

**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-2017-_____
and Construction of the 230 kV Transmission :
Line Associated with the **Independence** :
Energy Connection-West Project in :
Portions of Franklin County, Pennsylvania :

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

Statement No. 2

**Written Direct Testimony of
Kamran Ali**

**Topics Addressed: Need for the IEC Project;
Description of the IEC Project; and
Obligation of Transource PA to Complete the
IEC Project.**

1 **I. INTRODUCTION**

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

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

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

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

11
12 **Q. What are your current responsibilities?**

13 A. I am responsible for managing all activities related to assessing the adequacy of
14 American Electric Power companies’ transmission network in the PJM Interconnection,
15 L.L.C. (“PJM”) Regional Transmission Organization (“RTO”) region to meet the needs
16 of its customers in a reliable, cost effective and environmentally compatible manner.

17
18 **Q. Please provide your educational background.**

19 A. I received a Bachelor of Science – Electrical Engineering degree from the University of
20 Alabama in Tuscaloosa, Alabama and a Master of Science – Electrical Engineering
21 degree from Kansas State University in Manhattan, Kansas. I also received a Master of
22 Business Administration degree from Ohio University in Athens, Ohio. I am a registered
23 Professional Engineer in the state of Ohio. My registration number is PE.73895.

24

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

2 A. I was employed by SMC Electrical in 2004 as an electrical engineer. In 2006, I joined
3 AEPSC as a Substation Engineer. In 2007, I transferred to Transmission Planning, where
4 I advanced through increasing levels of responsibility. In June 2016, I assumed the
5 position of Director, Transmission Planning.

6

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

8 A. First, I will provide an overview of the process used by PJM to select and approve market
9 efficiency projects. Second, I will describe the need for the proposed Independence
10 Energy Connection Project (“IEC Project”) as identified by PJM. Finally, I will describe
11 the obligation of Transource PA and its sister company Transource Maryland, LLC
12 (“Transource MD”) to complete the IEC Project.

13

14 **Q. Are you responsible for the preparation of any of the Attachments or exhibits filed**
15 **with the above captioned Application?**

16 A. Yes. I am responsible for Attachment 2, the Necessity Statement.

17

18 **II. OVERVIEW OF PJM PROCESS**

19 **Q. Can you briefly describe PJM and its responsibilities?**

20 A. Yes. PJM is a FERC-approved Regional Transmission Organization charged with
21 ensuring the reliable and efficient operation of the electric transmission system under its
22 functional control, and coordinating the transmission of electricity in all or parts of
23 thirteen states, including Pennsylvania, and the District of Columbia.

24

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

2 A. In order to ensure reliable transmission service, PJM prepares an annual Regional
3 Transmission Expansion Plan (“RTEP”). PJM’s RTEP process is currently set forth in
4 Schedule 6 of PJM’s Amended and Restated Operating Agreement (“Schedule 6”). The
5 RTEP is an annual planning process that encompasses a comprehensive series of detailed
6 analyses to ensure electric power continues to flow reliably to customers under stringent
7 reliability planning criteria. PJM Manual 14B outlines the RTEP process and reliability
8 criteria used for this reliability process.

9

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

11 A. In addition to the reliability analysis, PJM’s RTEP includes a Market Efficiency Analysis
12 to identify congestion on electric transmission facilities that has economic or wholesale
13 market effects, as well as potential improvements to electric transmission economic
14 efficiencies. The electric transmission needs identified in a Market Efficiency Analysis
15 stem from the fact that the PJM transmission grid provides the means for generators to
16 participate in a competitive wholesale market to supply electricity, both capacity and
17 energy, to customers in PJM’s geographic footprint no matter where in this area the
18 electrical load is located.

19 The electric transmission infrastructure needs identified by the PJM Market
20 Efficiency Analysis are addressed by market efficiency transmission projects, which are
21 aimed specifically at improving electric transmission economic efficiencies and
22 alleviating electric transmission constraints that have an economic impact on PJM’s
23 wholesale energy or capacity markets. In very general terms, transmission congestion

1 results in increased transmission congestion costs, and market efficiency projects'
2 principal purpose and benefit is to reduce those costs on a net basis.

3
4 **Q. Please describe the PJM process to select market efficiency transmission projects.**

5 A. When PJM's Market Efficiency Analysis identifies a need to relieve congestion on
6 electric transmission facilities, PJM opens a Long Term Proposal Window, to solicit the
7 submittal of potential solutions (*i.e.*, market efficiency projects) to address those needs.
8 PJM's solicitation of market efficiency project submittals through its Long Term
9 Proposal Window is a competitive process consistent with FERC Order No. 1000. At a
10 very high level, this competitive process aims to encourage the development of projects,
11 which are then evaluated on a competitive basis to identify the best solution among those
12 proposed by the project developers competing in the process.

13 Through the competitive bid process, PJM evaluates the potential solutions
14 submitted by bidders using two criteria: first, the project must address the congestion
15 identified in the Market Efficiency Analysis; and, second, the project benefits must
16 exceed the costs by at least 25 percent. In addition, the project must meet PJM's
17 congestion criteria and not create additional unacceptable congestion elsewhere on the
18 system. Project benefits are measured by comparing the defined benefit metric with and
19 without the proposed project for a 15-year study period. In this case, the benefit metric
20 used was Net Load Payments for Benefitting Zones.

21 The market efficiency projects that are selected through PJM's Long Term
22 Proposal Window are presented to stakeholders and recommended to the PJM Board of
23 Managers ("PJM Board") for approval. If approved, such market efficiency projects are

1 included in the RTEP as Baseline Projects. It is customary for PJM to conduct additional
2 analysis periodically and as it may be appropriate, to confirm that the approved project
3 continues to meet the criteria for being included in the RTEP as projects progress from
4 approval by the PJM Board until the projects go in service.

5
6 **Q. Are winning bidders required to complete the market efficiency projects if
7 approved by the PJM Board and included in the RTEP as Baseline Projects?**

8 A. Yes. Pursuant to Schedule 6 of PJM's Amended and Restated Operating Agreement,
9 after the PJM Board approves a proposed market efficiency project, the successful project
10 bidder is obligated to complete the project once PJM and the successful entity execute a
11 Designated Entity Agreement, which specifically designates the entity or entities having
12 construction responsibility for the project.

13
14 **III. NEED FOR THE IEC PROJECT**

15 **Q. Please summarize the need for the IEC Project.**

16 A. The IEC Project is needed to alleviate transmission congestion constraints in
17 Pennsylvania, Maryland, West Virginia, and Virginia. The IEC Project will relieve this
18 transmission congestion, and provide significant net benefits, as further described in the
19 direct testimony of Mr. Paul F. McGlynn (Transource PA Statement No. 3).

20
21 **Q. Can you please explain "congestion constraints"?**

22 A. Yes. Congestion occurs on transmission facilities when there is heavy use of the
23 transmission system in a specific area. When congestion occurs, typically lower-priced
24 energy is prevented from flowing freely to a specific area on the grid because heavy

1 electricity use is causing parts of the grid to operate near its limits. As a result,
2 congestion generally raises the locational marginal pricing for electricity in congested
3 areas.

4
5 **Q. Was the need for the IEC Project identified through the PJM Market Analysis?**

6 A. Yes. In October 2014, PJM opened a Long Term Proposal Window (“2014/15 RTEP
7 Long Term Proposal Window”) to solicit proposals to address various congested
8 facilities, including congestion constraints in Pennsylvania, Maryland, West Virginia, and
9 Virginia.

10
11 **Q. Please describe the congestion problem and transmission constraints to be
12 addressed through PJM’s 2014/15 RTEP Long Term Proposal Window.**

13 A. The 2014/15 RTEP Long Term Proposal Window solicited proposals to address, among
14 other things, a number of transmission constraints on the AP South Reactive Interface.
15 The AP South Reactive Interface is a set of four 500 kV lines which originate in West
16 Virginia and terminate in Maryland and Virginia. The primary goal was to reduce
17 congestion on the AP South Reactive Interface, which is one of the most historically
18 congested flowgates in PJM.

19 Per the PJM State of the Market Reports, the congestion cost on the AP South
20 Interface totaled approximately \$800 million from 2012 through 2016. If the sum of the
21 flow on the four 500 kV lines that make up the AP South Reactive Interface exceeds a
22 dynamically determined limit, it can result in low voltages and even potential voltage
23 collapse. PJM determines the limit regularly based on system conditions and allows it to

1 influence Locational Marginal Prices (“LMPs”) in the market. If the interface congests,
2 higher cost generation in Maryland and Virginia will increase output, while lower cost
3 generation output will reduce in other parts of PJM.
4

5 **Q. Did Transource PA submit a proposal in response to PJM’s 2014/15 RTEP Long**
6 **Term proposal Window?**

7 A. Yes. Transource Energy, the parent of Transource PA, submitted several proposals,
8 including “Project 9A.”
9

10 **Q. Was Transource PA’s proposal selected by PJM as a market efficiency project?**

11 A. Yes. After extensive evaluation and review with stakeholders, PJM selected Project 9A
12 to address the needs identified in PJM’s 2014/15 RTEP Long Term Proposal Window
13 because it provided the most benefits, including the most total congestion savings, most
14 production cost savings, and a benefit-to-cost ratio exceeding 1.25. On August 2, 2016,
15 the PJM Board approved Project 9A as Baseline Upgrade Numbers b2743 and b2752,
16 which includes the IEC Project.

17 Additional details regarding the PJM process and selection of Project 9A, which
18 includes the IEC Project, are provided in Attachment 2 to this Siting Application and the
19 written direct testimony of Mr. Paul F. McGlynn (Transource PA Statement No. 3).
20

21 **Q. Has PJM conducted an update to confirm that the IEC Project is still needed?**

1 A. Yes. On September 14, 2017, PJM reported the results of an update to its analysis. This
2 report confirmed that Project 9A, which includes the IEC Project, continues to meet the
3 criteria for inclusion in the RTEP as a baseline upgrade project.
4

5 **IV. DESCRIPTION OF THE PROPOSED IEC PROJECT**

6 **Q. Please describe the IEC Project approved by PJM.**

7 A. The IEC Project is a major component of the Project 9A approved by PJM as Baseline
8 Upgrade Numbers b2743 and b2752.¹ The IEC Project involves: (i) construction of two
9 new substations in Pennsylvania, the Rice Substation and the Furnace Run Substation;
10 and (ii) construction of two new overhead double-circuit 230 kV interstate transmission
11 lines, the Rice-Ringgold 230 kV Transmission Line and the Furnace Run-Conastone 230
12 kV Transmission Line.

13 Upon receipt of all necessary approvals, the new Rice-Ringgold 230 kV
14 Transmission Line will be sited to extend approximately 29 miles, connecting the
15 existing Ringgold Substation located near Smithsburg, Washington County, Maryland,
16 and the new Rice Substation to be located in Franklin County, Pennsylvania. This
17 transmission line project is referred to as Independence Energy Connection-West Project
18 (“IEC-West Project”) and is the subject of this Siting Application.

19 Upon receipt of all necessary approvals, the new Furnace Run-Conastone 230 kV
20 Transmission Line will be sited to extend approximately 16 miles, connecting the
21 existing Conastone Substation located near Norrisville, Harford County, Maryland, and

¹ PJM’s 2014/2015 RTEP Baseline Upgrade Numbers b2743 and b2752 also includes upgrades to the existing Conastone and Ringgold Substations in Maryland and reconductoring of the Conastone-Northwest double-circuit 230 kV line and the Ringgold-Catoctin 138 kV line in Maryland. The upgrades to these existing facilities will be the responsibility of the incumbent utilities. The upgrades to existing facilities, while not part of the IEC Project, are inter-dependent components of the solution approved by PJM.

1 the new Furnace Run Substation to be located in York County, Pennsylvania. This
2 transmission line project is referred to as Independence Energy Connection-East Project
3 (“IEC-East Project”) and is the subject of a separately filed Siting Application.
4

5 **Q. Please describe the elements of the IEC Project for which Transource PA is**
6 **responsible.**

7 A. With respect to the IEC-West Project, Transource PA will construct, own, operate, and
8 maintain the new Rice Substation. The new Rice Substation will be a 500-230 kV
9 substation to be located in Franklin County, Pennsylvania. The new Rice Substation will
10 tie into the existing Hunterstown-Conemaugh 500 kV Transmission Line. The Rice
11 Substation will also be interconnected with and provide the 230 kV supply to the
12 proposed new Rice-Ringgold 230 kV Transmission Line.

13 Transource PA will also construct, own, operate, and maintain the Pennsylvania
14 portion of the new Rice-Ringgold 230 kV Transmission Line. Transource PA’s affiliate,
15 Transource MD, will construct, own, operate, and maintain the Maryland portion of the
16 Rice-Ringgold 230 kV Transmission Line.

17 With respect to the IEC-East Project, Transource PA will construct, own, operate,
18 and maintain the new Furnace Run-Conastone 230 kV Transmission Line. The new
19 Furnace Run Substation will be a 500-230 kV substation to be located in York County.
20 The new Furnace Run Substation will be interconnected with and provide the 230 kV
21 supply to the proposed new Furnace Run-Conastone 230 kV Transmission Line. The
22 new Furnace Run Substation will also tie into the existing Three Mile Island-Peach
23 Bottom 500 kV Transmission Line.

1 Transource PA will also construct, own, operate, and maintain the Pennsylvania
2 portion of the new Furnace Run-Conastone 230 kV Transmission Line. Transource PA's
3 affiliate, Transource MD, will construct, own, operate, and maintain the Maryland
4 portion of the Furnace Run-Conastone 230 kV Transmission Line.

5
6 **Q. Please explain how the IEC-East and IEC-West Projects work together to resolve**
7 **the congestion issues identified by PJM.**

8 A. The IEC-West Project was intended to directly address the congestion on the AP South
9 Reactive Interface described above. However, it was determined that some of the same
10 higher cost generators that respond to the AP South Reactive Interface also respond to
11 other congested facilities that interconnect Pennsylvania and Maryland. Thus, the
12 construction of the IEC-West Project alone would not fully address the congestion issue
13 and, instead, merely shift the congestion to other parts of the system. To avoid
14 additional, unacceptable congestion on other parts of the system serving Pennsylvania
15 and Maryland, the IEC-East Project was developed to help offload those higher cost
16 generating facilities. The combination of both the IEC-West Project and IEC-East
17 Project are interdependent components needed to address the congestion identified in
18 PJM's 2014/15 RTEP Long Term Proposal Window.

19
20 **Q. Will the IEC Project provide any additional benefits within Pennsylvania?**

21 A. Yes. Although the primary benefits from the IEC Project relate to market efficiency and
22 the reduction of congestion costs, the new transmission facilities associated with the IEC
23 Project will also enhance the electrical strength and reliability of the transmission system

1 by virtue of the new transmission facilities in the area that will be part of the
2 interconnected transmission grid. The IEC Project will provide additional and alternative
3 paths for electricity in the event of outages on other Pennsylvania transmission facilities.
4 The IEC Project will also allow the interconnection of future reliability, generation, and
5 load projects in the area.

6
7 **V. TRANSOURCE PA OBLIGATION TO COMPLETE THE IEC PROJECT**

8 **Q. Who will construct, own, and operate the IEC Project?**

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

12
13 **Q. Are Transource PA and Transource MD required to build the IEC Project?**

14 A. Yes. As explained above, the PJM Board approved the IEC Project proposed by
15 Transource Energy as a major component of Baseline Upgrade Numbers b2743 and
16 b2752 on August 2, 2016. Pursuant to Schedule 6 of PJM's Amended and Restated
17 Operating Agreement, after the PJM Board approves a proposed market efficiency
18 project, the successful project bidder, Transource Energy, is obligated to complete the
19 project once PJM and the successful entity execute a Designated Entity Agreement.

20 On November 2, 2016, PJM and Transource Energy, on behalf of Transource PA
21 and Transource MD, executed a Designated Entity Agreement. On November 14, 2016,
22 the Designated Entity Agreement was filed with the FERC Commission in Docket No.
23 ER17-349-000. FERC approved the Designated Entity Agreement on January 12, 2017.
24 Pursuant to Schedule E of the Designated Entity Agreement, Transource PA is

1 responsible for the construction, ownership, maintenance, and operation of the
2 Pennsylvania portion of the IEC Project. Under the same agreement, Transource MD is
3 responsible for the construction, ownership, maintenance, and operation of the Maryland
4 portion of the IEC Project. A true and correct copy of the Designated Entity Agreement
5 is provided in Appendix 2.3 of Attachment 2 to this Siting Application.

6
7 **Q. Does this conclude your direct testimony?**

8 A. Yes, it does. If necessary, I will supplement my testimony if and as additional issues
9 arise during the course of this proceeding.