion of the new interstate Rice-
18 Ringgold 230 kV Transmission Line between Maryland and Pennsylvania. Transource

¹As noted by other witnesses, Transource PA’s original request to obtain approval for the original 9A Project, also called the IEC Project (which included both 9A West and a related project called 9A East), was rejected by the PaPUC in an order entered May 24, 2021, at PaPUC Docket Nos. A-2017-2640195 (the 9A East Project) and A-2017-2640200 (collectively, “IEC Proceeding”). After the Commission’s denial of the authorizations requested by Transource PA in the IEC Proceeding, transmission projects approved by PJM in 2022 utilizing existing rights of way and the Chanceford 500 kV substation eliminated the need for the Transource PA Furnace Run 500 kV substation, rendering the 9A East Project no longer necessary. Also, after the Commission’s rejection of the IEC Project in 2021, PJM placed the IEC Project into a suspended status. In 2025, PJM completed a restudy of the IEC Project, determined that the 9A West Project portion of the IEC Project was still needed, and that the cost/benefit ratio of the 9A West Project had increased.

1 PA's affiliate, Transource Maryland, LLC ("Transource MD"), is obligated and
2 responsible for the construction, ownership, maintenance, and operation of the Maryland
3 portion (4.4 miles of transmission line) of the new interstate Rice-Ringgold 230 kV
4 Transmission Line between Maryland and Pennsylvania.

5 **II. SITING STUDY**

6 **Q. Please describe the purpose of the 2026 Siting Study prepared for the 9A West**
7 **Project.**

8 A. The purpose of the 2026 Siting Study was to confirm the feasibility of the Alternative
9 Routes identified for the 9A West Project, evaluate potential impacts associated with these
10 Alternative Routes, and identify a Proposed Route to be constructed to meet Transource
11 PA's obligation to construct the 9A West Project. The Siting Study provides Transource
12 PA with a means to assess the human/built environment, natural environmental, and
13 engineering variables associated with the different Alternative Routes identified for a
14 transmission line that connects the new Rice Substation to be located in Franklin County,
15 Pennsylvania, and the existing Ringgold Substation located near Smithsburg, Washington
16 County, Maryland, so that a Proposed Route can be determined. A complete copy of the
17 Siting Study, along with supporting materials and maps, is provided as Attachment 4 to the
18 Siting Application. Importantly, given the passage of time since the 2018 Siting Study was
19 completed and the IEC Project was placed into suspension by PJM, to prepare for the
20 current Siting Application and this testimony, we reviewed and corroborated the entire
21 Siting Study and updated it, where necessary, to address any field conditions and/or
22 updated data sources that might have changed since the earlier Siting Study was conducted.
23 Additionally, new stakeholder engagement and open houses were conducted and input

1 collected to help evaluate routes. All the Attachments I am sponsoring, including
2 Attachment 4 – Siting Study -- have been similarly corroborated and updated, where
3 appropriate.

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

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

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

19 Once the Study Area has been determined, the next step is to identify large area
20 constraints and opportunity features within the Study Area. These areas are typically
21 identified using a combination of readily available public data sources. The Siting Team
22 uses this information to first develop an array of Conceptual Routes for the project adhering
23 to a series of general siting and technical guidelines and factors.

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

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

11 A detailed description of the sources of information used to develop data for the
12 Siting Study is provided in Appendix A of Attachment 4 to the Siting Application. A
13 detailed description of the route development process used for the 9A West Project is
14 provided in Section 2.0 of Attachment 4 (2026 Siting Study) to the Siting Application.

15 **Q. Is this a typical transmission line route development process used in the industry?**

16 **A.** Yes. This is a robust and proven process used successfully by public utilities and
17 consultants for decades.

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

20 **A.** The Siting Team used a series of general siting guidelines and factors that represent
21 accepted siting principles to direct the development, evaluation, and ultimate selection of
22 the routes. These guidelines and factors also meet the expectations of the route evaluation
23 and siting regulations provided in 52 Pa. Code §§ 57.71–57.76, which outline the procedure

1 for locating and constructing high voltage transmission lines; and 52 Pa. Code §§ 69.3101–
2 69.3107, which supplement the existing regulations by providing additional guidelines on
3 public notice, environmental impact analysis, and safety. The following guidelines and
4 factors were used to identify and evaluate routes:

- 5 • Consider parallel alignments along existing utility rights-of-way or other
6 infrastructure, such as roadways and railroads.
- 7 • Maximize the distance from residential dwellings, schools, daycare facilities,
8 hospitals, and other community facilities.
- 9 • Consider stakeholder input.
- 10 • Minimize visibility from federal and state listed scenic roadways and designated
11 scenic resources.
- 12 • Minimize conflict with designated public resource lands, recreation lands, nature
13 preserves, or other conservation areas.
- 14 • Minimize conflict with existing and approved future development and land uses.
- 15 • Minimize potential environmental and land use impacts by avoiding circuitous
16 routes.
- 17 • Minimize new crossings of large wetland complexes, critical habitat, and other
18 unique or distinct natural resources.
- 19 • Minimize habitat fragmentation and impacts on designated areas of biodiversity
20 concern.
- 21 • Avoid crossing hazardous waste sites or sites with active mineral extraction
22 activities.
- 23 • One of the Alternative Routes should be less than 20% coincident with the Proposed
24 Route.

25 Using these established routing guidelines, the Siting Team identified opportunity and
26 constraint features within the Study Area that would take advantage of existing corridors
27 to the extent practicable and minimize potential impacts to the natural and human (or built)

1 environment. Details of the opportunity and constraints used to develop Study Segments
2 are included in Section 3.3 of Attachment 4 to the Siting Application.

3 **Q. Please describe how the Proposed Route was selected.**

4 A. Once the feasible Alternative Routes were identified, the Siting Team undertook a
5 quantitative and qualitative analysis of potential impacts of each Alternative Route to the
6 human/built environment, the natural environment and engineering considerations. The
7 Alternative Routes were reviewed in detail and compared using a combination of
8 information collected in the field, GIS data sources, public and regulatory input, resource
9 documents referenced in the Siting Study, engineering considerations, and the collective
10 knowledge and experience of the Siting Team.

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

22 Using the quantitative and qualitative analysis described above, the Siting Team
23 selected a Proposed Route that, on balance, best minimizes the overall impacts for the 9A

1 West Project. The rationale for selecting the Proposed Route is derived from the
2 accumulation of the siting decisions made throughout the process, the knowledge and
3 experience of the Siting Team, comments from landowners and other members of the
4 public and regulatory agencies, field reviews, and the comparative analysis of potential
5 impacts of each Alternative Route.

6 A detailed description of the process used to select the Proposed Route for the 9A
7 West Project is provided in Section 3.0 of Attachment 4 to the Siting Application.

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

9 A. Yes. As described above, stakeholder input, including public outreach ,was an integral part
10 of the route development and selection process.

11 **Q. Please summarize the 9A West Project’s public outreach.**

12 A. Transource PA conducted extensive outreach with the public throughout the siting process.
13 Open houses for the 9A West Project were conducted on March 16 and March 17, 2026.
14 These events were noticed in the local papers and property owners within a 1,000-foot wide
15 corridor along the three alternative routes were sent notification letters via mail informing
16 them of these open houses. The first open house was held at a public venue in Greencastle,
17 PA with the second open house being held in Hagerstown, MD. These open houses
18 followed an open format where the public could attend at any time during the scheduled
19 hours for each open house. Attendees were given comment cards and were encouraged to
20 identify the location of their residences, places of business, property of concern, or other
21 sensitive resources on the printed maps. Handwritten comments from the attendees were
22 digitized and entered into a database with the unique identifier so the comment and the

1 parcel could easily be correlated. A description of the public open houses held for the 9A
2 West Project is also provided in Section 2.5 of Attachment 4 to the Siting Application.

3 As a result of the March 2026 open house events, and notification efforts completed
4 to date via landowner letters and newspaper notices, the 9A West Project has received a
5 total of 84 new comments. These comments were received from either the open house
6 event, mailed in comments, or comments left via the Project website.

7 A more recent website was established for the 9A West Project that can be found
8 currently at [Rice - Ringgold Transmission Line Project](#). This website contains the current
9 project description, virtual open house materials, a mapper tool with the updated routes,
10 and the ability to leave an online comment. A description of the 9A West Project website
11 is provided in Section 2.5.2 of Attachment 4 to the Siting Application.

12 Previously in 2017, Transource PA conducted two rounds of public open houses
13 during different phases of the siting process to inform the public about the IEC Project and
14 to obtain information from landowners about their properties. The first round of IEC
15 Project open houses was held June 12-15, 2017, and focused on a wide network of Study
16 Segments with the goal of obtaining information from the public to help modify, eliminate
17 or add Study Segments. Following the first round of open houses and subsequent
18 qualitative and quantitative analysis, the second round of IEC Project open houses was held
19 August 7-8, 2017, and focused on a refined set of Study Segments. A description of the
20 public open houses held for the IEC Project is provided in Section 2.5 of Attachment 4 to
21 the Siting Application.

22 In addition to the open houses, Transource PA established an IEC Project website
23 that was updated throughout the various phases of the siting process for that earlier project.

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

9 **Q Did Transource PA meet with other stakeholders?**

10 A. Yes, Transource PA met with local governmental officials, consulted with state agencies,
11 and met with local school representatives concerning routes. Please see Attachment 13 for
12 a comprehensive list of these engagements.

13 **Q Were other route options presented by local stakeholders?**

14 A Yes, several stakeholders within Franklin County and State Representatives requested
15 consideration of options to parallel Interstate 81 or extend through sections of Michaux
16 State Forest.

17 **Q Was a route paralleling Interstate 81 considered?**

18 A. Yes – the Interstate 81 corridor was considered and reviewed for opportunities during the
19 2018 Siting Study and again in 2026. During the 2026 Siting Study reassessment,
20 governmental officials in the greater Chambersburg area requested that the Interstate 81
21 corridor that extends along the eastern side of Chambersburg be evaluated for potential
22 paralleling opportunities. The Study Segment Development section (Section 3.5.3) of the

1 Siting Study report details the larger linear opportunities that were reviewed during the
2 initial siting process, where effort was completed to review Interstate 81 as an opportunity
3 for paralleling existing linear infrastructure. However, ultimately few segments were
4 developed paralleling Interstate 81 for several reasons:

- 5 • To reach Interstate 81 from the Ringgold Substation and to even develop parallel
6 opportunities would require the route to traverse across the landscape in a westerly
7 direction. This is not in the direction that the route needs to go to reach the Rice
8 Substation located to the north and would add approximately 4-miles more length
9 compared to the other Route Alternatives before it reaches Interstate 81.
- 10 • These four miles represent additional property owner easements; stream and wetland
11 crossings; additional structures on farmland; as well as further costs. It is quite
12 reasonable to assume that both these additional property owners and the PaPUC might
13 question why the Siting Team would take such a circuitous route since it deviates from
14 reasonable and good siting principles.
- 15 • Even if the route reached the Interstate 81 corridor, it cannot parallel the highway the
16 whole length because there is significant residential, retail, and commercial
17 development along the corridor that would need to be routed around. Effectively, every
18 time the route reaches an obstruction along the highway, the Siting Team would need
19 to develop a strategy for diverting around it, adding yet more mileage and associated
20 impacts.

21 While the Interstate 81 corridor was considered, the Siting team reasonably
22 concluded that using that corridor would result in more impacts on the surrounding
23 population than either the Alternative Routes or the Proposed Route, and would shift the

1 concerns to different and more property owners. Note that route options paralleling
2 Interstate 81 near Chambersburg and points north to the Rice Substation were identified
3 and that sections of the Proposed Route are in fact located along this highway corridor.

4 **Q. Were other Route options surrounding the I-81 Corridor re-assessed in 2026?**

5 **A.** Yes. During the Siting Study update in 2026 the original Alternative Route A alignment
6 required realignment due to new residential development that occurred after the original
7 Siting Study was conducted. As a consequence of this new residential development, a
8 possible Route realignment was developed that paralleled additional portions of I-81. This
9 potential modification to Route A was identified and would have extended along an
10 approximate 2.9-mile section of the highway, including a new crossing of U.S. Route 30.
11 Most of this alignment took advantage of open lands that border the highway, but the
12 remaining portions involved the route being near several commercial buildings, needing to
13 cross back and forth over the highway to avoid residentially constrained areas, and having
14 to traverse a 0.3 mile part of the Chambersburg Area Middle School property. Despite the
15 complexity of the route, it was considered a potentially viable revision to the previous
16 Alternative Route A and was moved forward for further evaluation and presented to the
17 public during the open house events conducted in March 2026. Further coordination with
18 government officials in March and April 2026, however, revealed that plans to rebuild the
19 middle school closer to the highway could result in significant additional constraints to the
20 route. Review of the proposed school plans concluded the Proposed Route would be too
21 close to the proposed school buildings for reasonable development. Because of these
22 engineering constraints, this potential re-route to Alternative Route A was removed from
23 further review. Following these updates, another revised Alternative Route A was

1 developed to connect to Alternative Routes B and C through this area and is the route
2 option discussed in the Siting Study. The Siting Study further details the Alternative Route
3 A iterations and maturation in this area and provides an overview figure detailing the
4 changes that have occurred along this route from 2017 to 2026.

5 **Q. Was a route to the east crossing the South Mountain/Michaux State Forest area**
6 **considered to avoid residential areas?**

7 A. Yes. Segments through the South Mountain/Michaux State Forest area were also reviewed
8 and considered in the Study Segment Development (Section 3.5.3) portion of the 2018
9 Siting Study, but excluded from further evaluation once full routes were developed. In
10 2026, local governmental officials asked Transource PA to again review this area in an
11 effort to avoid residential areas. However, the Siting Team reconfirmed that routes crossing
12 the South Mountain/Michaux State Forest were unreasonable for the following reasons:

- 13 • The siting review noted that there are no reasonable opportunities to parallel existing
14 infrastructure that extend through the South Mountain/Michaux State Forest area that
15 flows in the north – south direction required for the route. It was further noted that any
16 route through the South Mountain/Michaux State Forest would be longer in length and
17 the amount of environmental impacts to threatened and endangered species, streams,
18 and wetlands would be significantly greater than other identified alternative routes.
19 Pennsylvania environmental regulations require that reasonable alternatives must be
20 considered to show that a proposed route with wetland and waterway impacts is the
21 least impactful alternative. Any route proposed through the South Mountain/Michaux
22 State Forest could not reasonably meet this burden, resulting in a high risk that
23 Transource PA would be denied the necessary permits to construct the 9A West Project.

- 1 • During the 2018 routing study, segments that crossed through the western portion of
2 South Mountain/State Forest were considered. Segments that might cut further through
3 the heart of the forest were dismissed as any segments in this area would not be
4 reasonably considered by the Department of Conservation and Natural Resources
5 (“DCNR”), which manages Michaux State Forest, due to the extensive impacts and
6 forest fragmentation. Western edge segments were developed, however. Some
7 additional details are included in the Siting Study.
- 8 • A meeting was held with DCNR to discuss opportunities for developing routes through
9 the State Forest lands; solicit their feedback around potential impacts with their
10 preference to have the route avoid this last vestige of forested habitat within this larger
11 geographical area due to the extensive environmental impacts; and to further review
12 the State Forest Environmental Review process.
- 13 • After segment analysis was conducted, it was clear that any route through the South
14 Mountain/Michaux State Forest area would result in extensive impacts to the natural
15 environment including:
- 16 ○ South Mountain/Michaux State Forest has some of the largest remaining
17 habitat in the broader area for numerous threatened and endangered species
18 (see the Siting Study that illustrates the Natural Areas, including two DCNR
19 classified Natural Areas).
- 20 ○ For the Mt. Cydonia Ponds Natural Area – large area of vernal ponds – any
21 route not crossing the ponds themselves would cross adjacent areas to ponds
22 that contain the same unique functions and rare species.

- 1 ○ For the Meeting of Pines Natural Area – an area of unique mixture of five
- 2 pine species – any new line would bisect this natural area.
- 3 ○ PA Natural Heritage Program also notes two ecological natural areas that
- 4 are coexistent with the two DCNR Natural Areas listed above – both areas
- 5 contain species of special concern (plants, amphibians, reptiles, birds).
- 6 ● This area of Michaux State Forest is also part of the South Mountain Important Bird
- 7 Area (“IBA”).
- 8 ● The level of impacts to head waters and other streams in the forest would be extensive
- 9 and would involve crossing a significantly larger number of streams through the state
- 10 forest when compared to the proposed and alternative routes, and the resulting riparian
- 11 impacts would be extensive. Note as well that these streams, such as Red Run, are high-
- 12 quality value streams requiring elevated protection from PaDEP.
- 13 ● Wetland impacts would be much more significant through these areas. Prime wetland
- 14 areas are typically located along riparian corridors and within threatened and
- 15 endangered habitat areas. For example, there is a large palustrine forested (“PFO”)
- 16 wetland bordering the high quality Red Run stream.
- 17 ● Red Run is also a Pennsylvania Fish and Boat Commission classified Wild Trout
- 18 Stream which means wetlands are considered Exceptional Value (“EV”) including the
- 19 PFO wetland noted above.
- 20 ● The permanent wetland impacts including conversion of forested wetland would need
- 21 to be mitigated likely with replacement through options such as offsite creation or
- 22 mitigation credit purchase at 2:1 to 3:1 ratios, of the final resulting permanent impact
- 23 acreage.

- 1 • Any route through this area, in addition to forested wetland impacts, would also require
2 extensive upland forest impacts and result in substantial forest and habitat
3 fragmentation.
- 4 • A route through this area could extend for approximately 5 miles through state forest
5 lands and account for close to 80 acres of forest clearing. The forest is considered
6 habitat for several species of state or federally protected bats.
- 7 • From a permitting perspective, Chapter 105 (Wetland and Waterway) regulations of
8 the Pennsylvania Department of Environmental Protection (“PaDEP”) requires that for
9 any permanent wetland impacts, evidence must be provided showing there is no less
10 impactful and reasonable alternative route that would reduce total wetland and
11 environmental impacts. Without such evidence, PaDEP has the right to deny a permit
12 approval. Given that there is an opportunity to traverse open land in upland areas that
13 is less environmentally impactful, the Siting Team concluded that it seems unlikely that
14 any less impactful route through South Mountain/Michaux State Forest could be shown
15 or developed.
- 16 • Under Chapter 102 (National Pollutant Discharge Elimination System (“NPDES”))
17 regulations, the route will also need to show evidence of limiting impacts to riparian
18 corridors and as noted above, any route through South Mountain/Michaux State Forest
19 would only increase the amount of riparian impacts.
- 20 • DCNR has an extensive process for ROW licensing on their property involving a State
21 Forest Environmental Review (“SFER”). Like the Chapter 105 and 102 regulations, the
22 SFER requires the proponent to show that no reasonable and less impactful alternative
23 could be reasonably developed.

- 1 • Additionally, the SFER is a seven-step extensive process that would potentially add
2 significant schedule impacts to the 9A West Project.
- 3 • Options to parallel existing infrastructure were evaluated, but existing infrastructure
4 running through the South Mountain/Michaux State Forest land traverse west - east and
5 are not in the direction of the proposed transmission line. Any new corridors running
6 north to south would only further fragment the forest.
- 7 • The Proposed Route parallels the largest amount of existing transmission infrastructure
8 through large open areas of the Study Area and is therefore very much aligned with
9 PaPUC and PaDEP expectations.
- 10 • The landscape of the South Mountain makes constructability of the 9A West Project
11 more challenging than development through open farmland (e.g., more access roads,
12 larger crane pads, additional forest clearing, and steep slopes with landslide risks).
- 13 • Even with western segment routes through the forest area, there are still homes and
14 development located along the western edge of the forest that would be impacted.

15 **Q. Did Transource PA consider local comprehensive plans and zoning ordinances in**
16 **selecting the Proposed Route for the 9A West Project?**

17 A. Yes. Preliminarily, I note that I have been advised by legal counsel for Transource PA that
18 public utility facilities, such as transmission lines and the non-building related components
19 and structures of electric substations, are generally exempt from local land use and zoning
20 regulations and authority. However, as required by the Commission's interim siting
21 guidelines found at 52 Pa. Code, §69.1101 (2)(3) and §69.3104 (1), local zoning ordinances
22 and comprehensive land use plans were reviewed by Transource PA to evaluate the impact
23 of the Proposed Route on these local ordinances and plans. Transource PA evaluated the

1 Proposed Route’s consistency with the zoning ordinances and comprehensive plans of the
2 government entities through which the Proposed Route would pass. Transource PA has
3 also reviewed the 9A West Project with representatives of Franklin County, Southampton
4 Township, Greene Township, Guilford Township, Quincy Township, and Washington
5 Township Planning Commissions as detailed within Attachment 13. A discussion of
6 Transource PA’s review of the local zoning ordinances and land use comprehensive plans
7 is provided in Section 5.2.8 of Attachment 4 to the Siting Application.

8 **III. PROPOSED ROUTE**

9 **Q. Please describe the feasible Alternative Routes identified by the Siting Team for the**
10 **9A West Project.**

11 A. Using the siting process described above, the Siting Team identified three (3) Alternative
12 Routes for the 9A West Project that were carried forward for further analysis to determine
13 a Proposed Route. These three Alternative Routes are illustrated in Figure 7 of Attachment
14 4. Attachment 4 Siting Study (Section 3.5.5) details those changes that have occurred to
15 the respective Alternative Routes from the 2018 Siting Study to the 2026 Siting Study
16 with their final alignment descriptions described in detail below. The adjustments were
17 developed to account for residential or commercial developments that have taken place
18 during this time frame; or to address specific planned development relayed to the Siting
19 Team during stakeholder engagement.

20 **Alternative Route A (30.1 miles – of which 23.5 miles is in PA; less than 20% coincident with**
21 **Proposed Route)**

- 22 • Alternative Route A exits the Rice Substation and turns west for 1.3 miles traveling across
23 agricultural fields and through a small, forested area. Rice Road is spanned halfway along
24 this section.

- 1 • Turning sharply to the south and southwest, the route extends for 1.3 miles across more
2 agricultural fields and other small, forested area before reaching Mickey Inn Road, which
3 is bordered at the crossing location by a few residential parcels. Black Gap Road (State
4 Route (“SR”) 997) is also spanned in this section.
- 5 • Continuing to the south and southwest, the route extends across a mix of agricultural and
6 forested lands for 1.6 miles to another crossing of the active Norfolk Southern rail line.
7 Conococheague Creek, which is designated by the PaDEP as a Cold Water Fishes
8 (“CWF”)² stream, is spanned in this section. A dense residential community along
9 Sycamore Grove Road will be bordered by the route, which starts to parallel the FE
10 Letterkenny-Grand Point 138 kV line that extends through this community. This section
11 also crosses a portion of the Eastern Greene Township Rural Historic District that borders
12 both sides of a Norfolk Southern rail line.
- 13 • Crossing to the south side of the railroad line, the route extends 0.9 miles southeast across
14 agricultural lands to I-81, with portions still paralleling the FE Letterkenny-Grand Point
15 138 kV line. A large farm and several residential parcels located along Grande Point Road
16 are passed in this area which are within the Eastern Greene Township Rural Historic
17 District.
- 18 • At this point, the route crosses to the east side I-81 and parallels the FE Letterkenny-Grand
19 Point 138 kV line to the southeast for 0.8 miles, crossing Walker Road, to the Grand Point
20 Substation, where the route turns sharply to the south for 1.0 miles to U.S. Route 30. The
21 Lost Acres Airport is located approximately 0.6 mile west of the route.
- 22 • Prior to crossing commercial lined U.S. Route 30, the route first crosses over to the west
23 side of the transmission line, which is now the FE Grand Point-Allegheny Energy 138 kV
24 line, and then spans the highway. The route turns sharply west and then south for 0.5 miles
25 to bypass around a commercial building. After going around the building, the route again
26 parallels the FE Grand Point-Allegheny Energy 138 kV line for 0.3 mile.
- 27 • Alternative Route A deviates from the transmission line corridor to bypass around homes
28 present along the line. Along this section, the route extends for 0.7 miles to the southwest
29 and spans Falling Spring Branch (HQ-CWF), crosses Falling Spring Road, and traverses
30 through a forested area that contains several homes. Within the forest, the route turns
31 south, travels across an agricultural field and spans the FE Grand Point-Allegheny Energy
32 138 kV line near Henry Lane.

² The PaDEP develops water quality standards for all surface waters of the Commonwealth. These standards, which are designed to safeguard Pennsylvania's streams, rivers and lakes, consist of both use designations and the criteria necessary to protect those uses. <https://www.pa.gov/agencies/dep/programs-and-services/water/clean-water/water-quality/stream-redesignations> The designation “HQ” stands for High Quality Waters, while “CWF” stands for Cold Water Fishes.

- 1 • After crossing this road, the route travels for 1.4 miles to the southwest across agricultural
2 fields before crossing Cider Press Road and turning south toward Wayne Road (SR 316).
- 3 • After crossing SR 316, the route extends for 2.0 miles crossing open fields, spanning the
4 CSX Lurgan Division railroad line, paralleling and crossing Stone Quarry Road, crossing
5 New Franklin Road, and spanning the FE Fayetteville-Allegheny Energy 115 kV
6 transmission line, before turning sharply west to intersect with Helman Road.
- 7 • From Helman Road, Alternative Route A crosses open farm lands for 1.7 miles to the
8 southwest before turning sharply to the southeast to cross Swamp Fox Road (SR 914).
- 9 • After crossing SR 914, the route traverses approximately 5.3 miles to the southeast through
10 existing agricultural fields, making turns to avoid structures and spanning several local
11 roads, until it reaches the west side of the active CSX Lurgan Division railroad line.
- 12 • Alternative Route A parallels the west side of the CSX railroad tracks for approximately
13 0.9 mile to the Buchanan Trail East (SR 16) crossing, where the route crosses the
14 commercial-lined road and the railroad tracks to continue paralleling the east side of the
15 tracks for approximately 2.4 miles. The route crosses one unnamed WWF stream in this
16 section as well as crossing Barr Road and McDowell Road.
- 17 • The route turns sharply to the southeast for approximately 1.4 miles across predominantly
18 agricultural fields toward Leitersburg Road (SR 2002), crossing Marsh Run (WWF) and
19 the FE Reid-West Waynesboro 69 kV transmission line along the alignment.
- 20 • After crossing SR 2002, the route spans the Pennsylvania/Maryland state line and turns for
21 1.0 mile to the southeast to parallel Leiters Mill Road (was Leitersburg Road in
22 Pennsylvania) until it reaches Millers Church Road, where the route turns sharply east,
23 crossing both roads.
- 24 • The route continues east and southeast for 1.8 miles through agricultural fields, crossing
25 an unnamed tributary to Antietam Creek, Antietam Creek, and then paralleling Battletown
26 Road before intersecting with Leitersburg Pike (Maryland (MD) 60).
- 27 • After spanning MD 60, Alternative Route A extends 1.5 miles across agricultural lands to
28 Poplar Grove Road, spanning Ringgold Pike (MD 418) and three unnamed tributaries to
29 Little Antietam Creek.
- 30 • Turning east, the route extends for 0.6 mile over agricultural lands to intersect with the
31 Ringgold-West Waynesboro 138 kV transmission line, which it parallels to the southwest
32 for 0.4 mile. This section spans Newcomer Road and Gardenhour Road, crosses Little
33 Antietam Creek and two tributaries, and extends through an orchard.
- 34 • Extending out for 0.5 mile to the southwest from the transmission line, Alternative Route
35 A bypasses around residential structures along Rowe Road and traverses agricultural lands
36 before spanning over to the south side of the FE Reid-Ringgold 138 kV transmission line.

- 1 • The route turns east for 0.8 mile and extends into the southeastern corner of the Ringgold
2 Substation, spanning the FE Ringgold-East Hagerstown 138 kV transmission line four
3 times and Smithsburg Pike (MD 64) along the alignment.

4 **Alternative Route B (31.0 miles – of which 24.4 miles is in PA)**

- 5 • Alternative Route B exits the Rice Substation from the southeast corner and spans 0.2 miles
6 east over the active Norfolk Southern railroad and to the east side of I-81, where it turns to
7 the south to parallel I-81 for 1.1 miles to SR 696. Along this stretch the route crosses Pine
8 Stump Road, Mountain Run (CWF), and is within 0.5 miles of the Rocktop Airport that is
9 located to the east past SR 696.

- 10 • The route turns sharply east to cross SR 696 perpendicularly and travels approximately 0.6
11 mile to the east-southeast through an agricultural field before turning sharply to the
12 southwest.

- 13 • Travelling southwest for 0.7 mile, the route crosses Phillaman Run (CWF) and then crosses
14 Black Gap Road (SR 997) in a perpendicular fashion. Alternative Route B follows the
15 outer edge of the parking lot for the Chambersburg Mall for 0.6 mile on the eastern and
16 northern sides of the mall and then heads west to intersect with I-81 again.

- 17 • After reaching the eastern side of I-81, Alternative Route B turns sharply south, and
18 parallels the interstate for approximately 1.4 miles; at this location I-81 and the route
19 generally travel in a western direction. Along this section, Alternative Route B traverses
20 the edge of agricultural fields and crosses an unnamed stream (CWF) and the
21 Conococheague Creek (CWF) stream.

- 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 east
24 of this system and parallels it south for approximately 1.6 miles toward U.S. Route 30,
25 spanning along agricultural fields, around the Grand Point Substation, and over Walker
26 Road. The Lost Acres Airport is located approximately 0.6 mile west of the route.

- 27 • Prior to crossing U.S. Route 30 which is lined with commercial businesses, the route first
28 crosses over to the west side of the transmission line, which is now the FE Grand Point-
29 Allegheny Energy 138 kV line, and then spans the highway. The route turns sharply west
30 and then south for 0.5 miles to bypass around the commercial building. After going around
31 the building, the route again parallels the FE Grand Point-Allegheny Energy 138 kV line
32 for 0.5 mile.

- 33 • Alternative Route B deviates from the transmission line corridor for 1.1 mile to bypass
34 around homes along the line. Along this section, the route extends to the southwest and
35 spans Falling Spring Branch (HQ-CWF), crosses Falling Spring Road, and traverses
36 through a forested area that contains several homes. Within the forest, the route turns
37 south, travels across an agricultural field and spans the FE Grand Point-Allegheny Energy
38 138 kV line near Henry Lane.

- 1 • After crossing this road, Alternative Route B extends to the southeast for approximately
2 4.6 miles over agricultural fields to Yohe Road, where it intersects with the FE Fayetteville-
3 West Waynesboro 138 kV transmission line. This section involves crossing of two
4 unnamed WWF streams, one CWF stream, several local roadways, and the FE Fayetteville-
5 Allegheny 69 kV line.
- 6 • As the route crosses Yohe Road, it also spans to the east side of the FE Fayetteville-West
7 West Waynesboro 138 kV transmission line and then turns sharply to the south to parallel this
8 existing line for approximately 1.0 mile; an unnamed CWF stream is crossed in this section,
9 as is Stamey Hill Road.
- 10 • At this point, Alternative Route B turns sharply to the west and spans to the west side of
11 the FE Fayetteville-West Waynesboro 138 kV transmission line and travels for
12 approximately 1.0 mile across agricultural fields, Buttermilk Road, and one CWF stream
13 and intersects with the CSX Lurgan Division railroad corridor.
- 14 • The route turns to the southwest and parallels the CSX railroad for approximately 4.5 miles,
15 with some deviations to bypass around residential and agricultural facilities adjacent to the
16 railroad line. This stretch crosses Wayne Highway (SR 316), several local roads, and three
17 unnamed CWF streams.
- 18 • At this point, Alternative Route B crosses to the west side of the CSX rail line and parallels
19 the west side of the CSX railroad tracks for approximately 0.9 mile to the Buchanan Trail
20 East (SR 16) crossing, where the route crosses the commercial building-lined road and the
21 railroad tracks to continue paralleling the east side of the tracks for approximately 2.4
22 miles. The route crosses one unnamed WWF stream in this section as well as crossing Barr
23 Road and McDowell Road.
- 24 • The route turns sharply to the southeast for approximately 1.3 miles across predominantly
25 agricultural fields toward Leitersburg Road (SR 2002), crossing Marsh Run (WWF) and
26 the FE Reid-West Waynesboro 69 kV transmission line along the alignment.
- 27 • After crossing SR 2002, Alternative Route B spans the Pennsylvania/Maryland state line
28 and turns for 1.0 mile to the southeast to parallel Leiters Mill Road (was Leitersburg Road
29 in Pennsylvania) until it reaches Millers Church Road, where the route turns sharply east,
30 crossing both roads.
- 31 • The route continues east and southeast for 1.8 miles through agricultural fields, crossing
32 an unnamed tributary to Antietam Creek and Antietam Creek, and paralleling Battletown
33 Road before intersecting with Leitersburg Pike (Maryland (MD) 60).
- 34 • After spanning MD 60, Alternative Route B extends 1.5 miles across agricultural lands to
35 Poplar Grove Road, spanning Ringgold Pike (MD 418) and three unnamed tributaries to
36 Little Antietam Creek.
- 37 • Turning east, the route extends for 0.6 mile over agricultural lands to intersect with the
38 Ringgold-West Waynesboro 138 kV transmission line, which it parallels to the southwest

1 for 0.4 mile. This section spans Newcomer Road and Gardenhour Road, crosses Little
2 Antietam Creek and two tributaries, and extends through an orchard.

- 3 • Extending out for 0.5 mile to the southwest from the transmission line, Alternative Route
4 B bypasses around residential structures along Rowe Road and traverses agricultural lands
5 before spanning over to the south side of the FE Reid-Ringgold 138 kV transmission line.
- 6 • The route turns east for 0.8 mile and extends into the southeastern corner of the Ringgold
7 Substation, spanning the FE Ringgold-East Hagerstown 138 kV transmission line and
8 Smithsburg Pike (MD 64) along the alignment.

9 **Alternative Route C (27.9 miles – of which 23.5 miles is in PA)**

- 10 • Alternative Route C exits the Rice Substation from the southeast corner and spans 0.2 miles
11 east over the active Norfolk Southern railroad and to the east side of I-81, where it turns to
12 the south to parallel I-81 for 1.1 miles to SR 696. Along this stretch the route crosses Pine
13 Stump Road, Mountain Run (CWF), and is within 0.5 miles of the Rocktop Airport that is
14 located to the east past SR 696.
- 15 • Alternative Route C turns sharply east to cross SR 696 perpendicularly and travels
16 approximately 0.6 mile to the east-southeast through an agricultural field before turning
17 sharply to the southwest.
- 18 • Travelling southwest for 0.7 mile, Alternative Route C crosses Phillaman Run (CWF) and
19 then crosses Black Gap Road (SR 997) in a perpendicular fashion. Alternative Route C
20 traverses for 0.6 mile around the perimeter of the Chambersburg Mall, generally following
21 the outer edge of the parking lot on the northern and eastern sides of the mall, and then
22 heading west to parallel with I-81 again.
- 23 • After reaching the eastern side of I-81, Alternative Route C turns sharply south and
24 parallels the interstate for approximately 1.4 miles and at this location I-81 and the route
25 generally travel in a western direction. Along this section, Alternative Route C traverses
26 the edge of agricultural fields and crosses an unnamed stream (CWF) and the
27 Conococheague Creek (CWF).
- 28 • Alternative Route C turns sharply to the southwest and travels 0.4 miles until it reaches the
29 existing FE Letterkenny-Grand Point 138 kV transmission line. The route stays to the east
30 of this system and parallels it south for approximately 1.6 miles toward U.S. Route 30,
31 spanning along agricultural fields, around the Grand Point Substation, and over Walker
32 Road. The Lost Acres Airport is located approximately 0.6 miles west of the route.
- 33 • Prior to crossing commercial building-lined U.S. Route 30, Alternative Route C first
34 crosses over to the west side of the transmission line, which is now the FE Grand Point-
35 Allegheny Energy 138 kV line and then spans the highway. The route turns sharply west
36 and then south for 0.5 miles spanning across a parking lot and bypassing around a
37 commercial building. After going around the building, the route again parallels the FE
38 Grand Point-Allegheny Energy 138 kV line for 0.5 mile.

- 1 • Alternative Route C deviates from the transmission line corridor for 1.1 mile to bypass
2 around homes along the line. Along this section, the route extends to the southwest and
3 spans Falling Spring Branch (HQ-CWF) stream, crosses Falling Spring Road, and traverses
4 through a forested area where homes are present to the east. Within the forest, the route
5 turns south, travels across an agricultural field and spans the FE Grand Point-Allegheny
6 Energy 138 kV line near Henry Lane.

- 7 • After crossing this road, Alternative Route C extends to the southeast for approximately
8 4.6 miles over agricultural fields to Yohe Road, where it intersects with the FE Fayetteville-
9 West Waynesboro 138 kV transmission line. This section involves crossing two unnamed
10 WWF streams, one CWF stream, several local roadways, and the FE Fayetteville-
11 Allegheny 69 kV line.

- 12 • As Alternative Route C crosses Yohe Road, it also spans to the east side of the FE
13 Fayetteville-West Waynesboro 138 kV transmission line and then turns sharply to the south
14 to parallel this existing line for approximately 1.7 miles; an unnamed CWF stream is
15 crossed in this section, as is Stamey Hill Road.

- 16 • A 0.6 mile deviation from the colocation is required in the vicinity of the Manheim Road
17 crossing due residential development that has built up adjacent to the transmission line,
18 and the route then parallels the existing line for 0.5 miles on the eastern side.

- 19 • At Hess Benedict Road, Alternative Route C crosses over to the west side of the FE
20 Fayetteville-West Waynesboro 138 kV transmission line to avoid agricultural and
21 residential structures. The route parallels the line for another 3.7 miles, traversing
22 agricultural fields, crossing Orphanage Road, Wayne Highway (SR 316), and Buchanan
23 Trail East (SR 16), as well as an unnamed CWF stream.

- 24 • After crossing SR 16 and spanning the FE Antrim-West Waynesboro 69 kV lines,
25 Alternative Route C turns sharply to the west and parallels this line for approximately 0.4
26 miles. This stretch includes a crossing of Cold Springs Road and an unnamed CWF stream.

- 27 • Turning to the south and then east, Alternative Route C extends for 1.2 miles to Marsh
28 Road. The route traverses an agricultural field to avoid agricultural and residential
29 structures, and crosses an unnamed CWF stream, the FE Reid-West Waynesboro 69 kV
30 line, and the FE Ringgold-West Waynesboro 138 kV line.

- 31 • After crossing Marsh Road and an unnamed CWF stream, Alternative Route C turns
32 sharply south to parallel the east side of the FE Ringgold-West Waynesboro 138 kV line
33 for 2.1 miles. Alternative Route C crosses agricultural fields, Hagerstown Road (SR 316),
34 the FE West Waynesboro-East Waynesboro 138 kV line, and the West Branch Antietam
35 Creek (CWF) along this stretch. The route extends away from the transmission line
36 corridor to avoid residential structures near the southern end of this section prior to crossing
37 Lyons Road.

- 38 • Spanning to the west side of the FE Ringgold-West Waynesboro 138 kV line, Alternative
39 Route C turns south and crosses the Pennsylvania/Maryland state line. The route generally

1 parallels the transmission line for approximately 2.6 miles until it intersects with
2 Gardenhour Road. Some deviations are required along this stretch to avoid agricultural
3 operations and structures. The route in this section crosses Rocky Forge Road, Ringgold
4 Pike (SR 418), Poplar Grove Road, and Newcomer Road, as well as numerous crossings
5 of various tributaries to Little Antietam Creek.

- 6 • Alternative Route C crosses Gardenhour Road paralleling the existing transmission line for
7 0.4 miles and traverses through an orchard.
- 8 • Alternative Route C extends out for 0.6 miles to the southwest from the transmission line
9 to bypasses around residential structures along Rowe Road and traverses agricultural lands
10 before spanning over to the south side of the FE Reid-Ringgold 138 kV transmission line.
- 11 • Alternative Route C turns east for 0.7 miles and extends into the southeastern corner of the
12 Ringgold Substation, spanning the FE Ringgold-East Hagerstown 138 kV transmission line
13 and Smithsburg Pike (MD 64) along the alignment.

14 **Q. What route was selected as the Proposed Route for the 9A West Project?**

15 A. Based on an updated qualitative and quantitative review of information obtained from GIS
16 data, field reconnaissance, agency consultation and updated public outreach as well as
17 engineering considerations for the 9A West Project, the Siting Team selected Alternative
18 Route C as the Proposed Route.

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

20 A. The Proposed Route has an approximate length of 27.9 miles (approximately 23.5 miles in
21 Pennsylvania and approximately 4.4 miles in Maryland). Being a more direct alignment
22 between the proposed Rice and Ringgold Substations it will cross the least number of
23 parcels (129) and impacts the fewest landowners (102) compared to the other alternatives.
24 The alignment avoids the more populated sections of the Study Area by crossing
25 agricultural lands adjacent to Interstate 81 and paralleling an existing transmission line
26 corridor south past Waynesboro as it extends into the Ringgold Substation. Additionally,
27 the Proposed Route spans U.S. Route 30 in a commercial retail area thereby minimizing

1 the residentially dense areas along this corridor. As a result, the Proposed Route has the
2 fewest residences within 500 feet (112) compared to the other alternatives.

3 Of the three routes, the Proposed Route crosses a similar amount of cropland
4 compared with the other alternatives and has the least amount of pasture/rangeland crossed.

5 Environmentally, the Proposed Route would span a low number of streams (22)
6 and have minimal impact on riparian areas. As noted previously, streams and floodplains
7 will be crossed at right angles and spanned with structures typically placed outside these
8 regulated areas. Since one of the streams crossed will be the HQ-CWF designated Falling
9 Spring Branch waterway, the construction of this alignment will involve additional
10 stormwater permitting requirements focused on the preservation of the water quality level.
11 In terms of wetlands, this alignment would cumulatively cross the least wetland area
12 relative to the other alternatives. Similar to streams and floodplains, wetland areas will be
13 spanned to further minimize potential impact.

14 The Proposed Route has the least amount of tree clearing (39 acres) compared to
15 the other options, which reduces the forest fragmentation effects and potential impacts to
16 threatened and endangered species that use forest habitats, such as bat species. In terms of
17 other potential threatened and endangered habitat areas, the Proposed Route would cross
18 three natural areas in Pennsylvania and one Sensitive Species Project Review Area
19 (“SSPRA”) in Maryland, that are comprised predominantly of open meadows that can be
20 spanned by the transmission lines therefore minimizing potential impacts on the plant or
21 animal communities.

22 From an engineering perspective, the Proposed Route parallels existing linear
23 features such as roads, railroads, and existing transmission lines, for 43% of the total length

1 of the transmission line, which may allow for the use of existing access roads for
2 maintenance. Overall, the Proposed Route is the preferred route from an engineering and
3 constructability perspective. In addition, the Proposed Route will not interfere with any
4 airport operations or quarries. Although the Proposed Route crosses more existing electric
5 transmission lines than some of the other routes considered, Transource PA will work with
6 the incumbent utilities to ensure proper clearances in order to safely operate and maintain
7 the facilities. Our updating of the information gathering and siting analysis demonstrates
8 that Alternative Route C continues to be the optimal solution for Project 9A West.

9 A detailed explanation of the metrics driving the selection of Alternative Route C
10 as the Proposed Route for the 9A West Project is provided in Attachment 4 to the
11 Application.

12 **Q. Please explain what consideration was given to agricultural land uses present along**
13 **the Proposed Route?**

14 A. This more direct route will help minimize impacts to agricultural lands, farming operations,
15 and orchard areas since many of the alignments across these areas were identified and
16 actively reviewed during early coordination with the landowners. Transmission lines and
17 agricultural land uses are not incompatible land uses. Farming, animal husbandry, and
18 plant husbandry can continue underneath the transmission lines for most crops, farm
19 animals, and orchards. Many of the national standards for transmission line design are
20 specifically in place to ensure that typical farm machinery can continue to operate in the
21 vicinity of and under transmission lines.

22 The new structures for the Project were initially designed to consist of lattice
23 towers, which are typically more flexible to adjust to the changing terrain. Coordination

1 with the landowners, especially those owning agricultural lands, however, concluded that
2 a monopole design would result in less impact to the farmer in terms of a smaller area of
3 inaccessible farmland and easier maneuverability with large farm equipment. As a
4 consequence of this coordination and input, Transource modified the proposed structure
5 design to use monopoles, thereby reducing the potential farming impact.

6 Other key requests during this coordination were to span fields or parallel property
7 lines or access roads where feasible, and to provide specially engineered structures near
8 orchards to allow the orchard trees to remain in production under the ROW. Transource
9 PA worked with landowners to understand any immediate plans to expand farming
10 operations that included buildings and worked to minimize impact where possible.
11 Transource PA has also worked to minimize impacts through selective siting of pole
12 locations and alignment with the goal of not impacting the ability to crop farm. Currently,
13 the potential cumulative area that would be directly affected by pole placement, with an
14 assumed 10-foot diameter, accounts for less than 0.5 acre across the approximate 28-mile
15 alignment of the Proposed Route.

16 **Q. What is the current status of easement acquisition for the Proposed Route?**

17 A. Currently, of the 108 parcels crossed in Pennsylvania, ROW easements have been secured
18 for 68 of the parcels (63%), and in Maryland, of the 21 parcels crossed, ROW easements
19 have been secured for 18 of the parcels (86%).

20

1 **IV. COMPLIANCE WITH POTENTIAL PERMIT AND MITIGATION**
2 **REQUIREMENTS**

3 **Q. Please summarize Transource PA’s efforts to minimize the anticipated impacts and**
4 **potential permit and mitigation requirements of the Proposed Route for the 9A West**
5 **Project.**

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

10 As part of the permitting process, any required waterway, wetland, or floodplain
11 encroachment permits will be obtained from the applicable jurisdictional state and federal
12 agencies prior to construction, and Transource PA will comply with all special conditions
13 placed on the permits. In addition, to address water quality standards within watersheds
14 along the 9A West Project corridor, Transource PA will comply with the regulations of the
15 National Pollutant Discharge and Elimination System permit program, obtain the required
16 soil erosion and sedimentation control permits, and follow the specified conditions required
17 for the permit.

18 A detailed discussion of Transource PA’s efforts to minimize the anticipated
19 impacts and potential permit and mitigation requirements of the proposed 9A West Project
20 is provided in Section 5.2 of Attachment 4 to the Siting Application, including potential
21 impacts to land use; natural features; rare, threatened, and endangered species; cultural
22 resources; community features and conserved lands; and agency requirements and permits.
23 Additionally, Attachment 7 details the current status of any required environmental studies
24 along with the associated permit applications.

1 **Q. Does this conclude your testimony at this time?**


2 A. Yes. However, I reserve the right to file such additional testimony as may be necessary or
3 appropriate during the course of this proceeding.

4

VERIFICATION

I, Barry A. Baker, Vice-President – Environmental Planning & Permitting – Eastern U.S., AECOM Corporation, hereby state that the facts set forth above are true and correct to the best of my knowledge, information and belief, and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities).

Date: May 21, 2026

By: 
Barry A. Baker, Vice-President –
Environmental Planning & Permitting –
Eastern U.S.
AECOM

STATEMENT 5

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Application of Transource Pennsylvania, :
LLC filed Pursuant to 52 Pa. Code Chapter :
57, Subchapter G, for Approval of the Siting : Docket No. A-2026-_____
and Construction of the 230 kV Transmission :
Line known as Project 9A West in a Portion :
of Franklin County, Pennsylvania :
:

**Transource Pennsylvania, LLC
9A West Project**

Statement No. 5

**Direct Testimony of
Jacob Clouse**

**Topics Addressed: Design and Safety Features of the 9A West Project;
Electric and Magnetic Fields Policy and Practices of
Transource PA**

Dated: May 21, 2026

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

2 A. My name is Jacob Clouse. My business address is Burns & McDonnell, 9400 Ward
3 Parkway, Kansas City, MO 64114.

4 **Q. By whom are you employed?**

5 A. I am employed by Burns & McDonnell Engineering Company, Inc. (“BMcD”) as a
6 transmission line engineer.

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

8 A. I earned a Bachelor of Science in Civil Engineering from the University of Missouri-
9 Columbia. I have been employed by BMcD for over 13 years in the overhead transmission
10 department.

11 **Q. What are your responsibilities in connection with the 9A West Project (“9A West
12 Project”)?**

13 A. I oversee the transmission line engineering services that BMcD is providing to Transource
14 Pennsylvania, LLC (“Transource PA”) on the 9A West Project.

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

16 A. First, I will explain the major design features of the transmission lines associated with the
17 proposed new double-circuit Rice-Ringgold 230 kV Transmission Line. Second, I will
18 explain the safety features incorporated into the design of the 9A West Project. Finally, I
19 will address the Electric and Magnetic Fields Policy and Practices of Transource PA that
20 will be utilized in the 9A West Project.

21

1 **Q. Please describe the portions of the Siting Application that you are sponsoring.**

2 A. I am sponsoring Attachment 5, the Engineering Description and Safety Practices, and
3 Attachment 11, the Electric and Magnetic Fields Policy and Practices of Transource PA.

4 **Q. Please provide an overview of the 9A West Project.**

5 A. As explained in the written direct testimony of Timothy J. Horger (Transource PA
6 Statement No. 3), PJM Interconnection L.L.C. (“PJM”) identified a need to alleviate
7 transmission congestion constraints in Pennsylvania, Maryland, West Virginia, and
8 Virginia. To address these congestion constraints, PJM approved “Project 9A” as Baseline
9 Upgrade Numbers b2743 and b2752. Project 9A West is a major component of Project
10 9A.¹

11 The 9A West Project approved by PJM involves (i) construction of the Rice
12 Substation and (ii) construction of a new overhead double-circuit 230 kV interstate
13 transmission lines, the new Rice-Ringgold 230 kV Transmission Line.

14 Upon receipt of all necessary approvals for the Company’s preferred route, the new
15 Rice-The Ringgold 230 kV Transmission Line will extend approximately 29 miles,
16 connecting the existing Ringgold Substation located near Smithsburg, Washington County,
17 Maryland, and the new Rice Substation to be located in Franklin County, Pennsylvania.

¹ As noted by other witnesses, Transource PA’s original attempt to obtain approval for the original 9A Project, also called the IEC Project (which included both 9A West and a related project called 9A East), was rejected by the PUC in an order entered May 24, 2021, at PUC Docket Nos. A-2017-2640195 (the 9A East Project) and A-2017-2640200 (the 9A West Project) (collectively, “IEC Proceeding”). After the Commission’s denial of the authorizations requested by Transource PA in the IEC Proceeding, transmission projects approved by PJM in 2022 utilizing existing rights of way and the Chanceford 500 kV substation eliminated the need for the Transource PA Furnace Run 500 kV substation, rendering the 9A East Project no longer necessary. Also, after the Commission’s rejection of the IEC Project in 2021, PJM placed the IEC Project into a suspended status. In 2025, PJM completed a restudy of the IEC Project, determined that the 9A West Project portion of the IEC Project was still needed, and that the cost/benefit ratio of the 9A West Project had increased.

1 This transmission line project is referred to as the 9A West Project and is the subject of this
2 Siting Application.

3 As further explained by Eric S. Williams in Transource PA Statement No. 2,
4 Transource PA is obligated and responsible for the construction, ownership, maintenance,
5 and operation of the new Rice Substation in Pennsylvania and the Pennsylvania portion of
6 the new interstate Rice-Ringgold 230 kV Transmission Line between Maryland and
7 Pennsylvania. Transource PA’s affiliate, Transource Maryland, LLC (“Transource MD”),
8 is obligated and responsible for the construction, ownership, maintenance, and operation
9 of the Maryland portion of the new interstate Rice-Ringgold 230 kV Transmission Line.

10 **Q. What is the National Electrical Safety Code?**

11 A. The National Electrical Safety Code (“NESC”) is a set of rules designed to safeguard
12 people during the installation, operation, and maintenance of electric power lines. The
13 NESC contains the basic provisions considered necessary for the safety of employees and
14 the public. Although it is not intended as a design specification, its provisions establish
15 minimum design requirements.

16 **Q. Will the Rice-Ringgold 230 kV Transmission Line for the 9A West Project comply
17 with the NESC standards?**

18 A. Yes.

19 **Q. Please explain the safety features incorporated into the design of the Rice-Ringgold
20 230 kV Transmission Line associated with the 9A West Project.**

21 A. For the Rice-Ringgold Transmission Line, Transource PA has developed design
22 specifications and safety rules that meet or surpass all requirements specified by the NESC.

1 A detailed description of the project’s design and safety specifications, and how they meet
2 the NESC standards can be found in Attachment 5 to the Siting Application.

3 In addition to meeting the NESC standards, the Rice-Ringgold 230 kV
4 Transmission Line will also be designed to meet the recommendations outlined in the
5 American Society of Civil Engineers (ASCE) Manual 74 (“Guidelines for Electrical
6 Transmission Line Structural Loading”). To facilitate safe operation of the transmission
7 line, high speed line protection will be installed, de-energizing the line nearly
8 instantaneously if there were to be an operational problem.

9 Pertaining to occupational safety for construction, maintenance, and related
10 activities, Transource PA conducts evaluations of contractors that exceed those required
11 by law. Transource PA conducts safety and health audits on potential contractors. During
12 these audits, Transource PA not only looks for compliance with Federal, State, and Local
13 regulations, but also assesses the overall safety and health culture of the contractor. Once
14 the contractor has satisfactorily completed the audit, they are eligible to be awarded work
15 that is within the scope of services provided by that contractor.

16 A description of the safety features incorporated into the design of the 230 kV
17 transmission lines associated with the 9A West Project is provided in Attachment 5 to the
18 Siting Application.

19 **Q. Please describe the design of the Rice-Ringgold 230 kV Transmission Line associated**
20 **with the 9A West Project?**

21 A. The Rice-Ringgold 230 kV Transmission Line associated with the 9A West Project will be
22 a 230 kV double-circuit transmission line. The 230 kV double-circuit design will utilize
23 twelve power conductors (two in each of the six phase positions) and two overhead ground

1 wires. The power conductors will be 795 kcmil² 26/7 Aluminum Conductor Steel
2 Supported (“ACSS”) “Drake”. The overhead ground wires will provide lightning
3 protection and in some cases communication between circuit breakers that remove the line
4 from service should a fault on the line be detected.

5 **Q. Please describe the principal types of 230 kV structures that will be used for the**
6 **Pennsylvania portion of the 9A West Project.**

7 A. The Pennsylvania portion of the new Rice-Ringgold 230 kV Transmission Line will be
8 sited to extend approximately 24.2 miles between the Maryland border and the new Rice
9 Substation to be located in Franklin County, Pennsylvania. The Pennsylvania portion of
10 the new 9A West Project will require the installation of approximately 155 structures with
11 an average height of 130 feet. The spans between the structures will be approximately 800
12 feet.

13 The Pennsylvania portion of the new 9A West Project will consist of tubular steel
14 monopole and multi-pole structures. Typical design diagrams similar to those that will be
15 installed for the 9A West Project are included in Attachment 5.

16 **Q. What is the current status of engineering work on the 9A West Project?**

17 A. Ninety percent of the project engineering was completed by May 2021. Final design has
18 now been completed and updated. The final design includes the transmission line, final
19 structure design, final material design, and final foundation design. The final design does
20 not include any lattice towers, which limits the permanent footprint of structures.

21
² A kcmil is a thousand circular mils. A circular mil is the cross-sectional area of a wire one mil in diameter, where 1 kcmil = 0.5067 mm².

1 **Q. Please describe the Electric and Magnetic Fields Policy and Practices of Transource**
2 **PA.**

3 A. Attachment 11 of the Siting Application, the Electric and Magnetic Fields Policy and
4 Practices of Transource PA, describes these Policies and Practices. Electric and Magnetic
5 Fields (“EMF”) are a common and unavoidable feature of modern life and are produced
6 by many everyday sources, including household wiring and appliances, as well as electric
7 transmission lines. Transource PA addresses EMF concerns through a combination of
8 informational, technical and line siting strategies, including adherence to accepted
9 industry standards and prudent engineering and siting practices as described in more detail
10 in Attachment 11.

11 **Q. Does this complete your direct testimony?**


12 A. Yes, it does. However, I reserve the right to file such additional testimony as may be
13 necessary or appropriate during the course of this proceeding.

14

VERIFICATION

I, Jacob Clouse, Transmission Line Engineer, Burns & McDonnell Engineering Company, Inc., hereby state that the facts set forth above are true and correct to the best of my knowledge, information and belief, and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities).

Date: May 21, 2026

By: 
Jacob Clouse, Transmission Line Engineer
Burns & McDonnell Engineering Company,
Inc.

STATEMENT 6

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Application of Transource Pennsylvania, :
LLC filed Pursuant to 52 Pa. Code Chapter :
57, Subchapter G, for Approval of the Siting : Docket No. A-2026-_____
and Construction of the 230 kV Transmission :
Line known as Project 9A West in a Portion :
of Franklin County, Pennsylvania :
:

**Transource Pennsylvania, LLC
9A West Project
Statement No. 6**

**Direct Testimony of
Michael Mechler**

Topics Addressed: Process used by Transource PA to acquire the Rights-of Way and Easements necessary for the 9A West Project; Transource PA's Policy Regarding the Landowner's Use of the Right-of-Way Area; Transource PA Vegetation Management Practices; Summary of the Status of Negotiations with Landowners.

Dated: May 21, 2026

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

2 A. Michael Mechler, 701 Cedar Lake Blvd., Ste 200, Oklahoma City, OK 73114

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

4 A. I am employed by Western Land Services Inc. (“WLS”), as Director of Right-of-Way and
5 Infrastructure where I oversee the management and strategic direction of all Right-of-Way
6 related activities for our project portfolios to ensure alignment with client organizational
7 goals and efficient resource allocation.

8 **Q. What is your educational background?**

9 A. I graduated from Mount St. Joseph University with a Bachelors of Science – Business
10 Administration degree and a Master’s in Business Administration from Eastern University
11 in Organizational Management.

12 **Q. Are you a member of any professional organizations?**

13 A. I am a Project Management Professional (“PMP”) with the Project Management Institute
14 (“PMI”). I am also a member of the International Right-of-Way Association (“IRWA”).

15 **Q. Please describe your employment history.**

16 A. I worked as a Right-of-Way / Senior Right-of-Way agent with EnSite USA from February
17 2016 – September 2019. I was employed by Contract Land Staff as a Senior Right-of-Way
18 agent from January 2020 – February 2020. From March 2020 – February 2025 I was
19 employed by O.R. Colan holding the following positions throughout my tenure; Assistant
20 Project Manager, Project Manager, Project Manager II, and Divisional Director. At WLS
21 I am the Director of Right-of-Way and Infrastructure.

1 **Q. What are your responsibilities in connection with the 9A West Project to be**
2 **constructed and developed by Transource Pennsylvania LLC (“Transource PA”)?**

3 A. As the Director of Right-of-Way Infrastructure, I am responsible for overseeing and
4 managing right-of-way (“ROW”) projects for our clients. In addition, I am currently
5 serving as the Project Manager / Right-of-Way Supervisor for the 9A West Project. WLS
6 is contracted as the ROW service vendor through Transource PA and is providing all
7 necessary ROW services for the successful acquisition of easement agreements from
8 affected landowners for the 9A West Project.

9 Additionally, I am responsible for resource allocation for WLS to staff the 9A West
10 Project in order to meet all ROW project deadlines. I collaborate with Transource PA and
11 its affiliates to effectively allocate resources, including budget, personnel, and timelines,
12 to support the successful execution of the 9A West Project.

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

14 A. The purpose of my direct testimony in this proceeding is to describe the ROW and land
15 services activities performed by WLS on behalf of Transource PA for the 9A West Project
16 in support of Transource PA’s pending application with the Pennsylvania Public Utility
17 Commission (“Commission” or “PaPUC”) for authorization to site the transmission line
18 and related facilities that comprise the 9A West Project (“Siting Application”). My
19 testimony explains WLS’ role as Transource PA’s ROW service provider, including route-
20 level property research, landowner outreach, acquisition of easements and related property
21 rights, coordination with landowners and local stakeholders, and support of permitting and
22 survey access activities.

1 In addition, my testimony establishes that WLS' ROW efforts have been conducted
2 in a manner consistent with industry standards and applicable PaPUC standards and
3 practices, with an emphasis on good-faith negotiations, respectful engagement with
4 affected landowners, and minimizing impacts to private property. My testimony
5 demonstrates and confirms that Transource PA has the ability, through WLS, to acquire
6 the necessary property interests to construct, operate, and maintain the 9A West Project in
7 a timely and responsible manner.

8 **Q. Please provide an overview of the 9A West Project.**

9 A. The 9A West Project approved by PJM involves the (i) construction of the Rice Substation
10 and (ii) construction of the new Rice-Ringgold overheard double-circuit 230 kV
11 Transmission Line.

12 Upon receipt of all necessary approvals the new Rice-Ringgold 230 kV
13 Transmission Line will extend approximately 29 miles, connecting the existing Ringgold
14 Substation located near Smithsburg, Washington County, Maryland, and the new Rice
15 Substation to be located in Franklin County, Pennsylvania. As noted above, this
16 transmission line project is referred to as the 9AWest Project.

17 Transource PA is responsible for the construction, ownership, maintenance, and
18 operation of the new Rice Substation in Pennsylvania; and the Pennsylvania portion of the
19 new interstate Rice-Ringgold 230 kV Transmission Line. Transource PA's affiliate,
20 Transource Maryland, LLC ("Transource MD"), is responsible for the construction,
21 ownership, maintenance, and operation of the Maryland portion of the new interstate Rice-
22 Ringgold Transmission Line.

1 **Q. Please describe the portions of the Siting Application that you are sponsoring.**

2 A. I am responsible for Attachment 6, which provides a list of the owners of properties that
3 will be traversed by the Rice-Ringgold Transmission Line associated with the 9A West
4 Project. I also am responsible for Attachment 12, which describes Transource PA's plan
5 for managing vegetation along the route for the 9A West Project and Attachment 14, which
6 provides the information that Transource PA has sent to fully notify landowners from
7 whom it has yet to secure necessary ROW that may be affected by the proposed 9A West
8 Project.

9 **Q. Please explain Transource PA's policy regarding dealings with landowners impacted**
10 **by the 9A West Project.**

11 A. WLS and Transource PA treat landowners with honesty and respect during the ROW
12 acquisition process. Where the 9A West Project impacts private property and there is a
13 need for an easement or access across private property, each property owner will be fairly
14 compensated for any land rights needed by Transource PA. WLS, as the agent for
15 Transource PA, will review the fair market value for the property and extend an offer for
16 the land rights still needed for the 9A West Project consistent with Transource PA's
17 guidance and direction. If damage occurs as part of the construction activities, Transource
18 PA will work with each landowner to restore the property to the greatest extent possible
19 and will offer compensation for any crop loss or damages, as appropriate.

20 **Q. Did Transource PA provide information to landowners whose properties may be**
21 **subject to a right-of-way or easement agreement?**

22 A. Yes. There are two large categories of property owners impacted by the 9A West Project.
23 The first group includes landowners with whom Transource PA previously negotiated the

1 land rights needed for the 9A West Project, as the Project was originally contemplated in
2 2016-2017. Most of these property rights were in the form of executed option agreements
3 that Transource PA has been exercising over the last several months in preparation for
4 meeting its obligation to construct and develop the 9A West Project. In exercising its rights
5 under the existing option agreements, Transource PA has been contacting the relevant
6 property owners – and sometimes their successors who are bound by the same option
7 agreements - to advise them of the 9A West Project and of Transource PA’s desire to
8 exercise the existing options.

9 The second category of property owners are those with whom Transource PA has
10 not yet finalized easement agreements for the 9A West Project. Prior to attempting to
11 contact these landowners, Transource PA has provided and will continue to provide
12 information to fully notify them that Transource PA plans to negotiate to acquire of ROW
13 and easements. The information provided to landowners included the name of the
14 proposed project, a brief description of the 9A West Project, and a description of their legal
15 rights and Transource PA’s legal rights regarding the 9A West Project. This information
16 includes the two notices that are required by the Commission in its regulations at 52 Pa.
17 Code § 57.91. The first notice references Transource PA’s power of eminent domain, that
18 is, the power to condemn land rights to construct facilities needed to provide electric utility
19 services to the public. The second notice provides information related to the right-of-way
20 maintenance practices for the 9A West Project. This information and notices are included
21 in Attachment 14 to the Siting Application.

1 All landowners who have provided ROW to Transource PA, as well as landowners
2 from whom ROW is still needed, will continue to receive information updating them on
3 the status of the 9A West Project.

4 **Q. For property owners from whom Transource PA has not yet obtained the necessary**
5 **ROW for the 9A West Project, what does Transource PA do after providing the**
6 **required PaPUC notices to landowners?**

7 A. Pursuant to 52 Pa. Code § 57.91(a), Transource PA must wait at least fifteen (15) days after
8 the landowner receives the notices provided in Attachment 14 to the Siting Application
9 before commencing activities. Transource PA will then contact the property owner(s) via
10 telephone or in person to request a convenient time to meet so that we may explain the
11 details of the 9A West Project and answer any questions the property owner(s) may have
12 about the project.

13 **Q. Please explain Transource PA's policy regarding the landowner's use of the right-of-**
14 **way area.**

15 A. Transource PA anticipates acquiring all the ROW and easements needed for the Rice-
16 Ringgold Transmission Line. About 66% of the needed ROW route within Pennsylvania
17 has already been obtained. Our desire and hope is to acquire the remaining property rights
18 via private negotiations and avoid the use of eminent domain, which would only be used
19 as a last resort. The owners of property traversed by the ROW will still be permitted to use
20 their property provided it does not interfere with Transource PA's safe and reliable
21 operation of the aerial transmission line. Certain landowner activities will be prohibited
22 within the ROW, such as: planting or cultivating any trees; placing any temporary or
23 permanent building, structure, improvement or obstruction, including but not limited to,

1 storage tanks, billboards, signs, sheds, dumpsters, light poles, water impoundments, above
2 ground irrigation systems, swimming pools or wells; or permitting any alteration of the
3 ground elevation over or within the right-of-way. However, Transource PA may, on a
4 case-by-case basis, grant an exception to a prohibited activity in certain circumstances
5 where it is reasonable to do so and the activity does not interfere with Transource PA's
6 rights and ability to safely and reliably operate the transmission line.

7 **Q. Does Transource PA have a formal plan for addressing vegetation management along**
8 **its transmission line ROW that is applicable to Project 9A West?**

9 A. Yes. I am sponsoring Attachment 12 of the Siting Application, which is American Electric
10 Power's, Transource PA's affiliate, Transmission Vegetation Management Program
11 ("TVMP") dated July 31, 2025. The TVMP describes, among other things, how Transource
12 PA and its affiliates seek to ensure compliance with relevant reliability standards through
13 its management of vegetation along the transmission line ROW. The goal of the TVMP is
14 to minimize encroachments from vegetation located adjacent to transmission line ROW,
15 thereby preventing vegetation-related outages that could impact system reliability and
16 ultimately service to customers.

17 **Q. Please explain the status of Transource PA's attempts to acquire ROW and/or**
18 **easements for the 9A West Project.**

19 A. There are a total of 102 landowners (85 in Pennsylvania) and 129 parcels (108 in
20 Pennsylvania) along the route selected for the proposed 9A West Project. Transource PA
21 is continuing to negotiate with all affected landowners who have not yet provided ROW
22 by agreement to reach a reasonable and mutually acceptable right-of-way agreement.
23 Transource PA has not yet been able to complete negotiations and acquire all the ROW

1 needed for the entire 9A West Project. In the event Transource PA is unable to acquire all
2 the ROW needed for the entire 9A West Project, Transource PA will promptly file and
3 serve separate applications seeking Commission approval to exercise the power of eminent
4 domain to acquire rights-of-way and easements for the proposed 9A West Project.
5 Although Transource PA's strong preference is to reach agreement with all landowners on
6 ROW, if any such condemnation applications become necessary, Transource PA will
7 request that they be consolidated with this Siting Application proceeding for the 9A West
8 Project and considered during its pendency.

9 **Q. Does this complete your direct testimony?**

10 A. Yes, it does. However, I reserve the right to file such additional testimony as may be
11 necessary or appropriate during the course of this proceeding.

12

VERIFICATION

I, Michael Mechler, Director of Right-of-Way and Infrastructure, Western Land Services, Inc., hereby state that the facts set forth above are true and correct to the best of my knowledge, information and belief, and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities).

Date: May 21, 2026

By: *Michael Mechler*

Michael Mechler, Director of Right-of-Way
and Infrastructure
Western Land Services, Inc.