

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

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

**Transource Pennsylvania, LLC
Independence Energy Connection-East 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
4 Floor, New 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
8 the Director of Transmission Planning. In this capacity I provide services to
9 Transource Energy, LLC, the parent of Transource Pennsylvania, LLC
10 (“Transource PA” or the “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
15 Interconnection, L.L.C. (“PJM”) Regional Transmission Organization (“RTO”)
16 region to meet the needs of its customers in a reliable, cost effective and
17 environmentally compatible manner.

18

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

20 A. I received a Bachelor of Science – Electrical Engineering degree from the
21 University of Alabama in Tuscaloosa, Alabama and a Master of Science –
22 Electrical Engineering degree from Kansas State University in Manhattan,
23 Kansas. I also received a Master of Business Administration degree from Ohio

1 University in Athens, Ohio. I am a registered Professional Engineer in the state of
2 Ohio. My registration number is PE.73895.

3
4 **Q. Please describe your professional experience.**

5 A. I was employed by SMC Electrical in 2004 as an electrical engineer. In 2006, I
6 joined AEPSC as a Substation Engineer. In 2007, I transferred to Transmission
7 Planning, where I advanced through increasing levels of responsibility. In June
8 2016, I assumed the position of Director, Transmission Planning.

9
10 **Q. What is the subject matter of your direct testimony?**

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

16
17 **Q. Are you responsible for the preparation of any of the Attachments or exhibits
18 filed with the above captioned Application?**

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

20
21 **II. OVERVIEW OF PJM PROCESS**

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

23 A. Yes. PJM is a FERC-approved Regional Transmission Organization charged with
24 ensuring the reliable and efficient operation of the electric transmission system

1 under its functional control, and coordinating the transmission of electricity in all
2 or parts of thirteen states, including Pennsylvania, and the District of Columbia.

3
4 **Q. How does PJM meet its obligation to ensure reliable transmission service?**

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

13
14 **Q. How does PJM meet its obligation to ensure efficient transmission service?**

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

1 The electric transmission infrastructure needs identified by the PJM
2 Market Efficiency Analysis are addressed by market efficiency transmission
3 projects, which are aimed specifically at improving electric transmission
4 economic efficiencies and alleviating electric transmission constraints that have
5 an economic impact on PJM's wholesale energy or capacity markets. In very
6 general terms, transmission congestion results in increased transmission
7 congestion costs, and market efficiency projects' principal purpose and benefit is
8 to reduce those costs on a net basis.

9
10 **Q. Please describe the PJM process to select market efficiency transmission**
11 **projects.**

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

21 Through the competitive bid process, PJM evaluates the potential
22 solutions submitted by bidders using two criteria: first, the project must address
23 the congestion identified in the Market Efficiency Analysis; and, second, the

1 project benefits must exceed the costs by at least 25 percent. In addition, the
2 project must meet PJM's congestion criteria and not create additional
3 unacceptable congestion elsewhere on the system. Project benefits are measured
4 by comparing the defined benefit metric with and without the proposed project for
5 a 15-year study period. In this case, the benefit metric used was Net Load
6 Payments for Benefitting Zones.

7 The market efficiency projects that are selected through PJM's Long Term
8 Proposal Window are presented to stakeholders and recommended to the PJM
9 Board of Managers ("PJM Board") for approval. If approved, such market
10 efficiency projects are included in the RTEP as Baseline Projects. It is customary
11 for PJM to conduct additional analysis periodically and as it may be appropriate,
12 to confirm that the approved project continues to meet the criteria for being
13 included in the RTEP as projects progress from approval by the PJM Board until
14 the projects go in service.

15
16 **Q. Are winning bidders required to complete the market efficiency projects if
17 approved by the PJM Board and included in the RTEP as Baseline Projects?**

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

23

1 **III. NEED FOR THE IEC PROJECT**

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

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

8
9 **Q. Can you please explain “congestion constraints”?**

10 A. Yes. Congestion occurs on transmission facilities when there is heavy use of the
11 transmission system in a specific area. When congestion occurs, typically lower-
12 priced energy is prevented from flowing freely to a specific area on the grid
13 because heavy electricity use is causing parts of the grid to operate near its limits.
14 As a result, congestion generally raises the locational marginal pricing for
15 electricity in congested areas.

16
17 **Q. Was the need for the IEC Project identified through the PJM Market
18 Analysis?**

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

23

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

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

9 Per the PJM State of the Market Reports, the congestion cost on the AP
10 South Interface totaled approximately \$800 million from 2012 through 2016. If
11 the sum of the flow on the four 500 kV lines that make up the AP South Reactive
12 Interface exceeds a dynamically determined limit, it can result in low voltages and
13 even potential voltage collapse. PJM determines the limit regularly based on
14 system conditions and allows it to influence Locational Marginal Prices (“LMPs”)
15 in the market. If the interface congests, higher cost generation in Maryland and
16 Virginia will increase output, while lower cost generation output will reduce in
17 other parts of PJM.

18

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

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

23

1 **Q. Was Transource PA's proposal selected by PJM as a market efficiency**
2 **project?**

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

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

13

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

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

20

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

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

1 A. The IEC Project is a major component of the Project 9A approved by PJM as
2 Baseline Upgrade Numbers b2743 and b2752.¹ The IEC Project involves: (i)
3 construction of two new substations in Pennsylvania, the Rice Substation and the
4 Furnace Run Substation; and (ii) construction of two new overhead double-circuit
5 230 kV interstate transmission lines, the Rice-Ringgold 230 kV Transmission
6 Line and the Furnace Run-Conastone 230 kV Transmission Line.

7 Upon receipt of all necessary approvals, the new Rice-Ringgold 230 kV
8 Transmission Line will be sited to extend approximately 29 miles, connecting the
9 existing Ringgold Substation located near Smithsburg, Washington County,
10 Maryland, and the new Rice Substation to be located in Franklin County,
11 Pennsylvania. This transmission line project is referred to as Independence
12 Energy Connection-West Project (“IEC-West Project”) and is the subject of a
13 separately filed Siting Application.

14 Upon receipt of all necessary approvals, the new Furnace Run-Conastone
15 230 kV Transmission Line will be sited to extend approximately 15.8 miles,
16 connecting the existing Conastone Substation located near Norrisville, Harford
17 County, Maryland, and the new Furnace Run Substation to be located in York
18 County, Pennsylvania. This transmission line project is referred to as
19 Independence Energy Connection-East Project (“IEC-East Project”) and is the
20 subject of this Siting Application.

21

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

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

10 Transource PA will also construct, own, operate, and maintain the
11 Pennsylvania portion of the new Rice-Ringgold 230 kV Transmission Line.
12 Transource PA's affiliate, Transource MD, will construct, own, operate, and
13 maintain the Maryland portion of the Rice-Ringgold 230 kV Transmission Line.

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

21 Transource PA will also construct, own, operate, and maintain the
22 Pennsylvania portion of the new Furnace Run-Conastone 230 kV Transmission
23 Line. Transource PA's affiliate, Transource MD, will construct, own, operate,

1 and maintain the Maryland portion of the Furnace Run-Conastone 230 kV
2 Transmission Line.

3

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

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

18

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

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

1 in the area that will be part of the interconnected transmission grid. The IEC
2 Project will provide additional and alternative paths for electricity in the event of
3 outages on other Pennsylvania transmission facilities. The IEC Project will also
4 allow the interconnection of future reliability, generation, and load projects in the
5 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,
11 operate, and 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
16 and b2752 on August 2, 2016. Pursuant to Schedule 6 of PJM's Amended and
17 Restated Operating Agreement, after the PJM Board approves a proposed market
18 efficiency project, the successful project bidder, Transource Energy, is obligated
19 to complete the project once PJM and the successful entity execute a Designated
20 Entity Agreement.

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

1 Designated Entity Agreement on January 12, 2017. Pursuant to Schedule E of the
2 Designated Entity Agreement, Transource PA is responsible for the construction,
3 ownership, maintenance, and operation of the Pennsylvania portion of the IEC
4 Project. Under the same agreement, Transource MD is responsible for the
5 construction, ownership, maintenance, and operation of the Maryland portion of
6 the IEC Project. A true and correct copy of the Designated Entity Agreement is
7 provided in Appendix 2.3 of Attachment 2 to this Siting Application.

8

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

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