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August 11, 2020

VIA ELECTRONIC FILING

Rosemary Chiavetta, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street, 2nd Floor North
P.O. Box 3265
Harrisburg, PA 17105-3265

Re: Application of Transource Pennsylvania, LLC for Approval of the Siting and Construction of the 230 kV Transmission Line Associated with the Independence Energy Connection - East and West Projects in Portions of Franklin and York Counties, Pennsylvania - Docket No. A-2017-2640195 & A-2017-2640200

Petitions of Transource Pennsylvania, LLC for a finding that a building to shelter control equipment at the Rice Substation in Franklin County, Pennsylvania and the Furnace Run Substation in York County, Pennsylvania are reasonably necessary for the convenience or welfare of the public - Docket Nos. P-2018-3001878 & P-2018-3001883

Application of Transource Pennsylvania, LLC for approval to acquire a certain portion of the lands of various landowners in York and Franklin Counties, Pennsylvania for the siting and construction of the 230 kV Transmission Lines associated with the Independence Energy Connection - East and West Projects as necessary or proper for the service, accommodation, convenience or safety of the public - Docket Nos. A-2018-3001881, et al.

Dear Secretary Chiavetta:

Enclosed for filing is the Main Brief of Transource Pennsylvania, LLC and PPL Electric Utilities Corporation in the above-referenced proceeding. Copies will be provided as indicated on the Certificate of Service.

Rosemary Chiavetta, Secretary
August 11, 2020
Page 2

Respectfully submitted,

A handwritten signature in blue ink that reads "Anthony D. Kanagy". The signature is fluid and cursive, with a large initial "A" and "K".

Anthony D. Kanagy

ADK/jl
Enclosures

cc: Honorable Elizabeth Barnes
Certificate of Service

CERTIFICATE OF SERVICE

Docket Nos. A-2017-2640195 & A-2017-2640200, et al.

I hereby certify that a true and correct copy of the foregoing has been served upon the following persons in the manner indicated, in accordance with the requirements of 52 Pa. Code § 1.54 (relating to service by a participant).

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**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Application of Transource Pennsylvania, LLC :
for approval of the Siting and Construction of :
the 230 kV Transmission Lines Associated : Docket No. A-2017-2640195
with the Independence Energy Connection – : Docket No. A-2017-2640200
East and West Projects in portions of Franklin :
and York Counties, Pennsylvania :

Petition of Transource Pennsylvania, LLC for a :
finding that a building to shelter control :
equipment at the Rice Substation in Franklin : Docket No. P-2018-3001878
County, Pennsylvania is reasonably necessary :
for the convenience or welfare of the public :

Petition of Transource Pennsylvania, LLC for a :
finding that a building to shelter control :
equipment at the Furnace Run Substation in : Docket No. P-2018-3001883
York County, Pennsylvania is reasonably :
necessary for the convenience or welfare of the :
public :

Application of Transource Pennsylvania, LLC :
for approval to acquire a certain portion of the :
lands of various landowners in York and : Docket No. A-2018-3001881, *et al.*
Franklin Counties, Pennsylvania for the siting :
and construction of the 230 kV Transmission :
Lines associated with the Independence Energy :
Connection – East and West Projects as :
necessary or proper for the service, :
accommodation, convenience or safety of the :
public :

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TABLE OF AUTHORITIES

Federal Court Decisions

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Morgan Stanley Capital Grp. Inc. v. Pub. Util. Dist. No. 1, 554 U.S. 527 (2008)36

Nat’l. Ass’n. of Regulatory Util. Comm’rs. v. FERC, (*NARUC v. FERC*”),
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New York v. FERC, 535 U.S. 1, March 4, 200237, 39

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North American Electric Reliability Corp., 116 FERC ¶ 61,062 (ERO Certification Order),
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order on compliance, 118 FERC ¶ 61,030 (2007)
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S.C. Puc. Serv. Auth. v. FERC, 762 F.3d 41, *58-59, 2014 U.S. App. LEXIS 15674,
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*Transmission Planning and Cost Allocation by Transmission Owning and Operating Public
Utilities*, 136 FERC ¶ 61,051, (“FERC Order 1000”) issued July 21, 201136

Pennsylvania Court Decisions

Brown v. Cmwlt., 940 A.2d 610 (Pa. Cmwlt. 2008)17

Center for Coalfield Justice and Sierra Club v. Commonwealth of Pa., EHB Docket
No. 2018-028-R, 2018 Pa. Envirm. LEXIS *26, *29 (April 24, 2018)29

Clean Air Council v. Sunoco Pipeline, L.P., 185 A.3d 478 (Pa. Cmwlt. 2018)28

Cmwlt. v. Williams, 557 Pa. 207, 732 A.2d 1167 (1999)17

Commonwealth v. Delaware and Hudson Railway Co., 339 A.2d 155 (Pa. Cmwlt. 1975)33

County of Chester v. Philadelphia Elec. Co., 420 Pa. 422, 218 A.2d 331 (1966)33

<i>Del. Riverkeeper Network v. Sunoco Pipeline, L.P.</i> , 179 A.2d 670, 2018 Pa. Commw. Lexis 74 (Pa. Cmwlt. 2017) (“ <i>Sunoco Pipeline</i> ”)	30
<i>Del. Riverkeeper Network, et al. v. Sunoco Pipeline L.P.</i> , Docket No. 204 MAL 2018	30
<i>Del-AWARE Unlimited, Inc. v. Pa. PUC</i> , 513 A.2d 593 (Pa. Cmwlt. 1986), <i>appeal denied</i> , 515 Pa. 587, 527 A.2d 547 (1987)	34
<i>Department of Environmental Resources v. Pa. PUC</i> , 335 A.2d 860 (Pa. Cmwlt. 1975), <i>aff’d.</i> , 473 Pa. 378, 374 A.2d 693 (1977)	32
<i>District of Columbia’s Appeal</i> , 343 Pa. 65, 21 A.2d 883 (1941)	17
<i>Dickson v. Public Service Commission</i> , 89 Pa. Super. 126 (1926)	32
<i>Dunk v. Pa. PUC</i> , 232 A.2d 231 (Pa. Super. 1967)	19, 20
<i>Duquesne Light Company v. Monroeville Borough</i> , 449 Pa. 573, 298 A.2d 252 (1972)	33
<i>Energy Conservation Council of Pa. v. Pa. PUC</i> , 995 A.2d 465 (Pa. Cmwlt. 2010)	19, 20, 21, 25
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<i>In re Mendenhall</i> , 484 Pa. 77, 398 A.2d 951 (Pa. 1979)	28
<i>Laird v. Pa. P.U.C.</i> , 133 A.2d 579 (1957)	24
<i>McDonald v. Pennsylvania Railroad Co.</i> , 348 Pa. 558, 36 A.2d 492 (1940)	17
<i>Newtown Township v. Philadelphia Elec. Co.</i> , 594 A.2d 834 (Pa. Cmwlt. 1991)	33
<i>O’Connor v. Pa. PUC</i> , 582 A.2d 427 (Pa. Cmwlt. 1990)	34
<i>Pa. Power & Light Co. v. Pa. PUC</i> , 696 A.2d 248 (Pa. Cmwlt. 1997)	19
<i>Paxtowne v. Pa. PUC</i> , 398 A.2d 254 (Pa. Cmwlt. 1979)	24, 32

<i>Payne v. Kassab</i> , 312 A.2d 86 (Pa. Cmwlt. 1973) (“ <i>Payne</i> ”)	‘ <i>passim</i>
<i>Pennsylvania Environmental Defense Foundation v. Commonwealth</i> , 161 A.3d 911 (Pa. 2017) (“ <i>PEDF</i> ”)	‘ <i>passim</i>
<i>Pennsylvania Power & Light Co. v. Pa. PUC</i> , 696 A.2d 248 (Pa. Cmwlt. 1997)	19
<i>Phillips v. Pa. P.U.C.</i> , 181 Pa. Super. 625, 124 A.2d 625 (1956)	24
<i>Samuel J. Lansberry, Inc. v. Pa. P.U.C.</i> , 578 A.2d 600 (Pa. Cmwlt. 1990)	17
<i>SEPTA v. Pa. PUC</i> , 991 A.2d 1021 (Pa. Cmwlt. 2010)	32
<i>South Coventry Township v. Philadelphia Elec. Co.</i> , 504 A.2d 368 (Pa. Cmwlt. 1986)	33
<i>Stone v. Pa. PUC</i> , 162 A.2d 18 (Pa. Super. 1960)	19, 24, 32
<i>West Penn Power Co. v. Pennsylvania Public Utility Commission</i> , 184 A.2d 143 (1962)	24

Other State Court Decisions

<i>Application of Transource Maryland LLC for a Certificate of Public Convenience and Necessity to Construct Two New 230 kV Transmission Lines Associated with the Independence Energy Connection Project in Portions of Harford and Washington Counties, Maryland, Case No. 9471 (Order No. 89571)</i>	7
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Pennsylvania Administrative Agency Decisions

<i>Application of Pennsylvania Electric Company For Approval to Locate and Construct the Bedford North-Osterburg East 115 kV HV Transmission Line Project Situated in Bedford and East St. Clair Townships, Bedford County, Pennsylvania, Docket Nos. A-2011-2247862, et al., 2012 Pa. PUC LEXIS 298 (Initial Decision Feb. 9, 2012)</i>	26, 27
<i>Application of Pennsylvania Electric Company Seeking Approval to Locate, Construct, Operate and Maintain a High-Voltage Transmission Line Referred to as the Bedford North-Central City West 115 kV HV Transmission Line Project, Docket No. A-2016-2565296 (Order entered March 8, 2018)</i>	29, 78
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Application of PP&L for Authorization to Locate and Construct its Hamlin 1348 kV Electric Transmission Line, Docket No. A-00101826 (April 3, 1981)74

*Application of PPL Electric Utilities Corporation for Approval of the Siting and Reconstruction of the Proposed Coopersburg # 1 and # 2 138/69 kV Tap, Docket No. A-2008-2022941, 2009 Pa. PUC LEXIS 1348, *38 (July 24, 2009)105*

Application of PPL Electric Utilities Corporation filed pursuant to 52 Pa. Code Chapter 57, Subchapter G, for approval of the siting and construction of transmission lines associated with the Northeast-Pocono Reliability Project in portions of Luzerne, Lackawanna, Monroe, and Wayne Counties, Pennsylvania, Docket No. A-2012-2340872, 2013 Pa. PUC LEXIS 620 (R.D. October 8, 2013; Order entered January 9, 2014)30

Application of PPL Electric Utilities Corporation Filed Pursuant to 52 Pa. Code Chapter 57, Subchapter G, for Approval of the Siting and Construction of the Pennsylvania Portion of The Proposed Susquehanna-Roseland 500 kV Transmission Line in Portions of Lackawanna, Luzerne, Monroe, Pike and Wayne Counties, Pennsylvania, Docket No. A-2009-2082652, 2010 Pa. PUC LEXIS 434 (Order entered February 12, 2010) (“Susquehanna-Roseland”) ‘passim

Application of PPL Electric Utilities Corporation Filed Pursuant to 52 Pa. Code Chapter 57, Subchapter G, for Approval of the Siting and Construction of the Pennsylvania Portion of The Proposed Susquehanna-Roseland 500kV Transmission Line in Portions of Lackawanna, Luzerne, Monroe, Pike and Wayne Counties, Pennsylvania, Docket Nos. A-2009-2082652, et al., 2009 Pa. PUC LEXIS 2323 (Recommended Decision Nov. 12, 2009)35

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I. INTRODUCTION

In these consolidated proceedings, Transource Pennsylvania, LLC (“Transource PA”), jointly with PPL Electric Utilities Corporation (“PPL Electric”), seek all approvals and findings necessary for the siting and construction of the Pennsylvania portions¹ of electric transmission lines related to a project known as the Independence Energy Connection Project (“IEC Project”). The IEC Project consists of two segments—the “East Portion,” as reconfigured by the Settlements with parties in York County located in areas of York County, Pennsylvania and the “West Portion” located in areas of Franklin County, Pennsylvania.

As explained herein, the IEC Project is a component of Project 9A that was approved by PJM Interconnection LLC (“PJM”) as a market efficiency project. During the course of this proceeding, Transource PA, PPL Electric and the active parties in York County agreed to reconfigure the route in York County to rely on existing PPL Electric transmission infrastructure and rights-of-way (“ROW”) to the extent reasonably possible. Transource PA and PPL Electric filed an Amended Application on January 29, 2020, requesting Commission approval of the reconfigured route. PJM has approved the reconfigured route subject to the approval of the Commission and the Maryland Public Service Commission. Transource PA Ex. SRH-AA1. In this Main Brief, Transource PA and PPL Electric refer to the reconfigured Project 9A as Settlement 9A. In addition, the reconfigured IEC component of Settlement 9A is referred to as the Settlement IEC Project or Settlement IEC East Portion.

Through the consolidated applications, Transource PA requests findings that the exercise of eminent domain to acquire rights-of-way across the property of 43 individual landowners

¹ On December 27, 2017, Transource PA’s Maryland affiliate filed an Application before the Maryland Public Service Commission (“MD PSC”) requesting approval for the sections of the IEC Project located in portions of Harford and Washington Counties, Maryland. The Application was docketed at Case No. 9471. The MD PSC recently issued an order approving the Application.

within the West Portion of the IEC Project is necessary or proper for the service, accommodation, convenience or safety of the public. Transource PA also requests findings that buildings to shelter control equipment at two new substation sites—the Rice Substation in Franklin County and the Furnace Run Substation in York County—are reasonably necessary for the convenience or welfare of the public.

Transource PA and PPL Electric are public utilities as defined in Section 102 of the Public Utility Code, 66 Pa.C.S. § 102. Transource PA holds a certificate of public convenience authorizing it to furnish and supply electric transmission service as a public utility in Franklin and York Counties, Pennsylvania.² PPL Electric furnishes electric distribution and transmission service in eastern and central Pennsylvania.

Project 9A was approved by PJM to mitigate congestion on the PJM transmission system. PJM is the Federal Energy Regulatory Commission (“FERC”) approved Regional Transmission Organization (“RTO”) responsible for the reliable and efficient operation of the electric transmission system under its functional control and coordinating the transmission of electricity in all or parts of thirteen states, including Pennsylvania, Maryland, West Virginia, Virginia and the District of Columbia. Transource PA St. No. 3, p. 8. PJM plans and directs the operation of the integrated transmission system for the entire PJM region. To carry out this function, PJM prepares a Regional Transmission Expansion Plan (“RTEP”). The RTEP is an annual planning process that encompasses a comprehensive series of detailed analyses to ensure that electric

² See *Application of Transource Pennsylvania, LLC for All of the Necessary Authority, Approvals, and Certificates of Public Convenience (1) to Begin to Furnish and Supply Electric Transmission Service in Franklin and York Counties, Pennsylvania; (2) for Certain Affiliated Interest Agreements; and (3) for any Other Approvals Necessary to Complete the Contemplated Transactions*, Docket No. A-2017-2587821 (Order entered January 23, 2018).

power flows efficiently and reliably to customers in accordance with North American Electric Reliability Corporation (“NERC”) reliability standards.³ Transource PA St. No. 3, pp 4-5.

PJM’s RTEP considers, among other things, market efficiency planning drivers and reliability criteria requirements. Under the market efficiency component, PJM identifies congestion on electric transmission facilities that has an economic impact on PJM’s wholesale energy or capacity markets. Transource PA St. No. 3, p. 5. When PJM’s market efficiency analysis identifies a need to relieve congestion on electric transmission facilities, PJM opens a Long Term Proposal Window to solicit potential solutions from market participants. These market participants submit competitive proposals to address the congestion issues, in order to mitigate transmission constraints and allow the market to access low cost generation.⁴

PJM opened a Long-Term RTEP Window beginning October 30, 2014 through February 27, 2015 (“2014/2015 Long Term Window”) to solicit proposals to alleviate congestion in the AP South area along with other congestion drivers. Transource PA St. No. 8-R, p. 7, lines 8-11. In response to the 2014/2015 Long Term Window, Transource Energy, the parent of Transource PA, submitted “Project 9A,” a major component of which is the IEC Project. After extensive review and evaluation of Project 9A and 40 other proposals with stakeholders, PJM selected Project 9A because it provided the most benefits, including the most total congestion savings and most production cost savings, and met PJM’s benefit to cost ratio. Transource PA St. No. 3, p. 3. Project 9A also consistently provided the most benefits across the scenarios that were studied. Transource PA St. No. 3, p. 31. Project 9A was approved by the PJM board in August 2016.

³ Pursuant to Section 215 of the Federal Power Act, FERC has certified NERC as the electric reliability organization to develop and enforce mandatory reliability standards, which are subject to FERC review and approval. The FERC-approved NERC reliability standards are mandatory, and failure to comply with those standards can result in penalties of up to \$1 million per day. *See* Transource PA St. No. 7-R, p. 23.

⁴ PJM’s solicitation of market efficiency project submittals through its Long Term Proposal Window is a competitive process consistent with FERC Order No. 1000, 136 FERC ¶ 61,051.

Thereafter, PJM and Transource Energy executed a Designated Entity Agreement, which was approved by FERC on January 12, 2017, obligating Transource PA to build the IEC Project. Transource PA Ex. Nos. 1 and 2, p. 9.

Since 2015 and throughout this proceeding, PJM has performed multiple reevaluations of the IEC Project. Transource PA St. No. 3, pp. 23, 33; Transource PA St. No. 8-R, p. 14; Transource PA Ex. TJH-AA2, p. 7. The results of an updated evaluation in September 2018 showed that in addition to resolving the congestion issues on the AP South and related constraints, Project 9A will resolve five reliability criteria violations that PJM identified to occur in 2023. Transource PA St. No. 7-R, pp. 20-22. The most recent reevaluation in November 2019 demonstrated that Settlement 9A (with the West Portion and the Settlement Route for the IEC East Portion) continues to pass the benefit-to-cost ratio threshold and also resolves the emerging reliability violations. Transource PA Ex. No. AA-1, Supplemental Attachment 2.

Prior to filing its Applications, Transource PA conducted an extensive, multi-faceted siting analysis to determine the preferred routes for the Pennsylvania portions of the IEC Project. Transource PA identified and compared route alternatives based upon a detailed analysis and balance of comments from the public, societal concerns, environmental impacts, engineering considerations, and cost.

In Transource PA's original Application for the East Portion of the IEC Project, Transource PA proposed to construct the overhead double-circuit Furnace Run-Conastone 230 kV Transmission Line in York County, Pennsylvania.⁵ During the course of this proceeding,

⁵ As explained in Transource PA's December 27, 2017 Siting Application for the East Portion of the IEC Project, the originally proposed Furnace Run-Conastone 230 kV Transmission Line extends approximately 15.8 miles to connect the existing Conastone Substation located near Norrisville, Harford County, Maryland, and the new Furnace Run Substation to be located in York County, Pennsylvania. The Pennsylvania section of the Furnace Run-Conastone 230 kV Transmission Line extends

various parties in Pennsylvania and in the related Maryland proceeding proposed using existing PPL Electric ROW and transmission infrastructure in York County to the extent reasonably possible for the East Portion of the IEC Project. Transource PA and PJM evaluated several different options that were put forth in the Maryland proceedings and were able to identify a solution that utilized PPL Electric's existing ROW and transmission infrastructure in York County for the IEC East portion of the Project. These efforts resulted in Transource PA entering settlement agreements with PPL Electric, York County Planning Commission ("YCPC"), and Citizens to Stop Transource York County, Maple Lawn Farms, Barron Shaw and Shaw Orchards (the latter four collectively, "York County Citizens") to propose and support the Settlement IEC East Portion through an amendment to the original Application. The PJM Board approved Settlement 9A subject to the approvals of the Pennsylvania and Maryland Commissions.

The Settlement IEC East Portion will consist primarily of utilizing existing PPL Electric infrastructure and right-of-way by installing a second circuit on the existing towers within the Manor to Graceton corridor and Otter-Creek to Conastone corridor. The Settlement IEC East Portion will require new transmission towers for approximately four miles in York County. The four-mile segment includes a two-mile segment east of the proposed Furnace Run Substation to the existing Manor to Graceton corridor and a two-mile segment west of the proposed Furnace Run Substation to the existing Otter-Creek to Conastone corridor. Transource PA Ex. No. AA-1, p. 14; PPL Electric St. No. AA-3, pp. 3-4. This four-mile segment currently consists of aged infrastructure within existing ROW that is not in service, which will be replaced with new infrastructure. The Furnace-Run to Conastone double circuit will be approximately eighteen miles in total length, of which approximately two miles will be constructed in the expanded

approximately 12.7 miles between the Maryland border and the new Furnace Run Substation. The remaining 3.1 miles are located in Maryland.

ROW with new transmission towers and sixteen miles will be in the existing ROW on the existing towers. The Furnace Run-Graceton double circuit line will be approximately eleven miles in total length, of which approximately two miles will be constructed in the expanded right-of-way with new transmission towers replacing the existing structures and nine miles will be in the existing right-of-way on the existing towers. Transource PA Ex. No. AA-1, p. 14; PPL Electric St. No. AA-3, pp. 3-6. Subject to the Commission's approval, PPL Electric will be responsible for constructing the new transmission line in York County, and Transource PA will construct, own and operate the new Furnace Run Substation. Transource PA Ex. No. AA-1, p. 13. PPL Electric has acquired all necessary ROW for the Settlement IEC East Portion. In addition, all of the active parties in York County support the Settlement IEC East Portion.

Transource PA continues to seek approval to site and construct the West Portion of the IEC Project as originally proposed in the Application. The West Portion of the IEC Project consists of the new overhead double circuit Rice-Ringgold 230 kV transmission line and the new Rice Substation to be located in Franklin County, Pennsylvania. The Rice-Ringgold 230 kV Transmission Line will extend approximately 28.8 miles to connect the existing Ringgold Substation located near Smithsburg, Washington County, Maryland and the new Rice Substation to be located in Franklin County, Pennsylvania. Approximately 24.4 miles of the IEC West Project will be located in Pennsylvania and approximately 4.4 miles will be located in Maryland. Transource PA Ex. No. 1, p. 14.

The IEC West siting route minimizes environmental and land use impacts in Franklin County. Over 40% of the Proposed Route parallels existing highways, railroads or existing transmission line ROW. Transource PA also has conducted extensive mitigation efforts to minimize the impacts of the line on landowners. One of these mitigation efforts in the siting

process was to switch from lattice towers to steel monopoles at the request of landowners to reduce the footprint of the transmission structures and minimize impacts on farmers and farmland. Transource PA St. No. 11-R, p. 4; Transource PA St. No. 4-R, p. 29.

Transource PA filed its siting Applications in December 2017, over 2-1/2 years ago. The schedule and hearings in this proceeding have been delayed several times. As a result of these delays, the estimated in-service date has moved from June 2020 to the fourth quarter of 2022. Transource PA Statement No. AA-1, p. 9. As explained in this proceeding, the Settlement IEC Project will resolve reliability violations that are identified to arise in 2023 absent Settlement 9A. In order to meet the in-service date of 2022 in time to address the 2023 reliability violations, prompt approval of the Project is necessary. Delayed approval will jeopardize the in-service date and could prevent the Settlement IEC Project from resolving the reliability violations in 2023.⁶ Transource PA notes that the Maryland Public Service Corporation (“MD PSC”) recently approved the IEC Project as modified by the Settlement Agreement in Maryland. *Application of Transource Maryland LLC for a Certificate of Public Convenience and Necessity to Construct Two New 230 kV Transmission Lines Associated with the Independence Energy Connection Project in Portions of Harford and Washington Counties, Maryland*, Case No. 9471 (Order No. 89571).

For the reasons set forth below and in the Company’s testimony, Transource PA and PPL Electric respectfully request that Administrative Law Judge Elizabeth H. Barnes (the “ALJ”) and the Commission expeditiously and without delay: (1) approve the siting and construction of the transmission lines associated with the Pennsylvania portion of the Settlement IEC Project as set forth in the consolidated Applications as amended; (2) find that the buildings to shelter control

⁶ Transource PA fully supports Commission approval of the Settlement IEC Project. In the event that the Commission does not approve the Settlement IEC Project, Transource PA requests that the Commission approve the IEC Project as originally filed.

equipment at the Furnace Run Substation and the Rice Substation are reasonably necessary for the convenience or welfare of the public; (3) approve the exercise of eminent domain by Transource PA to acquire rights-of-way across the properties of 43 individual landowners in Franklin County as necessary for the service accommodation, convenience or safety of the public; and (4) grant any other approvals as may be required.

II. STATEMENT OF THE CASE

This proceeding was initiated on December 27, 2017, when Transource PA filed Applications for Approval of the Siting and Construction of 230 kV Transmission Lines in Portions of York County at Docket No. A-2017-2640195 (East Portion of the IEC Project) and in portions of Franklin County at Docket No. A-2017-2640200 (West Portion of the IEC Project). Transource PA also submitted testimony in support of the Applications. Together, the East and West Portions of the IEC Project are being proposed to alleviate transmission congestion constraints in Pennsylvania, Maryland, West Virginia, and Virginia. The IEC Project, as part of Project 9A, will also resolve reliability violations identified to occur in 2023 without Settlement 9A. A full procedural history is provided in Appendix A to this Main Brief.

The Applications were assigned to Administrative Law Judges Elizabeth H. Barnes and Andrew M. Calvelli (the “ALJs”) for hearing and recommended decision.

Various parties have filed Protests and Petitions to Intervene, including the Office of Consumer Advocate (“OCA”), Stop Transource Franklin County (“STFC”), York County Citizens, PECO Energy Company, Mid-Atlantic Interstate Transmission, LLC & West Penn Power Company, YCPC, and PPL Electric. Numerous other individuals and organizations filed Protests and Petitions to Intervene.

On May 15, 2018, Transource PA filed Petitions for Findings that a Building to Shelter Control Equipment at the Furnace Run Substation in York County, Pennsylvania and a Building to Shelter Control Equipment at the Rice Substation in Franklin County, Pennsylvania are Reasonably Necessary for the Convenience or Welfare of the Public, Docket Nos. P-2018-3001883 (York County) and P-2018-3001878 (Franklin County) (collectively, the “Zoning Exemption Petitions.”)

Also on May 15, 2018, Transource PA filed 133 Condemnation Applications seeking to exercise eminent domain authority, some of which were later withdrawn due to engineering modifications or agreement with the respective landowners.

On September 25, 2018, other parties, except STFC, submitted their direct testimony. On September 25, 2018, STFC requested an extension of time to submit its direct testimony, which Transource PA opposed. STFC submitted its direct testimony on October 11, 2018.

Transource PA served its rebuttal testimony on November 27, 2018.

Also on November 27, 2018, Transource PA amended the Siting Application and submitted revised aerial mapbooks to reflect a minor proposed route adjustment, which maintained the original 1,000 foot corridor consisting of 500 feet on each side of the centerline.

On December 28, 2018, the ALJs issued an Order striking certain portions of Transource PA’s rebuttal testimony regarding reliability benefits and amending the procedural schedule.

The OCA, Citizens York County, STFC, Barron Shaw, YCPC, and PPL Electric submitted surrebuttal testimony on January 30, 2019.

On February 1, 2019, Transource PA filed a Petition for Interlocutory Review and Answer to Material Question requesting that the Commission grant interlocutory review of the

ALJs' December 28, 2018 Order striking Transource PA's testimony regarding reliability benefits.

On February 11, 2019, Transource PA filed a Brief in support of its Petition for Interlocutory Review. Also on February 11, 2019, the OCA, STFC, and Citizens York County filed Briefs in opposition to Transource PA's Petition for Interlocutory Review.

On February 11, 2019, Transource PA served its rejoinder testimony.

On February 14, 2019, the OCA and STFC filed Motions to Strike portions of Transource PA's rejoinder testimony. Citizens York County filed a letter in support of the Motions to Strike.

Evidentiary hearings were held on February 21-22, and 25-27, 2019. During the hearings, Transource PA's witnesses were cross examined and their testimony admitted to the record, except for the stricken testimony regarding reliability benefits.

On March 20, 2019, the Commission issued an Order granting Transource PA's Petition for Interlocutory Review, answering the material questions in the affirmative, and returning the matter to the ALJs for further proceedings consistent with the Commission's Order.

Transource PA submitted supplemental testimony on May 14, 2019 to provide an update regarding a conceptual alternative to the originally proposed East Portion of the IEC Project.

On May 29, 2019, the OCA served supplemental surrebuttal testimony. On June 3, 2019, STFC served supplemental surrebuttal testimony.

On June 17, 2019, Transource PA served supplemental rejoinder testimony.

On June 18, 2019, Transource PA filed a Motion to Suspend the Procedural Schedule in order to allow the parties additional time to engage in settlement discussions.

On June 21, 2019, the ALJs issued an Order granting Transource PA's Motion to Suspend the Procedural Schedule.

On July 26, 2019, counsel for Transource PA informed the ALJs that the parties were continuing to engage in settlement discussions and requested that the further hearing be rescheduled.

The parties continued to engage in settlement discussions, which resulted in Transource PA executing settlement agreements with PPL Electric, YCPC, and York County Citizens. The settlement agreements provide, inter alia, that Transource PA and PPL Electric will present the Commission with an alternative route for the East Portion of the IEC Project – the “Settlement IEC East Portion.” On October 17, 2019, Transource filed the settlement agreements with the Commission.

On January 29, 2020, Transource PA and PPL Electric filed the Joint Amended Application pursuant to the Settlement Agreements.

On February 28, 2020, Franklin County filed a Petition to Intervene and Protest. Transource PA filed an Answer to Franklin County’s Petition to Intervene on March 19, 2020. On April 16, 2020, ALJ Barnes granted Franklin County’s Petition to Intervene.

On July 8, 2020, Transource PA filed rejoinder testimony in response to the testimony filed by Franklin County and STFC on June 22, 2020.

Additional hearings were held on July 9, 2020.

Transource PA and PPL Electric hereby submits this Main Brief pursuant to the scheduled adopted by the ALJ.

III. SUMMARY OF THE ARGUMENT

Transource PA filed the above-captioned Siting Applications with the Commission in December 2017, over 2-1/2 years ago. The IEC East Application was amended on January 29, 2020 pursuant to Settlement Agreements with PPL Electric and the active York County parties to

site the Settlement IEC East Portion of the Project on existing PPL Electric ROW and transmission infrastructure. The applications request Commission approval for Transource PA and PPL Electric to site the Settlement IEC Project, which is a component of Settlement 9A as approved by PJM, subject to approvals by the Pennsylvania and Maryland Commissions. Settlement 9A is a market efficiency project approved by PJM to resolve congestion constraints on the AP South and related constraints.

PJM selected the original Project 9A out of 41 competitive solutions to address congestion on the AP South and related constraints. PJM performed over 23,000 hours of computation time in evaluating the competitive proposals. Project 9A provided the most congestion benefits and highest benefit to cost ratio out of all of the solutions that passed the benefit to cost ratio.

The AP South and related constraints have experienced significant and persistent congestion for many years. Settlement 9A is estimated to provide approximately \$844 million in congestion benefits over the 15-year planning window. Settlement 9A will continue to provide congestion benefits well past the 15-year planning window over its useful life of 50 or more years.

Settlement 9A also provides significant reliability benefits to the PJM system. Settlement 9A resolves 5 major NERC reliability violations that were identified by PJM to occur in 2023 if Settlement 9A is not constructed. Fines for NERC reliability violations can be up to \$1 million per violation per day. If Settlement 9A is not constructed in time to resolve the reliability violations, PJM could be required to take significant actions to ensure that the PJM transmission system is not overloaded, including emergency load reductions.

In this proceeding, Parties have challenged whether Settlement 9A which has been approved under PJM's FERC-approved benefit to cost methodology can satisfy the Commission's need requirements and have challenged various aspects of PJM's selection of Settlement 9A.

As a threshold matter, Settlement 9A clearly meets the need requirement for siting approval. As explained herein, the Federal Power Act provides FERC with exclusive jurisdiction over the interstate transmission of electricity, as well as the wholesale power market. Under Order No. 1000, FERC has ordered PJM to identify and resolve congestion on the transmission system in order to improve the economic efficiency of the system as a whole.

Under PJM's market efficiency process, PJM identified significant and persistent congestion on the AP South and related constraints and solicited competitive proposals to address the congestion. PJM reviewed 41 competitive proposals and selected Transource's Project 9A as the more efficient, cost effective solution. The PJM Board subsequently approved the modification of the eastern portion of the IEC Project (Settlement 9A) as a result of the Settlements with the York County parties, contingent upon approvals in both Pennsylvania and Maryland.

The Pennsylvania Commission is required to work with the Federal government and other states with respect to the interstate transmission system and interstate power pools to enhance competition and complement electric restructuring. Pennsylvania is served by PJM and is required under the Public Utility Code to work with PJM to operate the transmission system and interstate power pools. Given FERC's directives to PJM to identify and address congestion, it is clear that market efficiency transmission projects that are approved by PJM pursuant to a

FERC-approved planning process meet the need requirements under the Commission's regulations.

Parties in this proceeding have made many arguments challenging PJM's selection of Settlement 9A. They argue that PJM's FERC-approved benefit-to-cost ratio is flawed, that congestion on the AP South interface has decreased and that non-transmission alternatives could eliminate the need for Settlement 9A. These issues are addressed below, however, it is important to note that no party in this proceeding has made any allegation that PJM did not follow its FERC accepted and tariffed processes for selecting Project 9A. Parties arguments must fail for this reason alone.

Parties argue that PJM's benefit-to-cost methodology is flawed. These arguments should be denied. PJM is following its FERC-approved methodology which aligns the benefit metric calculation with cost allocation principles. This means that the zones that benefit from a market-efficiency project pay for the project. In addition, PJM's benefit to cost calculation methodology discourages the perpetuation of unjust, unreasonable and discriminatory rates. Parties' attempts to revise PJM's methodology to include increases in power prices in unconstrained areas would merely encourage the continuation of unjust, unreasonable, and unduly discriminatory wholesale power prices.

Parties also argue that Settlement 9A is not needed because congestion on the AP South interface has been decreasing. Parties fail to recognize that congestion cannot be viewed in isolation on one interface and that congestion on the AP South and related constraints for 2019 is consistent with what PJM forecasted in 2015.

Parties further argue that non-transmission alternatives such as energy efficiency measures, renewable resources, distributed generation and demand response could eliminate the

need for Settlement 9A. Parties have provided no evidence in this proceeding that non-transmission alternatives will reduce congestion on the AP South and related constraints. In addition, parties fail to recognize that PJM already includes forecasts for non-transmission alternatives in its Model. Parties also fail to recognize that non-transmission alternatives could increase congestion on the AP South and related constraints.

Transource PA has conclusively demonstrated that Settlement 9A is needed to address congestion and reliability violations. Parties' arguments that Settlement 9A is not needed should be denied.

Parties also challenge various aspects of Transource PA's proposed route for the IEC West Portion of Project 9A in Franklin County. As an initial matter, no party has proposed an alternative route for the IEC West Portion or presented any study or analysis that an alternative route in Franklin County would have less environmental impacts.

Transource PA conducted an extensive siting analysis in Franklin County and selected the route that had the least environmental impacts. Transource PA has also addressed many individual landowners' requests to mitigate individual impacts. Parties expressed concerns about karst geology in Franklin County, and Transource PA has hired a karst expert to conduct a study to ensure that karst will not impact the IEC West Portion.

Several public input hearings were held in this proceeding. Members of the public expressed concerns about EMF, real estate values, environmental impacts, land use, and farming impacts. Transource PA has addressed these issues in this proceeding through the testimony of various witnesses. Transource PA presented the testimony of three EMF experts who testified that EMF will not cause adverse health impacts on people or animals. Transource PA also

presented the testimony of two real estate experts who testified that the IEC Project will not have a significant adverse effect on property values.

Finally, in order to address landowner concerns about farming, Transource PA switched its plans from lattice structures to monopoles which significantly reduced the amount of farmland that will be impacted by the project. In fact, the total square footage for all of the monopoles in Franklin County is less than ½ acre. In addition, structures will be placed so that large farm equipment will be able to drive between structures. These efforts ensure that the Project will have minimum adverse effects on farming.

Transource PA has taken extensive measures to mitigate the impact of the Project on the parties. These measures include agreeing to an alternative route in York County which avoids greenfield construction of transmission lines and relies on PPL Electric's existing ROW and transmission infrastructure. Transource PA's siting efforts have minimized environmental impacts, comply with all applicable Commission regulations and also comply with Pennsylvania Court's decisions regarding the Environmental Rights Amendment to the Pennsylvania Constitution.

For these reasons and as more fully explained herein, Transource PA requests that ALJ Barnes and the Commission expeditiously approve the applications and petitions necessary to permit the prompt construction of the IEC West and Settlement IEC East Projects.

IV. BURDEN OF PROOF

Section 332(a) of the Public Utility Code ("Code"), 66 Pa.C.S. § 332(a), provides that the party seeking a rule or order from the Commission has the burden of proof in that proceeding. It is axiomatic that "[a] litigant's burden of proof before administrative tribunals as well as before most civil proceedings is satisfied by establishing a preponderance of evidence which is

substantial and legally credible.” *Samuel J. Lansberry, Inc. v. Pa. P.U.C.*, 578 A.2d 600, 602 (Pa. Cmwlth. 1990). The preponderance of evidence standard requires proof by a greater weight of the evidence. *Cmwlth. v. Williams*, 557 Pa. 207, 732 A.2d 1167 (1999). This standard is satisfied by presenting evidence more convincing, by even the smallest amount, than that presented by another party. *Brown v. Cmwlth.*, 940 A.2d 610, 614 n.14 (Pa. Cmwlth. 2008).

If the applicant sets forth a prima facie case, then the burden shifts to the opponent. *McDonald v. Pennsylvania Railroad Co.*, 348 Pa. 558, 36 A.2d 492 (1940). Establishing a prima facie case requires either evidence sufficient to make a finding of fact permissible or evidence to create a presumption against an opponent which, if not met, results in an obligatory decision for the proponent. Once a prima facie case on a point has been established, if contrary evidence is not presented, there is no requirement that the applicant produce additional evidence in order to sustain its burden of proof. *District of Columbia’s Appeal*, 343 Pa. 65, 21 A.2d 883 (1941). *See, e.g., Application of Pennsylvania Power & Light Co.*, Doc. Nos. A-110500F0196, et al.; 1994 Pa. PUC LEXIS 65 (Oct. 21 1994) (holding that the company met its burden to prove that there was an immediate need for the reinforcement of the power supply where the need for the project was uncontested and no party presented any evidence challenging the need for the project).

Further, a party that raises an issue that is not included in a public utility’s filing bears the burden of proof. For example, in *Pa. PUC v. Metropolitan Edison Co., et al.*, Docket Nos. R-00061366, et al., 2007 Pa. PUC LEXIS 5 (Order entered Jan. 11, 2007), a party offered proposals to have the companies incur expenses not included in their filings. The ALJ held that, as the proponent of a Commission order with respect to its proposals, the party bears the burden of proof as to proposals that are not included in the companies’ filings. The Commission agreed and adopted the ALJ’s conclusion that Section 315(a) of the Public Utility Code cannot

reasonably be read to place the burden of proof on the utility with respect to an issue the utility did not include in its filing and which, frequently, the utility would oppose. *Id.* at *111-12.

Transource PA and PPL Electric are seeking Commission approval of the consolidated Applications, as amended, for new high voltage transmission lines; two Zoning Exemption Petitions for control equipment buildings at the associated substations; and 43 Condemnation Applications for the remaining rights-of-way needed for the proposed West Portion. As the parties seeking a Commission order, Transource PA and PPL Electric have the burden of proof with respect to their proposals. 66 Pa.C.S. § 332(a). As explained fully herein, Transource PA and PPL Electric have met their burden by introducing evidence of record to support and satisfy all of the legal standards for approval of the consolidated Applications as amended.

V. APPLICABLE LEGAL STANDARD

A. STANDARDS FOR APPROVAL OF PUBLIC UTILITY FACILITIES

1. Need

The Commission's regulations provide that an electric distribution company may only construct a high voltage ("HV") transmission line, *i.e.* an electrical line with an operating voltage of 100 kV or higher, upon prior Commission approval. 52 Pa. Code § 57.71. The Commission's regulations set forth the procedures for seeking approval of a HV line and the evidence that the Commission will consider in its determination of the application. *See* 52 Pa Code §§ 57.72, 57.75. In order to grant an application for the construction and siting of a HV transmission line, the Commission must find and determine the following as to the proposed line:

- a) That there is a need for it.
- b) That it will not create an unreasonable risk of danger to the health and safety of the public.

- c) That it is in compliance with the applicable statutes and regulations providing for the protection of the natural resources of this Commonwealth.
- d) That it will have minimum adverse environmental impact, considering the electric power needs of the public, the state of available technology and the available alternatives.

52 Pa. Code § 57.76(a). In determining need for the proposed HV line, the Commission will consider, among other things, the “present and future necessity of the proposed HV line in furnishing service to the public.” 52 Pa. Code § 57.75(e)(1).

The Public Utility Code does not define need; however, Pennsylvania appellate courts have recognized that there is a need for reliable *regional* electric service and transmission systems. *See Energy Conservation Council of Pa. v. Pa. PUC*, 995 A.2d 465, 485 (Pa. Cmwlth. 2010) citing *Stone v. Pa. PUC*, 162 A.2d 18, 19-21 (Pa. Super. 1960) and *Dunk v. Pa. PUC*, 232 A.2d 231, 234-35 (Pa. Super. 1967). The Commonwealth Court has further explained that the need for a project is not limited to need from an “engineering” perspective. *Pennsylvania Power & Light Co. v. Pa. PUC*, 696 A.2d 248, 250 (Pa. Cmwlth. 1997).

With respect to need issues, the Commonwealth Court has determined that a transmission line should not be approved unless the electric utility demonstrates that the line is “necessary or proper for the accommodation, convenience and safety of its patrons, employees and the public.” *Pa. Power & Light Co. v. Pa. PUC*, 696 A.2d 248, 250 (Pa. Cmwlth. 1997) (quoting 66 Pa.C.S. § 1501). In *Stone*, the Superior Court upheld the Commission’s determination that a proposed HV transmission line that would integrate the systems of a Pennsylvania utility and a Maryland utility in order to meet varying and growing load demands and to provide constant voltage and frequency stability was “necessary and proper for the service, accommodation, convenience and safety of the public.” Specifically, the Superior Court stated that “[o]ne of the principal considerations of public convenience and necessity is the need for integration of the bulk power

transmission systems of Philadelphia and Baltimore.” *Stone*, 162 A.2d 18, 21. Thus, the Superior Court considered the fact that the interconnection would enable both systems to obtain greater economies of operation to be a key element of necessity for the proposed line. *Id.* The Superior Court also noted that the proposed line would improve reliability by increasing alternative sources of supply and providing needed reinforcement to the region’s transmission system by way of an integrated high capacity transmission network. As such, the proposed line would benefit customers of both the Pennsylvania utility and the Maryland utility, as well as customers served by the interconnecting companies. *Id.* at 21, fn. 1. *See also Dunk v. Pa. PUC*, 232 A.2d 231 (upholding Commission’s approval of application where energy to be transmitted over proposed line would partially benefit customers of other utilities and those in neighboring states).

Moreover, the General Assembly has recognized the importance of ensuring the reliability of electric transmission systems and the provision of sufficient electrical power at affordable rates. *Energy Conservation Council of Pa.*, 995 A.2d 465, 485. In the context of the Electricity Generation Customer Choice and Competition Act, 66 Pa. C.S. §§ 2801 *et seq.*, the General Assembly included several provisions regarding the need for an efficient, reliable interconnected transmission system to ensure the success of electric restructuring. Section 2802(12) of the Public Utility Code states: “[r]eliable electric service is of the utmost importance to the health, safety and welfare of the citizens of the Commonwealth. Electric industry restructuring should ensure the reliability of the interconnected electric system by maintaining the efficiency of the transmission . . . system.” 66 Pa. C.S. § 2802(12). Section 2802(20) of the Code provides, *inter alia*, that ensuring the reliability of electric service depends on conscientious maintenance of transmission systems, and that independent system operators shall

establish enforceable inspection, maintenance, repair and replacement standards. 66 Pa. C.S. § 2802(20). Finally, Section 2803 of the Code defines “reliability” as:

Includes adequacy and security. As used in this definition, “adequacy” means the provision of sufficient generation, transmission and distribution capacity so as to supply the aggregate electric power and energy requirements of consumers, taking into account scheduled and unscheduled outages of system facilities; and “security” means designing, maintaining and operating a system so that it can handle emergencies safely while continuing to operate.

66 Pa. C.S. § 2803.

When examining need, the Commission has previously considered the need to address congestion on the interstate transmission system. In *Application of Trans-Allegheny Interstate Line Company* (“*TrAILCo*”), the Commission determined that, pursuant to Section 2805, the “Commission has an obligation to enhance regional reliability and mitigate transmission constraints in order to reduce congestion for ratepayers in Pennsylvania and adjacent jurisdictions.” *TrAILCo*, Docket No. A-110172, 2008 Pa. PUC LEXIS 35 (December 12, 2008) (emphasis added). The Commonwealth Court upheld the Commission’s interpretation of its obligation under Section 2805 as requiring the Commission to work with NERC and regional coordinating councils. *Energy Conservation Council of Pa.*, 995 A.2d 465, 484-86.

As explained in Section VI(B) below, FERC requires PJM to adopt market efficiency projects to facilitate the provision of FERC-jurisdictional services at rates, terms and conditions that are just and reasonable and not unduly discriminatory or preferential. FERC Order No. 1000, 136 FERC ¶ 61,051, p. 99.

The General Assembly also emphasized the need for regional coordination to accomplish the goals of the electric industry restructuring. Section 2805 states:

§ 2805. Regionalism and reciprocity.

(a) Other states.--The commission shall take all necessary and appropriate steps to encourage interstate power pools to enhance competition and to complement industry restructuring on a regional basis. The Commonwealth, the commission and Pennsylvania electric utilities shall work with the Federal Government, other states in the region and interstate power pools to accomplish the goals of restructuring and to establish independent system operators or their functional equivalents to operate the transmission system and interstate power pools. The commission, Pennsylvania electric utilities and all electricity suppliers shall work with the Federal Government, other states in the region, the North American Electric Reliability Council and its regional coordinating councils or their successors, interstate power pools, and with the independent system operator or its functional equivalent to ensure the continued provision of adequate, safe and reliable electric service to the citizens and businesses of this Commonwealth.

66 Pa.C.S. § 2805(a).

The Commission also recognized the need for regional transmission planning in *Application of PPL Electric Utilities Corporation Filed Pursuant to 52 Pa. Code Chapter 57, Subchapter G, for Approval of the Siting and Construction of the Pennsylvania Portion of The Proposed Susquehanna-Roseland 500 kV Transmission Line in Portions of Lackawanna, Luzerne, Monroe, Pike and Wayne Counties, Pennsylvania*, Docket No. A-2009-2082652, 2010 Pa. PUC LEXIS 434 (Order entered February 12, 2010) (“*Susquehanna-Roseland*”), in which it stated:

As an RTO, PJM plans and operates the integrated Bulk Electric System for the entire PJM footprint and administers the power markets in the PJM region. As part of its responsibilities, PJM undertakes a coordinated and open transmission planning process. PJM’s role expanded in 2007 under FERC Order No. 890, which amended PJM’s existing tariff to require coordinated, open, and transparent transmission planning on both a local and regional level. *Preventing Undue Discrimination and Preference in Transmission Service*, Order No. 890, 72 FR 12,266 (March 15, 2007), FERC Stats. & Regs. ¶ 31,241, p. 435 (2007) (Order No. 890). In addition, FERC required that transmission providers, such as PJM, coordinate with interconnected systems. *Id.* at 523.

FERC stated that regional coordination would ensure the feasibility of simultaneously planned projects and the ability to identify system enhancements that could relieve congestion or integrate new resources. *Id.* Further, FERC determined that:

Greater coordination of planning on a regional basis will also increase efficiency through the coordination of transmission upgrades that have region-wide benefits, as opposed to pursuing transmission expansion on a piecemeal basis. Id. at 524; RD at 99, 100.

Susquehanna-Roseland at *44 (emphasis added). Approaching the need determination from a regional perspective rather than examining the electric needs of a particular state in isolation is consistent with the General Assembly's directives to the Commission in 66 P.a. C.S. § 2805(a).

Former Commissioner Cawley explained the importance of regional transmission planning in his testimony. He explained that Section 2805 of the Public Utility Code, 66 Pa. C.S. § 2805, requires the Commission to work with the Federal Government and other states to establish independent system operators, such as PJM, to operate the transmission system and interstate power pools. Transource PA St. No. 9-R, pp. 7-8. Former Commissioner Cawley also explained that the Commission has implemented regional transmission planning in its *TrAILCo* and *Susquehanna-Roseland* decisions. Transource PA St. No. 9-R, pp. 11-13.

It is clear from the appellate case law; the General Assembly's directives to the Commission in the context of electric restructuring, as provided for in the Public Utility Code; and the Commission's application of its regulations with respect to the need determination in prior siting applications, that need is not limited to resolving reliability violations but also includes addressing congestion constraints and that need is not limited only to Pennsylvania, but includes the electric needs of the region as a whole.

2. Siting and Route Selection

The Commission's regulations require that an applicant provide the following with respect to the siting of a proposed HV transmission line:

(10) A general description of reasonable alternative routes to the proposed HV line, including a description of the corridor planning methodology, a comparison of the merits and detriments of each route, and a statement of the reasons for selecting the proposed HV line route

52 Pa. Code § 57.72(c)(10).

When considering the reasonableness of an applicant's route selection, the Commonwealth Court has stated:

The applicable legal standards for review of the selection of a route for utility lines are whether the powers conferred upon the public utility have been wantonly, capriciously or arbitrarily exercised. *West Penn Power Co. v. Pennsylvania Public Utility Commission*, 184 A.2d 143 (1962). The degree of inconvenience to a landowner, therefore, would not constitute grounds for withholding the exercise of the power to condemn the easement, see *Stone v. Pennsylvania Public Utility Commission*, 162 A.2d 18 (1960), where the record establishes that the utility's route selection was reasonable considering all of the factors involved in the selection of the line.

Paxtowne v. Pa. P.U.C., 398 A.2d 254, 256 (Pa. Cmwlth. 1979). Similarly, the selection of a route for transmission lines was explained by the Superior Court as follows:

Appellant's [affected landowner's] first two contentions are sufficiently answered by our opinion in *Phillips v. Pa. P.U.C.*, [181 Pa. Super. 625, 124 A.2d 625 (1956)], wherein we restated the well-established proposition that the selection of routes for transmission lines is a matter for the utility in the first instance and, unless it is shown that it proposes to exercise the powers conferred upon it wantonly or capriciously, or that the rights of the landowner have been unreasonably disregarded, the Commission is not required to withhold its approval merely because another route might have been adopted.

Laird v. Pa. P.U.C., 133 A.2d 579, 581 (1957).

Recently, the Commonwealth Court has held that a utility's route for a proposed HV transmission line should be approved where the record evidence shows that the utility's route-selection process was reasonable and that the utility properly considered the factors relevant to siting a transmission line. *Energy Conservation Council of Pa. v. PUC*, 25 A.3d 440, 449 (Pa. Cmwlth. 2011) quoting *Energy Conservation Council of Pa.*, 995 A.2d 465, 479-80 (“[W]here the record establishes that the utility’s route selection was reasonable, considering all the factors, its route will be upheld. The mere existence of an alternative route does not invalidate the utility’s judgment.”) The route selected by the applicant must demonstrate reasonable efforts to minimize adverse environmental impacts when compared to the available alternative routes, but the utility need not consider all possibilities. *Id.* at 448-49. Moreover, the applicant is not required to choose a route that has no adverse impacts. Instead, a utility must make reasonable efforts to minimize and mitigate any impacts and ensure that any harm to the environment is outweighed by the benefits of the project. *Id.*

3. Environmental Considerations

With respect to environmental issues, the Commission must find that the proposed line “will have minimum adverse environmental impact, considering the electric power needs of the public, the state of available technology and the available alternatives.” 52 Pa. Code § 57.76(a)(4). The Commission’s regulations regarding the siting of HV transmission lines require that consideration be given to the impact and efforts to minimize the impact of the proposed line on the following:

- (i) Land use
- (ii) Soil and sedimentation
- (iii) Plant and wildlife habitats
- (iv) Terrain
- (v) Hydrology
- (vi) Landscape
- (vii) Archaeologic areas

- (viii) Geologic areas
- (ix) Historic areas
- (x) Scenic areas
- (xi) Wilderness areas
- (xii) Scenic rivers

52 Pa. Code § 57.75(e)(3).⁷

To approve the proposed line, the Commission must also find that the proposed line “is in compliance with the applicable statutes and regulations providing for the protection of the natural resources of this Commonwealth.” 52 Pa. Code § 57.76(a)(3). The Commission has generally found compliance with the applicable environmental statutes and regulations where the applicant agrees to obtain any and all environmental permits necessary for construction and to comply with any conditions on those permits during construction.⁸ Importantly, however, the

⁷ The Commission’s regulations also provide that an application for approval to site and construct a proposed HV line must include, *inter alia*, the following:

(7) A description of studies which had been made as to the projected environmental impact of the HV line as proposed and of the efforts which have been and which will be made to minimize the impact of the HV line upon the environment and upon scenic and historic areas, including but not limited to impacts, where applicable, upon land use, soil and sedimentation, plant and wildlife habitats, terrain, hydrology and landscape.

(8) A description of the efforts of the applicant to locate and identify archaeological, geologic, historic, scenic or wilderness areas of significance within 2 miles of the proposed right-of-way and the location and identity of the areas discovered by the applicant.

* * *

(11) A list of the local, State and Federal governmental agencies which have requirements which shall be met in connection with the construction or maintenance of the proposed HV line and a list of documents which have been or are required to be filed with those agencies in connection with the siting and construction of the proposed HV line.

52 Pa. Code § 57.72.

⁸ See, e.g., *Application of Pennsylvania Electric Company For Approval to Locate and Construct the Bedford North-Osterburg East 115 kV HV Transmission Line Project Situated in Bedford and East St. Clair Townships, Bedford County, Pennsylvania*, Docket Nos. A-2011-2247862, et al., 2012 Pa. PUC

applicant is not required to receive all necessary permits before the Commission may approve the transmission line or before construction of the proposed line begins. *Energy Conservation Council of Pennsylvania*, 25 A.3d 440, 452.

In *Pennsylvania Environmental Defense Foundation v. Commonwealth*, 161 A.3d 911 (Pa. 2017) (“*PEDF*”), the Supreme Court set forth a new standard for compliance with Article 1, Section 27 of the Pennsylvania Constitution (the “Environmental Rights Amendment” or “ERA”), rejecting the test set forth in *Payne v. Kassab*, 312 A.2d 86 (Pa. Cmwlth. 1973) (“*Payne*”), which the Commission has previously applied to siting applications.⁹ The Supreme Court determined that the *Payne* test was insufficient to analyze compliance with the ERA and replaced the *Payne* test with instructions to apply the text of Article I, Section 27 and the underlying principles of Pennsylvania trust law. As trustee, the “Commonwealth has a duty to

LEXIS 298 at *61 (Initial Decision Feb. 9, 2012); *Application of Trans-Allegheny Interstate Line Company for the Approval to locate, construct, operate and maintain certain high voltage electric transmission line facilities and to exercise the power of eminent domain to construct and to install the proposed aerial electric transmission line facilities along the proposed route, being a 138 kV transmission line and related facilities collectively, the Osage-Whiteley Line Facilities or Project, in portions of Dunkard Township, Perry Township, and Whiteley Township, Greene County in Southwestern Pennsylvania*, Docket Nos. A-2010-2187540, et al., 2011 Pa. PUC LEXIS 2028 (Recommended Decision March 28, 2011); *Application of PPL Electric Utilities Corporation Filed Pursuant to 52 Pa. Code Chapter 57, Subchapter G, for Approval of the Siting and Construction of the Pennsylvania Portion of The Proposed Susquehanna-Roseland 500 kV Transmission Line*, Docket Nos. A-2009-2082652, et al., 2010 Pa. PUC LEXIS 434 at *191-201 (Feb. 12, 2010).

⁹ The *Payne* test was as follows:

- (1) Was there compliance with all applicable statutes and regulations relevant to the protection of the Commonwealth’s public natural resources?
- (2) Does the record demonstrate a reasonable effort to reduce the environmental incursion to a minimum?
- (3) Does the environmental harm which will result from the challenged decision or action so clearly outweigh the benefits to be derived therefrom that to proceed further would be an abuse of discretion?

Payne v. Kassab, 312 A.2d 86.

prohibit the degradation, diminution, and depletion of our public natural resources,¹⁰ whether these harms might result from direct state action or from the actions of private parties.” *PEDF* at 933.

One of the factors previously considered when applying the *Payne* test to evaluate a challenge under the Environmental Rights Amendment was whether the challenged action complied with all applicable statutes and regulations relating to the protection of the Commonwealth's public natural resources. *Payne v. Kassab*, 312 A.2d 86. Following the Supreme Court's decision in *PEDF*, the Commonwealth Court has stated, “this does not necessarily mean, however, that compliance with statutes and regulations is irrelevant to the inquiry, even under the new standards adopted by the Pennsylvania Supreme Court in *PEDF*.” *Clean Air Council v. Sunoco Pipeline, L.P.*, 185 A.3d 478, n. 21 (Pa. Cmwlth. 2018).

The appellate case law and agency interpretation provide guidance in applying the standard articulated by the Supreme Court in *PEDF*. As trustee, the Commonwealth and Commonwealth agencies must “exercise such care and skill as a man of ordinary prudence would exercise in dealing with his own property.” *PEDF* at 90, citing *in re Mendenhall*, 484 Pa. 77, 398 A.2d 951, 953 (Pa. 1979). However, the Pennsylvania Supreme Court has also held that the ERA does not call for a stagnant landscape, the derailment of economic and social development nor a sacrifice of other fundamental values. *Robinson Twp. v. Commonwealth*, 623 Pa. 564, 650 (Pa. 2012) (“*Robinson Twp.*”) When the government acts, it must, on balance, reasonably account for the environmental features of the affected locale. *Id.* Likewise, in order to make an informed decision regarding the environmental effects of an action, an agency must

¹⁰ Public natural resources are not just state-owned lands, waterways and mineral reserves, but also resources that implicate the public interest, such as ambient air, surface and ground water, wild flora, and fauna (including fish) that are outside the scope of purely private property. *Robinson Twp. v. Commonwealth*, 623 Pa. 564, 652, 2013 Pa. LEXIS 3068 (Pa. 2012).

have an adequate understanding of what those effects are or will be. *Center for Coalfield Justice and Sierra Club v. Commonwealth of Pa.*, EHB Docket No. 2018-028-R, 2018 Pa. Environ. LEXIS *26, *29 (April 24, 2018.)

The Commission has reviewed and approved HV transmission line projects subsequent to *PEDF* and has concluded that application of its existing regulations is sufficient to carry out its duties as trustee under the ERA. *See Application of Pennsylvania Electric Company Seeking Approval to Locate, Construct, Operate and Maintain a High-Voltage Transmission Line Referred to as the Bedford North-Central City West 115 kV HV Transmission Line Project*, Docket No. A-2016-2565296 (Order entered March 8, 2018). Based upon *PEDF*, the Commission has stated that it will no longer apply the *Payne* test in transmission line cases. *Id.* However, the Commission has concluded that its existing siting regulations “are in accord with the ERA by requiring that the environmental impact of the proposed transmission siting route be minimized. *See* 52 Pa. Code §§ 57.75 and 57.76.” *Id.* The Commission’s regulatory scheme “provides for review of evidence regarding the necessity and safety of the proposed line, and the impact on, and mitigation of effects on several criteria including land use, soil and sedimentation, plant and wildlife habitats, terrain, hydrology, landscape, scenic rivers and archaeological, geologic, historic, scenic and wilderness areas” and is consistent with its role as a fiduciary responsible for preservation of the Commonwealth’s natural resources. *Id.*

The Commission has stated that 52 Pa. Code § 57.76(a)(4) does not require an applicant to “identify and evaluate every possible ‘alternative effort’ or ‘alternative method’ that could potentially minimize the impact of the [proposed project] nor is [an applicant] required to identify and implement the construction and maintenance methods that would have the ‘least’ adverse environmental impact.” *Application of PPL Electric Utilities Corporation filed pursuant*

to 52 Pa. Code Chapter 57, Subchapter G, for approval of the siting and construction of transmission lines associated with the Northeast-Pocono Reliability Project in portions of Luzerne, Lackawanna, Monroe, and Wayne Counties, Pennsylvania, Docket No. A-2012-2340872, 2013 Pa. PUC LEXIS 620 (R.D. October 8, 2013; Order entered January 9, 2014) (rejecting other parties argument that applicant has an “intensified burden” under the ERA to show that the environment has been considered in its planning and that every reasonable effort has been made to reduce the environmental incursion to a minimum).

The Commission’s interpretation is consistent with guidance given by the Commonwealth Court in *Del. Riverkeeper Network v. Sunoco Pipeline, L.P.*, 179 A.2d 670, 2018 Pa. Commw. Lexis 74 (Pa. Cmwlth. 2017) (“*Sunoco Pipeline*”).¹¹ In *Sunoco Pipeline*, parties challenged the Commission’s approval of Sunoco’s application for a certificate of public convenience to provide intrastate pipeline service, arguing that the approval violated the ERA. Parties argued that the Commission did not consider the environmental effects of the pipeline when it authorized Sunoco to provide service. The Commonwealth Court stated as follows:

...Plaintiffs do not explain how the ERA, Article 1, Section 27 of the Pennsylvania Constitution, adopted in 1971, impacts longstanding, pre-existing law involving regulation of public utilities, without expressly referring to the topic. Similarly, Plaintiffs do not explain how the 2014 Ordinance impacts longstanding, pre-existing law involving regulation of public utilities. The cases Plaintiffs rely upon dealt with very recent General Assembly enactments, unlike the current situation involving state-wide public utility statutes dating to 1913. Thus, the cases are distinguishable for this additional important reason. Stated differently, Plaintiffs ignore the comparative timing of the onset of legal duties, although such timing is usually a matter of significance to the legal analysis.

Sunoco Pipeline, 2018 Pa. Commw. LEXIS **60.

¹¹ The Supreme Court of Pennsylvania denied a Petition for Allowance of Appeal of this Order on August 28, 2018. *The Del. Riverkeeper Network, et al. v. Sunoco Pipeline L.P.*, Docket No. 204 MAL 2018.

As the Commonwealth Court reasoned in *Sunoco Pipeline*, the state-wide public utility statutes, including the statute regarding certificates of public convenience, have been in place since 1913, long before the adoption of the ERA. Although the Commission's regulations concerning the siting of electric facilities (Pa. Code, Title 52, Chapter 57, Subchapter G) were adopted in 1978, after the ERA, the Commission has been adhering to its duties under the ERA by applying these regulations to siting applications for approximately forty years.

B. STANDARDS FOR APPROVAL TO EXERCISE THE POWER OF EMINENT DOMAIN

Section 1511 of the Business Corporation Law of 1988 grants public utility corporations, such as Transource PA, the power to take and condemn property for the purpose of providing electricity to the public. *See* 15 Pa. C.S. § 1511(a)(3). However, before a public utility may seek to exercise the authority to condemn property for an aerial transmission line, it must obtain approval from the Commission pursuant to Section 1511(c), which provides, in pertinent part, as follows:

(c) The powers conferred by subsection (a) [for the running of aerial electric facilities] may be exercised to condemn property ... only after the Pennsylvania Utility Public Commission, upon application of the public utility corporation, has found and determined ... that the service to be furnished by the corporation through the exercise of those powers is necessary or proper for the service, accommodation, convenience or safety of the public.

15 Pa. C.S. § 1511(c).¹² Thus, on an application for condemnation, the Commission must determine whether the proposed service, *i.e.*, the transmission or distribution of electricity to or

¹² The BCL restricts the authority of a public utility to take and condemn property for the purpose of providing electricity to the public by providing that the public utility's condemnation authority shall not be used to condemn:

(i) Any dwelling house or, except in the case of any condemnation for petroleum or petroleum products transportation lines, any part of the reasonable curtilage of a

for the public that will be provided to the public if the subject property is condemned, is necessary or proper for the service, accommodation, convenience, or safety of the public.

The Commonwealth Court has explained that the Commission's only role under 15 Pa.C.S. § 1511 is to consider if the project is necessary or proper for the benefit of the public, and that the Commission is expressly barred from considering the power of the utility to condemn. *SEPTA v. Pa. PUC*, 991 A.2d 1021, 1023 (Pa. Cmwlth. 2010). Therefore, the Commission does not determine whether to grant a condemnation application on the basis of the legal authority, scope, validity, damages, or the willingness of a condemnee to negotiate.

Pennsylvania Appellate Courts have interpreted Section 1511 as requiring a condemning utility to show that the proposed transmission line is necessary or proper and that it has not acted wantonly, capriciously, or arbitrarily in selecting the proposed right-of-way. *Department of Environmental Resources v. Pa. PUC*, 335 A.2d 860 (Pa. Cmwlth. 1975), *aff'd.*, 473 Pa. 378, 374 A.2d 693 (1977); *Dickson v. Public Service Commission*, 89 Pa. Super. 126 (1926). The selection of the right-of-way is a matter for the public utility in the first instance and, while the route selection must be reasonable, it need not be the "best alternative" in terms of reducing or eliminating inconvenience to particular landowners. *Stone v. Pa. PUC*, 162 A.2d 18 (Pa. Super. 1960).¹³

dwelling house within 100 meters therefrom and not within the limits of any street, highway, water or other public way or place.
(ii) Any place of public worship or burying ground.

15 Pa.C.S. § 1511(b).

¹³ For example, in *Paxtowne v. Pa. PUC*, 398 A.2d 254, 256 (Pa. Cmwlth. 1979), the route selected by the public utility was affirmed. In order to establish that the selected route was reasonable in comparison with two alternative routes, the public utility established the following:

"[T]hat the proposed route was selected over alternative routes because the topography of petitioner's property was superior with regard to land use, environmental and engineering considerations; and that the selection of other routes would be more costly in acquiring rights-of-way from additional property owners."

C. STANDARDS FOR APPROVAL OF THE SITING OF SUBSTATION CONTROL EQUIPMENT BUILDINGS

The Commission has adopted a policy statement regarding local land-use plans and ordinances, which provides, in pertinent part, as follows:

To further the State's goal of making State agency actions consistent with sound land-use planning ... the Commission will consider the impact of its decisions upon local comprehensive plans and zoning ordinances. This will include reviewing applications for:

- (1) Certificates of public convenience.
- (2) Siting electric transmission lines.
- (3) Siting a public utility "building" under section 619 of the Municipalities Planning code (53 P.S. § 10619).
- (4) Other Commission decision.

52 Pa. Code § 69.1101.

As a general matter, public utility facilities are exempt from local regulation.¹⁴ A limited exception to this general rule is that a municipality may apply local zoning rules to a public

Id. at 647-648. The Court went on to hold that, although the proposed route clearly impacted the petitioner's property, when balanced against the utility's evidence, there was no indication that the utility's selection of the proposed route was done wantonly, capriciously, or arbitrarily.

¹⁴ The lack of authority for a local municipality to regulate the design, location, or construction of public utility facilities is consistent with the long line of cases holding that public utilities are exempt from local ordinances. *See Duquesne Light Company v. Monroeville Borough*, 449 Pa. 573, 580, 298 A.2d 252, 256 (1972) ("This Court has consistently held, however, that the Public Utility Commission has exclusive regulatory jurisdiction over the implementation of public utility facilities") (citations omitted). *See, e.g., County of Chester v. Philadelphia Elec. Co.*, 420 Pa. 422, 218 A.2d 331 (1966) (holding that regulation by a multitude of jurisdictions would result in "twisted and knotted" public utilities with consequent harm to the general welfare); *Newtown Township v. Philadelphia Elec. Co.*, 594 A.2d 834, 837 (Pa. Cmwlth. 1991) (noting that "it is clear that no 'implied' power exists in the MPC which would allow the Township to regulate [the Philadelphia Electric Company] through its subdivision and land development ordinance"); *Heintzel v. Zoning Hearing Board of Millcreek Township*, 533 A.2d 832 (Pa. Cmwlth. 1987) (holding that township had no power to regulate, under its zoning ordinance, city's erection of water tower because that power was under the exclusive jurisdiction of the PUC); *South Coventry Township v. Philadelphia Elec. Co.*, 504 A.2d 368 (Pa. Cmwlth. 1986) (noting that to possibly subject [the Philadelphia Electric Company] to a miscellaneous collection of regulations upon its system would clearly burden and indeed disable it from successfully functioning as a utility); *Commonwealth v. Delaware and Hudson Railway Co.*, 339 A.2d 155 (Pa. Cmwlth. 1975) (holding that the MPC did not authorize local governments to regulate public utilities in any manner which infringes upon the power of the Commission to so regulate).

utility “building” unless the Commission finds that the location of the building is reasonably necessary for the convenience or welfare of the public. *See* Section 619 of the Pennsylvania Municipalities Planning Code (“MPC”), 53 P.S. § 10619. Section 619 of the MPC provides the standard for approval of the siting of a public utility “building,” and provides as follows:

This article shall not apply to any existing or proposed building, or extension thereof, used or to be used by a public utility corporation, if, upon petition of the corporation, the Pennsylvania Public Utility Commission shall, after a public hearing, decide that the present or proposed situation of the building in question is reasonably necessary for the convenience or welfare of the public. It shall be the responsibility of the Pennsylvania Public Utility Commission to ensure that both the corporation and the municipality in which the building or proposed building is located have notice of the hearing and are granted an opportunity to appear, present witnesses, cross-examine witnesses presented by other parties and otherwise exercise the rights of a party to the proceedings.

53 P.S. § 10619. Thus, a municipality may exercise its zoning powers over a public utility building unless the Commission determines that the “site is reasonably necessary for the public convenience or welfare.” *Del-AWARE Unlimited, Inc. v. Pa. PUC*, 513 A.2d 593, 596 (Pa. Cmwlth. 1986), *appeal denied*, 515 Pa. 587, 527 A.2d 547 (1987). If the Commission finds that the location is reasonably necessary for the convenience or welfare of the public, the building is exempt from local zoning ordinances under the MPC. *Id.*

Section 619 of the MPC does not require a utility to prove that the site it has selected is absolutely necessary or that it is the best possible site; rather, the utility must only demonstrate “reasonable necessity” for a particular location, not absolute need. *O’Connor v. Pa. PUC*, 582 A.2d 427, 433 (Pa. Cmwlth. 1990) (citing *Re Philadelphia Suburban Water Co.*, 54 Pa. PUC 127, 132 (1980)). If the evidence of record demonstrates that the site chosen is reasonably necessary for the convenience or welfare of the public, the Commission should grant the necessary findings under Section 619 of the MPC. *Id.* at 433.

VI. ARGUMENT

A. INTRODUCTION

In the following sections of this Brief, Transource PA addresses the substantive reasons for how the siting of the IEC Project, including the Settlement IEC East Portion and the West Portion, meets the Commission's and the Pennsylvania Courts' requirements for siting an HV transmission line, why the siting of the IEC Project is necessary and why the siting of the IEC Project should be approved.

B. NEED FOR THE PROJECT

1. Overview of the Electric System

The electric system in the nation, including Pennsylvania, consists of three basic components: generation, transmission, and distribution. Generating plants produce electricity at relatively low voltages. These voltages are stepped up by transformers located close to the generating facilities and the electricity is then transmitted through high-voltage transmission lines to various substations where the voltage is then stepped down and the electricity is transmitted over local distribution systems for delivery to end-use consumers such as businesses and residential customers. *See, Application of PPL Electric Utilities Corporation Filed Pursuant to 52 Pa. Code Chapter 57, Subchapter G, for Approval of the Siting and Construction of the Pennsylvania Portion of The Proposed Susquehanna-Roseland 500kV Transmission Line in Portions of Lackawanna, Luzerne, Monroe, Pike and Wayne Counties, Pennsylvania, Docket Nos. A-2009-2082652, et al., 2009 Pa. PUC LEXIS 2323 at *151-54 (Recommended Decision Nov. 12, 2009).*

2. FERC's Role in Regulating Transmission and Wholesale Markets

a) FERC has Exclusive Jurisdiction Over Interstate Transmission Planning Under the Federal Power Act

The Federal Power Act authorizes FERC to regulate the transmission of electric energy in interstate commerce. 16 U.S. § 824. The Supreme Court of the United States held the following with respect to FERC's jurisdiction under the Federal Power Act:

In particular, the FPA obligates FERC to oversee all prices for those interstate transactions and all rules and practices affecting such prices. The statute provides that “[a]ll rates and charges made, demanded, or received by any public utility for or in connection with” interstate transmissions or wholesale sales – as well as “all rules and regulations affecting or pertaining to such rates or charges” – must be “just and reasonable.” § 842d(a).

FERC v. Elec. Power Supply Ass'n., 136 S. Ct. 760, 767 (January 25, 2016).

In *Hughes v. Talen Energy Mktg., LLC*, 136 S. Ct. 288, 1292 (April 19, 2016), the Supreme Court of the United States held that FERC's jurisdiction under the Federal Power Act is exclusive. *See also Nat'l. Ass'n. of Regulatory Util. Comm'rs. v. FERC*, (*NARUC v. FERC*"), 2020 U.S. App. LEXIS 21400, Order issued July 10, 2020; *Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities*, 136 FERC ¶ 61,051, (“FERC Order 1000”) issued July 21, 2011.

In *NARUC v. FERC*, the United States Court of Appeals for the District of Columbia Circuit explained that FERC has both the authority and the duty to ensure that rules or practices affecting wholesale rates are just and reasonable and that FERC issues orders aimed at breaking down regulatory and economic barriers that hinder a free market in wholesale electricity. *NARUC v. FERC*, *3-4, citing *FERC v. Elec. Power Supply Ass'n.*, 136 S.Ct. 760 (2016); *Morgan Stanley Capital Grp. Inc. v. Pub. Util. Dist. No. 1*, 554 U.S. 527 (2008).

The Federal Power Act preempts state jurisdiction over interstate transmission of electricity. *New York v. FERC*, 535 U.S. 1, 18-19, March 4, 2002. (“*New York v. FERC*”). In *New York v. FERC*, the Supreme Court of the United States held that FERC’s open access transmission requirements in Order No. 888, which required public utilities that had unbundled rates to transmit competitor’s energy on the same terms that the utility transmitted its own electricity, preempted state regulation over unbundled interstate transmissions of electricity. *Id.* at 18 – 24.¹⁵

b) FERC Requires Regional Competitive Transmission Planning To Address Congestion Issues In Order to Provide Just and Reasonable Rates.

FERC has a long history of regulating the operation of the interstate transmission system. In 1996, through Order No. 888, FERC implemented open access to transmission facilities owned, operated or controlled by a public utility. FERC Order 1000, ¶ 15. In 2007, FERC issued Order No. 890, in part, to remedy the potential for undue discrimination in transmission planning activities by requiring transmission providers, including FERC-approved RTOs such as PJM, to develop transmission planning processes that met the criteria set forth in Order No. 890. The primary goal of Order No. 890 was to have a coordinated, open and transparent regional planning process. FERC Order 1000, ¶ 19.

In 2011, FERC issued Order No. 1000 to address deficiencies in Order 890 with respect to regional planning and changes in the wholesale power market. FERC noted as follows in Order No. 1000:

¹⁵ Transource PA notes that in *Trailco*, the Commission stated in a footnote that it was not required to accept PJM’s RTEP findings or that the Commission must defer to PJM on siting issues. *TrAILCo*, p. 33, footnote 3. Transource PA notes that *TrAILCo* did not involve a market efficiency project approved by PJM under FERC Order 1000. Transource PA also notes that it is clear that the Commission has jurisdiction over siting and construction of HV transmission lines in Pennsylvania. See subsection 3, below.

Although focused on diverse aspects of transmission planning and cost allocation processes, the reforms adopted in this Final Rule are designed to work together to ensure an opportunity for more transmission projects to be considered in the transmission planning process on an equitable basis and increase the likelihood that transmission facilities in the transmissions plan will move forward to construction. The Commission's actions today therefore will enhance the ability of the transmission grid to support wholesale power markets and, in turn, *ensure that Commission-jurisdictional transmission services are provided at rates, terms, and conditions that are just and reasonable and not unduly discriminatory or preferential.*

FERC Order No. 1000, ¶ 42 (emphasis supplied).

FERC Order No. 1000 emphasized the need to address congestion as part of transmission planning requirements. FERC Order 1000, ¶¶ 2, 112. FERC held in Order No. 1000 that the regional planning requirements, including transmission planning to address market efficiency considerations, were being adopted pursuant to FERC's rate jurisdiction under Section 206 of the Federal Power Act. FERC Order 1000, ¶ 99. FERC also stated:

The transmission planning activities that are the subject of this Final Rule have a direct and discernable effect on rates. It is through the transmission planning process that public utility providers determine which transmission facilities will more efficiently or cost-effectively meet the needs of the region, the development of which directly impacts the rates, terms and conditions of jurisdictional service. *The rules governing the transmission planning process are therefore squarely within our jurisdiction, whether the particular transmission facilities in question are planned to meet reliability needs, address economic considerations or meet transmission needs driven by a Public Policy requirement.*

FERC Order 1000, ¶112 (emphasis supplied).

FERC stated further:

These reforms are intended to correct deficiencies in transmission planning and cost allocation processes so that the transmission grid can better support wholesale power markets and thereby ensure that Commission-jurisdictional services are provided at rates,

terms, and conditions that are just and reasonable and not unduly discriminatory or preferential.

FERC Order No. 1000, ¶ 99.¹⁶

One of the significant reforms adopted by FERC in Order No. 1000 was to eliminate a federal right of first refusal for incumbent transmission owners for certain projects. This reform was significant because it allows non-incumbent transmission owners, such as Transource PA, to compete to build regional transmission projects. FERC Order 1000, ¶ 225.¹⁷

FERC expressed its concerns in Order 1000 that the existence of a federal right of first refusal may lead to rates for jurisdictional transmission service that are unjust and unreasonable. FERC Order 1000, ¶ 256. FERC noted that it was not in the economic self-interest of incumbent transmission providers to permit new entrants to develop transmission facilities, even if the new entrants' proposal was a more efficient or cost-effective solution.

Various parties challenged certain aspects of FERC Order 1000, including FERC's mandate for regional transmission planning and the removal of the federal right of first refusal for incumbent transmission owners to construct transmission facilities in their service territories. The United States Court of Appeals for the District of Columbia upheld FERC's authority to mandate regional transmission planning under Section 206 of the FPA. *S.C. Puc. Serv. Auth. v. FERC*, 762 F.3d 41, *58-59, 2014 U.S. App. LEXIS 15674, ***38 (August 15, 2014). The U.S. Court of Appeals expressly noted FERC's broad authority over transmission planning matters. *Id.* at *63, *** 51-52.

¹⁶ As noted above, FERC has exclusive jurisdiction over transmission rates. See *Hughes v. Talen; New York v. FERC*, 535 U.S. 1, March 4, 2002.

¹⁷ Non-incumbent transmission providers are: (1) a transmission developer that does not have a retail distribution territory or footprint; and (2) a public utility transmission provider that proposes a transmission project outside of its existing retail distribution service territory or footprint where it is not the incumbent for that project.

Likewise, the U.S. Court of Appeals upheld FERC's authority to remove the Federal right of first refusal to allow non-incumbent transmission developers to compete to construct regional transmission facilities. *Id.* at *76, ***89. The court further stated:

By removing a pre-existing barrier to entry, the orders make it more likely that those key parties will actually join that process, making the transmission development process more competitive, which, in the Commission's reasoned expert judgment, will help to ensure that rates are just and reasonable.

Id. at *77, ***94.

3. The PUC Has Jurisdiction Over Transmission Line Siting

While FERC has jurisdiction over transmission planning, the Commission has jurisdiction over the siting of the HV transmission lines. 52 Pa. Code § 57.71. FERC Order 1000 is not intended to preempt or conflict with state's authority over siting, permitting and construction of transmission facilities. FERC Order 1000, ¶ 107, FERC Order 1000-A, ¶ 186

4. PJM 's Role in Transmission Planning

a) PJM is the Regional Transmission Planner

FERC has approved PJM as an RTO and has designated it with responsibility for planning and operating the transmission grid in the PJM footprint. PJM must ensure the reliability of the bulk transmission system and is required to improve the efficiency of the transmission system by relieving congestion to facilitate the provision of FERC-jurisdictional services at rates, terms and conditions that are just and reasonable and not unduly discriminatory or preferential. (Transource PA St. No. 7-R, p. 7; FERC Order 1000, ¶ 99.) PJM has responsibility for planning and directing the operation of the transmission grid in all or portions of 13 states, including both Pennsylvania and Maryland, and the District of Columbia.

(Transource PA St. No. 3, p. 8.) PJM has substantial and specialized expertise in its transmission planning responsibilities. (Transource PA St. No. 9-R, pp. 3-4.)

b) PJM RTEP Planning Process

PJM conducts transmission planning, through its RTEP process. The RTEP process is conducted annually and addresses five (5) main needs:

1. Reliability;
2. Market efficiency;
3. Operational performance;
4. Meeting public policy requirements; and
5. Addressing long-term congestion hedging deficiencies.

(Transource PA St. No. 3, p. 11.)

The RTEP process is comprehensive and considers impacts of generation and demand-side resources in its planning to address transmission system constraints involving reliability and persistent congestion concerns. (Transource PA St. No. 3, p. 12.) This includes non-transmission alternatives such as renewable energy, energy efficiency, distributed generation and demand response. PJM's RTEP process not only includes a reliability analysis, but also includes a market efficiency analysis to provide transmission service at just and reasonable rates. Under its FERC-approved authority, PJM determines the need for transmission projects and directs the construction of new transmission projects or upgrades to ensure grid reliability and market efficiency. (Transource PA St. No. 3, p. 5.) The process integrates many system factors, including:

- Forecasted load growth, demand-side-response efforts and distributed generation additions;

- Interconnection requests by developers of new generating resources and merchant transmission facilities;
- Solutions to mitigate persistent economic congestion and to ensure adequate allocation and funding of long-term financial transmission rights;
- Long-term firm transmission service requests;
- Generation retirements and other deactivations;
- Transmission Owner-initiated improvements; and
- Load-serving entity capacity plans.

(Transource PA St. No. 3, p. 12.)

The RTEP process is both open and collaborative. PJM receives stakeholder input and comments throughout its planning process and incorporates these comments in its findings. Participation is open to all transmission customers, entities proposing to provide transmission facilities to be integrated into PJM, all PJM members, representatives of state commissions, the agencies and offices of state consumer advocates, and any other interested party. (Transource PA St. No. 3, p. 13.)

After the stakeholder process, PJM develops a final recommended RTEP that is submitted to the PJM board. The PJM board consists of 10 members that are responsible for maintaining PJM's independence and ensuring that PJM fulfills its business obligations and legal and regulatory requirements. Members of the PJM board are prohibited from having personal affiliation or ongoing professional relationships with, or any financial stake in, any PJM participant. (Transource PA St. No. 3, p. 14.)

c) PJM's Market Efficiency Analysis

PJM conducts market efficiency analysis to comply with its obligations under FERC Order 1000 to identify and reduce congestion on the PJM transmission system. Transource PA St. No. 7-R, pp. 8-10. PJM's market efficiency analysis has two objectives:

- (1) To determine which reliability upgrades if any have an economic benefit if accelerated; and
- (2) Identify new transmission solutions that may create economic benefits.

(Transource PA St. No. 3, p. 16.)

The market efficiency analysis is conducted on a 24-month cycle. In the first year, PJM performs market simulations to determine future congested areas. The process includes concurrent PJM and stakeholder review. PJM then solicits competitive proposals to address identified market efficiency issues. In the second year, market efficiency models are updated and competitive proposals are evaluated. (Transource PA St. No. 3, p. 17.) PJM performs and computes market simulations with and without the proposed solutions for selected future years within the RTEP's 15-year planning horizon.

In order to be included in the RTEP recommended to the PJM board, the relative benefits and costs of a market efficiency project must meet or exceed a benefit/cost ratio threshold of at least 1.25 to 1. In the FERC Order 1000 proceeding, certain parties argued that FERC should adopt a benefit-to-cost ratio higher than 1.25 to 1. FERC specifically rejected these proposals, stating as follows:

...the Commission agrees that a benefit-to-cost ratio should not be set so high as to preclude certain beneficial projects from being constructed. As such, the Commission finds (and several commenters agree) that a benefit to cost ratio of 1.25 to 1 to be a reasonable ratio that will not act as a barrier to the development and construction of valuable new transmission projects.

Furthermore, regarding comments requesting that the Commission decline to establish a benefit to cost threshold given the difficulty in quantifying benefits, we reiterate that the benefit to cost ratio threshold identified in this Final Rule applies only if the public utility transmission providers of a transmission planning region choose to use a benefit to cost ratio to determine which transmission facilities are selected in the regional transmission plan for purposes of cost allocation. *They may decide to have no benefit to cost ratio threshold greater than one at all.*

FERC Order 1000, ¶649 (emphasis supplied).

As part of the market efficiency process, PJM conducts sensitivity analyses which take into account potential changes in future system conditions, such as load levels, fuel cost, level and type of generation, generation patterns (including potential retirements and new generation) and demand response. Transource PA St. No. 7-R, pp. 10-11. The sensitivity analyses evaluate whether market efficiency projects are viable over a broad range of conditions.

PJM utilizes the PROMOD software model to evaluate market efficiency projects. Transource PA St. No. 2-R, p. 16. PROMOD is an extensively used and accepted software tool for transmission planning. PJM's process for evaluating market efficiency projects is highly sophisticated and state-of-the-art worldwide. Transource PA St. No. 2-R, p. 16.

5. PJM Solicited Competitive Proposals to Address Congestion in the AP South and Related Constraints in the 2014/2015 Long-Term Window

The AP South and related constraints have experienced significant congestion over a long period of time. Transource PA St. No. 3, p. 7. Economic transmission cost constraints across the AP South interface totaled approximately \$800 million from 2012 through 2016. Transource PA Ex. No. TH-RR, p. 2. In addition, PJM models continued to identify significant congestion on the AP South and related constraints in long-term simulation results. Transource PA St. No. 8-R, p. 7.

As a result of the experienced historical congestion and continued forecasted congestion on the AP South and related constraints, PJM solicited competitive proposals in the 2014/2015 Long-Term Window to address these congestion issues. Transource PA St. No. 8-R, p. 7. The RTEP evaluated market efficiency projects over a 15-year planning window.

PJM received 41 market efficiency proposals, including Project 9A, that were designed to alleviate AP South and related congestion. Transource PA St. No. 8-R, p. 7; Transource PA Ex. No. 10-R, Redacted, p. 17. In total, approximately 23,000 hours of computation time was conducted to run all of the analyses. Transource PA St. No. 8-R, p. 11.

6. PJM Selected Project 9A As The Best Solution Out of All 41 Competitive Proposals

PJM selected Project 9A as the best solution out of all of the competitive proposals. Project 9A provided the most congestion benefits and the highest benefit-to-cost ratio. Transource PA St. No. 8-R, p. 12.

PJM did not just conduct a single evaluation of Project 9A. PJM conducted the following sensitivity analyses:

1. *Baseline Case* – 2015 market efficiency baseline assumptions on gas prices, load, and generation availability
2. *-\$2 Gas* – forecasted baseline natural gas price was reduced by \$2/MMBtu
3. *-\$1 Gas* – forecasted baseline natural gas price was reduced by \$1/MMBtu
4. *+\$1 Gas* – forecasted baseline natural gas price was increased by \$1/MMBtu
5. *-2 Percent Load* – forecasted load was reduced by 2 percent
6. *+2 Percent Load* – forecasted load was increased by 2 percent
7. *Generator Sensitivity (Gen Sens)* – a scenario in which Dickerson and Chalk Point units do not retire.

Transource PA St. No. 3, p. 28.

The results of these analyses demonstrated that Project 9A had the highest benefit-to-cost ratio, the most significant AP South congestion benefit, total congestion benefit, load payment benefit and production cost benefit and consistently provided the most benefits across the scenarios studied. Transource PA St. No. 3, p. 31.

Based upon PJM's extensive evaluation, including over 23,000 hours of computation time, Project 9A was clearly the best solution to address market efficiency issues on the AP South and related constraints. PJM selected Project 9A as the necessary and best solution to address congestion on the AP South and related constraints.

7. Settlement 9A Provides Significant Congestion Benefits For the PJM Transmission System

Congestion on the transmission system causes customers downstream of the congestion to pay higher energy costs resulting from the system constraints. Transource PA St. No. 7-RJ, p. 2. Congestion prevents the lowest price generation from reaching the congested area. Mr. Herling explained that the purpose of the market efficiency process is to ensure that the transmission system is efficient, economical and equitable. Mr. Herling further explained that it is not fair for customers in one area to pay higher prices than others simply because the system design prevents some customers from accessing the lowest cost energy. Transource PA St. No. 7-RJ, p. 11.

Former Commissioner Cawley explained that congestion provides customers in the unconstrained area artificially low and discriminatory rates. Transource PA St. No. 9-RJ, p. 2. Due to congestion constraints, customers in the constrained area pay artificially high, discriminatory and unjust and unreasonable power prices. Transource PA St. No. 9-RJ, p. 4. Mr. Cawley also explained that removing congestion eliminates discrimination in rates.

Transource PA St. No. 9-RJ, p. 5. This is consistent with FERC’s objectives in Order No. 1000 as discussed in Section IV(B) above.

Settlement 9A provides substantial congestion relief benefits to the PJM system. Based upon the latest evaluation in November 2019, Settlement 9A provides approximately \$845 million in congestion benefits over the 15-year planning period. Transource PA Ex. TJH-AA 1, p. 24.

Notably, PJM only considers benefits for the 15-year planning period. The life of the IEC Project is much greater than 15 years. Transource PA witness Kamran Ali testified that the typical useful life of transmission assets like the IEC Project is well beyond 50 years. Transource PA St. No. 2-R, p. 8. The IEC Project will continue to provide market efficiency and reliability benefits well beyond the 15-year period considered in PJM’s market efficiency analysis. Transource PA St. No. 2-R, p. 9; Transource PA St. No. 10-R, Redacted, p. 8.

Given the long useful life of the IEC Project, the congestion benefits to the PJM system is expected to be significantly higher than the \$845 million calculated by PJM for the 15-year planning window.

8. Project 9A Has Been Evaluated Many Times Over the Past Five Years and has Continued to Pass the Benefit-to-Cost Ratio.

Since Project 9A was approved on 2016, it has been re-evaluated by PJM multiple times and has passed the benefit-to-cost ratio every time. The chart below identifies all the times that Project 9A was evaluated and the resulting benefit-to-cost ratio.

IEC Evaluation	Benefit/Cost Ratio
Original August 11, 2016-Board Presentation	2.48
Re-Evaluation No. 1 September 14, 2017-TEAC Presentation	1.3

Re-Evaluation No. 2 February 8, 2018 – TEAC Presentation	1.32
Re-Evaluation No. 3 September 13, 2018 – TEAC Presentation	1.42
Ratio Update October 16, 2018	1.4
Re-Evaluation No. 4 February 2019	2.17
Re-Evaluation No. 5 October 17, 2019	2.1

See Transource PA St. No. 8-R, p. 14; Transource PA St. No. 8-RJ, p. 3; Transource PA Ex. No. TJH-AA2, p. 7.

The benefit-to-cost ratio for Project 9A has always exceeded 1.25

9. Settlement 9A Also Exceeds the 1.25 Benefit-to-Cost Ratio

As explained herein, Transource PA entered into settlements with PPL Electric and parties in York County to modify the proposed route in York County to utilize existing PPL Electric ROW and transmission infrastructure. PJM has authorized Settlement 9A if it is approved by the Pennsylvania and Maryland Commissions.¹⁸ Settlement 9A also exceeds the benefit-to-cost ratio of 1.25. PJM witness Horger provided the following results in his Supplemental Testimony in support of the Amended Application:

Updated Mid-Cycle Base Case	NPV \$(M) BGE/PPL Validated Costs	NPV \$(M) Including 25% Cost Adder
Total Cost for Project 9A as modified by Settlement	\$478.48	\$496.17
Benefit-to-Cost Ratio for Project 9A as modified by Settlement	1.66	1.60

¹⁸ PJM’s planning process contemplates regulatory adjustments to RTEP projects. Schedule 6 of the Amended and Restated Operating Agreement of PJM Interconnection, LLC and the *pro forma* designated entity agreement as set forth in PJM’s Open Access Transmission Tariff, Attachment KK contemplate that projects approved through PJM’s RTEP process may need to be modified from time to time, including to comply with state regulatory approvals.

For example, Schedule 6, § 1.7 of PJM’s Operating Agreement acknowledges that a designated entity’s obligation to construct PJM-approved upgrades is “[s]ubject to the requirements of applicable law, government regulations and approvals, including, without limitation, requirements to obtain any necessary state or local siting, construction and operating permits.”

Sensitivity Case – 1% Load Decrease (Peak and Energy)	Present \$ (M) BGE/PPL Validated Costs	Present \$ (M) Including 25% Cost Adder
Total Cost for Project 9A as modified by Settlement	\$478.48	\$496.17
Benefit-to-Cost Ratio for Project 9A as modified by Settlement	1.52	1.46

Transource PA St. No. AA-3, p. 4.

Settlement 9A has a benefit-to-cost ratio of 1.66 based upon estimated costs and 1.6 with a 25% cost adder. In addition, Settlement 9A has a benefit-to-cost ratio of 1.52 with a 1% load decrease and a benefit-to-cost ratio of 1.46 with a 1% load decrease and 25% cost adder.

10. A 1.25 Benefit-to-Cost Ratio is the Highest Allowed by FERC Unless Granted a Special Exception

As explained in this proceeding, the PJM could have adopted a lower benefit-to-cost ratio under FERC Order 1000 but adopted a cost ratio of 1.25 to hedge against the uncertainty of estimating benefits. Transource PA St. No. 7-R, p. 15. The Company further notes that a benefit-to-cost ratio of 1.25 is the highest allowed under FERC Order 1000 unless a special exception is granted by FERC. PJM witness Herling testified as follows:

Specifically, under Regional Cost Allocation Principle 3, Order No. 1000 provided that if a transmission provider determines to use a benefit/cost ratio threshold, it should not exceed 1.25 to 1.0 so as to ensure that transmission facilities with significant positive net benefits that would otherwise be selected in the RTEP for purposes of cost allocation are not excluded from the regional transmission plan. In other words, FERC specifically rejected arguments raised in the Order No. 1000 to select a benefit/cost ratio higher than 1.25 because FERC did not want to exclude projects, such as the Project 9A, which will provide significant benefits to the transmission grid.

Transource PA St. No. 7-R, pp. 15-16.

In Order 1000, FERC held that a benefit to cost threshold was not required. FERC stated as follows:

... the Commission agrees that a benefit to cost ratio should not be set so high as to preclude certain beneficial transmission projects from being constructed. As such, the Commission finds (and several commenters agree) that a benefit to cost ratio of 1.25 to 1 be a reasonable ratio that will not act as a barrier to the development and construction of valuable new transmission projects. Furthermore, regarding comments requesting that the Commission decline to establish a benefit to cost threshold given the difficulty in quantifying benefits, we reiterate that the benefit to cost ratio threshold identified in this Final Rule applies only if the public utility transmission providers of a transmission planning region choose to use a benefit to cost ratio to determine which transmission facilities are selected in the regional transmission plan for purposes of cost allocation. They may decide to have no benefit to cost ratio threshold greater than one at all.

FERC Order 1000, ¶ 649.

The 1.25 benefit to cost ratio adopted by PJM ensures that a market efficiency project will provide congestion benefits. Settlement 9A's 1.66 benefit to cost ratio provides substantial benefits over the maximum level of 1.25 set forth in FERC Order 1000.

11. In Addition to Providing Congestion Relief, Settlement Project 9A Also Provides Reliability Benefits

a) Congestion and Reliability Violations are Frequently Related

Congestion and reliability issues are often related. The Commission has recognized this in prior proceedings. In *TrAILCo*, the Commission stated as follows:

We also agree with the ALJs that economics was a consideration of TrAILCo in proposing the Pennsylvania 502 Junction Facilities. The record is well-established that Project Mountaineer, as well as an earlier version of TrAILCo, were discussed and proposed within the context of a response to west-to-east transfer enhancements and in response to the National Interest Electric Transmission Corridor (NIETC). These projects were very similar to the April 13, 2007 filing that initiated this proceeding. *However, one cannot easily distinguish between*

transmission efficiency projects and reliability projects within a congested region. Removing congestion resolves reliability violations, and vice versa. There is nothing inherently wrong with removing reliability violations on a heavily congested line through construction of a new transmission line.

In Re: Application of Trans-Allegheny Interstate Line Company (TrAILCo)..., Docket No. A-110172, et al., Order entered December 12, 2008 (emphasis supplied).

Transource PA witness Herling also testified that congestion and reliability issues are related, stating as follows:

...while reliability is not a driver of the Project, PJM has identified reliability criteria violations that would result and would have to be resolved if the Project is not constructed. This is not particularly surprising. History has shown that RTEP projects justified on the basis of reliability have also shown economic benefit by mitigating congestion.

Transource PA St. No. 7-R, p. 21, lines 3-7.

b) Settlement 9A Resolves Significant Reliability Violations Identified by PJM to Occur in 2023.

Settlement 9A provides significant reliability benefit to the PJM transmission system, including Pennsylvania and Maryland. The Project resolves five significant reliability violations that were identified by PJM in an RTEP 2023 study year case generator deliverability analysis.

These five reliability violations are listed below:

Facility Name	Limiting Equipment	Loading
Three Mile Island 500/230 kV Transformer	Transformer	117%
Peach Bottom-Conastone 500 kV Line	Conductor	109%
Hunterstown-Lincoln 115 kV Line	Conductor	123%
Lincoln Tap-Lincoln 115 kV Line	Conductor	120%
Lincoln-Straban 115 kV Line	Conductor	104%

Transource PA St. No. 7-R, p. 21.

Mr. Herling explained that the Peach Bottom-Conastone 500kV Line is an N-0 violation. The other violations are N-1 violations. Transource PA St. No. 7-RJ-SUPP, p. 2. An N-0 violation is a violation that is projected to occur under normal operating conditions with no contingencies. An “N-1” or “N MINUS 1” violation is an overload that occurs following a single contingency, i.e., when one system element is taken out of service. Transource PA St. No. 7-RJ-SUPP, p. 2.

c) Reliability Violations Violate NERC Standards and are Subject to Fines of up to \$1 Million Per Violation Per Day.

The Energy Policy Act of 2005 (“EPAct 2005”) created mandatory compliance and enforcement rules for reliability standards under FERC’s oversight. Section 215 of the Federal Power Act required FERC to certify an Electric Reliability Organization (“ERO”) to develop mandatory and enforceable reliability standards, which are subject to FERC approval. 42 U.S.C. § 16511-14 (2005).

On February 3, 2006, FERC certified the North American Electric Reliability Corporation (“NERC”) as the ERO.¹⁹ Thereafter, NERC developed reliability standards, which apply to users, owners and operators of the Bulk Electric System, and are subject to FERC review and approval. The NERC Reliability Standards define the reliability requirements for planning and operating the North American Bulk Electric System, which includes all of PJM. In addition, EPAct 2005 provided NERC, as the ERO, with the legal authority to enforce compliance with its Reliability Standards, subject to FERC oversight. These FERC-approved

¹⁹ *North American Electric Reliability Corp.*, 116 FERC ¶ 61,062 (ERO Certification Order), order on reh’g & compliance, 117 FERC ¶ 61,126 (ERO Rehearing Order) (2006), order on compliance, 118 FERC ¶ 61,030 (2007) (January 2007 Compliance Order).

NERC Reliability Standards are mandatory and failure to comply can result in penalties of up to \$1 million per day per violation. Transource PA St. No. 7-R, p. 23.

d) If Settlement 9A Is Not Constructed, PJM Would Be Required to Seek Costly Alternative Solutions to the Reliability Violations.

If Settlement 9A is not constructed, PJM would be required to seek alternative solutions to address the reliability violations. Mr. Herling testified that NERC and PJM Planning criteria require PJM to develop solutions to all identified reliability criteria violations to avoid “reliability consequences.” Transource PA St. No. 7-R, pp. 24-25. Mr. Herling further explained that solutions for violations on 500kV facilities are not typically small in scope or cost. Transource PA St. No. 7-R, p. 25.

e) Alternative Solutions to Address the Reliability Violations Could Not Be Constructed in Time to Resolve Them.

The identified reliability violations that will be resolved by Settlement 9A are identified to occur in 2023. Transource PA St. No. 7-R, p. 21. If Settlement 9A is not constructed, there is not sufficient time to address the reliability violations by 2023.

Mr. Herling testified that any proposed solutions would need to go through the RTEP process and be approved by PJM. Tr. 2972. In addition, they would have to be approved by their respective state commissions. Any approved project would not likely be constructed and placed into service until 2025 or 2026, assuming no substantial regulatory delay. Tr. 2977. This is 2 to 3 years after the identified reliability violations in 2023, and too late to resolve them.

f) If Settlement 9A Is Not Constructed in Time, PJM Could be Required to Implement Load Restrictions to Prevent Reliability Violations.

If Settlement 9A is not constructed or not constructed in time to address the reliability violations, PJM will have to implement operational procedures to avoid overloading facilities.

Mr. Herling testified as follows:

Operational procedures include a variety of things. Obviously that would include all manner of re-dispatch. It would include a series of emergency procedures where we could invoke different types of emergency load reductions, even including the possibility of having to institute load shedding in parts of the system that are affected by the constraint.

So if you have constraints on a 500 kV line, you could have a potentially broad area where we might have to reduce customer load in order to manage that constraint.

If it's a 115 kV facility, we would probably identify a much more targeted local area where we would have to shed customer load to manage that constraint.

Tr. 2970, lines 2-14.

Construction of Settlement 9A on a timely basis will avoid PJM developing operational procedures, which could include customer load shedding, to address the identified reliability violations.

12. Settlement 9A Provides Significant Additional Benefits to Pennsylvania.

In addition to the market congestion and reliability benefits described above, Settlement 9A provides significant additional benefits to Pennsylvania. Pennsylvania is rich in natural gas production in the Marcellus region. This abundance of natural gas has led to increased generation of electricity powered by natural gas. Settlement 9A will provide Pennsylvania generators with greater access to markets. Tr. 2267, 2460.

Settlement 9A will also provide additional benefits to Pennsylvania including:

1. Mitigation of extreme weather/load events;
2. Increased import/export capability between capacity zones in PJM;
3. Enhanced competition in the PJM market;
4. Additional jobs;
5. Increased tax revenues; and
6. Increased economic activity.

Transource PA St. No. 10-R, Redacted, pp. 8, 25-26.

Transource PA witness Chang provided an estimate of the jobs supported, economic activity supported and tax revenues generated by the IEC Project. Ms. Chang testified as follows:

Table 5 shows that the IEC project is expected to support 25 to 35 full-time jobs in Franklin County and between 15 and 21 full-time jobs in York County during construction. The project is expected to stimulate \$12.6 million to \$14.7 million in economic activity within Franklin County, and an additional \$7.1 million to \$8.3 million of economic activity within York County while under construction. The jobs supported and the economic activity stimulated in Franklin and York Counties represent about half of all the job-supported and two-thirds of local economic activity stimulated by the IEC project. As discussed in the previous section, the majority of the jobs supported and economic activity stimulated occur within Franklin and York Counties because the majority of the new transmission line and the two new substations will be constructed in these two counties. Lastly, Table 5 indicates that in Franklin County, the IEC project is expected to generate between \$170,000 and \$230,000 of state and local taxes while under construction. Likewise, in York County, the project is expected to generate between \$110,000 and \$140,000 in state and local taxes.

Table 5 also presents the results for the rest of the state of Pennsylvania, outside of Franklin and York Counties. In the remainder of the state, I estimate that the IEC project will support between 34 and 37 FTE-year jobs, stimulate between \$5.9 million and \$6.6 million of economic activities, and generation between \$250,000 and \$290,000 of state and local tax revenues. These

economic benefits are in addition to the benefits seen in Franklin and York Counties.

Transource PA St. No. 10-R, Redacted, p. 26, line 1 – p. 27, line 9.

Settlement 9A inclusive of the IEC Project provides substantial benefits to Pennsylvania in addition to the congestion and reliability benefits.

13. Participation in PJM Provides Substantial Benefits to Pennsylvania.

Being part of PJM and participating in regional planning provides substantial benefits to the Commonwealth of Pennsylvania. Regional transmission planning across the PJM zones reduces the need for additional generation by up to \$3.78 billion annually. Transource PA Ex. TJH-AA-RJ1, p. 1. The regional transmission system helps to maintain reliable service across the region during periods of extreme weather and when there is sudden loss of large generation. Transource PA Ex. TJH-AA-RJ1, p. 1. Interstate transmission lines allow the lowest-cost power to reach the greatest number of people. Transource PA Ex. TJH-AA-RJ1, p. 4. Transource PA witness Horger explained as follows:

PJM's grid has electricity reserve margins that ensures PJM can maintain reliability (i.e. keep the lights on) under extreme conditions. Project 9A ensures the grid maintains an adequate level of reserves by providing access to new efficient generation resources in PJM and Pennsylvania that are currently restricted to certain areas of the network because of transmission limitations:

...

The area served by PJM accounts for 21 percent of the U.S. Gross Domestic Product. Thus affordable wholesale electricity prices have an outsized impact on the economic productivity of our region and the nation. States such as Pennsylvania that have elected to rely on market forces to stimulate the entry and exit of generators have cultivated some of the most attractive environments for new resource development and investment in the U.S. For example, the top three states in PJM with generation projects under consideration are Ohio (20,000+ MW), Pennsylvania (18,000+ MW) and the PJM portion of northern Illinois (15,000+ MW). This is no accident. Policies have enabled

these states to nurture a vibrant market for generator development that attracts billions of dollars of private investment – more than \$17 billion in Ohio and Pennsylvania alone. These investments in new generation are further incented with the construction of the Transource project;

...

New technologies tend to improve efficiency, and PJM's current generation mix is 30 percent less carbon-intensive than 10 years ago. On average, producing one megawatt of power in PJM emits 13 percent less carbon dioxide than it did 10 years ago. Emissions reductions are largely the result of the competitive markets encouraging the free entry of new, competing technologies. Removal of transmission bottlenecks with transmission upgrades, such as that of Project 9A provides access to more of this technology.

Transource PA St. No. 8-R, pp. 18 – 19.

Former Commissioner Cawley also testified as follows:

Localized planning to ensure only safe and reliable service in Pennsylvania would significantly increase transmission and generation costs, as well as work to erode or negate the significant benefits and reasons that utilities within Pennsylvania expected when they ceded local grid and market control to PJM with the expectation of higher benefits through the operation of a regional market

Transource PA St. No. 9-RJ, p. 9, lines 17 – 22.

PJM's regional planning process has provided substantial benefits to Pennsylvania for many years. Regional planning greatly enhances the efficiency of the wholesale power market and provides substantial cost savings for customers in Pennsylvania.

14. OCA's Argument That Project 9A Does Not Satisfy the Commission's Need Criteria Should Be Denied.

OCA Witness Rubin argued in testimony that Project 9A was not intended to address reliability issues and suggested that market efficiency projects adopted under FERC's benefit-to-cost analysis such as Project 9A do not meet the Commission's need requirements. OCA St. No.

1, p. 45. OCA's argument should be denied. OCA fails to acknowledge that PJM is required by FERC Orders and regulations to identify and resolve congestion. FERC Order 1000, ¶¶ 2, 70, 71, 147, 415. *See also* Section B above.

In addition, PJM is required to follow its filed planning procedure to address congestion. Those procedures provide for extensive stakeholder input through a collaborative process. PJM's market efficiency process has been submitted to and approved by FERC. Transource PA St. No. 7-R, pp. 8-15. PJM cannot change its market efficiency process without FERC approval. Moreover, OCA has not made any allegations that PJM failed to follow its FERC-approved and tariffed processes.

For these reasons, OCA's argument that PJM's market efficiency process is not sufficient to establish need for a transmission project under Pennsylvania law should be denied.

15. Parties' Criticism of PJM's Benefit-to-Cost Ratio Should Be Denied.

a) Introduction

Several of the parties in this proceeding argue that PJM's benefit-to-cost ratio is flawed because it does not capture all costs of market efficiency projects. Parties' primary argument is that PJM's benefit-to-cost ratio does not include power costs in regions where power costs will increase. OCA St. No. 1, p. 27. Parties also cite to the report of PJM's Independent Market Monitor ("IMM") as support for their position. Franklin County St. No. 1, p. 8; OCA Hearing Ex. 6, p. 6-11. Parties' criticisms of PJM's benefit-to-cost ratio are contrary to PJM's FERC-approved process and should be summarily disregarded. PJM is required by law to follow its FERC-accepted, tariffed process and cannot change it without an Order from FERC. Notably, no party in this proceeding has argued at any time that PJM did not comply with its tariff and FERC-approved process in calculating the benefit-to-cost ratio or in approving Project 9A. In

addition, the Market Monitor's recommendations in the Market Monitor Report are not relevant in this proceeding before the Commission.

b) PJM's Benefit-to-Cost Methodology is Approved by FERC.

Transource PA witness, Mr. Herling, explained the process by which the benefit-to-cost ratio methodology was adopted in his Rebuttal Testimony. Transource PA St. No. 7-R, pp. 11-15. PJM conducted a thorough stakeholder process to evaluate the benefit-to-cost methodology and submitted the methodology to FERC. Transource PA St. No. 7-R, pp.12-14. In Rejoinder Testimony, Mr. Herling testified as follows:

As stated in PJM's February 28, 2014 letter filed in Docket No. ER14-1394, the revisions to PJM's economic planning process that revised the benefits determination were developed in an extensive stakeholder process through the Regional Planning Process Task Force ("RPPTF"). During the course of the RPPTF, PJM and its stakeholders considered various options. The proposal that was developed in the context of the RPPTF was supported by the majority of the stakeholders. The proposed revisions were then presented to and endorsed by acclamation with no objections and no abstentions by the Markets and Reliability Committee and Members Committee. The importance of the stakeholder process is to vet all options before a stakeholder group so that the needs of all stakeholders are considered and no one stakeholder can impose his or her agenda on the whole.

Transource PA St. No. 7-RJ, p. 10, lines 12-22.

No party opposed this methodology before FERC in Docket No. ER14-1394, and the filing was accepted by FERC. The methodology is set forth in PJM's Operating Agreement and has the force and effect of law. *See New York State Elec. & Gas Corp. v. New York Indep. Sys. Operator*, 2001 U.S. Dist. LEXIS 27071, *20, (2001); *see also Lowden v. Simonds-Shields Lonsdale Grain Co.*, 306 U.S. 516, 520 (1939). PJM must follow the benefit-to-cost methodology set forth in its tariff. Parties' attempts to require a different methodology should be denied.

c) PJM’s Benefit to Cost Methodology Requires Zones that Benefit from Settlement 9A to Pay the Costs of the Project.

PJM’s benefit to cost methodology aligns payment of costs with zones that benefit. Mr. Herling testified that it is appropriate that the regions that benefit from the deployment of market efficiency projects are the regions paying for the upgrades. Transource PA. St. No. 7-R, p. 14. Parties in this proceeding have argued that Pennsylvania zones receive little congestion relief benefits from Project 9A. OCA St. No. 1, p. 41. Pursuant to PJM’s cost allocation methodology, if a Pennsylvania zone does not receive congestion benefits from the Project, it will not pay for the Project.

d) PJM’s Benefit-to-Cost Methodology Prevents Rate Discrimination.

In resolving congestion issues, it is not appropriate to consider higher costs that would result in unconstrained regions because the costs in unconstrained regions are artificially low due to the congestion constraints. Former Chairman of the Commission, James Cawley testified as follows:

Finally, contrary to Mr. Rubin’s suggestion, no customer or group of customers is entitled to lower cost generation created by congestion constraints. When there is a constraint or bottleneck, the wholesale market is not functioning as intended, which results in a disparity of prices in front of and behind the bottleneck/constraint. Customers in front of the bottleneck are paying artificially low prices and customers behind the bottleneck are paying artificially high prices. The so-called “benefits” of congestion, i.e., the fact that customers in front of the constraint are paying lower than competitive prices, are not benefits at all. They are the inefficient and uneconomic consequences of the bottleneck, which are being paid for through higher prices by those customers taking power behind the constraint. The purpose of the Project is to reduce this congestion and provide a more open and efficient market and levelized and competitive prices.

Transource PA St. No. 9-R, p. 6, lines 10-20.

Former Commissioner Cawley also explained that transmission congestion causes rate discrimination. In his Rejoinder Testimony, he stated as follows:

Second, elimination of a market inefficiency is not a “cost” to customers in the unconstrained area because they are not entitled to discriminatory rates caused by congestion. Presently, customers in the constrained area are paying artificially high, discriminatory, and unjust and unreasonable power prices because cheaper generation cannot reach them and they instead must be served by higher generation sources.

... Presently, customers in the unconstrained area are paying artificially low power prices because only they can take advantage of cheaper generation. In the first instance, the prices are discriminatory to the customers which agreed to participate in the regional PJM market and cede local operations in order to receive higher benefits of a regional market; in the second instance, they are discriminatory to the generators who are deprived by the congestion of realizing the full market value of the energy they provide to the regional market. Removal of the congestion, such as the chronic congestion which has existed on the AP South interface for many years, eliminates discrimination in rates over the length of the line in both of these instances.

Nor is a distortion in prices caused by congestion a “benefit” to which customers in the unconstrained area are entitled to receive or maintain. Customers are entitled to fair, just, and reasonable rates, but not discriminatory rates that are the result of market inefficiencies that do not exist in a well-functioning marketplace. Therefore, the monetized amount of the “loss” of this nonexistent “benefit” is improperly subtracted from the legitimate estimated savings to be achieved by removing the congestion.

Transource PA St. No. 9-RJ, p. 4, lines 11-15; p. 5, lines 1-16.

As demonstrated by Former Commissioner Cawley, other parties’ proposals to include higher prices in the unconstrained area in the benefit-to-cost ratio is unreasonable because it perpetrates discriminatory rates.

16. Non-Transmission Alternatives Will Not Resolve Congestion on the AP South and Related Constraints.

a) Introduction

In this proceeding, OCA argued that non-transmission alternatives were sufficient to address congestion on AP South and related constraints. These non-transmission alternatives included: (1) end-use energy efficiency measures, (2) renewable resources, (3) distributed generation and (4) demand response programs. OCA St. No. 3, pp. 15-30. As an initial matter, PJM already forecasts these measures in its model. In addition, the AP South and related constraints have experienced high congestion over an extended period of time. Transource PA Statement No. 8-R, p. 17; Tr. at 2643-44. There is no reasonable basis to conclude that this will change in the future due to the addition of non-transmission alternatives that are not already incorporated in PJM's model. In addition, OCA presented no specific analysis or study which analyzed this issue. OCA's arguments are purely based on speculation. In fact, construction of new renewable resources could exacerbate congestion on the AP South and related constraints. Transource PA St. No. 7-R, p. 33. Further, there are substantial flaws in OCA's estimate of the impact of these non-transmission alternatives.

b) PJM Already Includes Energy Efficiency, Renewable Resources, Distributed Generation and Demand Response In Its Model.

Transource PA witness Mr. Herling testified that PJM specifically includes forecasts for non-transmission alternatives in its model. Mr. Herling explained that PJM's forecasting of non-transmission alternatives is based upon well-defined methodologies. These methodologies are explained in detail in documents that are available on PJM's website.

With respect to energy efficiency, equipment saturation and efficiency trends are included in the forecast Model through three variables—heating, cooling and other. The

variables include evaluating comprehensive heating, cooling and miscellaneous equipment. Transource PA St. No. 7-R, pp. 30-31. PJM has a load forecasting white paper that was included as Transource PA Ex. No. SRH-5R which provides extensive detail in PJM's energy efficiency modeling.

The RTEP Model forecast also includes renewable energy resources, regardless of whether the resource is part of a state renewable energy forecast or not. Transource PA St. No. 7-R, p. 32.

Likewise, PJM includes distributed solar generation in its forecast. PJM considers the following factors in its forecast: historical installed capacity, DC to AC conversion factors, solar insolation, cloud cover, solar panel efficiency degradation and panel tilt angle. Transource PA St. No. 7-R, p. 32. A detailed explanation of these procedures was also included in the Load Forecasting white paper provided as Transource PA Ex. No. 8-SRH-5R.

PJM also specifically includes a forecast of demand response resources in its Load Forecast. A description of the methodology for how PJM includes demand response in its forecast was included in the document titled PJM Market Efficiency Modeling Practice which was provided as Transource PA Ex. No. SRH-6R. *See* Transource PA St. No. 7-R, p. 31.

OCA's testimony failed to recognize that PJM already includes non-transmission alternatives in its forecast. In Surrebuttal Testimony, OCA witness Crandall stated as follows:

The purpose of my direct testimony was to review and assess whether or not non-transmission alternatives would mitigate congestion. I concluded that non-transmission resources, ***which were not considered by PJM***, have a significant role to play.

OCA St. No. 3SR, p. 4, lines 3-6 (emphasis supplied).

However, at the hearing, it was clear that Mr. Crandall was not aware that PJM did forecast non-transmission alternatives in the RTEP model. Mr. Crandall testified that he did not

review PJM's load forecasting white paper before making this statement, even though the Load Forecasting White Paper was provided in Transource PA's Rebuttal Testimony before Mr. Crandall submitted his Surrebuttal Testimony. Tr. 2556-57. Mr. Crandall also stated that he did not consider PJM's Market Efficiency Modeling Practices which were provided in rebuttal testimony in Ex. SRH-6R when making his statements that PJM did not consider non-transmission alternatives in its model. Tr. 2562.

Mr. Crandall's failure to even be aware of PJM's load forecasting white paper and failure to consider PJM's Market Efficiency Modeling Practices demonstrates that his conclusion that PJM did not consider non-transmission alternatives is not credible. Mr. Crandall's conclusions regarding non-transmission alternatives cannot be accepted. PJM has a specific, detailed and well-defined process for including non-transmission alternatives in its load forecast model.

c) The AP South and Related Constraints Have Experienced Chronic Congestion For Many Years and There is No Basis to Conclude Non-Transmission Alternatives Will Resolve Future Congestion.

PJM has experienced significant congestion on the AP South and related constraints for many years. The congestion drivers leading to the selection of Project 9A were posted for stakeholders in 2014. Transource PA St. No. 7-RJ, p. 8. Non-transmission alternatives have not resolved the congestion issues in the past 6 years, and there is no basis to conclude that they will in the future.

Moreover, non-transmission alternatives such as renewable resources could increase congestion on the AP South and related constraints. In his Rebuttal Testimony, Mr. Herling stated:

Mr. Crandall also seems to focus on purported non-transmission alternatives in Maryland and Virginia but ignores the potential for additional non-transmission alternatives to the north and west of the AP South interface, which will continue to develop through the

normal course of market activity in the generation interconnection queue and would further increase congestion. Mr. Crandall's conclusion that the need for Project 9A can be eliminated completely by non-transmission alternatives is unsupported and inaccurate.

Transource PA St. No. 7-R, p. 33, lines 1-7.

Mr. Crandall's testimony that non-transmission alternatives eliminate the need for Project 9A are mere speculation and are unsupported by any study or model.

d) Mr. Crandall's Testimony Regarding State Requirements for Renewable Energy Contains Significant Flaws.

In his testimony, Mr. Crandall cites to renewable resource requirements in Virginia, the District of Columbia and Maryland as support for his argument that non-transmission alternatives reduce the need for Project 9A. OCA St. No. 3, pp. 19-30. There are many flaws with Mr. Crandall's argument that renewable energy requirements reduce the need for Project 9A.

First, as explained above, OCA has not presented any analysis or study demonstrating that the construction of specific renewable resources will reduce congestion on AP South and related constraints. Testimony that additional renewable resources will be constructed is meaningless without such analysis. Construction of additional renewable generation in Maryland could increase congestion on the AP South and related constraints. Transource PA St. No. 7-R, p. 33.

Second, Mr. Crandall's forecasts are completely speculative. Mr. Crandall admitted in discovery that he was not predicting any level of energy efficiency measures and was not predicting what level of new renewable resources would be constructed. Transource PA St. No. 1-R, pp. 27-28; Transource PA Ex. BDW-4R. He also stated in his surrebuttal testimony that he

was not providing a forecast of any amount of non-transmission alternatives. OCA St. no. 3-SR, p. 4.

Third, Mr. Crandall cites a Dominion Energy Integrated Resource Plan (“Dominion IRP”) as support for his claims that the Virginia Grid Transformation and Security Act of 2018 will reduce energy usage and peak demand. *See* Transource PA St. No. 1-R, p. 28. The Dominion IRP provides no support for Mr. Crandall’s arguments. The Dominion IRP actually demonstrates that Dominion projects a significant energy and capacity shortfall through 2033, even including the addition of new resources. Transource PA St. No. 1-R, pp. 28-31.

In addition, the Commission has previously denied parties’ attempts to include unproven renewable resources in RTEP modeling. In *Susquehanna Roseland*, the Commission denied parties’ attempts to require PJM to model Act 129 and New Jersey Energy Master Plan (“EMP”) goals. Therein, the Commission stated:

Additionally, we agree with the ALJ regarding the Act 129 objectives and the NJ EMP goals and that until they are in effect and have been proven to work that it is not reasonable to model those expectations into the RTEP.

Susquehanna Roseland at 62.

For the reasons explained above, Mr. Crandall’s arguments that non-transmission alternatives reduce the need for Project 9A should not be accepted.

e) Parties’ Arguments that Congestion on AP South has Decreased Ignore Congestion Increases on Related Constraints that Will Be Resolved by Settlement 9A.

Parties in this proceeding have argued that congestion levels on the AP South interface have decreased and that Settlement 9A is no longer necessary to address congestion. OCA witness Lanzalotta argued that congestion on the AP South interface decreased by 95% from 2018 to 2017. OCA St. No. 2, p. 17. In addition, Franklin County witness McGavran argued

that congestion has been decreasing on the AP South interface since 2014.²⁰ Franklin County St. No. 1, p. 9. OCA and Franklin County attempt to take an extremely narrow view of congestion that will be resolved by Settlement 9A, and their arguments should not be accepted.

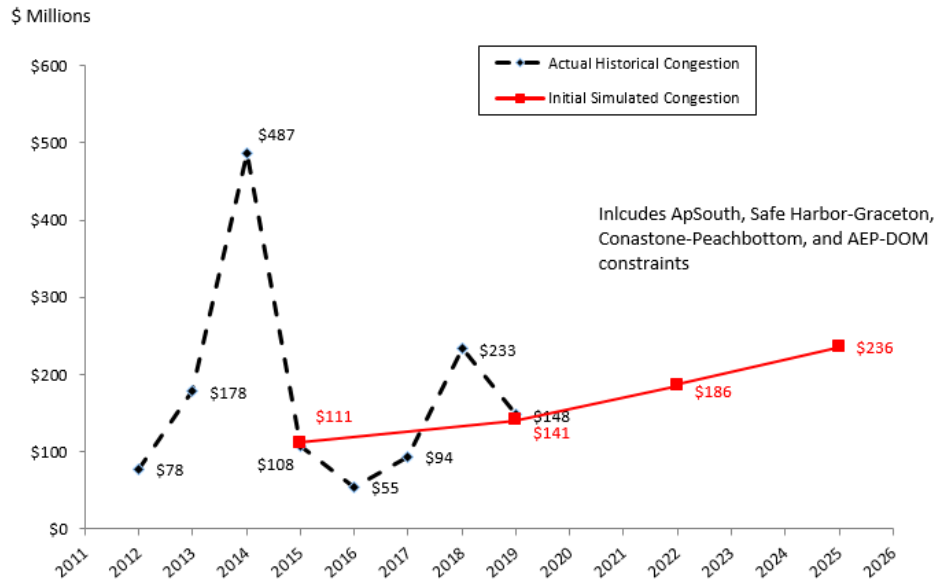
Transource PA witness Horger explained in this proceeding that congestion on one PJM interface cannot be viewed in a vacuum. Congestion shifts among interfaces, and there are multiple constraints in the area that are mitigated by Settlement 9A. Mr. Horger explained this issue in his testimony, stating as follows:

The congestion on the AP South Interface is one of the, but not the only, area of congestion alleviated by the Project 9A inclusive of the IEC project because congestion often shifts and there are multiple constraints in the same area that are impacted by the upgrade provided by the Project. PJM's 2014/2015 Long-Term Proposal Window sought proposals for many congested facilities as identified in PJM's simulations. Although the AP South Interface was the major congestion point that Project 9A inclusive of the IEC Project resolved, the Project also relieves congestion in other areas. For example, in PJM's operations, PJM typically does not experience congestion on the AP South, AEP-Dominion, Conastone – Peach Bottom, and Gracetown-Safe Harbor interfaces at the same time; when one of these areas is constrained the others typically would not be, but all areas are persistently constrained. One of the distinct advantages of Project 9A inclusive of the IEC Project that also speaks to the Project's benefits is that the Project does not just mitigate congestion in one interface—it mitigates the problem in all of these areas. Indeed, in PJM's evaluations and summary of Project 9A inclusive of the IEC Project, PJM identified the Project's impact in multiple areas as one of the Project's advantages.

Transource PA St. No. 3AA-RJ, p. 8, lines 148-162.

In addition, as also demonstrated by Mr. Horger, the actual level of congestion on the AP South and related interfaces for 2019 is consistent with the congestion forecasted by PJM in 2015.

²⁰ Neither Project 9A nor Settlement 9A are based on the level of congestion on the AP South interface in 2014. They are based upon forecasted congestion benefits over the future 15-year planning period.



Transource PA St. No. 3AA-RJ, p. 11.

This figure shows that back in 2015, PJM projected that congestion on the AP South and related interfaces would be \$141 million in 2019. Actual congestion on the AP South and related interfaces was \$148 million in 2019. Transource PA St. No. 3-AA, p. 10. PJM has accurately forecasted increased congestion in its model. For these reasons, parties’ challenges to PJM’s forecasted congestion should not be accepted.

f) Project 9A Was Not Designed to Only Address Congestion on the AP South Interface.

At the hearing, OCA suggested that when PJM issued the 2014/2015 Long-Term Window, PJM only intended to address congestion on the AP South interface and not congestion on other related interfaces. Tr. 2926. OCA’s suggestion is not correct and should not be accepted.

As explained above, congestion shifts on the transmission system and congestion at a single interface cannot be viewed in isolation. Therefore, the premise of OCA’s suggestion is flawed. When projects are submitted to PJM for review, PJM reviews the project for how it

impacts congestion on the transmission system as a whole—not just at one isolated interface. Tr. 2938-2939. In addition, the March 2016 TEAC presentation for the 2014/2015 Long-Term Window clearly identified that Project 9A was resolving congestion on interfaces other than the AP South interface. Tr. 2939-2940. Moreover, the March 2016 TEAC presentation also identified the estimated dollar values of congestion reduction on other related interfaces such as the AEP-DOM interface. Tr. 2940-2941.

OCA’s suggestion that Project 9A was only intended to address congestion on the AP South interface is contrary to the evidence and should not be accepted.

g) Parties’ Arguments that Reductions in Energy and Peak Load Forecasts Reduce the Need for Settlement Project 9A Have No Merit.

In this proceeding, several parties have argued that reductions in energy and peak load forecasts suggest that Settlement 9A is not needed. In Direct Testimony, OCA witness Lanzalotta stated that PJM summer load levels have been decreasing and that forecasted levels for Baltimore Gas & Electric (“BG&E”), PEPCO and Dominion had also decreased since 2015. OCA St. No. 2, pp. 15-16. At the hearing, parties also suggested that recent energy and peak load reductions due to COVID-19 could eliminate the need for Settlement Project 9A. Tr. 2962-2963. As explained below, these parties focus on overall energy and peak loads, as well as their focus on short-term forecasts is inconsistent that with PJM’s long-term planning process and should not be considered.

In Direct Testimony, OCA witness Lanzalotta argued that summer peak levels and peak load forecasts had been declining over the Mid-Atlantic area for the past five years. OCA St. No. 2, p. 16. OCA suggests that Project 9A is not necessary due to these peak load reductions.

In Rebuttal Testimony, Mr. Horger explained that PJM’s market efficiency analysis does not simply look at peak loads in a single hour to determine if a market efficiency analysis is

needed. Rather, PJM looks at all 8,760 hours in a year over a 15-year period. Transource PA St. No. 8-R, p. 16 lines 4-6. In addition, PJM conducted sensitivity analysis with load reductions, and Project 9A still passed the benefit-to-cost ratio. TPA Exhibit No. TH-1R, pp. 4-5. Moreover, PJM has continually evaluated Project 9A and Settlement Project 9A with updated load forecasts and the Projects have continued to pass the benefit-to-cost test. The last analysis was presented in November 2019 and the benefit-to-cost ratio of Settlement Project 9A was 1.6. Transource PA Ex. TJH-AA2, p. 7.

Likewise, at the hearing, parties suggested that Settlement 9A is not necessary due to recent decreases in energy and peak load due to COVID-19. Tr. 2956. Load reductions due to COVID-19 do not reduce the need for Settlement Project 9A.

As an initial matter, the load reductions due to COVID-19 are forecasted to be temporary and not long term. PJM's most recent forecast shows a minimal peak load reduction of 2/10ths or 3/10ths of a percent in 2023 and by 2025, no reduction at all. Tr. 2956. Market efficiency planning is conducted over a 15-year window. Tr. 2937. The PJM system often experiences fluctuations in load. Tr. 2938. A temporary reduction in load does not affect long-term transmission planning. The recent reductions in load due to COVID-19 do not affect the need for Settlement Project 9A.

17. There is No Need To Conduct A Separate Study to Address The Reliability Violations.

Parties have argued in this proceeding that PJM did not conduct a specific study to address the identified reliability violations in 2023. OCA witness Lanzalotta argued that PJM should conduct a more complete investigation of the reliability violations. OCA Statement No. 2-SR-SUPP, pp. 3, 6, 16-17. As a result, OCA argues that the reliability benefits of Project 9A should not be relied upon. These arguments have no merit and should not be considered.

Mr. Herling explained that it is not necessary to conduct additional reliability analysis because the reliability violations that were identified will be resolved by Project 9A. Mr. Herling stated as follows:

- A. Mr. Lanzalotta's testimony is misfocused. The IEC Project was approved by the PJM Board in August 2016 to resolve market efficiency problems. The project also prevents NERC reliability criteria violations from occurring, violations that PJM would have to solve absent the IEC Project. There is no need to perform further reliability analyses in the absence of Project 9A. It is clear that a number of reliability criteria violations will arise in the absence of Project 9A. These reliability violations simply do not arise with Project 9A assumed to be in service.

Moreover, there is no requirement that a market efficiency project also resolve reliability criteria violations as a condition of further evaluation or ultimate approval. As I have stated in my rebuttal testimony, it is not unusual that a market efficiency project may also resolve reliability issues. That is the case here.

If the now-identified *reliability* criteria violations that arise without the IEC Project in the base case had been identified (i.e., existed) prior to the *economic* analysis upon which the 2014/2015 RTEP window was based, then PJM would have pursued development of a transmission solution to those reliability criteria violations. That was not the case. Reliability criteria violations absent Project 9A arose and were identified in September 2018, several years after the 2014/2015 RTEP window.

That being said, if Project 9A were removed from the RTEP base case, RTEP projects recently identified by PJM to resolve reliability violations would need to be evaluated, in addition to any projects needed to resolve remaining market congestion.

Transource PA St. No. 7-RJ, SUPP., p. 3, line 10-p. 4, line 5.

Mr. Herling explained that even though Project 9A resolves reliability violations, it was approved by PJM as a market efficiency project. Transource PA St. No. 7-RJ-SUPP., p. 6. Reliability issues and market congestion issues are often intertwined and should not be viewed in isolation.

There is no dispute in this proceeding that Project 9A and Settlement 9A solve NERC reliability violations. Solving these reliability violations is a significant additional benefit of Project 9A. Mr. Herling summed his conclusion by stating as follows:

The reliability benefits fortify PJM's already well-grounded justification for its recommendation of the IEC Project as the more efficient, cost effective market efficiency project among the proposed solutions.

Transource PA St. No. 7-RJ-SUPP., p. 6, lines 6-8.

Moreover, as explained above, congestion and reliability issues are often related. OCA's argument to ignore the reliability violations should not be accepted.

Project 9A and Settlement 9A resolve significant NERC reliability violations. There is no need to conduct a separate study or solicit other proposals to address the reliability violations that will be resolved by Project 9A or Settlement Project 9A.

18. Conclusion Regarding Need for Settlement 9A.

Under Order 1000, FERC has required RTOs such as PJM to identify and address market congestion issues to ensure that FERC-jurisdictional services are provided at rates, terms and conditions that are just and reasonable and not unduly discriminatory or preferential. PJM identified significant and persistent congestion on the AP South and related constraints and solicited competitive proposals in the 2014/2015 Long-Term Window to address this congestion.

PJM evaluated 41 different competitive proposals to resolve congestion on the AP South and related constraints and selected Project 9A. Pursuant to settlement agreements in this proceeding, Transource PA, PPL Electric and the active parties in York County agreed to Settlement 9A in order to utilize existing infrastructure in York County to the extent reasonably possible.

Settlement 9A provides \$845 million of congestion benefits to the PJM system in the 15-year planning period and will continue to provide benefits for the 50-year useful life of the

assets. Settlement 9A also resolves significant reliability violations that PJM identified will occur in 2023.

Settlement 9A is clearly needed and is necessary or proper for the accommodation, convenience and safety of its patrons, employees and the public.

C. RISKS TO HEALTH AND SAFETY OF THE PUBLIC

1. Transource PA and PPL Electric Will Safely Construct the IEC Project.

Transource PA witness Herzog explained the measures that the Company will employ to safely construct the IEC Project. *See* Transource PA St. No. 5. In addition, the safety measures are set forth in Attachment 4 to the Siting Application.

Transource PA will incorporate AEP's experience in safely constructing its portion of the Project. Construction will comply with all Occupational Safety and Health Administration ("OSHA") rules and regulations, while keeping environmental impact to a minimum. Transource PA will have dedicated safety personnel for the Project and each contractor will be required to have a safety program. *See* Attachment 4 to Siting Application.

Likewise, PPL Electric will follow its well-established safety protocols in constructing its portion of the IEC Project. PPL Electric's construction practices are set forth in Supplemental Attachment 4 to the Amended Siting Application.

2. Transource PA and PPL Electric Will Meet or Exceed All National Electric Safety Code Standards.

The IEC Project will meet or exceed all National Electric Safety Code ("NESC") requirements. Descriptions of how Transource PA will meet or exceed NESC requirements are provided in Attachment 4 to the original Siting Application. Descriptions of how PPL Electric will meet or exceed all NESC requirements are provided in Supplemental Attachment 4 to the Amended Siting Application.

The Commission has found in numerous cases that transmission lines that meet or exceed NESC requirements do not create an unreasonable risk or danger to the health and safety of the public. *Investigation on Commission Motion of the Safety of the Cabett-Wylei Ridge 500kV Transmission Line*, I.D. 236 (Sept. 18, 1981); *Application of PP&L for Approval to Locate and Construct a 138kV Transmission Line Between West Allentown and Salisbury Substations*, Docket No. A-00104160 (July 20, 1984); *Application of PP&L for Authorization to Locate and Construct its Hamlin 1348 kV Electric Transmission Line*, Docket No. A-00101826 (April 3, 1981); *Larken v. Philadelphia Electric Co.*, 39 Pa. PUC 777 (1961).

3. Electric and Magnetic Fields

a) Background on EMF

Transource PA witness, Mr. Silva, provided an overview of electric and/or magnetic fields (“EMF”). EMF are created whenever there is a flow of electricity. Transource PA St. No. 15-R, p. 7. There are two types of EMF associated with alternating electric current—the electric field and the magnetic field. The electric field is created by the voltage, and the magnetic field is created by the flow of current. Transource PA St. No. 15-R, p. 7. In the United States, electric fields operate at a power frequency of 60 Hertz (Hz). Common sources of 60 Hz EMF include wiring in homes, businesses and schools, lighting, home appliances, power tools and other electrical equipment. Transource PA St. No. 15-R, p. 8.

Peoples are exposed to EMF every day. Mr. Silva provided tables in his testimony showing the typical magnetic fields from appliances and at public locations. Transource PA St. No. 15-R, pp. 10-12.

b) EMF Levels for the IEC Project are Lower Than Levels that Exist in Common Public Locations.

Mr. Silva calculated EMF levels for the IEC Project and provided those levels in a table on page 13 of his testimony. Transource PA St. No. 15-R, p. 13. Those levels are lower than levels that are seen at various public locations, including public libraries, supermarkets, coffee shops and stores. *See* Transource PA St. No. 15-R, pp. 12-13.

Based upon his evaluation, Mr. Silva concluded that EMF levels for the IEC Project were below the recommended ranges for public exposures and the magnetic fields are within the range that people experience in their normal living and working environments. Transource PA St. No. 15-R, p. 14.

c) EMF Levels Do Not Present a Risk to Public Health

In this proceeding, various members of the public expressed concerns about the risk of cancer or other health issues due to EMF. *See, e.g.,* Tr. at 347, 963. In response to this testimony, Transource PA presented the testimony of Dr. Nancy Lee, an expert in cancer and other public health issues.

Dr. Lee conducted extensive research on the potential health effects of EMF. Dr. Lee provided her expert opinion that there is no reliable scientific basis to conclude that exposure to EMF would cause or contribute to childhood leukemia, other childhood or adult cancers, or other chronic health problems. Transource PA St. No. 16-R, p. 15. Dr. Lee's conclusion is consistent with the Commission's view that EMF should not be regarded as a health hazard. *See Application of Pennsylvania Power & Light Company Filed Pursuant to 52 Pa. Code Chapter 57, 1994 Pa. PUC LEXIS 65, *67-*69 (Oct. 21, 1994).*

d) EMF Levels Do Not Present a Risk to Animals.

Members of the public also expressed concern regarding potential EMF impacts on animals, including cows and horses. *See e.g.*, Tr. at 462, 1674. In response to this testimony, Transource PA presented the testimony of Dr. H. Dwight Mercer. Dr. Mercer is a veterinarian, a comparative toxicologist and an expert on the EMF impacts on animals.

Dr. Mercer explained that he has extensive experience working with animals personally, researching issues, writing papers and reviewing studies regarding potential EMF impacts on animals. Dr. Mercer's opinion in this proceeding was that there is no risk to animals as a result of EMF from the IEC Project. Transource PA St. No. 17-R, p. 12.

e) The IEC Project Does Not Present Stray Voltage Concerns.

At the public input hearings, various members of the public expressed concerns about stray voltage. *See, e.g.*, Tr. at 1674, 1744. Transource PA witness, Mr. Silva, explained that stray voltage is a voltage between two objects where no voltage should exist. Transource PA St. No. 15-R, p. 17. Mr. Silva explained that high voltage transmission lines do not create stray voltage problems and would not be expected for the IEC Project.

f) The IEC Project Will Not Create Audible Noise Concerns.

At the public input hearings, several parties expressed concerns about noise levels from the transmission lines. *See e.g.*, Tr. at 976 332. Transource PA witness Mr. Silva calculated noise levels for the transmission lines in both dry and rainy conditions. Transource PA St. No. 15-R, p. 16. Mr. Silva testified that sound levels for the transmission lines are below typical sound levels in a library, in a suburb at night or the low range of sounds from a light wind or light rain. Transource PA St. No. 15-R, p. 16.

g) Typical Farming Activity Can Safely Occur Under the Transmission Lines.

At the public input hearings, several parties expressed concerns about being able to safely farm underneath the transmission lines. See e.g. Tr. at 914, 1674, 1754. Transource PA notes that much of the transmission line in Franklin County parallels existing transmission infrastructure that is currently being farmed around.

In addition, the new transmission infrastructure will allow greater farming activity than the existing infrastructure. Much of the existing infrastructure is lattice or H-frame construction which presents greater obstacles to farming. The Transource PA towers will be monopoles, which take up less land and allow farmers to farm greater acreage than lattice or H-frame towers. Transource PA witness Herzog explained that farming and transmission lines have co-existing for a long time. Transource PA St. No. 5-R, p. 2. In addition, the current design of the west lines have a minimum span length of 220 feet, a maximum span length of 1,124 feet and a mean span length of 822 feet. Transource PA St. No. 5-R, p. 3. The span length easily allows for large farming equipment to move between the structures.

Some members of the public expressed concerns at the public input hearings that transmission lines affecting global positioning system (“GPS”) on farm equipment. Tr. 137-138. Mr. Silva explained that he has conducted research regarding whether GPS devices are adversely affected by EMF from power lines and testified that the transmission lines would not affect GPS systems. Transource PA St. No. 15-R, pp. 22-23.

h) Conclusions Regarding Health and Safety.

The record evidence in this proceeding demonstrates that the transmission lines will be safely constructed and will not cause adverse effects to the health and safety of the public.

D. ENVIRONMENTAL IMPACTS

1. Commission Standards for Reviewing Environmental Impacts

The Commission's regulations require that a transmission line project "will have minimum adverse environmental impact, considering the electric power needs of the public,²¹ the state of available technology and the available alternatives."²² 52 Pa. Code § 57.76(a)(4). In determining whether a proposed route will have minimum adverse environmental impacts, the Commission will consider the impact and the efforts that have been and will be made to minimize the impact, if any, of the proposed line upon the following: (i) land use; (ii) soil and sedimentation; (iii) plant and wildlife habitats; (iv) terrain; (v) hydrology; (vi) landscape; (vii) geologic areas; (ix) historic areas; (x) scenic areas; (xi) wilderness areas; and (xii) scenic rivers. 52 Pa. Code § 57.75(e)(3). Further, the Commission will consider the availability of reasonable alternative routes in reaching a conclusion as to whether the proposed route will have minimum adverse environmental impacts. 52 Pa. Code § 57.75(e)(4). The Commission has determined that application of its regulations fulfills the Commission's duties as trustee under the Environmental Rights Amendment as set forth in *PEDF*.²³ As explained below, Transource PA and PPL Electric have extensively considered each of the factors set forth in the Commission's regulations as well as the available alternative routes in selecting the proposed routes.

In approving a utility's application for a high voltage transmission line, the Commonwealth Court has stated that a utility's route for a proposed high voltage transmission line should be approved where the record evidence shows that the utility's route selection

²¹ Section VI(B) of this Brief fully explains why the IEC Project is necessary to meet the power needs of the public.

²² Consideration of alternatives is addressed in Section E of this Brief.

²³ See *Application of Pennsylvania Electric Company Seeking Approval to Locate, Construct, Operate and Maintain a High-Voltage Transmission Line Referred to as the Bedford North-Central City West 115 kV HV Transmission Line Project*, Docket No. A-2016-2565296 (Order entered March 8, 2018).

process was reasonable and that the utility properly considered the factors relevant to siting a transmission line. *Energy Conservation Council of Pa. v. PUC*, 25 A.3d 440, 449 (Pa. Cmwlth. 2011). The Commonwealth Court explained that Section 57.76(a)(4) requires the applicant to demonstrate reasonable efforts to minimize adverse environmental impacts of the proposed route when compared to the available alternative routes, but the utility need not consider all possibilities. *Id.* at 448-49. Moreover, the applicant is not required to choose a route that has no adverse impacts. *Id.*

If “no impact” were the standard, no transmission line project would ever be built because a high voltage transmission line cannot be built without causing some effects on the environment, the public and individual property owners. Transource PA St. No. 4-R, pp. 12-14. Such a “no build” approach would have a significant adverse effect in that it would prevent the provision of adequate, safe and reliable electric service to the public. The fact that various parties to this proceeding may have pointed out some adverse effects of the West Portion of the IEC Project and the Settlement IEC East Portion does not support rejection of the Application as amended. Merely identifying some adverse effects along a proposed line route does not justify moving the line somewhere else where it would have similar or perhaps even greater adverse effects on others. As explained by Transource PA and PPL Electric witness Mr. Baker, the goal of the siting process is to identify a route that minimizes impacts overall while balancing environmental impacts, human/built impacts, and engineering concerns to the extent practicable. Transource PA St. No. 4-R, p. 14.

A review of potential environmental impacts should weigh these impacts against available alternatives and fully consider mitigation measures proposed by Transource PA and PPL Electric. Transource PA and PPL Electric have committed to taking substantial measures to

mitigate environmental impacts of the proposed transmission line, including working with numerous governmental agencies that have jurisdiction over various aspects of the project, based on their combined expertise, to further mitigate the effects of the project. Transource PA Ex. No. AA-1, Supplemental Attachment 3, pp. 25-28; Transource PA Ex. No. 1, Attachment 3, p. 99. These mitigation measures are explained below. These efforts should be fully recognized in any analysis of the environmental effects of the proposed line route.

The siting processes employed by Transource PA and PPL Electric represents a careful balancing of all relevant factors, resulting in a reasonable route selection that minimizes environmental impacts for both the West Portion of the IEC Project and the Alternative IEC East Portion. Route C was selected as the Proposed Route for the West Portion of the IEC Project and the Settlement IEC East Portion was proposed for the East Portion of the IEC Project because these routes have the least overall impact. As explained below, Transource PA and PPL Electric have considered available alternative routes and selected the routes that appropriately minimize environmental impacts, consistent with the Commission's siting regulations and *PEDF*. Transource PA St. No. 4-R, p. 10. The siting of the West Portion of the IEC Project and the Settlement IEC East Portion of the IEC Project should be approved as proposed in the Amended Application.

2. Overview of the Siting Process

After PJM selected Project 9A as the preferable solution to relieve the identified congestion constraints, Transource PA retained AECOM to undertake a comprehensive siting analysis to determine the most appropriate routes for the IEC Project. Transource PA Ex. No. 1, Attachment 3 (West and East), p. 3. AECOM has experience providing comprehensive services for transmission and distribution projects, ranging from alternative route analyses, licensing and permitting, conceptual engineering, right-of-way services, and public involvement to detailed

engineering and design, geotechnical engineering and subsurface investigation, site preparation, construction management, and regulatory compliance. Transource PA St. No. 4, pp. 2-3. Prior to submitting the original Applications, Transource PA conducted siting studies using the process described in this Section for the West Portion of the IEC Project and the East Portion of the IEC Project. Prior to submitting the Joint Amended Application, PPL Electric undertook a supplemental siting study to analyze the Settlement IEC East Portion of the IEC Project. *See* Transource PA Ex. No. AA-1, Supplemental Attachment 3. As explained below, Transource PA's and PPL Electric's siting studies represent a thorough analysis of the regions through which the IEC Project must be constructed to accomplish its functional purposes.

The Siting Study for the West Portion of the IEC Project and the Siting Study for the originally proposed East Portion of the IEC Project were used to develop feasible Alternative Routes, evaluate potential impacts associated with the Alternative Routes, and identify a Proposed Route for each portion of the Project. Transource PA St. No. 4, p. 6. The Siting Studies assessed the human/built, environmental, engineering, and constructability variables associated with the different Alternative Routes. The Siting Team also used a series of general siting guidelines and factors to direct the development, evaluation, and ultimate selection of routes. Transource PA St. No. 4, pp. 6-7. Using these routing guidelines and factors, the Siting Team identified opportunity and constraint features within the Study Area that would minimize potential impacts to the natural and human/built environments. *See* Transource PA Ex. No. 1, Attachment 3 (West and East). Modifications were made throughout the route development process as a result of the identification of new constraints, input from agencies, landowners, and other stakeholders, periodic re-assessment of routes with respect to the siting guidelines and

factors, and adjustments to the overall route network to develop feasible Alternative Routes. Transource PA St. No. 4, p. 7.

The first step in the route development process was to identify the Study Area. The Study Area is the region in which transmission line route alternatives could be sited to practicably meet the functional requirements of the project. The Study Area was selected based on professional judgment, field reviews, the geographic characteristics of the region, and the physical endpoints of the proposed Project (i.e., substation locations). Transource PA St. No. 4, p. 7

Once the Study Area was determined, the next step was to identify large area constraints and opportunity features within the Study Area. These areas are typically identified using a combination of readily available public data sources. The Siting Team uses this information to first develop an array of Conceptual Routes for the project adhering to a series of general siting and technical guidelines and factors. Transource PA St. No. 4, pp. 7-8.

Where two or more of these Conceptual Routes intersect, Study Segments were formed between two common points of intersection. As the route development process progressed, the Siting Team continued to evaluate new data and modify, if necessary, the Study Segments included in the network. Eventually, feasible Alternative Routes were developed by assembling the Study Segments that best met the siting guidelines and factors into individual routes for analysis. Transource PA St. No. 4, p. 8; Transource PA Ex. No. 1, Attachment 3 (West and East), Section 2.

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

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

Transource PA St. No. 4, p. 9. Using these established routing guidelines, the Siting Team identified opportunity and constraint features within the Study Area that would take advantage of existing corridors to the extent practicable and minimize potential impacts to the natural and human/built environment. Transource PA St. No. 4, p. 9; Transource PA Ex. No. 1, Attachment 3 (West and East).

Once the Alternative Routes were identified, the Siting Team undertook a quantitative and qualitative analysis of potential impacts of each Alternative Route to the human/built environment, the natural environment, cultural resources, and engineering and construction

considerations. Transource PA St. No. 4, p. 8. The Alternative Routes were reviewed in detail and compared using a combination of information collected in the field, Geographic Information System (“GIS”) data sources, public and agency input, engineering and constructability considerations, and the collective knowledge and experience of the Siting Team. Transource PA St. No. 4, pp. 9-10. The Siting Team selected a Proposed Route for each portion of the Project that, on balance, best minimized the overall impacts of the Project. The rationale for selecting the Proposed Route was derived from the accumulation of the siting decisions made throughout the process, the knowledge and experience of the Siting Team, comments from the public and regulatory agencies, and the comparative analysis of potential impacts of each Alternative Route. Transource PA St. No. 4, p. 10.

Transource PA conducted extensive outreach with the public throughout the siting process, including two rounds of public open houses during different phases of the siting process to inform the public about the Project and obtain information from landowners about their properties. Transource PA St. No. 4, p. 11; Transource PA Ex. Nos. 1 and 2, Attachment 3, Section 2.5. In addition, Transource PA established an IEC Project website to update the public throughout various phases of the siting process. Through the website, members of the general public could submit comments about the Project or add points to the map to provide specific information about resources or structures on their property. Transource PA monitored the comments provided through the website and provided answers to questions from the public. Transource PA St. No. 4, pp. 11-12.

The siting process for the IEC Project considered approximately 150 different route segments – a total of over 245 miles. The siting process also evaluated paralleling existing infrastructure and right-of-way to the extent possible. Transource PA St. No. 4-R, pp. 2-4, 6-8.

Transource PA completed numerous environmental surveys for wetlands, threatened and endangered species, and sensitive habitats. It was determined that the transmission line will not have a significant impact on land use, soil or sedimentation, plant and wildlife habitats, terrain, hydrology, landscape, designed scenic areas, or wilderness areas. Transource PA St. No. 4-R, pp. 14-16. The specific considerations given to each of these areas is discussed in sections 3-4 below.

3. Selection of the Proposed Routes

a) Selection of the Proposed Route for the IEC West Project

Using the siting process described above, the Siting Team identified three Alternative Routes for the IEC West Project: Alternative Route A, Alternative Route B, and Alternative Route C. Alternative Route A extends approximately 30.4 miles (approximately 23.8 miles in Pennsylvania and approximately 6.6 miles in Maryland). Alternative Route B extends approximately 31.9 miles (approximately 25.3 miles in Pennsylvania and approximately 6.6 miles in Maryland). Alternative Route C extends approximately 28.8 miles (approximately 24.4 miles in Pennsylvania and approximately 4.4 miles in Maryland). A detailed description of these three Alternative Routes was provided in Attachment 3 to Transource PA's December 26, 2017 Siting Application. *See* Transource PA Ex. No. 1.

The Alternative Routes were compared, and a Proposed Route was selected based upon a detailed analysis and balance of impacts on the human/built environment, environmental impacts, and engineering and constructability considerations. Based on these evaluation processes, the Siting Team selected Alternative Route C as the Proposed Route for the West Portion of the IEC Project based on its determination that the cumulative environmental, human/built, engineering, and constructability impacts associated with the Proposed Route,

Alternative Route C, will be significantly less than the other Alternative Routes. Transource PA St. No. 4, p. 21.

The Proposed Route is a more direct alignment between the Rice and Ringgold Substations, which means that it will cross fewer parcels and impact fewer landowners compared to the other alternatives. The alignment avoids the more populated sections of the Project Study Area by crossing agricultural lands adjacent to I-81 and paralleling an existing transmission line corridor south past Waynesboro as it extends into the Ringgold Substation. Additionally, the Proposed Route spans U.S. Route 30 in a commercial retail area thereby minimizing the residentially dense areas along this corridor. As a result, the Proposed Route has the fewest residences within 500 feet compared to the other alternatives. Transource PA St. No. 4, p. 21.

This more direct route will also help minimize impacts to agricultural lands, farming operations, and orchard areas since many of the alignments across these areas were identified during early coordination with the landowners. Key requests during this coordination were to span fields or parallel property lines or access roads where feasible, and to provide specially engineered structures near orchards to allow the orchard trees to remain in production under the right-of-way. Transource PA St. No. 4, p. 22. Transource PA has been able to accommodate these landowner requests in most instances. Specific examples of landowner requests that Transource PA evaluated and accepted are discussed in Section 4 (Mitigation Efforts) below.

Environmentally, the Proposed Route would span a low number of streams and have minimal impact on riparian areas. Streams and floodplains will be crossed at right angles and spanned with structures typically placed outside these regulated areas. Since one of the streams crossed will be the HQ-designated Falling Spring waterway, the construction of this alignment will involve additional stormwater permitting requirements focused on the preservation of the

water quality level. In terms of wetlands, this alignment would cumulatively cross the least wetland area relative to the other alternatives. Similar to streams and floodplains, wetland areas will be spanned to further minimize potential impact. Transource PA St. No. 4, p. 22.

The Proposed Route has the least amount of tree clearing and reduces the forest fragmentation effects and potential impacts to T&E species that use forest habitats such as T&E bat species. In terms of other potential T&E habitat areas, the Proposed Route would cross three natural areas in Pennsylvania that are comprised predominantly of open meadows, which can be spanned by the transmission lines therefore minimizing potential impacts on the plant or animal communities. Transource PA St. No. 4, p. 22.

In meeting the expectations of 52 Pa. Code § 69.3105(3)(iii), over 40% of the Proposed Route alignment for the West Project parallels either highways, railroads, or transmission line rights-of-way. Transource PA St. No. 4-R, p. 7. Specifically, the Proposed Route parallels existing linear features for 42% of the total length of the transmission line, which may allow for the use of existing access roads. Overall, the Proposed Route is the preferred route from an engineering and constructability perspective. In addition, the Proposed Route will not interfere with any airport operations or quarries. Although the Proposed Route crosses more transmission lines, Transource PA will work with the incumbent utilities to ensure proper clearances in order to safely operate and maintain the facilities. Transource PA St. No. 4, p. 23.

While several individuals and parties have criticized the preferred route for the West Portion of the IEC Project, no expert testimony supports the selection of another route for the West Portion of the IEC Project, and no witness for any other party presented an analysis of the alternative routes or any other route.

b) Selection of the Proposed Route for the Settlement IEC East Portion

In its original Application, Transource PA proposed a greenfield route for the East Portion of the IEC Project that would extend for 15.8 miles (approximately 12.7 miles in Pennsylvania and approximately 3.1 miles in Maryland) between the proposed Furnace Run Substation and the Conastone Substation. Transource PA Ex. No. AA-1, Attachment 3 (East), p. 3. That route was selected using the siting process described above.

During the course of this proceeding and the related Maryland proceeding, several route alternatives were suggested by stakeholders which use various combinations of existing infrastructure. Transource PA and PJM evaluated these alternatives and determined that one of the alternatives to use existing PPL Electric infrastructure with the addition of a third transformer at the Furnace Run Substation would pass the required reliability and market efficiency tests. Transource PA Ex. No. AA-1, Supplemental Attachment 3, p. 2. Settlement agreements were reached with various parties to amend the original Application to propose the Settlement IEC East Portion as the preferred route for the East Portion of the IEC Project. Transource PA Ex. No. AA-1, Supplemental Attachment 3, p. 2. Prior to submitting the Amended Application, PPL Electric retained AECOM to conduct a Supplemental Siting Study that comparatively evaluates the originally proposed route for the East Portion and the Settlement IEC East Portion. PPL Electric St. No. AA-5, p. 4. The same methodology that was used for the siting of the original IEC East Portion was used to evaluate the Settlement IEC East Portion. PPL Electric St. No. AA-5, p. 5.

As compared to the originally proposed route for the East Portion of the IEC Project, the Settlement IEC East Portion will utilize existing infrastructure and/or rights-of-way, affect fewer new landowners and parcels, and impact fewer natural resources. PPL Electric St. No. AA-5, p.

5. The entire alignment for the Settlement IEC East Portion consists of parcels that currently have right-of-way agreements or are owned in fee by PPL Electric. The Settlement IEC East Portion also uses existing infrastructure for majority of the length of the line by adding a second circuit onto the existing transmission lines. PPL Electric St. No. AA-5, pp. 5-6. The four-mile Furnace Run 230 kV Transmission Line corridor is the only section of the Settlement IEC East Portion that will require widening of existing rights-of-way. Effectively, the Settlement IEC East Portion will minimize requirements for new right-of-way and potential impacts to new property owners. PPL Electric St. No. AA-5, p. 6.

The Settlement IEC East Portion will result in less overall environmental impacts relative to the originally proposed route. PPL Electric St. No. AA-5, pp. 6-7. Only four streams are present along the Furnace Run 230 kV Transmission Line corridor that will require clearing of the riparian areas compared to the eleven streams located along the originally proposed route. The amount of wetland area crossed by the Settlement IEC East Portion is similar to that of the originally proposed route. The Settlement IEC East Portion will involve less tree clearing (19.3 acres) relative to the originally proposed route (51.7 acres), which reduces the forest fragmentation effects and potential impacts to threatened and endangered species that use forest habitat, such as T&E bat species. PPL Electric St. No. AA-5, p. 6.

The Settlement IEC East Portion already spans Muddy Creek in defined right-of-way areas. Only new arms and wires will be added to the existing towers, thereby minimizing the construction challenges associated with the steep slopes in this area. PPL Electric St. No. AA-5, p. 7. Access to the existing PPL Electric transmission lines was previously identified and coordinated with landowners when the lines were rebuilt in 2012-2014. Coordination for access to the Furnace Run 230 kV Transmission Line section will be considerably less challenging than

the coordination that would be required for the numerous new access roads needed for the originally proposed route. PPL Electric St. No. AA-5, p. 7.

Overall, the Settlement IEC East Portion is anticipated to have less total impact when compared to the original Proposed Route for the IEC East Project. PPL Electric St. No. AA-5, p. 7. Additionally, the Settlement IEC East Portion is unopposed by the major parties in York County – Citizens to Stop Transource York County, Maple Lawn Farms, Barron Shaw and Shaw Orchards (collectively, “York County Citizens”) the York County Planning Commission.

4. Specific Environmental Considerations

a) Protection of Natural Resources.

Together, Transource PA and PPL Electric have undertaken extensive efforts to identify those public natural resources present within the Study Area for both Portions of the proposed Project, including prime soils, streams, floodplains, wetlands, and potential critical habitat areas and has developed alternatives that avoid or minimize impacts to those resources as much as practicable. Transource PA St. No. 4-R, p. 10-11; Transource PA Ex. No. AA-1, Supplemental Attachment 3, pp. 25-30. Transource PA and PPL Electric will comply with all applicable statutes and regulations providing for the protection of the natural resources of this Commonwealth as required by 52 Pa. Code § 57.76(a)(3).

Transource PA has coordinated with state and local agencies to identify and characterize the potential for impacts on public natural resources and has used that information to aid in the selection of the Proposed Route. Transource PA St. No. 4-R, p. 11. Examples of these efforts for include: Wetland Delineation Report, Lance-leaved Buckthorn Report, Northeastern Bulrush Survey Report, Bat Mist Netting Report, Eastern Spadefoot Toad Consultation Report, Archeological Survey Report, Historic Age Resources Survey Report, Bald Eagle Nest Report, U.S. Fish and Wildlife Service Concurrence Request, PA Fish and Boat Commission

Concurrence Request and Bog Turtle Report. Transource PA Ex. No. BB-3R. PPL Electric will conduct several specific threatened and endangered species studies, wetland/stream studies, and archaeological surveys along the new Furnace Run 230 kV corridor portion of the Settlement IEC East Portion to provide information on possible avoidance and impact areas. Transource PA Ex. No. AA-1, Supplemental Attachment 3, p. 28.

Transource PA and PPL Electric will continue to coordinate with state and local agencies to minimize impacts until the Project is complete. Transource PA St. No. 4-R, p. 11; Transource PA Ex. No. AA-1, Supplemental Attachment 6. Transource PA and PPL Electric will obtain all necessary permits and comply with any conditions placed on those permits. Transource PA St. No. 4-R, p. 11; Transource PA Ex. No. 1, Attachment 6; Transource PA Ex. No. AA-1, Supplemental Attachment 6. However, Transource PA and PPL Electric are not required to obtain all necessary before construction of the proposed line begins. *See Susquehanna-Roseland*, 25 A.3d, 452-53. (Pa. Cmwlth. 2011).

b) Rare, Threatened and Endangered Species

(1) West Portion of the IEC Project.

Typical plant and wildlife species found within the Project Study Area for the West Portion include those found in wetlands, forested habitats and open/agricultural lands. These habitats contain a diverse population of amphibians, fish, reptiles, birds and mammals. Given that the Project Study Area contains a diverse range of habitat, it has the potential to host a number of different types of plant and animal T&E species. A review of the Natural Heritage Program Database in Pennsylvania will be conducted to evaluate for federal and state listed species. Transource PA Ex. No. 1, Attachment 3 (West), pp. 44-45.

Comparatively, none of the Settlement Routes for the West Portion were anticipated to cause significant impact to natural areas where T&E species may be present. All required

federal and state agency consultations will be completed for the Proposed Route to determine final species habitat locations and requirements for species specific surveys. Coordination with these agencies will determine whether areas can be avoided, or where appropriate, whether timing restrictions can be applied to construction activities to avoid impact during breeding or roosting seasons. Transource PA Ex. No. 1, Attachment 3 (West), p. 48.

Several plant and wildlife surveys for the West Portion have been completed to date. Transource PA will continue to coordinate with local agencies involving plant and animal species of concern. During public outreach, some commenters expressed concern with the potential for bald eagles to be located in proximity to the Project. Transource PA has coordinated with the USFWS and is completing any surveys required to address this species along with any mitigation that may be needed. Transource PA St. No. 4-R, p. 24.

(2) Settlement IEC East Portion

With respect to the Settlement IEC East Portion, PPL Electric collected threatened and endangered species and habitat data during the siting process and will coordinate with state and federal agencies regarding potential threatened and endangered species. PPL Electric is committed to obtaining and complying with all permits necessary to protect threatened and endangered species. Transource PA Ex. No. AA-1, Supplemental Attachment 3, p. 27. However, it is currently anticipated that there will be no impacts to threatened and endangered species or to the natural areas where threatened and endangered species may reside. Tr. at p. 2834, ln. 5-9; p. 2841, ln. 14-19.

(3) Trout fishing

(a) West Portion of the IEC Project

Transource PA has undertaken significant efforts to minimize impacts on High-Quality (“HQ”) streams. The right-of-way for the West Portion was guided predominately into open

areas that will not require tree clearing. The alignment also crosses the least amount of forested areas that would create need for forest clearing. Transource PA Statement No. 4-R, pp. 16-22.

The Pennsylvania Department of Environmental Protection (“PADEP”) has established water quality criteria necessary to support a variety of protected water uses, including protection uses for aquatic life. The Pennsylvania Fish and Boat Commission (“PFBC”) provides additional protection to streams that support trout populations. Transource PA will coordinate with PADEP and PFBC and will comply with all applicable regulations and permitting requirements related to water quality standards. Transource PA Ex. No. 1, Attachment 3 (West), p. 33.

The Proposed Route for the West Portion of the IEC Project crosses a portion of the Falling Springs trout stream in an area of low growing vegetation where there is limited tree canopy to shade the stream. Transource PA St. No. 4-R, p. 23. Trout habitat is typically found in shaded stream areas, which provide for the cooler temperatures preferred by trout. Transource PA Statement No. 4-R, p. 22, ln. 17-23. Therefore, the crossing will have limited impact on stream’s trout habitation.

In addition, the structure locations will be placed in upland areas, away from the riparian wetlands and riparian habitat associated with the stream. The structures will span the stream, thereby minimizing any impact. Transource PA St. No. 4, p. 22. Transource PA will coordinate with PAFBC and use required storm water controls during construction to mitigate impacts from construction. Further, required storm water controls will be used during construction to mitigate potential impacts from sedimentation. Transource PA St. No. 4-R, p. 23. The construction of this alignment will involve additional stormwater permitting requirements focused on the preservation of the water quality level. Transource PA Statement No. 4, p. 22. The proposed

line will cross perpendicular to the stream, which is a PADEP best practice. Tr. at 2142, ln. 11-16.

(b) Settlement IEC East Portion

The Settlement IEC East Portion would cumulatively comprise more stream crossings than the originally proposed route, but most of these stream crossings would only involve the addition of a new conductor on existing transmission structures. The new Furnace Run 230 kV corridor section of the Settlement IEC East Portion would encounter four special protection streams that will involve some degree of clearing. Transource PA Ex. No. AA-1, Supplemental Attachment 3, p. 9. PPL Electric has received the necessary clearances from the PFBC indicating that there are no anticipated impacts from the proposed line. Tr. at p. 2839, ln. 2-13.

(4) Wetlands

(a) West Portion

The Proposed Route for the West Portion crosses the least total wetland area. Transource PA Ex. No. 1, Attachment 3 (West), p. 43. Impacts to wetlands will be limited due to the few wetland resources in the West Portion Project Study Area. In most cases, the transmission line alignment can be engineered to span over the wetland areas, resulting in limited effect on the wetlands. No permanent structures or other sources of fill are anticipated in any wetland, but the use of timber matting for temporary access road crossing may be necessary in certain situations. Transource PA Ex. No. 1, Attachment 3 (West), p. 42.

(b) Settlement IEC East Portion

With respect to the Settlement IEC East Portion, that portion consisting of existing infrastructure is already permitted for an additional circuit. In addition, access is already in place within the right-of-way and activities to install the new arms and wires will not result in new

wetland or stream impacts and therefore would not require new permits. Transource PA Ex. No. AA-1, Supplemental Attachment 3, p. 28.

Wetlands along the new Furnace Run 230 kV corridor portion of the Settlement IEC East Portion will be delineated using PADEP and USAEC approved methodologies based on the *Interim Regional Supplement to the Corps. Of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region* (USACE 2010). Once the wetlands have been delineated, an engineering review will be conducted to minimize the potential impact to these resources through strategic structure placement that will span the wetlands where possible. Identifying access roads that do not need to cross wetlands will further minimize impacts. All required permits will be obtained from the PADEP and the USACE. Wetland creation, enhancement or concertation may be required in these areas to mitigate potential wetland impacts. Transource PA Ex. No. AA-1, Supplemental Attachment 3, p. 26. However, no permanent impacts to wetlands are anticipated at this time. Tr. at 2841, ln. 8-19.

(5) Tree Trimming and vegetation management

Transource PA and PPL Electric will adhere to their respective vegetation management practices to maintain the portions of the IEC Project for which they are responsible. Vegetation clearing and maintenance is required to ensure the safe and reliable operation of transmission lines. Transource PA Ex. No. AA-1, Supplemental Attachment 3, p. 26.

(a) West Portion of the IEC Project

For the West Portion of the IEC Project, Transource PA will implement the AEP Transmission Vegetation Management Program, which was provided as Appendix 11.1 to Attachment 11 of the Siting Application. Transource PA is responsible for the safe operation and maintenance of its facilities, including the management of tall growing vegetation that could

potentially affect the safe and reliable operation of its transmission lines. Orchard operations are one potential exception to this policy where, in certain circumstances, Transource PA will partner with the commercial orchard owner to share vegetation management responsibilities in the right-of-way. Transource PA Ex. No. 1, Attachment 11.

(b) Settlement IEC East Portion

With respect to the Settlement IEC East Portion, PPL Electric's vegetation management practices will allow for the regeneration of compatible species of low growing shrubs and grasses where practicable. Herbicides will be Environmental Protection Agency ("EPA")-approved and will be applied selectively in accordance with the label instructions. Different herbicides will be used based on the environmental conditions with specific attention to not negatively affect streams and wetlands. The application of herbicides near sensitive resources will be conducted using hand-held spraying, not aerial spraying. Determination of mitigation requirements for potential forest impacts and impacts for other natural resources will be part of the permit review process. Transource PA Ex. No. AA-1, Supplemental Attachment 3, p. 26.

(6) Springs, creeks, wells, soil and sedimentation

(a) West Portion of the IEC Project

On the West Portion, potential impacts to streams will be minimized because any stream crossing will always be spanned by the transmission line; however, some minor crossings may be required for permanent or temporary access roads. Stream access road crossings will be avoided where possible, but where required will be designed and permitted under the direction of the appropriate federal or state agency. Transource PA Ex. No. 1, Attachment 3 (West), p. 43. Transource PA will follow PADEP Ch. 102 erosion and sediment control plans to protect the water quality of nearby streams and wetlands during construction. Transource PA St. No. 4-R, p. 20.

Transource PA has researched the proposed route extensively for the existence of water wells. Transource PA does not believe that there are any water wells within the proposed right-of-way. In isolated instances, water sources have been identified in Franklin County. When a well or water source is identified within the proposed right-of-way, Transource PA will work with the landowner to mitigate any impacts. Transource PA has committed to work with the landowner to re-drill any impacted water wells at Transource PA's cost. Transource PA St. No. 11-R, p. 9.

All temporary ground disturbances will be permitted through the appropriate state agency to ensure that any soil impacts are adequately addressed through the installation and maintenance of best management practices and restoration of disturbed areas. Aside from structure placement and the few instances of permanent access roads, all other soil impacts will be temporary in nature and returned to the preconstruction state. Transource PA Ex. No. 1, Attachment 3 (West), p. 33.

(b) Settlement IEC East Portion

Crossing Muddy Creek on the East Portion is unavoidable. St. 4-R, p. 17. However, the Settlement IEC East Portion already spans Muddy Creek in defined right-of-way areas. Only new arms and wires will be added to the existing towers, which will minimize the construction challenges associated with the steep slopes in this area. PPL Electric St. No. AA-5, p. 7. Vegetation was previously cleared during construction of the existing infrastructure, and only minor clearing to reestablish access roads may be required for the second circuit. Transource PA Ex. AA-1, Supplemental Attachment 3, p.8.

Streams along the new Furnace Run 230 kV corridor portion of the Settlement IEC East Portion will be delineated using PADEP approved methodologies. Long-term impacts to these watercourses are expected to be minimal, as they will be spanned by the proposed transmission

line, with most crossings oriented to span the feature at a ninety-degree angle to minimize impacts to the adjacent riparian buffer. Due to the water quality level in these watersheds, an Individual NPDES permit will be required to mitigate any potential short-term impacts of erosion and sedimentation during construction. As part of the individual NPDES process, additional and more sophisticated Best Management Practices (“BMPS”) may be required during construction to maintain the water quality standards. Transource PA Ex. No. AA-1, Supplemental Attachment 3, p. 26.

(7) Plant and wildlife habitats

Forest clearing concerns from an environmental perspective focus on fragmentation, which reduces the viability of a forest ecosystem through the possible introduction of invasive plant species and changes in the wildlife community dynamics. Transource PA Ex. No. 1, Attachment 3 (West), p. 53. Trees are also specifically tied to the habitat requirements of several T&E bat species, which use trees for roosting at night during the summer. Clearing trees may have a direct impact on potential bat habitat, thus the less tree clearing required, the less possibility of creating a T&E impact. The Proposed Route for the West Portion has the least amount of tree clearing and would likely have less overall potential impact to the T&E bat species. Fragmentation of forest habitat was minimized through paralleling existing infrastructure where feasible. Transource Ex. No. 1, Attachment 3 (West), p. 53. Alignments were designed to avoid forests, streams, and wetlands. The Proposed Route for the West Portion will impact the fewest acres of forest relative to the alternative route options evaluated. Transource PA St. No. 4-R, p. 36.

The Settlement IEC East Portion will involve less than half of the tree clearing required for the originally proposed route for the East Portion. In turn, the forest fragmentation effects

and potential impacts to T&E species will be significantly reduced. PPL Electric St. No. AA-5, p. 6.

Moreover, the existing habitat areas are already fragmented by road networks, housing growth, and farming operations. Thus, the overall impact of line on remaining corridors will be minimal. Transource PA St. No. 4-R, pp. 17-18.

(8) Other Natural Resources

Transource PA and PPL Electric do not anticipate that the IEC Project, with the West Portion as proposed in the original Application and the Settlement East Portion as proposed in the Amended Application, will materially impact any other specific natural resources that are not already addressed in the Siting Studies and explained in this Brief.

(a) Terrain

Karst is discussed in subsection ix (Geologic areas) below. There are no other material issues related to terrain that have not already been addressed in this brief.

(b) Hydrology

Floodplains in the West Portion Project Study area are fairly common due to the level of terrain of the Conococheague and Antietam Creek valleys, which allows for floodwaters to more easily overflow their banks. These floodplains primarily consist of narrow buffers along streams and are not wide resources. It is possible to design the transmission line alignment to span floodplain areas, which would constrain the potential impact to any necessary tree clearing. No structures will be built within the floodway areas of any stream. Transource PA Ex. No. 1, Attachment 3 (West), p. 43.

(c) Landscape

No significant impacts to the landscape are expected as transmission lines are already present in the Project Area for both the Settlement East and West Portions. Transource PA St. No. 4-R, p. 25.

The Siting Team identified four distinctive landscapes within the West Portion Study Area: (1) forested and mountain view; (2) pastoral and farming communities; (3) small residential communities; and (4) urban towns. No designated scenic overlooks, vista, or byways are documented in the Project Study Area. Transource PA Ex. No. 1, Attachment 3 (West), p. 83. To provide an example of the visual character of the Project, Transource PA completed visual simulations depicting the transmission line set against the local landscape. Transource PA selected those areas with viewshed sensitivities tied to cultural significance, agritourism and public facilities. Transource PA St. No. 4-R, pp. 25-26; Ex. No. BB-5R. The Proposed Route for the West Portion parallels the longest length of existing transmission lines and Interstate 81 and is the overall shortest option, thereby minimizing new visual impacts to the area. Transource PA Ex. No. 1, Attachment 3 (West), p. 83.

The Settlement IEC East Portion uses existing infrastructure for the majority of the line. As such, there will be no significant impacts on the landscape in that area. Transource PA St. No. 4-R, p. 25.

(9) Archeologic areas

(a) West Portion of the IEC Project

Transource PA is in consultation with the Pennsylvania Historic Museum Commission (“PHMC”) and is committed to carrying out all required cultural resource studies related to the West Portion of the IEC Project. Transource PA St. No. 4-R, p. 25; Transource PA Ex. No. 1, Attachment 3 (West), p. 80. Archaeological and historic resource field surveys were conducted,

which yielded no significant findings. No impacts to archaeological sites are anticipated. Transource PA St. No. 4-R, pp. 24-25. The historic-age structure field survey was completed for structures that are 45 years old or older within approximately one-half mile on either side of the preliminary alignment. Of the 854 structures surveyed, only one grouping of structures located on a single property are potentially eligible for the National Register of Historic Places. Transource PA St. No. 4-R, p. 25.

Any physical impacts on architectural historic properties will be minimized, where practicable, by strategically locating access roads, staging areas, and structures away from the historic resource. Where possible, impacts on archaeological sites will be minimized by strategically locating access roads, staging areas, and structures away from any archeological sites. Transource PA Ex. No. 1, Attachment 3 (West), p. 80.

(b) Settlement IEC East Portion

PPL Electric is also committed to working with the PHMC to complete any required studies and address any potential impacts and required mitigation activities. During the siting process for the Settlement IEC East Portion, information was collected to understand the location of sensitive resources and efforts were made to avoid these resources. Transource PA Ex. No. AA-1, Supplemental Attachment 3, p. 27.

(10) Geologic areas

The Project does not cross any listed geologic or botanical sites. Transource PA St. No. 4-R, p. 38.

STFC expressed concerns regarding the presence of karst terrain on the West Portion of the IEC Project. As explained below, the presence of karst in Franklin County is not a concern for the IEC Project. Transource PA has extensive experience working in karst regions. Existing

transmission lines, including in Franklin County, have been safely built where karst is the topography. Transource PA St. No. 12-R, pp. 7-8.

In response to STFC's concerns, Transource PA hired Dr. Walter Kutschke, PhD, P.E., to perform a karst desktop and field study along the proposed alignment of the IEC Project. Dr. Kutschke holds a Bachelor of Science from State University of New York at Buffalo (1993) with a major in civil engineering, a Master of Science in civil engineering specializing in geotechnical engineering from State University of New York at Buffalo (1995), and a Doctor of Philosophy in civil engineering specializing in geotechnical engineering from the University of Pittsburgh (2011). He is a registered Professional Engineer in several states, including Pennsylvania. Dr. Kutschke is the Service Line Manager for the Geotechnical Engineering & Geosciences Group of DiGioia Gray & Associates LLC and has extensive experience working with karst projects. He has also published a variety of works on the topic of karst. Transource PA St. No. 12-R, pp. 4-6.

The karst study will enable Transource PA to better understand locations where active karst-type features and hydrological features exist along the IEC Project. Transource PA will work with Dr. Kutschke to develop a strategy to understand and mitigate the risks related to the active karst-type features. Transource PA St. No. 12-R, p. 6.

Transource PA is implementing measures to ensure that the transmission line is constructed safely. If the karst study identifies karst-type features and hydrologic features that pose a risk for impacting groundwater, surface water or wells, Transource PA will take steps to mitigate any potential impacts. Strategies to mitigate impacts may include shifting facilitates so that the karst-type or hydrologic feature is avoided, implementing erosion and sediment control plan, reclamation of distributed area back to original grade, use of stormwater conveyance

facilities, establishing buffers around karst-type features, developing site specific mitigation strategies, and evaluating options for foundation installation methods. Transource PA St. No. 12-R, pp. 9-11.

The Proposed Route for the West Portion of the IEC Project crosses the least area of karst topography. Where karst is present, structures can be strategically placed to avoid specific karst features. Transource PA Ex. No. 1, Attachment 3 (West), p. 33. Transource PA will consider karst-type features and hydrological features (e.g. sinkholes, closed depressions, caves and disappearing streams) in the design, construction, and operations of the transmission as necessary to construct and operate the transmission line safely. Transource PA St. No. 12-R, p.4.

(11) Historic Areas

The Project does not cross any listed historic sites. Transource PA St. No. 4-R, p. 38.

(12) Viewshed of Scenic Areas and Rivers

Existing transmission lines are present in the area of both the East and West Portion of the IEC Project. The addition of the proposed routes would not dramatically alter the character of the broader area, which is currently cross by several existing transmission lines. Transource PA St. No. 4-R, p. 26. Transource PA has completed visual simulations depicting the transmission line set against the local landscape. Due to the rolling landscape and many small intersecting forested valleys, the route will be less evident with distance. Transource PA St. No. 4-R, pp. 26, 30. Where possible, the Siting Team sought to align the route farther from areas of high visibility, such as along scenic roadways. Transource PA Statement No. 4-R, p. 25.

(13) Land subject to conservation easement

The effect of the Project on farms conserved through the conservation easement program was thoroughly evaluated. The easements include language that permits public utility corridors to be constructed across the conserved lands because these utilities are not considered

“development” of the land and do not affect the ability to use the land for farming. Even with the easement allowing for the construction of public utility facilities, efforts were made to minimize the potential impacts to conserved farmlands. Transource PA St. No. 4-R, p. 28; Transource PA Ex. No. 1, Attachment 3 (West), p. 54. Specific mitigation measures are discussed in Section 4 (Mitigation Efforts) below.

Related to the issue of land subject to conservation easements, on June 24, 2018, Act 45 of 2018 (“Act 45”) was signed into law. Act 45 amends Title 26 (Eminent Domain) of the Pennsylvania Consolidated Statutes. Section 208, in relevant part, requires, with certain exemptions, orphans’ court approval for eminent domain of land that is subject to a conservation easement:

(a) Approval required. Except as provided in subsection (g), no political subdivision, authority, public utility or other body having or exercising powers of eminent domain shall condemn any land subject to a conservation easement for any purpose, unless prior approval has been obtained from the orphans’ court of the county in which the land is located. The condemnation approval specified by this subsection shall not be required for an underground public utility facility that does not permanently impact the open space benefits protected by the conservation easement. **The condemnation approval specified by this subsection shall not be required for any public utility facility or other project that is subject to approval by a federal agency, the necessity for the proprietary and environmental effects of which has been reviewed and ratified or approved by the Pennsylvania Public Utility Commission or the Federal Energy Regulatory Commission, regardless of whether the right to establish and maintain such underground or other public utility facility is obtained by condemnation or by agreement with the owner.** (emphasis added)

Public utility facilities that are approved by the Pennsylvania Public Utility Commission are specifically excluded. Thus, Act 45 does not require orphans’ court approval for condemnation for purposes of constructing public utility facilities that are approved by the Pennsylvania Public Utility Commission. If contested, this would be an issue for the Orphans

Court to decide and would not be decided in the proceeding before the Commission. The Commission does not make determinations regarding whether a utility has the legal authority to condemn. *See Application of PPL Electric Utilities Corporation for Approval of the Siting and Reconstruction of the Proposed Coopersburg # 1 and # 2 138/69 kV Tap, Docket No. A-2008-2022941*, 2009 Pa. PUC LEXIS 1348, *38 (July 24, 2009) (any issues regarding a public utility's legal authority to condemn may not be raised before the Commission) citing *Fairview Water Co. v. Pa. P.U.C.*, 509 Pa. 384, 502 A.2d 162 (1985).

In addition, Act 45 lists the following eight “open space benefits” in Section 202:

Open space benefits. The benefits to the residents of this Commonwealth and its local government units which result from the preservation or restriction of the use of selected predominantly undeveloped open spaces or areas, including, but not limited to:

- (1) the protection and conservation of water resources and watersheds, by appropriate means, including, but not limited to, preserving the natural cover, preventing floods and soil erosion, protecting water quality and replenishing surface and ground water supplies;
- (2) the protection and conservation of forests and land being used to produce timber crops;
- (3) the protection and conservation of farmland;
- (4) the protection of existing or planned park, recreation or conservation sites;
- (5) the protection and conservation of natural or scenic resources, including, but not limited to, soils, beaches, streams, flood plains, steep slopes or marshes;
- (6) the protection of scenic areas for public visual enjoyment from public rights of way;
- (7) the preservation of sites of historic, geologic or botanic interest; and
- (8) the promotion of sound, cohesive and efficient land development by preserving open spaces between communities.

As explained by Transource PA witness Baker, Transource PA considered all of the “open space benefits” described in Act 45 as part of the siting process. Transource PA St. No. 4-R, pp. 35-38.

(14) Properties within an Agricultural Security Area

Agricultural land is a predominant characteristic of the land use in the Project Study Area. Agricultural lands are predominantly used for row crops, with other areas used for dairy cattle. A number of orchards also exist across the Project Study Area. The majority of these agricultural lands are associated with single farm complexes that consist of several hundred acres. Transource PA Ex. No. 1, Attachment 3 (West), p. 53. Recognizing that the landscape is predominately agricultural, Transource PA has given extensive consideration to impacts on agricultural land, including taking steps to mitigate any impacts on agricultural use. Transource PA St. No. 4-R, pp. 26 – 32.

Agricultural Security Areas (“ASAs”) are a state program whereby a number of adjacent participating farms join together to form an area of a minimum of 250 acres in which participants receive special protection regarding local ordinances affecting farming activities, nuisance complaints, and review of farmland condemnation by state and local government agencies. Transource PA Ex. No. 1, Attachment 2, pp. 53-54. Commission-approved public utility facilities are specifically exempt from the Agricultural Area Security Law. *See* 3 P.S. § 913(b). Nevertheless, Transource PA has made significant efforts to minimize impacts to agricultural land. The vast majority of land crossed will still be suitable for agricultural production. Transource PA has undertaken special efforts to coordinate with landowners to minimize short and long-term effects of the Project and maximize the ability of landowners to functionally use

the land. Transource PA St. No. 4-R, p. 37. Specific mitigation measures are discussed in Section 4 (Mitigation Efforts) below.

The Proposed Route for the West Portion of the IEC Project crosses the fewest acres of preserved farmland of the alternatives considered, with only 0.44 acres on the IEC West Portion being used for the poles. Transource PA. St. No. 4-R, pp. 8-9. The Proposed Route also crosses the fewest areas of prime farmland soils. The Project will be designed to allow typical farming vehicles to operate within the right-of-way. The Siting Team attempted to minimize impacts to agricultural land, where feasible, by routing along the edge of fields, along farm roads, or in pasture lands. Transource PA Ex. No. 1, Attachment 3 (West), p. 33.

(15) Tourism

Although some parties expressed concern regarding a possible decline in agritourism, there is no evidence that tourism will be negatively impacted by the proposed Project. In fact, there are several examples of nurseries, farm markets, and pick-your-own orchards in Pennsylvania that are bordered and even crossed by transmission lines and/or gas pipelines that have successfully been in business for decades. Transource PA St. No. 4-R, p. 31.

(16) Real Estate Property Values

Several individuals expressed concern regarding the potential for the proposed transmission line to negatively impact real estate values. *See e.g.* Tr. At 668, 670, 678. Transource PA engaged two experts to analyze the potential impact of the proposed transmission line on real estate values in York and Franklin Counties. Based on a review of published studies and literature at the national and state levels as well as an analysis of property values in Franklin and York Counties, the proposed transmission lines will not have a material impact on property values, including farmland values. *See* Transource PA St. Nos.13-R and 14-R.

With respect to an analysis of real estate values at the local level, Transource PA engaged William F. Rothman. Mr. Rothman is the founder of Rothman, Shubert and Reed (“RSR”) Realtors, LLC and has a degree in real estate from the Pennsylvania State University. He has been involved with various activities in the real estate business since 1962. Transource PA St. No. 13-R, p. 1.

Mr. Rothman reviewed property values of parcels that have existing transmission lines on or very close to them in York and Franklin Counties and compared those properties with properties that do not have transmission lines on or very close to them. To perform his study, Mr. Rothman traveled to both Franklin and York Counties with the help of a land agent and followed the proposed transmission line route to view the properties that the line would cross. He then gathered transaction records of sales of similar properties in each County, focusing on farmland. This information was obtained from public records found on the County GIS mapping portals, the multiple listing service (“MLS”), a Google Earth kmz file provided by Transource PA, the National Association of Realtors website and RSR’s in-house files. For each sale, Mr. Rothman gathered the following information, to the extent that it was available:

- Location (address, parcel ID, Township)
- Parcel Size (number of acres)
- Property Type or Use
- A description of improvements, if any (house size, age/condition, barns, outbuildings etc.)
- Sales Date
- Sales Price
- The existence of (or not) of a high voltage transmission line on or in close proximity to the property.

Transource PA St. No. 13-R, pp. 2-3.

After analyzing the sales transaction data for farms in Franklin and York Counties, Mr. Rothman concluded that the existence of the HV transmission line corridor had no discernible

effect on property values of farm land in either County. Mr. Rothman observed no significant difference in the range or average of the sales prices between those properties located on a HV transmission line corridor and those that were not. Mr. Rothman also indicated that he would not expect to see a decline in property values on farms if the proposed Project were built. Transource PA St. No. 13-R, p. 3.

Mr. Rothman also analyzed residential sales in both Counties and compared the sales prices per square foot of living area for those properties where a transmission line corridor crossed or abutted the property to those sales where a HV transmission line corridor did not cross or abut the property. Based on that analysis, Mr. Rothman concluded that the existence of the HV transmission line corridor made no difference in the market value of the properties abutting the line. This was the case in the farm sales and also the residential sales analysis. Transource PA St. No. 13-R, p. 4.

Some individuals also expressed concern that the proposed Project may lower the amount of tax revenue available for schools and local municipalities. *See e.g.* Tr. at 1024. In Mr. Rothman's opinion, the concern of diminished tax revenue as a result of the Project is extremely unlikely. The only way for a loss of property tax revenue to occur would be for the property tax assessments to be lowered. While it would be theoretically possible for an individual property owner to file a tax appeal for a reduced assessment based on the presence of a high voltage transmission line, Mr. Rothman has not seen any instances where this has occurred. There are already a significant number of properties in both Counties that have existing right-of-way crossings for transmission lines, including approximately 50% of the properties along the proposed route in Franklin County. Mr. Rothman has not seen any instances where those

existing encroachments trigger a reduction in property assessments. Transource PA St. No. 13-R, pp. 4-5.

As Mr. Rothman also pointed out, Franklin County has not done a county-wide tax reassessment since 1961. The result is that property tax assessments are already very low and for a property owner to prove that it should be lowered further would be difficult. In fact, the assessments are so low that the Clean and Green program often used to lower property taxes on agricultural property is not in effect in Franklin County. In York County the vast majority of the agricultural properties are enrolled in the Clean and Green program. Clean and Green is a preferential tax assessment program that bases property taxes on use values rather than fair market values. This ordinarily results in a significant tax savings for landowners. Again, the already low assessments would make it difficult for property owners to obtain a reduction in their assessments for a negative influence factor such as a power line. Transource PA St. No. 13-R, pp. 4-5.

Transource PA also engaged David Ray Dominy to assess the potential impacts of a HV transmission line on properties located on and adjacent to the proposed IEC Project. Mr. Dominy is the Managing Director of JLL Valuation and Advisory Services – Houston. Mr. Dominy is a certified real estate appraiser and has 28 years' experience in the real estate business. See Transource PA St. No. 14-R, pp. 1-2.

In order to determine the potential impacts, Mr. Dominy prepared an analysis consisting of ten case studies of property values along HV transmission line corridors in the states of Pennsylvania, Connecticut, Illinois and Wisconsin. These case studies were based on factual recorded sales transaction data. Thus, the analysis is not based on subjective criteria, but rather is an independent reflection of the overall real estate marketplace. In order to most accurately

reflect the potential impact of the proposed IEC Project, Mr. Dominy's analysis considered *actual sales transactions* of properties located along various HV transmission line corridors across the eastern and central United States. Transource PA St. No. 14-R, pp. 1-2. Based on Mr. Dominy's study, he concluded that there was no impact on property values from proximity to the adjacent transmission line corridor and powerlines before or after construction. Transource PA St. No. 14-R, p. 16.

Mr. Dominy also reviewed published literature that spans over five decades on the effects on HV transmission lines on nearby residential and agricultural properties. From his review of the literature, Mr. Dominy concluded that more than half of the published literature has found little to no adverse impact on prices and values of the properties studied. Transource PA St. No. 14-R, p. 7.

At the public input hearing in this matter, the "Wyman and Mothorpe 2018 Study"²⁴ was presented in support of the position that HV transmission lines adversely affect property values. Tr. at 1689. Mr. Dominy reviewed the Wyman and Mothorpe 2018 Study and concluded that it has no applicability to the properties at issue in this matter. The properties in the Wyman and Mothorpe 2018 Study were part of residential subdivision lots located in large communities, often near golf courses and navigable waterways. Transource PA St. No. 14-R, pp. 15-16. Conversely, Mr. Dominy's analysis involving agricultural properties reveals little to no impact on property values from the presence of a HV transmission line. Transource PA St. No. 14-R, p. 18. Mr. Dominy also revealed that the Wyman and Mothorpe 2018 Study used an automated valuation model or "AVM." Standards of professional practice of the appraisal profession recognize that AVMs are subject to a high error rate and manipulation to achieve predetermined

²⁴ David Wyman and Chris Mothorpe, "The Pricing of Power Lines: A Geospatial Approach to Measuring Residential Property Values," *The Journal of Real Estate Research* (Jan-Mar 2018):121-153.

results. Transource PA St. No. 14-R, p. 19. Therefore, the Wyman and Mothorpe 2018 Study should not be relied upon to form any conclusion regarding the impact of HV transmission lines on property values.

(17) Impact on schools, local government municipalities and businesses

(a) Schools

The right-of-way for the West Portion of the IEC Project will cross a portion of the cross-country track on the Falling Springs Elementary School property. In these locations where the right-of-way crosses the cross-country track, existing trees will have to be removed. However, the transmission line will not deter or inhibit use of the cross-country track. Transource PA St. No. 4-R, p. 9. Transource PA did examine alternative options throughout this area. However, the presence of a municipal building and residential properties in the surrounding area makes this the only open area that could reasonably be crossed through. Tr. at 2124, ln. 3-19.

The Proposed Route is located in a forested area southeast of Falling Spring Elementary School with approximately 680 feet of woods between the school and the Proposed Route. Tr. at 2169, ln. 18-24. There are many examples of school buildings that are in much closer proximity to HV transmission line rights-of-way than the proposed line will be to the Falling Spring Elementary School. Tr. at 2169, ln. 20-24. The impact to the Falling Spring Elementary School will be limited to removing trees underneath the right-of-way, and the school property can continue to be used as it is today. Tr. at 2182, ln. 16-25. The presence of the transmission line will not pose a threat to the safety of the children who attend the Falling Springs Elementary School. Transource PA St. No. 16-R, p. 15. *See also* Section C above.

(b) Local Government and municipalities

Although public utility facilities such as transmission lines and substations are generally exempt from local municipal authority, Transource PA and PPL Electric considered the local ordinances and comprehensive land use plans as required by the Commission's interim siting guidelines found at 52 Pa. Code, § 69.1101 (2)(3) and § 69.3104 (1). As part of the route selection process, Transource PA reviewed local zoning ordinances and comprehensive land use plans to evaluate the impact of the Proposed Route for the West Portion on these local ordinances and plans. Transource PA evaluated the Proposed Route's consistency with the zoning ordinances and comprehensive plans of the government entities through which the Proposed Route would pass. Transource PA St. No. 4, p. 13; Transource PA Ex. 1, Attachment 3 (West). PPL Electric also reviewed the applicable comprehensive land use plans and local zoning ordinances to evaluate the impact of the Settlement IEC East Portion. Transource PA Ex. No. AA-1, Supplemental Attachment 4, pp. 28-30.

No existing or planned park, recreation or conservation sites (local land trusts, local conservancies, or natural land trusts) are crossed by the Project. Transource PA St. No. 4-R, p. 37. With respect to the Settlement IEC East Portion that consists of exiting right-of-way and infrastructure, community features, such as schools, daycare centers, churches and cemeteries were identified and effectively avoided. As such, none of these features will be affected by the Settlement IEC East Portion. In addition, no private or public open space areas are located along the Settlement IEC East Portion. Transource PA Ex. No. AA-1, Supplemental Attachment 3, pp. 27-28.

(c) Businesses

With respect to business impacts, it is estimated that the IEC Project will bring significant employment and economic stimulus benefits to the local economies in Franklin and York

Counties. The construction of the IEC Project will also create additional tax revenue for state and local governments within Pennsylvania. Transource PA St. No. 10-R, pp. 3, 25-29.

Finally, Transource PA evaluated the Proposed Route for the presence of mines and quarries. These land uses are typically incompatible with transmission lines due to the instability of the lands and the extensive operations involved in their processes. The Proposed Route does not cross any mines or quarries. Transource PA Ex. No. 1, Attachment 3 (West), p. 64.

(18) Construction Issues

Paralleling existing linear features, such as transmission lines or roadway corridors, is typically viewed as a common siting practice to minimize the cumulative effect of a new right-of-way. The Proposed Route for the West Portion has the longest alignment paralleling these linear features. The Proposed Route for the West Portion involves the fewest road crossing and contains no railroad crossings. Therefore, the Proposed Route is the best option from a railroad and roadway crossing perspective. Transource PA Ex. No. 1, Attachment 3 (West), p. 91. Given the terrain, all of the Settlement Routes considered for the West Portion would have the same constructability consideration for steep slopes. Transource PA Ex. No. 1, Attachment 3 (West), p. 92.

Transource PA does not plan to maintain any access roads permanently after construction. If any soil compaction issues occur, Transource PA will work with landowners to minimize compaction and restore any soil compaction issues that occur. Transource PA St. No. 4-R, p. 29-30. Transource PA will remediate any damages to roads and/or bridges that may be caused by construction activities. Transource PA St. No. 11-R, p. 6. Where possible, existing farm or forest roads will be evaluated and used instead of developing new access roads, which could involve grading to provide the desired slopes for the heavy equipment that would be

involved in the construction. Transource PA will coordinate with landowners to secure the rights to use these existing roads. Transource PA Ex. No. 1, Attachment 3 (West), p. 92.

With respect to the Settlement IEC East Portion, use of existing infrastructure for the majority of the line will simplify the construction process significantly as compared to the greenfield route based on the need to construct a much smaller portion of new line for the Settlement IEC East Portion. The Settlement IEC East Portion will involve the construction of four miles of new ingratitute as compared to the sixteen miles required for the original proposal. Transource PA Ex. No. AA-1, Supplemental Attachment 3, Section 1.1.

(a) Mitigation Efforts

Transource PA and PPL Electric are committed to undertaking measures necessary to mitigate the proposed Project's potential impacts. These specific efforts are described in the sections above.²⁵ Transource PA and PPL Electric have coordinated and will continue to coordinate with state and local agencies to minimize impacts. During the siting process for the West Portion of the IEC Project, for example, Transource PA attempted to minimize impacts on existing and future land uses, as well as avoid sensitive natural resources such as wetlands and streams. Where potential impacts are unavoidable, Transource PA will employ best management practices and obtain and comply with any necessary permits. As part of the permitting process, any required waterway, wetland, or floodplain encroachment permits will be obtained from the applicable jurisdictional state and federal agencies. In addition, to address water quality standards within watersheds along the IEC-Project corridor, Transource PA will comply with the regulations of the National Pollutant Discharge and Elimination System permit program, obtain

²⁵ A detailed discussion of Transource PA's efforts to minimize the anticipated impacts and potential permit and mitigation requirements related to the West Portion of the IEC Project is also provided in Section 5.2 of Attachment 3 to the Siting Application. See Transource PA Ex. No. 1, Attachment 3.

the required soil erosion and sedimentation control permits, and follow the specified conditions required for the permit. Transource PA St. No. 4, pp. 22 -24.

Throughout this proceeding, certain individuals and parties have expressed concerns with the ability to continue agricultural activities in the area surrounding the proposed transmission line. Framing and transmission lines have co-existed since the early development of the transmission grid. Typical farming practices can continue within the right-of-way, and Transource PA will compensate landowners for any impacts or crop loss during the construction and restoration period. Transource PA St. No. 5-R, pp. 1-2. Still, Transource PA has undertaken significant efforts to minimize the impact of the Project on farming operations.

During the siting process, efforts were made to decrease fragmentation of crop fields by aligning segments with property boundaries, access roads, and field edges where feasible. Individual landowners were given opportunities to provide input regarding the route alignment to minimize impact on farming operations. Specifically, during the open house meetings, landowners were asked to provide information regarding their property such as the location of pasture fields versus crop fields, rocky areas that are not farmed, and spring and well sites, to help define an alignment across their land that would be more compatible with their farming operations. Over 150 alignment shifts were made to address landowner input. Transource PA St. No. 4-R, pp. 27-28. Specific examples of landowner requests that were evaluated and accepted include: (1) request for substation orientation to be rotated and moved closer to the west side of property and request that proposed route be moved to avoid center pivot irrigation; (2) request for the proposed route to be moved approximately 125 feet off of the western property boundary line further onto the subject property so as to reduce impacts to farming equipment and practices; (3) request for proposed structure to be moved closer to the northern property

boundary; (4) request for proposed structure to be moved closer to existing wooded area; (5) request for proposed structure to be moved closer to the property line; (6) request for proposed structure location to be moved to property boundary outside of tillable land; (7) request for proposed structure location to be moved onto the subject property, instead of the neighboring property; (8) request for proposed structure location to be moved onto neighboring, previously affected landowner's property to minimize impacts to farming practices; (9) request for proposed structure to be moved to reduce impacts to farming practices; (10) request for structure location to be moved from planting area to grazing area; (11) request for the proposed structure location to be moved off property so as to not impact limited access; and (12) request for proposed line route to be shifted off property to avoid new home construction. See Transource PA St. No. 6-R, Table 1.

Specific requirements associated with tree farms and orchards were also addressed through Transource PA's discussions with landowners. Transource PA St. No. 4-R, p. 28. Woody vegetation, such as orchards, that grow to be fifteen feet tall or less are allowed within the right-of-way. Therefore, the majority of orchard operations can safely coexist with the transmission line right-of-way. To the extent orchards will be taller than fifteen feet, Transource PA will incorporate additional clearance into the design of the transmission line where needed. Transource PA Statement No. 5-R, p. 2.

One of the measures taken by Transource PA to minimize the impact of the proposed structures is to use steel monopoles for the Project, where practicable, instead of lattice towers. The footprint of the steel monopoles will be considerably smaller (approximately 30-80 square feet) than the lattice towers (approximately 400 square feet) and results in a much smaller area of land impact. To put this in perspective, assuming the maximum case scenario, with an average

of 10 foot by 10 foot area (100 square feet) per monopole, the physical loss of prime farmland soils for the West Portion (190 structures) would equate to approximately 0.44 acre along the 28.8 mile alignment. When compared to the level of residential and commercial development in the area, this impact can be considered de minimis. Transource PA St. No. 4-R, p. 29. The distance between monopoles will allow large farm equipment to move between structures. Transource PA St. No. 5-R, pp. 1-3.

(b) Conclusions regarding Siting and Environmental Impacts

The Proposed Routes for the IEC Project were selected with the goals of minimizing impacts on land use and natural and cultural resources while avoiding circuitous routes, extreme costs, and non-standard design requirements. Transource PA Ex. No. 1, Attachment 3, p. 97. Transource PA and PPL Electric have undertaken an extensive evaluation of the impacts of the available alternative routes for both portions of the IEC Project. The routes proposed by Transource PA and PPL Electric will have significantly less overall impact to the natural and human built environment than the other feasible alternative routes.

The Proposed Route for the West Portion of the IEC Project is the shortest option, crosses the fewest parcels, and has the fewest landowners. The Proposed Route has a significant amount of the overall length parallel existing transmission lines and a number of residences are already adjacent to existing infrastructure. Transource PA Ex. No. 1, Attachment 3, pp 63-64. The Proposed Route for the East Portion of the IEC Project – the Settlement IEC East Portion – is the preferred route because it utilizes existing PPL Electric infrastructure for a significant portion of the route. Not surprisingly, the Settlement IEC East Portion is anticipated to have less total impact when compared to the originally proposed greenfield route. Transource PA Ex. No. AA-1, Supplemental Attachment 3, Section 2.

Transource PA and PPL Electric have met the applicable legal standard of making a reasonable route selection that complies with the Commission's siting regulations. *See Energy Conservation Council of Pa. v. PUC*, 25 A.3d 440, 449 (Pa. Cmwlth. 2011). As explained herein, Transource PA and PPL Electric have fully considered each of the factors listed in the Commission's siting regulations in selecting the routes for the West Portion of the IEC Project and the Settlement IEC East Portion and have made reasonable efforts to minimize potential environmental impacts. *See* 52 Pa. Code §§ 57.75-57.76. Possible alternative routes were also identified and evaluated before selecting the Proposed Routes. The resulting Proposed Routes minimize the overall impacts of the IEC Project while at the same time balancing the impacts on the human/built environment, environmental impacts, and engineering and constructability considerations. Additionally, Transource PA and PPL Electric are employing numerous mitigation measures to lessen those impacts that do exist. The Proposed Routes for the West Portion of the IEC Project and the Settlement IEC East Portion as proposed by Transource PA and PPL Electric are reasonable, comply with the Commission's siting regulations, and should be approved.

E. THERE ARE NO REASONABLE ALTERNATIVES

1. Settlement Route in York County

Under the originally filed IEC Project in York County proposed greenfield construction of approximately 13 miles of transmission line. In this proceeding and in the Maryland proceeding, various parties requested that Transource PA utilize existing PPL Electric infrastructure to avoid greenfield construction of new transmission lines to the extent reasonably possible. *See e.g.* OCA St. No. 2, p. 20. Parties proposed various alternatives, and Transource PA, PJM and PPL Electric were able to develop the Alternative Route in York County which relies primarily on existing PPL Electric ROW and transmission infrastructure. Transource PA

and PPL Electric are able to construct the Alternative Route in York County because it exceeds PJM's market efficiency criteria and continues to solve the reliability violations identified in 2023. There are no reasonable alternatives to either the original proposed route or the alternative route agreed to in settlement in York County.

2. Siting Route in Franklin County

As explained in Section D above, Transource PA evaluated many different segment areas in developing the siting route for Franklin County. Over 40% of the proposed route alignment for Franklin County parallels either highways, railroads or transmission line ROW. Transource PA St. No. 4-R, p. 7. In addition, Transource PA has worked with landowners to attempt to mitigate the impacts of the line. Transource PA Ex. No. 1, Attachment 3, p. 99; Transource PA St. No. 6-R, Table 1.

No party in this proceeding proposed an alternative route for the transmission lines in Franklin County. There are no reasonable, viable alternatives for siting the proposed route in Franklin County.

3. There Are No Reasonable Alternatives to Address Market Congestion on the AP South and Related Interfaces

Parties in this proceeding argued that non-transmission alternatives such as energy efficiency and renewable resources are alternatives to Project 9A or Alternative Project 9A. These arguments are addressed in Section VI(B)(15) above. As explained therein, non-transmission alternatives will not relieve congestion on the AP South and related interfaces and could, in fact, increase congestion on the AP South and related interfaces.

4. MAIT Project 18H Is Not a Reasonable Alternative in Franklin County

In testimony, OCA witness Lanzalotta argued that MAIT Proposal 18H is an alternative to Project 9A in Franklin County. OCA St. No. 2, p. 22. This proposal should be denied. Proposal 18H did not provide the congestion benefits that Project 9A provided. In addition, Proposal 18H created additional congestion in the BGE control area. Transource PA St. No. 8-R, p. 23.

PJM evaluated 41 different proposals and performed over 23,000 hours of analysis in evaluating proposals to reduce congestion on the AP South and related interfaces. Transource PA Statement No 8-R, p 11. PJM did not deem Proposal 18H to be a reasonable alternative to Project 9A.

As explained by Former Commissioner Cawley, PJM has substantial expertise in transmission planning, which is vitally important to Pennsylvania. Former Commissioner Cawley explained as follows:

- Q. What is your view with respect to PJM's expertise in transmission system planning?
- A. PJM's expertise in transmission system planning is vitally important for these reasons:
1. Transmission system planning is a technically complex subject matter.
 2. The Commission has limited core expertise in electric transmission planning.
 3. PJM has nine decades of specialized experience in transmission system planning.
 4. Only PJM has the necessary cross-region information available to it.
 5. PJM's transmission system planning recommendations are the product of extensive study and an open and transparent collective decision making process.
 6. PJM's planning process is informed not only by PJM's in-house experts but also by experts of the

member-owners of transmission and interested parties.

Transource PA St. No. 9-R, p. 3, line 19-p. 4, line 5.

PJM has extensive planning experience and has selected Project 9A over Project 18H for the reasons explained above and in Mr. Horger's testimony. OCA's proposal to adopt Project 18H over Project 9A should not be accepted.

F. ECONOMIC BENEFITS

The economic benefits of the IEC Project are addressed in Section B above.

G. EMINENT DOMAIN

1. Eminent Domain Issues in York County

On May 15, 2018, Transource PA filed 40 eminent domain applications in connection with the East segment of Project 9A in York County. These applications are only necessary in the event that the Commission approves the original IEC East Portion instead of the settlement route under the Settlement IEC East Portion.

Under the Settlement IEC East Portion, PPL Electric has acquired all necessary ROW in York County. No eminent domain applications are necessary in York County for the Settlement IEC East Portion.

Transource PA fully supports Commission approval of the Settlement IEC East Portion. If the Commission approves the Settlement IEC East Portion, Transource PA will withdraw the pending condemnation applications in York County related to the original IEC East proposal. A list of these condemnation applications is provided in Appendix E.

2. Eminent Domain Issues in Franklin County

On May 15, 2018, Transource PA filed 93 eminent domain applications in connection with the West segment of the IEC Project in Franklin County. Transource PA subsequently

withdrew 50 of those eminent domain applications. A list of the eminent domain applications that have not been withdrawn in Franklin County is provided as Appendix F.

As explained in Section D above, the West segment of the IEC Project in Franklin County parallels existing transmission line and other infrastructure for over 40% of the length of the transmission line, Transource PA attempted to parallel existing infrastructure to the greatest extent reasonably possible in order to minimize impacts. Transource PA's siting analysis demonstrates that the proposed route in Franklin County would be approved.

Approval of the eminent domain applications in Franklin County is necessary for Transource PA to site, construct and operate the transmission lines. The service to be provided by Transource PA is necessary or proper for the service, accommodation, convenience or safety of the public for the reasons set forth above. Accordingly, Transource PA's proposed exercise of the power of eminent domain to acquire ROW and easements for the IEC West project in Franklin County over the lands identified in the Eminent Domain Application is necessary for the service, accommodation, convenience, or safety of the public and therefore should be approved.

H. TRANSOURCE PA'S REQUEST FOR ZONING EXEMPTIONS FOR THE CONTROL BUILDINGS AT THE CONASTONE AND FURNACE RUN SUBSTATIONS SHOULD BE APPROVED

1. Zoning Exemption in York County

On May 15, 2018, Transource PA filed a Zoning Petition requesting a finding that a building to shelter control equipment at the Furnace Run Substation in York County, Pennsylvania, is reasonably necessary for the convenience or welfare of the public and, therefore, exempt from any local zoning ordinance.

In the Zoning Petition, Transource PA explained that the Furnace Run Substation was an integral part of the EIC Project and necessary to relieve the congestion constraints. Transource

PA further noted that the Furnace Run Substation must include equipment to operate the substation and that the most efficient means for protecting the equipment was with a control equipment building. Transource PA Ex. No. 3, p. 9.

Transource PA has acquired an option to purchase the land for the Furnace Run Substation. The substation site is located in an agricultural zone in Lower Chanceford Township. Transource PA Ex. No. 3, p. 10.

The Lower Chanceford Township Zoning Ordinance does not define public utilities or essential services. Under the Agricultural District (A) no building or structure may be erected or used and no land may be used or occupied except for those listed principal uses, accessory uses, and uses by special exception, none of which list utilities. However, Section 375 states that “public utility buildings and facilities shall be approved in any district, provided however, that building or structures erected for these utilities shall be subject to the specific regulations provided here related to front/side/rear yards, building height, fencing requirements, external design of the building shall be in conformity with the buildings in the district, and access requirements.” *See* Transource PA Ex. No. 3, pp. 10-11, Lower Chanceford Township Zoning Ordinance provided in Appendix E.

In addition, a building and/or zoning permit is required prior to the erection, construction, or use of any building structure, or portion thereof. A building and/or zoning permit is also required prior to the use or change in land. *See id.* § 400 and 405.

The in-service date for the substation is the same as the East segment of the IEC East Project, which is fourth quarter of 2022. Transource PA Statement No. AA-1, p. 9. If Transource PA was required to obtain a Zoning Permit prior to construction of the control

equipment building, the process, including appeals from any adverse determination, could consume substantial time and could potentially delay the in-service date.

Based upon the foregoing, Transource PA respectfully requests that the ALJ and the Commission find that the control equipment building at the proposed Furnace Run Substation site in York County is reasonably necessary for the convenience or welfare of the public and, therefore, exempt from local zoning regulation.

2. Zoning Exemption in Franklin County

On May 15, 2018, Transource PA filed a Zoning Petition requesting a finding that a building to shelter control equipment at the Rice Substation in Franklin County, Pennsylvania, is reasonably necessary for the convenience or welfare of the public and, therefore, exempt from any local zoning ordinance.

In the Zoning Petition, Transource PA explained that the Rice Substation was an integral part of the IEC Project and necessary to relieve the congestion constraints. Transource PA further noted that the Rice Substation must include equipment to operate the substation and that the most efficient means for protecting the equipment was with a control equipment building. Transource PA Ex. No. 4, p. 9.

Transource PA has acquired an option to purchase the land for the Rice Substation. The substation site is located in the Agricultural/Woodland Conservation (A) Zone in Southampton Township. Transource PA Ex. No. 3, p. 10.

Under the Agricultural/Woodland Conservation District (A) conditional uses include public utility facilities and essential services, provided that “all buildings including accessory buildings shall not cover more than ten percent of the area of the lot”. *See id.* § 39-Part 7 of Southampton Township’s Zoning Ordinance. On application, and after a public hearing and the receipt of recommendations by the Township and County Planning Commissions, and after all

required subdivision or land development plan approvals, the Supervisors may authorize the issuance of land use permits for any of the conditional uses permitted by the zoning ordinance. *See id.* § 39-1101.

In addition, a building and/or zoning permit is required prior to the erection, construction, or use of any building structure, or portion thereof. A building and/or zoning permit is also required prior to the use or change in land. *See id.* §§ 39-501 and 39-502.

The in-service date for the substation is the same as the West segment of the IEC West Project, which is May 2021. Transource PA Statement No. AA-1, p. 9. If Transource PA was required to obtain a Zoning Permit prior to construction of the control equipment building, the process, including appeals from any adverse determination, could consume substantial time and could potentially delay the in-service date.

Based upon the foregoing, Transource PA respectfully requests that the ALJ and the Commission find that the control equipment building at the proposed Rice Substation site in Franklin County is reasonably necessary for the convenience or welfare of the public and, therefore, exempt from local zoning regulation.

VII. OTHER RELEVANT ISSUES

A. THE COST ESTIMATES ARE UPDATED AND ACCURATE

In this proceeding, certain parties suggested that the cost-estimates used by PJM to calculate the benefit to cost ratio were outdated. Franklin County's witness Mr. McGavran suggested that the cost estimates used for Settlement 9A were from 2014. Franklin County St. No. 1, pp. 8, 10. This testimony is not correct.

Transource PA witness Mr. Weber explained that costs estimates are reviewed quarterly and that the latest comprehensive cost update was provided to PJM in April 2020. Transource

PA St. No. 1AA-RJ, p. 3. The costs in this update were consistent with the costs used by PJM to calculate the benefit to cost ratio for Settlement 9A. In addition, Transource PA has confirmed over 60% of its costs for Settlement 9A through a combination of actual expenditures, binding bids and contracts with vendors. Transource PA St. No. 1AA-RJ, p. 4.

Parties arguments that the costs estimates used in the benefit to cost calculation are either inaccurate or outdated should be denied.

B. THE SETTLEMENT AGREEMENTS WITH THE YORK COUNTY PARTIES AND PPL ELECTRIC ARE IN THE PUBLIC INTEREST

As previously explained, Transource PA entered settlement agreements with the active parties in York County (Citizens to Stop Transource York County, Maple Lawn Farms, Barron Shaw and Shaw Orchards (collectively, “York County Citizens”) and YCPC) and PPL Electric to modify the proposed route in York County to utilize existing PPL Electric right-of-way and transmission infrastructure. The settlement agreements were filed with the Commission on October 17, 2019. The settlement agreements are in the public interest because they provide for the use of an alternative route for the East Portion of the IEC Project that will utilize existing infrastructure and right-of-way for the majority of the route while still resolving the congestion problems and reliability issues identified by PJM.

1. The Settlement IEC East Route Minimizes Impacts to the Environment and Landowners.

The Settlement IEC East Portion will have overall less impact to the natural and human/built environment as compared to the originally proposed route. PPL Electric Statement No. AA-5, p. 7. The Settlement IEC East Portion consists of adding a second circuit on existing PPL Electric infrastructure and will require construction of new transmission line for only the four-mile Furnace Run 230 kV segment as opposed to the approximately 15.8 miles

(approximately 12.7 miles in Pennsylvania and approximately 3.1 miles in Maryland) of new transmission line required for the originally proposed IEC East Portion. PPL Electric Statement No. AA-5, pp. 5-6.

The Settlement IEC East Portion will minimize requirements for new right-of-way and potential impacts to new property owners. The four-mile Furnace Run 230 kV segment is the only section of the Settlement IEC East Portion that will require widening of existing rights-of-way. PPL Electric Statement No. AA-5, p. 6. The 34 pending eminent domain applications associated with the original configuration will be withdrawn following approval of the Amended Application. Transource PA Exhibit No. AA-1, p. 15. No condemnation applications are necessary for the Settlement IEC East Portion because PPL Electric has acquired all necessary rights from landowners for the Furnace Run segment prior to submitting the Amended Application. PPL Electric Statement No. AA-4, p. 8.

The Settlement IEC East Portion will result in overall less environmental impacts relative to the originally proposed route. PPL Electric Statement No. AA-5, p. 6. The Settlement IEC East Portion is not expected to impact threatened or endangered species or the natural areas where threatened or endangered species may reside. The settlement agreement with YCPC also provides for Transource PA to provide a one-time payment to YCPC to mitigate potential environmental impacts, if any, as a result of constructing the Settlement IEC East Portion. Tr. at p. 2834, ln. 5-9; p. 2841, ln. 14-19.

2. Settlement 9A provides significant benefits in the form of congestion relief on the PJM system.

Addressing congestion costs through market efficiency projects is necessary to ensure a properly functioning and fair electricity market. All customers in the PJM region benefit from and rely upon the reliable and economic supply of electricity. Transource PA Statement No.

AA-1 p. 8. The IEC Project as proposed in the Amended Application provides for the construction of transmission enhancements that will provide hundreds of millions of dollars of benefits for customers in the PJM region and also address significant emerging reliability issues identified to occur in the near future. Transource PA Statement No. 1 AA-1, p. 6. Specifically, economic transmission cost constraints across the AP South interface totaled approximately \$800 million from 2012 through 2016. Transource PA Ex. No. TH-RR, p. 2. In addition, PJM models continued to identify significant congestion on the AP South and related interfaces or long-term simulation results. Transource PA Statement No. 8-R, p. 7.

Relieving the persistent congestion is in the public interest. As former Commissioner Cawley explained, congestion allows customers in the unconstrained area to receive artificially low and discriminatory rates. Transource PA Statement No. 9-RJ, p. 2. Due to congestion constraints, customers in the constrained area pay artificially high, discriminatory and unjust and unreasonable power prices. Transource PA St. No. 9-RJ, p. 4. Thus, removing congestion eliminates discrimination in rates. Transource PA St. No. 9-RJ, p. 5.

The Settlement IEC Project as proposed in the Amended Application continues to meet PJM's regional transmission planning criteria and addresses the persistent congestion on the AP South and related constraints within the needed timeframe. Transource PA Statement No. 1, p. 8; Transource PA Statement No. 2, p. 7. Project 9A, including the IEC Project as proposed in the Amended Application, has a benefit to cost ratio of 1.66, well above the required 1.25 benefit to cost ratio. Transource PA Statement No. AA-2, p. 7; Transource PA Statement No. AA-3, p. 3.

3. Settlement 9A is in the public interest because it resolves reliability violations that would occur absent the Project.

The IEC Project as proposed in the Amended Application is in the public interest because it resolves the emerging reliability issues on the transmission system in southern Pennsylvania and northern Maryland. Without Settlement 9A, another solution would be required to solve the reliability violations, including 500 kV transmission line conductor overloads, that have been identified as occurring in 2023 in order to ensure the continued reliability of service to customers in the PJM region. In PJM's experience, conductor overloads on 500 kV transmission lines are likely to be resolved only through the construction of additional greenfield transmission. Transource PA, Statement No. AA-2, p. 8. Transource PA witness Mr. Herling testified that if Project 9A, including the Settlement IEC East Portion, is not approved, there is not sufficient time to address the reliability violations by 2023. Tr. at 2972, 2977. The PJM Board has reviewed and approved the Settlement 9A for inclusion in the RTEP subject to the necessary regulatory approvals. Transource PA Statement No. AA-2, pp. 2-3.

4. Settlement 9A is in the public interest because it would provide other significant benefits to Pennsylvania.

In addition to the congestion and reliability benefits, Project 9A with the Settlement IEC East Portion will provide the following benefits to Pennsylvania: (1) mitigation of extreme weather/load events; (2) increased import/export capability between capacity zones in PJM; (3) enhanced competition in the PJM market; (4) additional jobs; (5) increased tax revenues; and (6) increased economic activity. Transource PA St. No. 10-R, pp. 8, 25-26. Additionally, Settlement 9A will provide Pennsylvania generators with greater access to markets. Tr. 2267, 2460.

5. Conclusion Regarding Settlement Agreements.

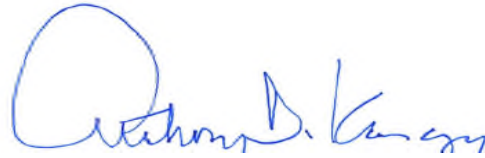
Settlement 9A as proposed in the settlement agreements is unopposed by the York County Citizens and YCPC. Settlement 9A as proposed in the Settlement Agreements and Amended Application is in the public interest because it will resolve the persistent congestion issues and reliability violations identified by PJM, as well as provide other benefits to Pennsylvania, while lessening the potential impact of the Project by eliminating the need for several eminent domain applications and new right-of-way associated with the originally-proposed East Portion.

VIII. CONCLUSION

WHEREFORE, Transource Pennsylvania, LLC and PPL Electric Utilities Corporation respectfully request that the Commission approve:

- (1) the consolidated Siting Applications as amended;
- (2) the Zoning Petitions associated with the Furnace Run Substation in York County, Docket No. P-2018-3001883, and the Rice Substation in Franklin County, Docket No. P-2018-3001878;
- (3) the consolidated Condemnation Applications that are necessary for the approved routes as set forth in Appendices E and F (the Condemnation Applications set forth in Appendix E are only necessary in the event that the Commissions selects Project 9A over Settlement 9A; and,
- (4) such other approvals as are necessary or appropriate under all of the circumstances.

Respectfully submitted,



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Date: August 11, 2020

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Appendix A: Procedural History

Appendix B: Proposed Findings of Fact

Appendix C: Proposed Conclusions of Law & Ordering Paragraphs

Appendix D: List of Abbreviations

Appendix E: List of Eminent Domain Applications in York County

Appendix F: List of Eminent Domain Applications in Franklin County

APPENDIX A

This proceeding was initiated on December 27, 2017, when Transource PA filed Applications for Approval of the Siting and Construction of 230 kV Transmission Lines in Portions of York County at Docket No. A-2017-2640195 (East Portion of the IEC Project) and in portions of Franklin County at Docket No. A-2017-2640200 (West Portion of the IEC Project). Transource PA also submitted testimony in support of the Applications. Together, the East and West Portions of the IEC Project are being proposed to alleviate transmission congestion constraints and provide reliability benefits in Pennsylvania, Maryland, West Virginia, and Virginia.

The Applications were assigned to Administrative Law Judges Elizabeth H. Barnes and Andrew M. Calvelli (the “ALJs”) for hearing and recommended decision.

Notice of the Applications appeared in the Pennsylvania Bulletin on January 20, 2018.

Various parties have filed Protests and Petitions to Intervene, including the Office of Consumer Advocate (“OCA”), Stop Transource Franklin County (“STFC”), York County Citizens, PECO Energy Company, Mid-Atlantic Interstate Transmission, LLC & West Penn Power Company, YCPC, and PPL Electric. Numerous other individuals and organizations filed Protests and Petitions to Intervene.

A Notice of Prehearing Conference was issued on January 4, 2018, scheduling an initial prehearing conference in both dockets for March 13, 2018.

On February 28, 2018, the ALJs issued a Prehearing Conference Order directing that the parties submit prehearing conference memoranda by March 8, 2018.

The parties submitted prehearing memoranda and attended the prehearing conference in accordance with the Notice of Prehearing Conference and Prehearing Conference Order.

The ALJs issued a Protective Order on March 14, 2018. The parties have engaged in extensive discovery throughout the course of this proceeding, some of which has been the subject of various motions filed by the parties and discovery orders issued by the ALJs.

On March 28, 2018, the ALJs issued a Procedural Order adopting a litigation schedule and consolidating the Applications.

On May 15, 2018, Transource PA filed Petitions for Findings that a Building to Shelter Control Equipment at the Furnace Run Substation in York County, Pennsylvania and a Building to Shelter Control Equipment at the Rice Substation in Franklin County, Pennsylvania are Reasonably Necessary for the Convenience or Welfare of the Public, Docket Nos. P-2018-3001883 (York County) and P-2018-3001878 (Franklin County) (collectively, the “Zoning Exemption Petitions.”)

Also on May 15, 2018, Transource PA filed 133 Condemnation Applications seeking to exercise eminent domain authority, some of which were later withdrawn due to engineering modifications or agreement with the respective landowners.

Public input hearings were conducted in Franklin County on May 22 and 23, 2018, and in York County on May 9 and 14, 2018. Additional public input hearings in Franklin County were held on September 18, 2018. Additional public input hearings in York County were held on September 20, 2018. Multiple site views were also held in both Franklin and York Counties.

On June 1, 2018, the OCA filed a Motion to Amend the Procedural Schedule. Transource PA filed an Answer in opposition to the OCA’s Motion on June 6, 2018.

The ALJs issued a Second Prehearing Conference Order on June 4, 2018 scheduling a second prehearing conference.

Representatives from Transource PA, PJM and OCA participated in a technical conference held on June 8, 2018.

On June 26, 2018, the ALJs issued a Third Prehearing Order granting the OCA's requested extension of the deadline to submit intervenor direct testimony and consolidating the Condemnation Applications and Zoning Petitions with the Siting Applications.

Pursuant to the Second Prehearing Conference Order, parties submitted further prehearing memoranda on July 5, 2018. The second prehearing conference was held on July 9, 2018.

On July 30, 2018, the ALJs issued a Fourth Prehearing Order addressing several procedural issues and amending the procedural schedule.

On September 25, 2018, other parties, except STFC, submitted their direct testimony. On September 25, 2018, STFC requested an extension of time to submit its direct testimony, which Transource PA opposed. STFC submitted its direct testimony on October 11, 2018.

Transource PA served its rebuttal testimony on November 27, 2018.

Also on November 27, 2018, Transource PA amended the Siting Application and submitted revised aerial mapbooks to reflect a minor proposed route adjustment, which maintained the original 1,000 foot corridor consisting of 50 feet on each side of the centerline.

Following the submission of Transource PA's rebuttal testimony, York County Citizens, OCA, and STFC filed motions requesting that the procedural schedule be amended. STFC also requested that certain of Transource PA's rebuttal testimony regarding reliability benefits be stricken.

Transource PA filed Answers to the OCA's and York County Citizens' Motions on December 13, 2018. Transource PA filed an Answer to STFC's Motion on December 17, 2018.

On December 28, 2018, the ALJs issued an Order striking certain portions of Transource PA's rebuttal testimony regarding reliability benefits and amending the procedural schedule.

The OCA, Citizens York County, STFC, Barron Shaw, YCPC, and PPL Electric submitted surrebuttal testimony on January 30, 2019.

On February 1, 2019, Transource PA filed a Petition for Interlocutory Review and Answer to Material Question requesting that the Commission grant interlocutory review of the ALJs' December 28, 2018 Order striking Transource PA's testimony regarding reliability benefits.

On February 11, 2019, Transource PA filed a Brief in support of its Petition for Interlocutory Review. Also on February 11, 2019, the OCA, STFC, and Citizens York County filed Briefs in opposition to Transource PA's Petition for Interlocutory Review.

On February 11, 2019, Transource PA served its rejoinder testimony.

On February 14, 2019, the OCA and STFC filed Motions to Strike portions of Transource PA's rejoinder testimony. Citizens York County filed a letter in support of the Motions to Strike.

Evidentiary hearings were held on February 21-22, and 25-27, 2019. During the hearings, Transource PA's witnesses were cross examined, and their testimony admitted to the record, except for the stricken testimony regarding reliability benefits.

On March 20, 2019, the Commission issued an Order granting Transource PA's Petition for Interlocutory Review, answering the material questions in the affirmative, and returning the matter to the ALJs for further proceedings consistent with the Commission's Order.

On April 2, 2019, the ALJs issued an Order scheduling further evidentiary hearings for June 27-28, 2019.

Transource PA submitted supplemental testimony on May 14, 2019 to provide an update regarding a conceptual alternative to the originally proposed East Portion of the IEC Project.

On May 29, 2019, the OCA served supplemental surrebuttal testimony. On June 3, 2019, STFC served supplemental surrebuttal testimony.

On June 17, 2019, Transource PA served supplemental rejoinder testimony.

On June 18, 2019, Transource PA filed a Motion to Suspend the Procedural Schedule in order to allow the parties additional time to engage in settlement discussions.

On June 21, 2019, the ALJs issued an Order granting Transource PA's Motion to Suspend the Procedural Schedule and rescheduling the further evidentiary hearings for August 7 and 8, 2019.

On July 26, 2019, counsel for Transource PA informed the ALJs that the parties were continuing to engage in settlement discussions and requested that the further hearing be rescheduled. The ALJs canceled the further hearing scheduled for August 7 and 8, 2019.

The parties continued to engage in settlement discussions, which resulted in Transource PA executing settlement agreements with PPL Electric, YCPC, and York County Citizens. The settlement agreements provide, inter alia, that Transource PA and PPL Electric will present the Commission with an alternative route for the East Portion of the IEC Project – the “Settlement IEC East Portion.” On October 17, 2019, Transource filed the settlement agreements with the Commission.

On January 29, 2020, Transource PA and PPL Electric filed the Joint Amended Application pursuant to the Settlement Agreements.

Notice of the Joint Amended Application was published in the Pennsylvania Bulletin on February 8, 2020.

On February 28, 2020, Franklin County filed a Petition to Intervene and Protest. Transource PA filed an Answer to Franklin County's Petition to Intervene on March 19, 2020. On April 16, 2020, ALJ Barnes granted Franklin County's Petition to Intervene.

A further prehearing conference was held on May 20, 2020.

On June 22, 2020, Franklin County and STFC submitted additional testimony.

On June 29, 2020, STFC filed a Motion requesting in-person hearings. Franklin County filed a concurrence on June 30, 2020.

On July 2, 2020, Transource PA and PPL Electric filed an Answer opposing STFC's Motion for in-person hearings.

On July 6, 2020, the ALJ issued an Order denying STFC's request for in-person hearings.

On July 8, 2020, Transource PA filed rejoinder testimony in response to the testimony filed by Franklin County and STFC on June 22, 2020.

Additional hearings were held on July 9, 2020.

Transource PA hereby submits this Main Brief pursuant to the scheduled adopted by the ALJ.

APPENDIX B

PROPOSED FINDINGS OF FACT

1. Transource PA and PPL Electric are public utilities as defined in Section 102 of the Public Utility Code, 66 Pa.C.S. § 102.
2. Transource PA holds a certificate of public convenience authorizing it to furnish and supply electric transmission service as a public utility in Franklin and York Counties, Pennsylvania.
3. PJM is responsible for planning and operating the transmission grid in all or portions of 13 states, including both Pennsylvania and Maryland, and the District of Columbia. Transource PA St. No. 3, p. 8.
4. PJM has substantial and specialized expertise in transmission planning. Transource PA St. No. 9-R, pp. 3-4.
5. Under its FERC-delegated authority, PJM determines the need for transmission projects and directs the construction of new transmission projects or upgrades to ensure grid reliability and market efficiency. Transource PA St. No. 3, p. 5.
6. The RTEP is an annual planning process that encompasses a comprehensive series of detailed analyses to ensure that electric power flows efficiently and reliability to customers in accordance with North American Electric Reliability Corporation reliability standards. Transource PA St. No. 3, p. 5.
7. The RTEP includes two primary components: a market efficiency component and a reliability component. Under the market efficiency component, PJM identifies congestion on electric transmission facilities that has an economic impact on PJM's wholesale energy or capacity markets. Transource PA St. No. 3, p. 5.

8. PJM's load forecasting model includes non-transmission alternatives, including renewable energy sources and distributed solar generation. Transource PA St. No. 7-R, p. 32.
9. PJM includes a forecast of demand response in its Load Forecast. Transource PA St. No. 7-R, p. 31; Transource PA Ex. No. SRH-6R.
10. PJM receives stakeholder input and comments throughout its planning process and incorporates these comments in its findings. Participation is open to all transmission customers, entities proposing to provide transmission facilities to be integrated into PJM, all PJM members, representatives of state commissions, the agencies and offices of state consumer advocates, and any other interested party. Transource PA St. No. 3, p. 13.
11. PJM conducts market efficiency analysis to comply with its obligations under FERC Order 1000 to identify and reduce congestion on the PJM transmission system. Transource PA St. No. 7-R, pp. 8-10.
12. PJM's market efficiency analysis has two objectives: (1) to determine which reliability upgrades if any have an economic benefit if accelerated; and (2) identify new transmission solutions that may create economic benefits. Transource PA St. No. 3, p. 16.
13. As part of the market efficiency process, PJM conducts sensitivity analyses which take into account potential changes in future system conditions, such as load levels, fuel cost, level and type of generation, generation patterns (including potential retirements and new generation) and demand response. Transource PA St. No. 7-R, pp. 10-11.
14. PJM utilizes the PROMOD software model to evaluate market efficiency projects. Transource PA St. No. 2-R, p. 16.

15. PROMOD is an extensively used and accepted software tool for transmission planning. PJM's process for evaluating market efficiency projects is highly sophisticated and state-of-the-art worldwide. Transource PA St. No. 2-R, p. 16.
16. The AP South and related constraints have experienced significant congestion over a long period of time. Transource PA St. No. 3, p. 7.
17. Economic transmission cost constraints across the AP South interface totaled approximately \$800 million from 2012 through 2016. Transource PA Ex. No. TH-RR, p. 2.
18. In long-term simulation results, PJM models continued to identify significant congestion on the AP South and related constraints. Transource PA St. No. 8-R, p. 7.
19. Construction of additional renewable generation in Maryland could increase congestion on the AP South and related constraints. Transource PA St. No. 7-R, p. 33.
20. Congestion on the transmission system causes customers downstream of the congestion to pay higher costs based on the system constraints. Transource PA St. No. 7-R, p. 2.
21. Congestion provides customers in the unconstrained area artificially low and discriminatory rates. Transource PA St. No. 9-RJ, p. 2.
22. Removing congestion eliminates discrimination in rates. Transource PA St. No. 9-RJ, p. 5.
23. PJM opened a Long-Term RTEP Window beginning October 30, 2014 through February 27, 2015 to select proposals to alleviate AP South interface congestion along with other congestion drivers. Transource PA St. No. 8-R, p. 7.
24. After extensive review and evaluation of Project 9A and several other proposals with stakeholders, PJM selected Project 9A because it provided the most benefits, including

- the most total congestion savings and most production cost savings, and met PJM's benefit to cost ratio. Transource PA St. No. 3, p. 3.
25. PJM and Transource Energy executed a Designated Entity Agreement, which was approved by FERC on January 12, 2017, obligating Transource PA to build the IEC Project. Transource PA Ex. Nos. 1 and 2, p. 9.
 26. Since 2015 and throughout this proceeding, PJM has performed multiple reevaluations of the IEC Project. Transource PA St. No. 3, pp. 23, 33; Transource PA St. No. 8-R, p. 14; Transource PA Ex. TJH-AA2, p. 7.
 27. The IEC Project inclusive of the Settlement IEC East Portion provides approximately \$845 million in congestion benefits over the 15-year planning period. Transource PA Ex. TJH-AA 1, p. 24.
 28. Settlement 9A has a benefit-to-cost ratio of 1.66 based upon estimated costs and 1.6 with a 25% cost adder. In addition, Settlement 9A has a benefit-to-cost ratio of 1.52 with a 1% load decrease and a benefit-to-cost ratio of 1.46 with a 1% load decrease and 25% cost adder for certain components. Transource PA St. No. AA-3, p. 4.
 29. PJM adopted a cost ratio of 1.25 to hedge against the uncertainty of estimating benefits. Transource PA St. No. 7-R, p. 15.
 30. Settlement 9A (with the West Portion and the Settlement Route for the IEC East Portion) resolves five emerging reliability violations that were identified by PJM in an RTEP 2023 study year case generator deliverability analysis. Transource PA Ex. No. AA-1, Supplemental Attachment 2; Transource PA St. No. 7-R, p. 21.

31. If Project 9A or Settlement 9A are not constructed, PJM would be required by law to seek alternative solutions to address the reliability violations. Transource PA St. No. 7-R, pp. 24-25.
32. Solutions for violations on 500kV facilities are not typically small in scope or cost. Transource PA St. No. 7-R, p. 25.
33. Construction of Settlement 9A on a timely basis will avoid PJM developing operational procedures, which could include customer load shedding, to address the identified reliability violations. Tr. 2970, lines 2-14.
34. Settlement 9A will provide Pennsylvania generators with greater access to markets. Tr. 2267, 2460.
35. Settlement 9A will provide additional benefits to Pennsylvania including: (1) Mitigation of extreme weather/load events; (2) Increased import/export capability between capacity zones in PJM; (3) Enhanced competition in the PJM market; (4) Additional jobs; (5) Increased tax revenues; and (6) Increased economic activity. Transource PA St. No. 10-R, Redacted, pp. 8, 25-26.
36. The West Portion of the IEC Project consists of the new overhead double circuit Rice-Ringgold 230 kV transmission line and the new Rice Substation to be located in Franklin County, Pennsylvania. Transource PA Ex. No. 1, p. 14.
37. The Rice-Ringgold 230 kV Transmission Line will extend approximately 28.8 miles to connect the existing Ringgold Substation located near Smithsburg, Washington County, Maryland and the new Rice Substation to be located in Franklin County, Pennsylvania. Approximately 24.4 miles of the IEC West Project will be located in Pennsylvania and approximately 4.4 miles will be located in Maryland. Transource PA Ex. No. 1, p. 14.

38. The Settlement IEC East Portion will consist primarily of utilizing existing PPL Electric infrastructure and right-of-way by installing a second circuit on the existing towers within the Manor to Graceton corridor and Otter-Creek to Conastone corridor. Transource PA Ex. No. AA-1, p. 14; PPL Electric St. No. AA-3, pp. 3-4.
39. The Settlement IEC East Portion will require new transmission towers for approximately four miles in York County. The four-mile segment includes a two-mile segment west of the proposed Furnace Run Substation to the existing Manor to Graceton corridor and a two-mile segment east of the proposed Furnace Run Substation to the existing Otter-Creek to Conastone corridor. Transource PA Ex. No. AA-1, p. 14; PPL Electric St. No. AA-3, pp. 3-4.
40. PPL Electric will be responsible for constructing the new transmission line in York County, and Transource PA will construct, own and operate the new Furnace Run Substation. Transource PA Ex. No. AA-1, p. 13.
41. Transource PA has conducted extensive mitigation efforts to minimize the impacts of the line on landowners. Transource PA St. No. 11-R, p. 4; Transource PA St. No. 4-R, p. 29.
42. Transource PA switched from lattice towers to steel monopoles at the request of landowners to reduce the footprint of the transmission structures and minimize impacts on farmers and farmland. Transource PA St. No. 11-R, p. 4; Transource PA St. No. 4-R, p. 29.
43. The estimated in-service date for the IEC Project has moved from June 2020 to the fourth quarter of 2022. Transource PA Statement No. AA-1, p. 9.
44. Transource PA will incorporate AEP's experience in safely constructing its portion of the Project. Transource PA Ex. No. 1, Attachment 4.

45. Construction of Transource PA's portion of the Project will comply with all Occupational Safety and Health Administration rules and regulations. Transource PA Ex. No. 1, Attachment 4.
46. Transource PA will have dedicated safety personnel for the Project and each contractor will be required to have a safety program. Transource PA Ex. No. 1, Attachment 4.
47. PPL Electric will follow its well-established safety protocols in constructing its portion of the IEC Project. Transource PA Exhibit No. AA-1, Attachment 4.
48. The IEC Project will meet or exceed all National Electric Safety Code requirements. Transource PA Ex. No. 1, Attachment 4; Transource PA Exhibit No. AA-1, Attachment 4.
49. EMF are created whenever there is a flow of electricity. Transource PA St. No. 15-R, p. 7.
50. There are two types of EMF associated with alternating electric current—the electric field and the magnetic field. The electric field is created by the voltage, and the magnetic field is created by the flow of current. Transource PA St. No. 15-R, p. 7.
51. Common sources of 60 Hz EMF include wiring in homes, businesses and schools, lighting, home appliances, power tools and other electrical equipment. Transource PA St. No. 15-R, p. 8.
52. The EMF levels for the IEC Project were below the recommended ranges for public exposures and the magnetic fields are within the range that people experience in their normal living and working environments. Transource PA St. No. 15-R, p. 14.

53. There is no reliable scientific basis to conclude that exposure to EMF would cause or contribute to childhood leukemia, other childhood or adult cancers, or other chronic health problems. Transource PA St. No. 16-R, p. 15.
54. There is no risk to animals as a result of EMF from the IEC Project. Transource PA St. No. 17-R, p. 12.
55. Stray voltage is a voltage between two objects where no voltage should exist. High voltage transmission lines do not create stray voltage problems. Transource PA St. No. 15-R, p. 17.
56. The sound levels for the proposed transmission lines are below typical sound levels in a library, in a suburb at night or the low range of sounds from a light wind or light rain. Transource PA St. No. 15-R, p. 16.
57. The presence of transmission lines would not affect GPS systems on farm equipment. Transource PA St. No. 15-R, pp. 22-23.
58. Transource PA and PPL Electric have committed to taking substantial measures to mitigate environmental impacts of the proposed transmission line, including working with numerous governmental agencies that have jurisdiction over various aspects of the project to further mitigate the effects of the project. Transource PA Ex. No. AA-1, Supplemental Attachment 3, pp. 25-28; Transource PA Ex. No. 1, Attachment 3, p. 99.
59. Transource PA retained AECOM to undertake a comprehensive siting analysis to determine the most appropriate routes for the IEC Project. Transource PA Ex. No. 1, Attachment 3 (West and East), p. 3.
60. AECOM has experience providing comprehensive services for transmission and distribution projects, ranging from alternative route analyses, licensing and permitting,

conceptual engineering, right-of-way services, and public involvement to detailed engineering and design, geotechnical engineering and subsurface investigation, site preparation, construction management, and regulatory compliance. Transource PA St. No. 4, pp. 2-3.

61. Using established routing guidelines, the Siting Team identified opportunity and constraint features within the Study Area that would take advantage of existing corridors to the extent practicable and minimize potential impacts to the natural and human/built environment. Transource PA St. No. 4, p. 9; Transource PA Ex. No. 1, Attachment 3 (West and East).
62. The Siting Team selected a Proposed Route for each portion of the Project that, on balance, best minimized the overall impacts of the Project. The rationale for selecting the Proposed Route was derived from the accumulation of the siting decisions made throughout the process, the knowledge and experience of the Siting Team, comments from the public and regulatory agencies, and the comparative analysis of potential impacts of each Alternative Route. Transource PA St. No. 4, p. 10.
63. Transource PA conducted extensive outreach with the public throughout the siting process, including two rounds of public open houses during different phases of the siting process to inform the public about the Project and obtain information from landowners about their properties. Transource PA St. No. 4, p. 11; Transource PA Ex. Nos. 1 and 2, Attachment 3, Section 2.5.
64. The siting process for the IEC Project considered approximately 150 different route segments – a total of over 245 miles – and also evaluated paralleling existing

- infrastructure and right-of-way to the extent possible. Transource PA St. No. 4-R, pp. 2-4, 6-8.
65. The transmission line will not have a significant impact on land use, soil or sedimentation, plant and wildlife habitats, terrain, hydrology, landscape, designed scenic areas, or wilderness areas. Transource PA St. No. 4-R, pp. 14-16.
 66. The Siting Team selected Alternative Route C as the Proposed Route for the West Portion of the IEC Project based on its determination that the cumulative environmental, human/built, engineering, and constructability impacts associated with the Proposed Route, Alternative Route C, will be significantly less than the other Alternative Routes. Transource PA St. No. 4, p. 21.
 67. The Proposed Route for the IEC West Portion has the fewest residences within 500 feet compared to the other alternatives. Transource PA St. No. 4, p. 21.
 68. The Proposed Route for the IEC West Portion would span a low number of streams and have minimal impact on riparian areas. Streams, floodplains and wetland areas will be spanned to minimize potential impact. Transource PA St. No. 4, p. 22.
 69. The Proposed Route for the IEC West Portion has the least amount of tree clearing and reduces the forest fragmentation effects and potential impacts to threatened and endangered species that use forest habitats. Transource PA St. No. 4, p. 22.
 70. Over 40% of the Proposed Route alignment for the West Portion of the IEC Project parallels either highways, railroads, or transmission line rights-of-way. Transource PA St. No. 4-R, p. 7.

71. Where the West Portion of the IEC Project crosses existing transmission lines, Transource PA will work with the incumbent utilities to ensure proper clearances in order to safely operate and maintain the facilities. Transource PA St. No. 4, p. 23.
72. In its original Application, Transource PA proposed a greenfield route for the East Portion of the IEC Project that would extend for 15.8 miles (approximately 12.7 miles in Pennsylvania and approximately 3.1 miles in Maryland) between the proposed Furnace Run Substation and the Conastone Substation. Transource PA Ex. No. AA-1, Attachment 3 (East), p. 3.
73. Settlement agreements were reached with various parties to amend the original Application to propose the Settlement IEC East Portion as the preferred route for the East Portion of the IEC Project. Transource PA Ex. No. AA-1, Supplemental Attachment 3, p. 2.
74. PPL Electric retained AECOM to conduct a Supplemental Siting Study that comparatively evaluates the originally proposed route for the East Portion and the Settlement IEC East Portion. PPL Electric St. No. AA-5, p. 4.
75. The Settlement IEC East Portion will utilize existing infrastructure and/or rights-of-way, affect fewer new landowners and parcels, and impact fewer natural resources. PPL Electric St. No. AA-5, p. 5.
76. The entire alignment for the Settlement IEC East Portion consists of parcels that currently have right-of-way agreements or are owned in fee by PPL Electric. The Settlement IEC East Portion uses existing infrastructure for majority of the length of the line by adding a second circuit onto the existing transmission lines. PPL Electric St. No. AA-5, pp. 5-6.

77. The four-mile Furnace Run 230 kV Transmission Line corridor is the only section of the Settlement IEC East Portion that will require widening of existing rights-of-way. PPL Electric St. No. AA-5, p. 6.
78. The Settlement IEC East Portion will minimize requirements for new right-of-way and potential impacts to new property owners. PPL Electric St. No. AA-5, p. 6.
79. The Settlement IEC East Portion will result in less overall environmental impacts relative to the originally proposed route. PPL Electric St. No. AA-5, pp. 6-7.
80. The Settlement IEC East Portion will involve less tree clearing (19.3 acres) relative to the originally proposed route (51.7 acres), which reduces the forest fragmentation effects and potential impacts to threatened and endangered species that use forest habitat. PPL Electric St. No. AA-5, p. 6.
81. The Settlement IEC East Portion is anticipated to have less total impact when compared to the original Proposed Route for the IEC East Project. PPL Electric St. No. AA-5, p. 7.
82. Transource PA and PPL Electric will comply with all applicable statutes and regulations providing for the protection of the natural resources of this Commonwealth as required by 52 Pa. Code § 57.76a(3).
83. Transource PA and PPL Electric will continue to coordinate with state and local agencies to minimize impacts until the Project is complete. Transource PA St. No. 4-R, p. 11; Transource PA Ex. No. AA-1, Supplemental Attachment 6.
84. Transource PA and PPL Electric will obtain all necessary permits and comply with any conditions place on those permits. Transource PA St. No. 4-R, p. 11; Transource PA Ex. No. 1, Attachment 6; Transource PA Ex. No. AA-1, Supplemental Attachment 6.

85. Transource PA has undertaken significant efforts to minimize impacts on High-Quality streams. Transource PA Statement No. 4-R, pp. 16-22.
86. Vegetation clearing and maintenance is required to ensure the safe and reliable operation of transmission lines. Transource PA Ex. No. AA-1, Supplemental Attachment 3, p. 26.
87. Transource PA and PPL Electric will adhere to their respective vegetation management practices to maintain the portions of the IEC Project for which they are responsible. Transource PA Ex. No. 1, Attachment 11; Transource PA Ex. No. AA-1, Supplemental Attachment 3, p. 26.
88. No structures will be built within the floodway areas of any stream. Transource PA Ex. No. 1, Attachment 3 (West), p. 43.
89. No significant impacts to the landscape are expected as transmission lines are already present in the Project Area for both the Settlement East and West Portions. Transource PA St. No. 4-R, p. 25.
90. Archaeological and historic resource field surveys were conducted for the West Portion, which yielded no significant findings. No impacts to archaeological sites are anticipated. Transource PA St. No. 4-R, pp. 24-25.
91. Transource PA has extensive experience working in karst regions. Transource PA St. No. 12-R, pp. 7-8.
92. Existing transmission lines, including in Franklin County, have been safely built where karst is the topography. Transource PA St. No. 12-R, pp. 7-8.
93. Transource PA hired Dr. Walter Kutschke, PhD, P.E., to perform a karst desktop and field study along the proposed alignment of the IEC Project. Transource PA St. No. 12-R, pp. 4-6.

94. Transource PA will work with Dr. Kutschke to develop a strategy to understand and mitigate the risks related to the active karst-type features. Transource PA St. No. 12-R, p. 6.
95. The Proposed Route for the West Portion of the IEC Project crosses the least area of karst topography. Where karst is present, structures can be strategically placed to avoid specific karst features. Transource PA Ex. No. 1, Attachment 3 (West), p. 33.
96. Transource PA will consider karst-type features and hydrological features (e.g. sinkholes, closed depressions, caves and disappearing streams) in the design, construction, and operations of the transmission as necessary to construct and operate the transmission line safely. Transource PA St. No. 12-R, p.4.
97. Existing transmission lines are present in the area of both the East and West Portion of the IEC Project. Transource PA St. No. 4-R, p. 26.
98. Transource PA has completed visual simulations depicting the transmission line set against the local landscape. Transource PA St. No. 4-R, pp. 26, 30.
99. The Siting Team sought to align the route farther from areas of high visibility, such as along scenic roadways. Transource PA Statement No. 4-R, p. 25.
100. Transource PA considered all of the “open space benefits” described in Act 45 as part of the siting process. Transource PA St. No. 4-R, pp. 35-38.
101. Transource PA has given extensive consideration to impacts on agricultural land, including taking steps to mitigate any impacts on agricultural use. Transource PA St. No. 4-R, pp. 26 – 32.

102. Transource PA has undertaken special efforts to coordinate with landowners to minimize short and long-term effects of the Project and maximize the ability of landowners to functionally use the land. Transource PA St. No. 4-R, p. 37.
103. The Proposed Route for the West Portion of the IEC Project crosses the fewest acres of preserved farmland of the alternatives considered, with only 0.44 acres on the IEC West Portion being used for the poles. Transource PA. St. No. 4-R, pp. 8-9.
104. The proposed transmission lines will not have a material impact on property values, including farmland values. See Transource PA St. Nos.13-R and 14-R.
105. The transmission line will not inhibit use of the cross-country track. Transource PA St. No. 4-R, p. 9.
106. The impact to the Falling Spring Elementary School will be limited to removing trees underneath the right-of-way, and the school property can continue to be used as it is today. Tr. at 2182, ln. 16-25.
107. Transource PA evaluated the Proposed Route's consistency with the zoning ordinances and comprehensive plans of the government entities through which the Proposed Route would pass. Transource PA St. No. 4, p. 13; Transource PA Ex. 1, Attachment 3 (West).
108. PPL Electric reviewed the applicable comprehensive land use plans and local zoning ordinances to evaluate the impact of the Settlement IEC East Portion. Transource PA Ex. No. AA-1, Supplemental Attachment 4, pp. 28-30.
109. The IEC Project will bring significant employment and economic stimulus benefits to the local economies in Franklin and York Counties and create additional tax revenue for state and local governments within Pennsylvania. Transource PA St. No. 10-R, pp. 3, 25-29.

110. If any soil compaction issues occur during construction, Transource PA will work with landowners to minimize compaction and restore any soil compaction issues that occur. Transource PA St. No. 4-R, p. 29-30.
111. Transource PA will remediate any damages to roads and/or bridges that may be caused by construction activities. Transource PA St. No. 11-R, p. 6.
112. Costs estimates for the Project are reviewed quarterly and that the latest comprehensive cost update was provided to PJM in April 2020. Transource PA St. No. 1AA-RJ, p. 3.
113. Transource PA has confirmed over 60% of its costs for Settlement 9A through a combination of actual expenditures, binding bids and contracts with vendors. Transource PA St. No. 1AA-RJ, p. 4.
114. The Furnace Run Substation must include equipment to operate the substation, and the most efficient means for protecting the equipment was with a control equipment building. Transource PA Ex. No. 3, p. 9.
115. The Rice Substation must include equipment to operate the substation, and the most efficient means for protecting the equipment was with a control equipment building. Transource PA Ex. No. 4, p. 9.
116. The MD PSC approved the Application of Transource PA's Maryland affiliate to construct sections of the IEC Project located in Harford and Washington Counties, Maryland. *Application of Transource Maryland LLC for a Certificate of Public Convenience and Necessity to Construct Two New 230 kV Transmission Lines Associated with the Independence Energy Connection Project in Portions of Harford and Washington Counties, Maryland*, Case No. 9471 (Order No. 89571).

APPENDIX C

PROPOSED CONCLUSIONS OF LAW & ORDERING PARAGRAPHS

Conclusions of Law

117. The party seeking a rule or order from the Commission has the burden of proof in that proceeding. 66 Pa.C.S. § 332(a).
118. “A litigant’s burden of proof before administrative tribunals as well as before most civil proceedings is satisfied by establishing a preponderance of evidence which is substantial and legally credible.” *Samuel J. Lansberry, Inc. v. Pa. P.U.C.*, 578 A.2d 600, 602 (Pa. Cmwlt. 1990).
119. This preponderance of the evidence standard is satisfied by presenting evidence more convincing, by even the smallest amount, than that presented by another party. *Brown v. Cmwlt.*, 940 A.2d 610, 614 n.14 (Pa. Cmwlt. 2008).
120. If the applicant sets forth a prima facie case, then the burden shifts to the opponent. *McDonald v. Pennsylvania Railroad Co.*, 348 Pa. 558, 36 A.2d 492 (1940).
121. Once a prima facie case on a point has been established, if contrary evidence is not presented, there is no requirement that the applicant produce additional evidence in order to sustain its burden of proof. *District of Columbia’s Appeal*, 343 Pa. 65, 21 A.2d 883 (1941). *See, e.g., Application of Pennsylvania Power & Light Co.*, Doc. Nos. A-110500F0196, et al.; 1994 Pa. PUC LEXIS 65 (Oct. 21, 1994).
122. A party that raises an issue that is not included in a public utility’s filing bears the burden of proof. *Pa. PUC v. Metropolitan Edison Co., et al.*, Docket Nos. R-00061366, et al., 2007 Pa. PUC LEXIS 5 (Order entered Jan. 11, 2007).

123. The Federal Power Act authorizes FERC to regulate the transmission of electric energy in interstate commerce. 16 U.S.C. § 824.
124. The Commission has jurisdiction over the siting of the HV transmission lines. 52 Pa. Code § 57.71.
125. An electric distribution company may only construct a high voltage transmission line, i.e. an electrical line with an operating voltage of 100 kV or higher, upon prior Commission approval. 52 Pa. Code § 57.71.
126. In order to grant an application for the construction and siting of a HV transmission line, the Commission must find and determine the following as to the proposed line:
- a) That there is a need for it.
 - b) That it will not create an unreasonable risk of danger to the health and safety of the public.
 - c) That it is in compliance with the applicable statutes and regulations providing for the protection of the natural resources of this Commonwealth.
 - d) That it will have minimum adverse environmental impact, considering the electric power needs of the public, the state of available technology and the available alternatives.
- 52 Pa. Code § 57.76(a).
127. In determining need for the proposed HV line, the Commission will consider, among other things, the “present and future necessity of the proposed HV line in furnishing service to the public.” 52 Pa. Code § 57.75(e)(1).
128. There is a need for reliable regional electric service and transmission systems. *Energy Conservation Council of Pa. v. Pa. PUC*, 995 A.2d 465, 485 (Pa. Cmwlth.

2010) citing *Stone v. Pa. PUC*, 162 A.2d 18, 19-21 (Pa. Super. 1960); *Dunk v. Pa. PUC*, 232 A.2d 231, 234-35 (Pa. Super. 1967).

129. Need for a project is not limited to need from an “engineering” perspective. *Pennsylvania Power & Light Co. v. Pa. PUC*, 696 A.2d 248, 250 (Pa. Cmwlth. 1997).
130. In order to be approved, a transmission line must be “necessary or proper for the accommodation, convenience and safety of its patrons, employees and the public.” *Pa. Power & Light Co. v. Pa. PUC*, 696 A.2d 248, 250 (Pa. Cmwlth. 1997).
131. “One of the principal considerations of public convenience and necessity is the need for integration of the bulk power transmission systems.” *Stone v. Pa. PUC*, 162 A.2d 18, 21 (Pa. Super. 1960).
132. The “Commission has an obligation to enhance regional reliability and mitigate transmission constraints in order to reduce congestion for ratepayers in Pennsylvania and adjacent jurisdictions.” *TrAILCo*, Docket No. A-110172, 2008 Pa. PUC LEXIS 35 (December 12, 2008).
133. FERC requires PJM to identify and resolve congestion issues to ensure FERC-jurisdictional services are provided at rates, terms and conditions that are just and reasonable and not unduly discriminatory or preferential. FERC Order No. 1000, 136 FERC ¶ 61,051, p. 99.
134. Planning on a regional basis will increase efficiency through the coordination of transmission upgrades that have region-wide benefits, as opposed to pursuing transmission expansion on a piecemeal basis. *Application of PPL Electric*

Utilities Corporation Filed Pursuant to 52 Pa. Code Chapter 57, Subchapter G, for Approval of the Siting and Construction of the Pennsylvania Portion of The Proposed Susquehanna-Roseland 500 kV Transmission Line in Portions of Lackawanna, Luzerne, Monroe, Pike and Wayne Counties, Pennsylvania, Docket No. A-2009-2082652, 2010 Pa. PUC LEXIS 434, *44 (Order entered February 12, 2010).

135. FERC Order 1000 is not intended to preempt or conflict with state's authority over siting, permitting and construction of transmission facilities. FERC Order 1000, ¶ 107, FERC Order 1000-A, ¶ 186.
136. FERC Order No. 1000 emphasized the need to address congestion as part of transmission planning requirements. FERC Order 1000, ¶¶ 2, 112.
137. Order No. 1000 eliminated a federal right of first refusal for incumbent transmission owners for certain projects and allowed non-incumbent transmissions owners, such as Transource PA, to compete to build regional transmission projects. FERC Order 1000, ¶ 225.
138. Under Order 1000, FERC has required RTOs such as PJM to identify and address market congestion issues to ensure that FERC-jurisdictional services are provided at rates, terms and conditions that are just and reasonable and not unduly discriminatory or preferential.
139. Settlement 9A is necessary or proper for the accommodation, convenience and safety of the public. *Pa. Power & Light Co. v. Pa. PUC*, 696 A.2d 248, 250 (Pa. Cmwlth. 1997).

140. The Commission's regulations require that an applicant provide: "A general description of reasonable alternative routes to the proposed HV line, including a description of the corridor planning methodology, a comparison of the merits and detriments of each route, and a statement of the reasons for selecting the proposed HV line route." 52 Pa. Code § 57.72(c)(10).
141. The applicable legal standards for review of the selection of a route for utility lines are whether the powers conferred upon the public utility have been wantonly, capriciously or arbitrarily exercised. *West Penn Power Co. v. Pennsylvania Public Utility Commission*, 184 A.2d 143 (1962).
142. The degree of inconvenience to a landowner would not constitute grounds for withholding the exercise of the power to condemn the easement where the record establishes that the utility's route selection was reasonable considering all of the factors involved in the selection of the line. *Paxtowne v. Pa. P.U.C.*, 398 A.2d 254, 256 (Pa. Cmwlth. 1979).
143. A utility's route for a proposed HV transmission line should be approved where the record evidence shows that the utility's route-selection process was reasonable and that the utility properly considered the factors relevant to siting a transmission line. *Energy Conservation Council of Pa. v. PUC*, 25 A.3d 440, 449 (Pa. Cmwlth. 2011).
144. The route selected by the applicant must demonstrate reasonable efforts to minimize adverse environmental impacts when compared to the available alternative routes, but the utility need not consider all possibilities. *Energy Conservation Council of Pa. v. PUC*, 25 A.3d 440, 448-449 (Pa. Cmwlth. 2011).

145. An applicant is not required to choose a route that has no adverse impacts. Instead, a utility must make reasonable efforts to minimize and mitigate any impacts and ensure that any harm to the environment is outweighed by the benefits of the project. *Energy Conservation Council of Pa. v. PUC*, 25 A.3d 440, 448-449 (Pa. Cmwlth. 2011).
146. The Commission must find that the proposed line “will have minimum adverse environmental impact, considering the electric power needs of the public, the state of available technology and the available alternatives.” 52 Pa. Code § 57.76(a)(4).
147. The Commission’s regulations regarding the siting of HV transmission lines require that consideration be given to the impact and efforts to minimize the impact of the proposed line on the following:
- (i) Land use
 - (ii) Soil and sedimentation
 - (iii) Plant and wildlife habitats
 - (iv) Terrain
 - (v) Hydrology
 - (vi) Landscape
 - (vii) Archaeologic areas
 - (viii) Geologic areas
 - (ix) Historic areas
 - (x) Scenic areas
 - (xi) Wilderness areas
 - (xii) Scenic rivers

52 Pa. Code § 57.75(e)(3).

148. To approve the proposed line, the Commission must find that the proposed line “is in compliance with the applicable statutes and regulations providing for the

protection of the natural resources of this Commonwealth.” 52 Pa. Code § 57.76(a)(3).

149. The Commission has generally found compliance with the applicable environmental statutes and regulations where the applicant agrees to obtain any and all environmental permits necessary for construction and to comply with any conditions on those permits during construction. *See, e.g., Application of Pennsylvania Electric Company For Approval to Locate and Construct the Bedford North-Osterburg East 115 kV HV Transmission Line Project Situated in Bedford and East St. Clair Townships, Bedford County, Pennsylvania*, Docket Nos. A-2011-2247862, et al., 2012 Pa. PUC LEXIS 298 at *61 (Initial Decision Feb. 9, 2012); *Application of PPL Electric Utilities Corporation Filed Pursuant to 52 Pa. Code Chapter 57, Subchapter G, for Approval of the Siting and Construction of the Pennsylvania Portion of The Proposed Susquehanna-Roseland 500 kV Transmission Line*, Docket Nos. A-2009-2082652, et al., 2010 Pa. PUC LEXIS 434 at *191-201 (Feb. 12, 2010).
150. The applicant is not required to receive all necessary permits before the Commission may approve the transmission line or before construction of the proposed line begins. *Energy Conservation Council of Pennsylvania*, 25 A.3d 440, 452.
151. Under Article 1, Section 27 of the Pennsylvania Constitution the “Commonwealth has a duty to prohibit the degradation, diminution, and depletion of our public natural resources, whether these harms might result from direct state action or

from the actions of private parties.” *Pennsylvania Environmental Defense Foundation v. Commonwealth*, 161 A.3d 911 (Pa. 2017).

152. As trustee, the Commonwealth and Commonwealth agencies must “exercise such care and skill as a man of ordinary prudence would exercise in dealing with his own property.” *Pennsylvania Environmental Defense Foundation v. Commonwealth*, 161 A.3d 911 (Pa. 2017) at 90, citing *in re Mendenhall*, 484 Pa. 77, 398 A.2d 951, 953 (Pa. 1979).
153. The Environmental Rights Amendment does not call for a stagnant landscape, the derailment of economic and social development nor a sacrifice of other fundamental values. *Robinson Twp. v. Commonwealth*, 623 Pa. 564, 650 (Pa. 2012).
154. Application of the Commission’s existing regulations is sufficient to carry out its duties as trustee under the Environmental Rights Amendment. *See Application of Pennsylvania Electric Company Seeking Approval to Locate, Construct, Operate and Maintain a High-Voltage Transmission Line Referred to as the Bedford North-Central City West 115 kV HV Transmission Line Project*, Docket No. A-2016-2565296 (Order entered March 8, 2018).
155. Transource PA and PPL Electric have met the applicable legal standard of making a reasonable route selection that complies with the Commission’s siting regulations. *See Energy Conservation Council of Pa. v. PUC*, 25 A.3d 440, 449 (Pa. Cmwlth. 2011).
156. Transource PA and PPL Electric have fully considered each of the factors listed in the Commission’s siting regulations in selecting the routes for the West Portion of

the IEC Project and the Settlement East Portion and have made reasonable efforts to minimize potential environmental impacts. See 52 Pa. Code §§ 57.75-57.76.

157. The West Portion of the IEC Project and the Settlement East Portion are “in compliance with the applicable statutes and regulations providing for the protection of the natural resources of this Commonwealth.” 52 Pa. Code § 57.76(a)(3).
158. The West Portion of the IEC Project and the Settlement East Portion “will have minimum adverse environmental impact, considering the electric power needs of the public, the state of available technology and the available alternatives.” 52 Pa. Code § 57.76(a)(4).
159. Section 1511 of the Business Corporation Law of 1988 grants public utility corporations, such as Transource PA, the power to take and condemn property for the purpose of providing electricity to the public. See 15 Pa. C.S. § 1511(a)(3).
160. The Commission’s only role under 15 Pa.C.S. § 1511 is to consider if the project is necessary or proper for the benefit of the public, and that the Commission is expressly barred from considering the power of the utility to condemn. *SEPTA v. Pa. PUC*, 991 A.2d 1021, 1023 (Pa. Cmwlth. 2010).
161. The 43 eminent domain applications associated with the IEC West Portion are necessary or proper for the benefit of the public.
162. As a general matter, public utility facilities are exempt from local regulation. See, e.g. *Duquesne Light Company v. Monroeville Borough*, 449 Pa. 573, 580, 298 A.2d 252, 256 (1972).

163. A municipality may apply local zoning rules to a public utility “building” unless the Commission finds that the location of the building is reasonably necessary for the convenience or welfare of the public. 53 P.S. § 10619.
164. If the evidence of record demonstrates that the site chosen is reasonably necessary for the convenience or welfare of the public, the Commission should grant the necessary findings under Section 619 of the MPC. *O’Connor v. Pa. PUC*, 582 A.2d 427, 433 (Pa. Cmwlth. 1990) (citing *Re Philadelphia Suburban Water Co.*, 54 Pa. PUC 127, 132 (1980)).
165. The sites for the Furnace Run Substation control equipment building and the Rice Substation control equipment building are reasonably necessary for the convenience or welfare of the public. 53 P.S. § 10619.
166. The Commission has previously determined that EMF should not be regarded as a health hazard. *See Application of Pennsylvania Power & Light Company Filed Pursuant to 52 Pa. Code Chapter 57*, 1994 Pa. PUC LEXIS 65, *67-*69 (Oct. 21, 1994).
167. Commission-approved public utility facilities are exempt from the Agricultural Area Security Law. *See* 3 P.S. § 913(b).

Ordering Paragraphs

168. The consolidated Siting Applications as amended are approved.
169. The Zoning Petitions associated with the Furnace Run Substation in York County, Docket No. P-2018-3001883, and the Rice Substation in Franklin County, Docket No. P-2018-3001878 are approved.
170. The consolidated Condemnation Applications that are necessary for the approved routes are approved.

APPENDIX D

List of Abbreviations

ALJ	Administrative Law Judge Elizabeth H. Barnes
Alternative IEC East Portion	East Portion of the IEC Project
ASA	Agricultural Security Areas
BG&E	Baltimore Gas & Electric
BMPS	Best Management Practices
Code	Pennsylvania Public Utility Code
Commission	Pennsylvania Public Utility Commission
Dominion IRP	Dominion Energy Integrated Resource Plan
EMF	Electric and/or magnetic fields
EMP	Energy Master Plan
EPA	Environmental Protection Agency
EPAct 2005	Energy Policy Act of 2005
ERO	Electric Reliability Organization
FERC	Federal Energy Regulatory Commission
FERC	Federal Energy Regulatory Commission
GPS	Global positioning system
HQ	High-Quality
HV	High voltage
IEC Project	Independence Energy Connection Project
IMM	PJM's Independent Market Monitor
MD PSC	Maryland Public Service Commission
MLS	Multiple Listing Service
MPC	Municipalities Planning Code

NERC	North American Electric Reliability Corporation
NESC	National Electric Safety Code
OCA	Office of Consumer Advocate
OSHA	Occupational Safety and Health Administration
PADEP	Pennsylvania Department of Environmental Protection
PFBC	Pennsylvania Fish and Boat Commission
PHMC	Pennsylvania Historic Museum Commission
PJM	PJM Interconnection LLC
PPL Electric	PPL Electric Utilities Corporation
ROW	Right-of-way
RPPTF	Regional Planning Process Task Force
RSR	Rothman, Shubert and Reed Realtors, LLC
RTEP	Regional Transmission Expansion Plan
RTO	Regional Transmission Organization
STFC	Stop Transource Franklin County
Transource PA	Transource Pennsylvania, LLC
YCPC	York County Planning Commission
York County Citizens	Citizens to Stop Transource York County, Maple Lawn Farms, Barron Shaw and Shaw Orchards

APPENDIX E

LIST OF EMINENT DOMAIN APPLICATIONS IN YORK COUNTY

The following list of Eminent Domain Applications in York County are only necessary if the Commission approves Project 9A instead of Settlement 9A.

1.	ANDERSON – TOMPKINS - JUDY	Barbara D. & David W. Anderson, C. Kathleen and William M. Tompkins, and M. Kathryn and Stephen M. Judy	A-2018-3001982
2.	BARLEY FARMS LP	Barley Farms LP	A-2018-3001964
3.	BLEVINS	Kent E. & Nancy H. Blevins	A-2018-3001902
4.	BOONE	Francis & Mary Eileen Boone	A-2018-3001963
5.	BRACEY	Jefferson L. Bracey, Sr. & Laura R. Bracey	A-2018-3001967
6.	BRADLEY	Glenn J. Bradley	A-2018-3001956
7.	BURTON FAMILY	Burton Family Limited Partnership	A-2018-3001936
8.	CHILCOAT & PETERS	Chilcoat and Peters, Inc.	A-2018-3001932
9.	ESH	Amos L. & Elizabeth K. Esh	A-2018-3001923
10.	GOOD	Richard D. Good, Cathy M. Good, Rodger D. Good & Peggy L. Good	A-2018-3001954
11.	GOSS	Gregory J. & Melanie A. Goss	A-2018-3001904
12.	GROVE	D. Arthur Grove and David Richard Grove	A-2018-3001960
13.	HAMILTON	John J. & Carol A. Hamilton	A-2018-3001989
14.	HASH - GOSS	Jonathan R. Hash, and Gregory J. & Melanie A. Goss	A-2018-3001957
15.	HECNER - NORRIS	Michael Hecner, Eva Hecner, Stephen M. Hecner and Theresa M. Norris	A-2018-3001906
16.	KRELL	Thomas R. Krell, Jr. & April R. Krell	A-2018-3001958
17.	KRICK	Stephen J. & Dolores E. Krick	A-2018-3001965
18.	MACKLIN	R. Andrew & Deborah E. Macklin	A-2018-3001962
19.	MAPLE LAWN FARMS	Maple Lawn Farms, Inc.	A-2018-3001985

20. MAPLE SPRINGS FARMS	Robert B. Burchett, Judy K. Burchett, Thomas L. Burchett, and Stacy L. Burchett, t/d/b/a Maple Springs Farms Partnership	A-2018-3001907
21. McGINNIS	J. Ross & Norma R. McGinnis	A-2018-3001925
22. McGINNIS	McGinnis Limited Partnership	A-2018-3001929
23. McGINNIS	James R. McGinnis	A-2018-3001943
24. MILLER	Mervin S. & Gladys O. Miller	A-2018-3001922
25. NEFF	E. Daniel & Diane M. Neff	A-2018-3001984
26. RGRG PARTNERS	RGRG Partners	A-2018-3001961
27. ROHRER	Douglas E. & Martha J. Rohrer	A-2018-3001881
28. STEWART	Randall C. Stewart, Jr. and Peggy A. Stewart	A-2018-3001986
29. TAYLOR	Shane K. & Kristi L. Taylor	A-2018-3001966
30. TORBERT	Dale A. & Barbara D. J. Torbert	A-2018-3001886
31. TRAYNOR	Leonard M. & Sandra J. Traynor	A-2018-3001968
32. TREADWAY	George W. Treadway, Jr. and Madelyn K. Treadway	A-2018-3001944
33. WILT	Gregory M. & Kristina L. Wilt	A-2018-3001933
34. YOST FAMILY FARMS LP	Yost Family Farms, LP	A-2018-3001898

APPENDIX F

LIST OF EMINENT DOMAIN APPLICATIONS IN FRANKLIN COUNTY

1.	BENDER - WIDNEY	Daryl Harry Bender and Donna Irene Bender Widney	A-2018-3002031
2.	BIESECKER	Roy B. Biesecker and Susan L. Biesecker	A-2018-3002032
3.	CHAMBERSBURG AREA	Chambersburg Area School District	A-2018-3002055
4.	CHAMBERSBURG MALL	Chambersburg Mall Realty LLC, Chambersburg CH LLC, and Chambersburg Nassim LLC	A-2018-3002067
5.	CORDELL	Roy M. Cordell and Emma L. Cordell	A-2018-3002107
6.	DC FARMS	DC Farms, LLC	A-2018-3002051
7.	DILLER	J. Norman & Bonna Jane Diller	A-2018-3002310
8.	DILLER	Joshua L. Diller and Nicole M. Diller	A-2018-3002331
9.	ETTER	Lynn D. Etter and Mary W. Etter	A-2018-3002232
10.	FOX	Charles Stamy Fox	A-2018-3002072
11.	FOX	Edna S. Fox and Charles A. Fox	A-2018-3002111
12.	FREDERICK – SALTER	Michael D. Frederick and Tammy Jo Salter	A-2018-3002329
13.	FREDERICK – SALTER	Michael D. Frederick and Tamra D. Frederick and Tammy Jo Salter and Roderick C.B. Salter	A-2018-3002332
14.	GBR – CHAMBERSBURG HOLDINGS – WLR CHAMBERSBURG	GBR Lincoln Highway Limited Liability Company, Chambersburg Holdings, LP and WLR Chambersburg, LLC	A-2018-3002022
15.	GUILFORD WATER	Guilford Water Authority	A-2018-3002048
16.	HENRY – FRANK - CARMACK	Mary K. Henry, Deceased, D. Yvonne Frank, Marion Carmack, Charles W. Henry (Letters Testamentary)	A-2018-3002066
17.	HORST	Ivan D. Horst and Ellen M. Horst	A-2018-3002047
18.	HORST	Ivan D. & Ellen M. Horst	A-2018-3002104
19.	KAUFFMAN	Leonard H. Kauffman and Mary P. Kauffman	A-2018-3002046

20.	LEHMAN – CREDIT SHELTER TRUST	Wayne E. Lehman & Donald R. Lehman as Trustees of Credit Shelter Trust established under Item II of the Last Will of Harvey M. Lehman (the “Harvey M. Lehman Credit Shelter Trust”) & Wayne E. Lehman, Donald R. Lehman, Jane L. Martin, Kenneth L. Lehman & Lester E. Lehman	A-2018-3002054
21.	LEMMA & O’CONNOR	Lemma & O’Connor Investors LLC	A-2018-3002057
22.	LESHER	Richard L. Leshler and Agnes Marie Leshler	A-2018-3002069
23.	LESHER	Willis M. Leshler Partnership	A-2018-3002147
24.	LONG	Daniel S. Long	A-2018-3002061
25.	LOWE’S	Lowe’s Home Centers, Inc.	A-2018-3002103
26.	MARTIN	Donald L. Martin and Denise M. Martin	A-2018-3002052
27.	MARTIN	Marlin Lester Martin and Carrie Rosemarie Martin	A-2018-3002074
28.	MEYER - BENEDICT	Rodney A. Meyer and Karen I. Benedict	A-2018-3002169
29.	MILLER	Myron J. & Fern L. Miller	A-2018-3002125
30.	MOWER	Margaret L. Mower	A-2018-3002238
31.	NITTERHOUSE	William K. Nitterhouse and Diane R. Nitterhouse	A-2018-3002053
32.	NITTERHOUSE	Colby S. Nitterhouse and Leah A. Nitterhouse	A-2018-3002140
33.	OWLS CLUB	Owls Club, Inc.	A-2018-3002075
34.	PATRIOT	Patriot Federal Credit Union	A-2018-3002108
35.	REIFF	Elam H. Reiff and Mary Z. Reiff	A-2018-3002251
36.	RICE	Allen W. Rice and Lori C. Rice	A-2018-3002128
37.	SCHINDEL	Kyle F. & Kelly A. Schindel	A-2018-3002163
38.	STEIGER	John A. Steiger and Allison E. Steiger	A-2018-3002041
39.	STINE	Allen A. Stine	A-2018-3002037

40.	STRALEY	Douglas L. Straley and Nellie M. Straley	A-2018-3002312
41.	SUMMIT PARTNERS	Summit Partners, LLC	A-2018-3002028
42.	WHITE	Lois M. White	A-2018-3001999
43.	ZAIGER	Jane M. Zaiger	A-2018-3002012