

---

Garrett P. Lent

glent@postschell.com  
717-612-6032 Direct  
717-731-1985 Direct Fax  
File #: 209803

October 8, 2026

***VIA ELECTRONIC FILING***

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

**Re: Letter Of Notification Of PPL Electric Utilities Corporation, Filed Pursuant To 52 Pa. Code Chapter 57 Subchapter G, For Approval To Rebuild Approximately 1.1 Miles Of New Parallel Double Circuit 230 kV Transmission Taps That Are Needed to Connect the Existing Susquehanna-Harwood #1 & #2 Transmission Lines on the New Tomhicken 230 kV Switchyard That Are Respectively Located in Luzerne County, Pennsylvania.  
Docket No. A-2025-3059443**

---

Dear Secretary Homsher:

Attached for filing is PPL Electric Utilities Corporation's ("PPL Electric") Main Brief in the above-referenced proceeding. Copies will be provided as indicated on the Certificate of Service.

Respectfully submitted,



Garrett P. Lent

GPL/sll  
Attachment

cc: The Honorable Erin L. Gannon (*via email; w/attachment*)  
The Honorable John Coogan (*via email; w/attachment*)  
Certificate of Service

## CERTIFICATE OF SERVICE

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 § 57.72(d)(3).

### VIA E-MAIL

Jacob Guthrie  
Josiah B. Harmar  
Melanie Joy El Atieh  
PA Office of Consumer Advocate  
555 Walnut Street  
5<sup>th</sup> Floor Forum Place  
Harrisburg, PA 17101-1923  
[JGuthrie@paoca.org](mailto:JGuthrie@paoca.org)  
[JHarmar@paoca.org](mailto:JHarmar@paoca.org)  
[melatieh@paoca.org](mailto:melatieh@paoca.org)  
(Counsel for OCA)

Erika Cook  
38 Red Rock Road  
Sugarloaf, PA 18249  
[Elcook33@gmail.com](mailto:Elcook33@gmail.com)

John Zola  
17 Dagostin Road  
Sugarloaf, PA 18249  
[zolajj@gmail.com](mailto:zolajj@gmail.com)

Dated: October 8, 2026



Garrett P. Lent

**BEFORE THE  
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Letter of Notification of PPL Electric :  
Utilities Corporation, Filed Pursuant to 52 :  
Pa. Code Chapter 57 Subchapter G, For :  
Approval to Build Approximately 1.1 Miles : Docket No. A-2025-3059443  
of New Parallel Double Circuit 230 kV :  
Transmission Taps that are Needed to :  
Connect the Existing Susquehanna :  
Harwood #1 & #2 Transmission Lines to the :  
New Tomhicken 230 kV Switchyard that :  
are Respectively Located in Luzerne :  
County, Pennsylvania :

---

**MAIN BRIEF OF  
PPL ELECTRIC UTILITIES CORPORATION**

---

Michael J. Shafer (I.D. # 205681)  
PPL Services Corporation  
645 Hamilton Street, Suite 700  
Allentown, PA 18101  
Voice: 610-774-2599  
Fax: 610-774-4102  
E-mail: mjshafer@pplweb.com

Garrett P. Lent (I.D. # 321566)  
David B. MacGregor (I.D. # 28804)  
Lindsay A. Berkstresser (I.D. # 318370)  
Megan E. Rulli (I.D. # 331981)  
Hayley E. Wilburn (I.D. # 336055)  
Post & Schell, P.C.  
17 North Second Street  
12th Floor  
Harrisburg, PA 17101-1601  
Voice: 717-731-1970  
Fax: 717-731-1985  
E-mail: glent@postschell.com  
E-mail: dmacgregor@postschell.com  
E-mail: lberkstresser@postschell.com  
E-mail: mrulli@postschell.com  
E-mail: hwilburn@postschell.com

Date: October 8, 2026

Attorneys for PPL Electric Utilities Corporation

## Table of Contents

|      |                                                                                                                                                                    |    |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| I.   | INTRODUCTION .....                                                                                                                                                 | 1  |
| II.  | BACKGROUND AND HISTORY OF THE PROCEEDING .....                                                                                                                     | 3  |
| III. | LEGAL STANDARDS .....                                                                                                                                              | 6  |
| A.   | BURDEN OF PROOF .....                                                                                                                                              | 6  |
| B.   | ASSESSMENT OF WITNESS CREDIBILITY .....                                                                                                                            | 8  |
| C.   | STANDARDS FOR APPROVAL OF A LETTER OF NOTIFICATION .....                                                                                                           | 9  |
| IV.  | SUMMARY OF ARGUMENT .....                                                                                                                                          | 15 |
| V.   | ARGUMENT.....                                                                                                                                                      | 18 |
| A.   | INTRODUCTION .....                                                                                                                                                 | 18 |
| B.   | THERE IS AN UNDISPUTED NEED FOR THE proposed HV<br>TRANSMISSION LINES.....                                                                                         | 22 |
| 1.   | The Commission’s need determination under 52 Pa. Code §<br>57.76(a)(1) relates to the proposed HV transmission lines.....                                          | 24 |
| 2.   | An undisputed need for the proposed HV transmission lines exists.....                                                                                              | 26 |
| 3.   | PPL Electric demonstrated that the subject HV lines are needed to<br>safely and reliably serve the Customer’s projected Phase 1 load .....                         | 30 |
| 4.   | PPL Electric demonstrated there are no reasonable or feasible<br>alternative engineering solutions to serve the Customer’s need .....                              | 31 |
| 5.   | OCA’s claims regarding transmission costs, cost allocation, and cost<br>recovery do not alter the fact that an undisputed need exists .....                        | 35 |
| 6.   | The Commission need not delay approval of the LON based upon<br>litigation surrounding the Customer’s land use and zoning approvals .....                          | 39 |
| 7.   | Conclusion regarding need .....                                                                                                                                    | 40 |
| C.   | PPL ELECTRIC DEMONSTRATED THAT THE PROPOSED HV<br>TRANSMISSION LINES WILL NOT CREATE AN UNREASONABLE<br>RISK OF DANGER TO THE HEALTH AND SAFETY OF THE PUBLIC..... | 40 |
| 1.   | The proposed HV transmission lines associated with the Tomhicken<br>230 kV Switchyard Project will meet and exceed the NESC Standards ...                          | 41 |
| 2.   | The LON adequately addresses electric and magnetic field mitigation ....                                                                                           | 43 |

|     |                                                                                                                                                                           |    |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| 3.  | PPL Electric demonstrated that other concerns regarding health and safety are not warranted .....                                                                         | 44 |
| a.  | OCA’s “resource adequacy” concerns do not demonstrate that the subject HV transmission lines will cause an unreasonable risk to the health and safety of the public ..... | 44 |
| b.  | The HV lines and Tomhicken 230 kV Switchyard are appropriately set back from other properties .....                                                                       | 47 |
| c.  | The proposed HV transmission lines do not present an unreasonable fire hazard risk .....                                                                                  | 48 |
| d.  | The use of helicopters to inspect and maintain facilities is reasonable and appropriate .....                                                                             | 48 |
| e.  | General concerns about the Customer’s facility are not relevant to this case .....                                                                                        | 49 |
| 4.  | Conclusion regarding health and safety .....                                                                                                                              | 50 |
| D.  | THE PROPOSED HV TRANSMISSION LINES ARE IN COMPLIANCE WITH APPLICABLE STATUTES AND REGULATIONS PROVIDING FOR THE PROTECTION OF NATURAL RESOURCES .....                     | 50 |
| E.  | THE PROPOSED HV TRANSMISSION LINES WILL HAVE MINIMUM ADVERSE ENVIRONMENTAL IMPACTS .....                                                                                  | 54 |
| VI. | CONCLUSION .....                                                                                                                                                          | 60 |

**Proposed Findings of Fact.....**Appendix A

**Proposed Conclusions of Law.....**Appendix B

**Proposed Ordering Paragraphs.....**Appendix C

**Unpublished Decisions.....**Appendix D

*Application of Pennsylvania Electric Co.*, Docket No. A-110400F0033, 1997 Pa. PUC LEXIS 63 (Initial Decision dated Mar. 4, 1997).

*Application of Pennsylvania Electric Company*, Docket Nos. A-2011-2247862, et al., 2012 PUC LEXIS 298 (Initial Decision Feb. 9, 2012) (Opinion and Order Denying Exceptions entered June 7, 2012).

*Application of Pennsylvania Power & Light Co.*, Docket Nos. A-110500F0196, et al., 1994 Pa. PUC LEXIS 65 (Initial Decision issued Oct. 21 1994).

*Larkin v. Philadelphia Electric Co.*, 38 Pa. P.U.C. 777 (1961).

## TABLE OF AUTHORITIES

|                                                                                                                                                                  | <b>Page(s)</b> |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| <b>Cases</b>                                                                                                                                                     |                |
| <i>Abbingdon Electric Co. v. Pa. PUC</i> ,<br>198 A. 901 (Pa. Super. 1938).....                                                                                  | 11, 25         |
| <i>Allied Mechanical and Elec., Inc. v. Pennsylvania Prevailing Wage Appeals<br/>Board</i> ,<br>923 A.2d 1220 (Pa. Cmwlth. 2007) .....                           | 7              |
| <i>Bd. of Supervisors of Springfield Twp. v. Pa. PUC</i> ,<br>41 A.3d 142 (Pa. Cmwlth. 2012) .....                                                               | 25, 26         |
| <i>Borough of E. McKeesport v. Special/Temporary Civil Service Commission</i> ,<br>942 A.2d 274 (Pa. Cmwlth. 2008) .....                                         | 7              |
| <i>Brockway Glass Co. v. Pa. PUC</i> ,<br>437 A.2d 1067 (Pa. Cmwlth. 1981) .....                                                                                 | 28             |
| <i>Brown v. Commonwealth of Pennsylvania</i> ,<br>940 A.2d 610 (Pa. Cmwlth. 2008) .....                                                                          | 7              |
| <i>Bureau of Corrections v. City of Pittsburgh, Pittsburgh City Council</i> ,<br>532 A.2d 12 (Pa. 1987) .....                                                    | 7              |
| <i>Commonwealth of Pennsylvania v. Williams</i> ,<br>732 A.2d 1167 (Pa. 1999) .....                                                                              | 7              |
| <i>Commonwealth v. Updegrove</i> ,<br>413 Pa. 599, 198 A.2d 534 (1964) .....                                                                                     | 8              |
| <i>Commonwealth v. Valenzuela</i> ,<br>408 Pa. Super. 399 (Pa. Super. 1991) .....                                                                                | 8              |
| <i>Del-AWARE Unlimited, Inc. v. Pa. PUC</i> ,<br>513 A.2d 593, 596 n.4 (Pa. Cmwlth. 1986), <i>allowance for appeal denied</i> , 527<br>A.2d 547 (Pa. 1987) ..... | 24             |
| <i>District of Columbia's Appeal</i> , 21 A.2d 883 (Pa. 1941) .....                                                                                              | 7              |
| <i>Dunk v. Pa. PUC</i> ,<br>232 A.2d 231 (Pa. Super. 1967).....                                                                                                  | 11             |
| <i>Energy Conservation Council of Pa. v. Pa. PUC</i> ,<br>995 A.2d 465 (Pa. Cmwlth. 2010) .....                                                                  | 14             |

|                                                                                                                              |               |
|------------------------------------------------------------------------------------------------------------------------------|---------------|
| <i>Energy Conservation Council of Pennsylvania v. Pa. PUC,</i><br>25 A.3d 440 (Pa. Cmwlth. 2011) .....                       | 13, 40        |
| <i>Feingold v. Bell,</i><br>383 A.2d 791 (Pa. 1977) .....                                                                    | 50            |
| <i>In re Gaston’s Estate,</i><br>361 Pa. 105, 62 A.2d 904 (Pa. 1949) .....                                                   | 8             |
| <i>Hess v. Pa. PUC,</i><br>107 A.3d 246 (Pa. Cmwlth. 2014) .....                                                             | 8, 10, 11, 22 |
| <i>Hughes v. Talen Energy Mktg., LLC,</i><br>578 U.S. 150 (2016) .....                                                       | 36            |
| <i>Kossman v. Pa. PUC,</i><br>694 A.2d 1147 (Pa. Cmwlth. 1997) .....                                                         | 28            |
| <i>Kyu Son Yi v. State Board of Veterinarian Medicine,</i><br>960 A.2d 864 (Pa. Cmwlth. 2008) .....                          | 7             |
| <i>Larken v. Philadelphia Electric Co.,</i><br>38 Pa. PUC 777 (1961) .....                                                   | 12, 41        |
| <i>Lower Chichester Township v. Pa. PUC,</i><br>119 A.2d 674 (Pa. Super 1956) .....                                          | 11, 26        |
| <i>McDonald v. Pennsylvania Railroad Co.,</i><br>36 A.2d 492 (Pa. 1940) .....                                                | 7             |
| <i>Met-Ed Indus. Users Group v. Pa. PUC,</i><br>960 A.2d 189 (Pa. Cmwlth. 2008) .....                                        | 7             |
| <i>Metropolitan Edison Co. v. Pa. PUC,</i><br>437 A.2d 76 (Pa. Cmwlth. 1982) .....                                           | 11            |
| <i>Mid-Atlantic Power Supply Ass’n v. Pa. PUC,</i><br>746 A.2d 1196 (Pa. Cmwlth. 2000) .....                                 | 7             |
| <i>Miller v. Brass Rail Tavern, Inc.,</i><br>664 A.2d 525 (Pa. 1995) .....                                                   | 9             |
| <i>NRG Energy, Inc. v. Pa. PUC,</i><br>233 A.3d 936 (Pa. Cmwlth. 2020), <i>appeal denied</i> , 244 A.3d 346 (Pa. 2021) ..... | 8             |
| <i>Pa. Environmental Defense Foundation v. Com. Of Pa.,</i><br>161 A.3d 911 (Pa. 2017) .....                                 | 12, 51        |
| <i>Pa. Gas Co. v. Pub. Serv. Comm’n,</i><br>83 Pa. Super. 557 (1924) .....                                                   | 10, 27        |

|                                                                                                                   |        |
|-------------------------------------------------------------------------------------------------------------------|--------|
| <i>Patricca v. Zoning Bd. of Adjustment</i> ,<br>590 A.2d 744 (Pa. 1991) .....                                    | 11     |
| <i>Penn. Elec. Co. v. Pa. PUC</i> ,<br>663 A.2d 281 (Pa. Cmwlth. 1995) .....                                      | 28     |
| <i>Pennsylvania Communities Organizing for Change, Inc. v. Pa. PUC</i> ,<br>89 A.3d 338 (Pa. Cmwlth. 2014) .....  | 8      |
| <i>Pennsylvania Power &amp; Light Co. v. Pa. PUC</i> ,<br>696 A.2d 248 (Pa. Cmwlth. 1997) .....                   | 22     |
| <i>Philadelphia Transp. Co. v. Pa. PUC</i> ,<br>37 A.2d 138 (Pa. Super. 1944).....                                | 10, 27 |
| <i>Popowsky v. Pa. PUC</i> ,<br>910 A.2d 38 (Pa. 2006) .....                                                      | 10, 27 |
| <i>PPL Elec. Utils. Corp. v. City of Lancaster</i> ,<br>125 A.3d 837 (Pa. Cmwlth. 2015) .....                     | 28     |
| <i>Robinson Township v. Com. of Pa.</i> ,<br>623 Pa. 564, 83 A.3d 901 (2013) .....                                | 13     |
| <i>Samuel J. Lansberry, Inc. v. Pa. PUC</i> ,<br>578 A.2d 600 (Pa. Cmwlth. 1990) .....                            | 7      |
| <i>Shenango Twp. Bd. of Supervisors v. Pa. PUC</i> ,<br>686 A.2d 910 (Pa. Cmwlth. 1996) .....                     | 28     |
| <i>Stone v. Pa. PUC</i> ,<br>162 A.2d 18 (Pa. Super. 1960).....                                                   | 11     |
| <i>Transource Pa. LLC v. DeFrank, et al.</i> ,<br>156 F.4th 351 (3d Cir. 2025) .....                              | 36     |
| <i>West Penn Power Co. v. Pa. PUC</i> ,<br>219 A.3d 716, 2019 Pa. Commw. Unpub. LEXIS 532 (Pa. Cmwlth. 2000)..... | 7      |
| <i>York Water Company v. Pa. PUC</i> ,<br>414 A.2d 138 (Pa. Cmwlth. 1980) .....                                   | 8      |

## Administrative Proceedings

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                             |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| <i>Application of Leatherstocking Gas Co., LLC, for Approval to Supply Natural Gas Serv. to the Pub. in N. Susquehanna Cnty., in the Twps. of Bridgewater, Forest Lake, Great Bend, Harmony, New Milford, and Oakland, and in the Boroughs of Great Bend, Hallstead, Lanesboro, Montrose, New Milford, Oakland and Susquehanna, Docket No. A-2011-2275595, 2012 Pa. PUC LEXIS 1391 (Order entered Aug. 30, 2012).....</i>                                                                                      | <i>10, 28</i>                               |
| <i>In Re: Application of PPL Electric Utilities Corporation (PPL) for Approval of the Siting and Reconstruction of the Proposed Coopersburg # 1 and # 2 138/69 kV Tap in Upper Saucon Township, Lehigh County and Springfield and Richland Townships, Bucks County, Pennsylvania (Coopersburg kV transmission line), Docket Nos. A-2008-2022941, et al. (Opinion and Order entered July 24, 2009) .....</i>                                                                                                    | <i>15, 35</i>                               |
| <i>Application of Pennsylvania Electric Co., Docket No. A-110400F0033, 1997 Pa. PUC LEXIS 63 (Initial Decision dated Mar. 4, 1997).....</i>                                                                                                                                                                                                                                                                                                                                                                    | <i>27</i>                                   |
| <i>Application of PPL Electric Utilities Corp. 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 (Opinion and Order entered Feb. 12, 2010), affirmed, 25 A.3d 440 .....</i>                                                    | <i>8, 9, 13, 15, 19, 22, 35, 41, 54, 58</i> |
| <i>Application of PPL Electric Utilities Corporation filed Pursuant to 52 Pa. Code Chapter 47, Subchapter G, for Approval of the Siting and Construction of the North Lancaster Honey Brook # 1 &amp; # 2 138/69 kV Transmission Lines in Lancaster County, Pennsylvania, Docket Nos. A-2014-2430565, et al., 2015 Pa. PUC LEXIS 77 (Initial Decision issued Feb. 27, 2015) adopted without modification (Order entered Apr. 23, 2015) .....</i>                                                               | <i>10</i>                                   |
| <i>Application of PPL Electric Utilities Corporation, for Approval to Rebuild Approximately Six Miles of the Breinigsville-Alburtis 500 kV Transmission Line in Lower Macungie and Upper Macungie Townships, Lehigh County, Pennsylvania; Petition for Waiver of Certain Provisions of the Commission's Regulations for Commission Review of Siting and Construction of Electric Transmission Lines set forth at 52 Pa. Code § 57.71 et seq., Docket No. A-2019-3007945 (Order entered Aug. 14, 2019).....</i> | <i>14</i>                                   |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |        |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| <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) (Opinion and Order Denying Exceptions entered June 7, 2012)</i> .....                                                                                                                                                                                                                                                                                                                                                                                    | 13, 54 |
| <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 issued Feb. 9, 2012) (Opinion and Order Denying Exceptions entered June 7, 2012)</i> .....                                                                                                                                                                                                                                                                                                                                                                             | 13, 54 |
| <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 Nos. A-2016-2565296, et al. (Order entered March 8, 2018)</i> .....                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 12     |
| <i>Application of Pennsylvania Power &amp; Light Co., Docket Nos. A-110500F0196, et al., 1994 Pa. PUC LEXIS 65 (Initial Decision issued Oct. 21 1994)</i> .....                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 7      |
| <i>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 issued Mar. 28, 2011), adopted with modification on other grounds (Opinion and Order entered Mar. 15, 2012)</i> ..... | 13, 54 |
| <i>Heidi Fiedler v. Metropolitan Edison Company, Docket No. C-2018-3003642 (Order entered July 16, 2020)</i> .....                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 40     |
| <i>Letter of Notification of Keystone Appalachian Transmission Co. and FirstEnergy Pa. Elec. Co. for approval to construct the Bredinville - McCalmont 138 kV Transmission Line Interconnection Project located in Butler Township, Butler County, Pennsylvania, Docket Nos. A-2026-3063030, et al. (Order entered Oct. 1, 2026)</i> .....                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 37     |

|                                                                                                                                                                                                                                                                                                                                                                                                                                          |    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| <i>Letter of Notification of Mid-Atlantic Interstate Transmission, LLC and FirstEnergy Pa. Elec. Co. for approval to construct the East Sayre - East Towanda 115 kV Transmission Line Interconnection Project located in Wysox Township, Bradford County, Pennsylvania, Docket Nos. A-2026-3063996, et al. (Order entered Oct. 1, 2026)</i> .....                                                                                        | 37 |
| <i>Letter of Notification of Mid-Atlantic Interstate Transmission, LLC for approval to construct 230 kV Transmission Line connections to the Three Mile Island 500 kV Substation and TMI 230 kV Substation located in Londonderry Township, Dauphin County, Pennsylvania, Docket No. A-2026-3064369, at p. 5 (Order entered Oct. 1, 2026)</i> .....                                                                                      | 37 |
| <i>Letter of Notification of PPL Electric Utilities Corporation for approval to construct the Susquehanna 230 kV and 500 kV Transmission Line Project in Conyngham and Salem Townships, Luzerne County, Pennsylvania, Docket Nos. A-2025-3056806, P-2025-3056867 (Order entered Sept. 25, 2025)</i> .....                                                                                                                                | 37 |
| <i>Letter of Notification of PPL Electric Utilities Corporation for approval to reconstruct a section of the Frackville - Columbia 230 kV Transmission Line located in Catawissa, Cleveland, Conyngham, Franklin, Hemlock, Locust, Montour, and Roaring Creek Townships, Columbia County, and Butler Township, Schuylkill County, Pennsylvania, Docket No. A-2025-3057843, 2026 Pa. PUC LEXIS 40 (Order entered Feb. 19, 2026)</i> ..... | 37 |
| <i>Letter of Notification of PPL Electric Utilities Corporation for approval to reconstruct a section of the Saegers-Elimsport/Clinton-Elimsport 230 kV Transmission Line and the Saegers-Elimsport/Saegers-Clinton 230 kV Transmission Line located in Brady, Clinton, and Washington Townships, Lycoming County, Pennsylvania, Docket No. A-2022-3034224, 2022 Pa. PUC LEXIS 337 (Order entered Oct. 27, 2022)</i> .....               | 38 |
| <i>Letter of Notification of PPL Electric Utilities Corporation for approval to reconstruct the Elimsport-Lycoming # 2 and # 3 230 kV Transmission Line located in Williamsport Borough and Armstrong and Washington Townships, Lycoming County, Pennsylvania, Docket No. A-2021-3029267, 2022 Pa. PUC LEXIS 73 (Order entered Feb. 24, 2022)</i> .....                                                                                  | 38 |
| <i>Letter of Notification of PPL Electric Utilities Corporation for approval to reconstruct the Fox Hill - Shawnee 230 kV Transmission Line and Shawnee - Bushkill 230 kV Transmission Line located in Smithfield Township, Monroe County, Pennsylvania, Docket No. A-2025-3054291, 2025 Pa. PUC LEXIS 237 (Order entered Jul. 24, 2025)</i> .....                                                                                       | 37 |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| <i>Letter of Notification of PPL Electric Utilities Corporation for approval to reconstruct the Harwood - East Palmerton 230 kV Transmission Line and Siegfried - East Palmerton 230 kV Transmission Line located in Jim Thorpe Borough and Banks, Franklin, Lehigh, Lower Towamensing, Packer, Penn Forest, and Towamensing Townships, Carbon County, Hazle Township, Luzerne County, and Allen and Lehigh Townships, Northampton County, Pennsylvania, Docket No. A-2024-3047924, 2024 Pa. PUC LEXIS 175 (Order entered Jun. 13, 2024)</i> ..... | 37     |
| <i>Letter of Notification of PPL Electric Utilities Corporation for approval to reconstruct the Manor-Millwood 230 kV Transmission Line located in Conestoga, Manor, and Pequea Townships, Lancaster County, Pennsylvania, Docket No. A-2021-3029689, 2022 Pa. PUC LEXIS 101 (Order entered Mar. 10, 2022)</i> .....                                                                                                                                                                                                                               | 38     |
| <i>Letter of Notification of PPL Electric Utilities Corporation for approval to reconstruct sections of the Siegfried - Frackville 230 kV Transmission Line, Eldred - Frackville 230 kV Transmission Line, and Columbia - Frackville 230 kV Transmission Line located in Butler Township, Schuylkill County, Pennsylvania, Docket No. A-2023-3040694, 2023 Pa. PUC LEXIS 237 (Order entered Sep. 21, 2023)</i> .....                                                                                                                               | 38     |
| <i>Letter of Notification of PPL Electric Utilities Corporation for approval to reconstruct the South Akron-Millwood 230 kV Transmission Line located in East Lampeter, Pequea, Upper Leacock, West Earl, and West Lampeter Townships, Lancaster County, Pennsylvania, Docket No. A-2022-3034794, 2022 Pa. PUC LEXIS 419 (Order entered Dec. 22, 2022)</i> .....                                                                                                                                                                                   | 38     |
| <i>Letter of Notification of PPL Electric Utilities Corporation for Approval to Relocate approximately 0.4 miles of the Keystone - Juniata 500 kV Transmission Line and Juniata - Alburtis 500 kV Transmission Line in Centre Township, Perry County, Pennsylvania, Docket No. A-2025-3059384, 2026 Pa. PUC LEXIS 174 (Order entered Jun. 4, 2026)</i> .....                                                                                                                                                                                       | 37     |
| <i>Letter of Notification of Transource Pennsylvania, LLC for Approval to Construct 230 kV and 500 kV transmission lines to Bramah Substation located in Peach Bottom Township, York County, Pennsylvania, Docket No. A-2026-3060029, 2026 Pa. PUC LEXIS 247 (Order entered Aug. 6, 2026)</i> .....                                                                                                                                                                                                                                                | 37     |
| <i>Pa. PUC, et al. v The Columbia Water Co., Docket Nos. R-2008-2045157, et al., 2009 Pa. PUC LEXIS 1423 (Opinion and Order entered May 28, 2009)</i> .....                                                                                                                                                                                                                                                                                                                                                                                        | 11     |
| <i>Pa. PUC, et al. v. PPL Electric Utilities Corp., Docket Nos. R-2025-3057164, et al. (Opinion and Order entered June 11, 2026)</i> .....                                                                                                                                                                                                                                                                                                                                                                                                         | 28, 29 |

|                                                                                                                                                                                                                                                                                                                                                                                  |               |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| <i>Pennsylvania Public Utility Commission, Bureau of Investigation and Enforcement v. Jerome McCree, Sr.,</i><br>Docket No. C-2023-3037385, 2025 Pa. PUC LEXIS 44 (Order entered Feb. 7, 2026) .....                                                                                                                                                                             | 8             |
| <i>Petition of PPL Electric Utilities Corporation for Approval of Its Non-Bypassable Consumer Protection Transmission Rider, Elimination of its Transmission Service Charge, Changes to Its Generation Supply Charges, Changes to Its Retail Tariff, and Changes to Its Electric Generation Supplier Coordination Tariff,</i><br>Docket Nos. P-2026-3065186, <i>et al.</i> ..... | 39            |
| <i>PJM Interconnection, L.L.C.,</i><br>195 F.E.R.C. ¶ 61,211, Docket No. EL26-67-000, 2026 FERC LEXIS 842 (June 18, 2026) .....                                                                                                                                                                                                                                                  | 36            |
| <b>Federal Statutes</b>                                                                                                                                                                                                                                                                                                                                                          |               |
| 16 U.S.C. § 824(b) .....                                                                                                                                                                                                                                                                                                                                                         | 36            |
| 16 U.S.C. § 824e(a) .....                                                                                                                                                                                                                                                                                                                                                        | 36            |
| <b>State Constitutional Provisions</b>                                                                                                                                                                                                                                                                                                                                           |               |
| PA. CONST. art. I, § 27 .....                                                                                                                                                                                                                                                                                                                                                    | 12            |
| <b>State Statutes</b>                                                                                                                                                                                                                                                                                                                                                            |               |
| 2 Pa.C.S. § 704 .....                                                                                                                                                                                                                                                                                                                                                            | 7             |
| 66 Pa.C.S. § 102 .....                                                                                                                                                                                                                                                                                                                                                           | 25            |
| 66 Pa.C.S. § 332(a) .....                                                                                                                                                                                                                                                                                                                                                        | 6, 8          |
| 66 Pa.C.S. § 1103 .....                                                                                                                                                                                                                                                                                                                                                          | 10, 27        |
| 66 Pa.C.S. § 1303 .....                                                                                                                                                                                                                                                                                                                                                          | 28            |
| 66 Pa.C.S. § 1501 .....                                                                                                                                                                                                                                                                                                                                                          | 9, 10, 19, 27 |
| 66 Pa.C.S. § 2802(12) .....                                                                                                                                                                                                                                                                                                                                                      | 10, 11, 27    |
| 66 Pa.C.S. § 2802(20) .....                                                                                                                                                                                                                                                                                                                                                      | 11            |
| 66 Pa.C.S. § 2803 .....                                                                                                                                                                                                                                                                                                                                                          | 11            |
| <b>State Regulations</b>                                                                                                                                                                                                                                                                                                                                                         |               |
| 52 Pa. Code Ch. 57, Subch. G .....                                                                                                                                                                                                                                                                                                                                               | <i>passim</i> |

|                                                   |               |
|---------------------------------------------------|---------------|
| 52 Pa. Code § 5.350(f) .....                      | 20, 35        |
| 52 Pa. Code § 57.1 .....                          | 24            |
| 52 Pa. Code § 57.19 .....                         | 10, 27        |
| 52 Pa. Code § 57.71 .....                         | 15, 24        |
| 52 Pa. Code § 57.72(c) (1)—(3), (5) and (6) ..... | 38            |
| 52 Pa. Code § 57.72(d)(1)(iii).....               | <i>passim</i> |
| 52 Pa. Code § 57.72(d)(1)(vi) .....               | <i>passim</i> |
| 52 Pa. Code § 57.72(d)(4).....                    | 14, 38, 54    |
| 52 Pa. Code § 57.75(e).....                       | 38            |
| 52 Pa. Code § 57.76(a).....                       | <i>passim</i> |
| 52 Pa. Code § 57.76(a)(1) .....                   | <i>passim</i> |
| 52 Pa. Code § 57.76(a)(2) .....                   | <i>passim</i> |
| 52 Pa. Code § 57.76(a)(3) .....                   | <i>passim</i> |
| 52 Pa. Code § 57.76(a)(4) .....                   | <i>passim</i> |
| 52 Pa. Code § 69.3105 .....                       | 12            |
| 52 Pa. Code § 69.3106 .....                       | 12            |

## **I. INTRODUCTION**

PPL Electric Utilities Corporation (“PPL Electric” or the “Company”) submits this Main Brief in the above-captioned Letter of Notification seeking Pennsylvania Public Utility Commission (“Commission”) approval to build approximately 1.1 miles of new double-circuit 230 kilovolt (“kV”) transmission taps (“Tap Lines”) that are needed to connect the existing Susquehanna-Harwood #1 and #2 230 kV Transmission Lines to the new Tomhicken 230 kV Switchyard (“Tomhicken Switchyard”) (collectively, the “Tomhicken 230 kV Switchyard Project” or the “Project”). The Tomhicken Switchyard will bifurcate the Susquehanna-Harwood #1 and #2 230 kV Transmission Lines to create the Susquehanna-Tomhicken #1 and #2 230 kV Transmission Lines and the Tomhicken-Harwood #1 and #2 230 kV Transmission Lines. The Letter of Notification also seeks approval to construct two new double-circuit 0.1-mile-long 230 kV transmission lines (“Connecting Lines”) from the Tomhicken 230 kV Switchyard to a new customer-owned 230-34 kV substation. The new 230 kV Connecting Lines, Tap Lines, and Tomhicken 230 kV Switchyard are located in Hazle Township, Luzerne County, Pennsylvania.

At the outset, PPL Electric notes that there is no dispute as to whether this Project qualifies for approval via a letter of notification. It is undisputed that the proposed Project qualifies for use of a letter of notification because the proposed high-voltage (“HV”) transmission lines will be located entirely within the applicant’s existing transmission line right of way (“ROW”) and the property of the customer to be served by the line,<sup>1</sup> and because it has a proposed route of 2 miles or less.<sup>2</sup>

The proposed Project is required to comply with PPL Electric’s obligation to provide non-discriminatory service to a customer facility at 69 kV or above, and PPL Electric’s general right

---

<sup>1</sup> See 52 Pa. Code § 57.72(d)(1)(iii).

<sup>2</sup> See *id.* § 57.72(d)(1)(vi).

and obligation to serve customers in its service territory, subject to the terms and conditions of its tariffs and certificate of public convenience. Specifically, one new customer (“Customer”), located in Hazle Township, has requested 230 kV electrical service with an in-service date of March 2027, at an initial load of 12 megawatts (“MW”).<sup>3</sup> In order to provide service to this Customer, PPL Electric must construct the Project to avoid overloading and voltage violations that would otherwise result from the interconnection of this Customer. Simply stated, there is a demonstrated need for this Project.<sup>4</sup>

The Company anticipates that the Project will eventually facilitate service to multiple customers, due to multiple customer requests. Critically, while a second phase of the Project (“Phase 2”)<sup>5</sup> will be needed to address the Customer’s future electrical needs and demands, as well as the needs and demands of future customers and PPL Electric’s system needs, these future needs and demands are not the subject of this case.<sup>6</sup> Indeed, the proposed HV transmission lines that PPL Electric requests Commission approval under 52 Pa. Code Ch. 57, Subch. G to site and construct in this case—i.e., the Tap Lines and the Connecting Lines—are needed to serve and designed to serve the Customer’s immediate demand.

The Company further emphasizes that, while it provided information related to the total costs of this Project and whether such costs will be the responsibility of PPL Electric or the Customer to be served, PPL Electric has not requested and the Commission need not make any findings or determinations regarding the reasonableness of such costs, the allocation or accounting treatment of these costs, and/or the recovery of such costs in this case. Much of the Office of

---

<sup>3</sup> The Customer’s load will increase in stages to approximately 276 MW by December 2027, and to approximately 965 MW by 2033. PPL Electric St. No. 1, p. 3.

<sup>4</sup> 52 Pa. Code § 57.76(a)(1).

<sup>5</sup> The Tomhicken 230 kV Switchyard Project may also be referred to as “Phase 1,” since the LON for the instant Project was filed before the Full Siting Application for Phase 2.

<sup>6</sup> Phase 2 is the subject of a Full Siting Application which was filed on April 6, 2026, at Docket No. A-2026-3061547. The proceeding at Docket No. A-2026-3061547 has been stayed as of September 22, 2026.

Consumer Advocate’s (“OCA”) arguments in this case focus on issues of cost and cost allocation, which are not germane to the Commission’s decision approve the siting and construction of HV transmission line facilities. While the Company is mindful of the impacts of HV transmission line projects on transmission costs and rates, this proceeding before the Commission is simply not the appropriate forum for OCA to raise these issues. OCA belatedly admitted this reality in pre-hearing motions made in this matter.<sup>7</sup>

Finally, the Company notes that it has made the requisite showings to demonstrate that the HV transmission lines proposed by this Letter of Notification, “will not create an unreasonable risk of danger to the health and safety of the public,”<sup>8</sup> “is in compliance with applicable statutes and regulations providing for the protection of the natural resources of this Commonwealth,”<sup>9</sup> and “will have minimum adverse environmental impact, considering the electric power needs of the public, the state of available technology and the available alternatives.”<sup>10</sup>

Accordingly, PPL Electric requests that Administrative Law Judges Erin L. Gannon and John M. Coogan (the “ALJs”) and the Commission (a) find that the Project, as set forth in the Letter of Notification and associated testimony and exhibits, satisfies the requirements of the applicable statutes and regulations, and (b) approve the Letter of Notification.

## **II. BACKGROUND AND HISTORY OF THE PROCEEDING**

PPL Electric is a public utility that provides electric distribution, transmission, and provider of last resort services in Pennsylvania subject to the regulatory jurisdiction of the Commission. PPL Electric furnishes electric service to approximately 1.4 million customers throughout its

---

<sup>7</sup> OCA Answer to Motion to Strike, p. 12 (“... the fact that OCA’s witnesses have recommended changes concerning tariff provisions, cost allocation, cost recovery, or related matters does not render those recommendations irrelevant to the issues before the Commission. The OCA will not ask the Commission in its briefs to make determinations regarding PPL Electric’s transmission rates, cost allocation, cost recovery, or tariff provisions.” (emphasis added)).

<sup>8</sup> 52 Pa. Code § 57.76(a)(2).

<sup>9</sup> 52 Pa. Code § 57.76(a)(3).

<sup>10</sup> 52 Pa. Code § 57.76(a)(4).

certificated service territory, which includes all or portions of twenty-nine counties and encompasses approximately 10,000 square miles in eastern and central Pennsylvania. PPL Electric is a “public utility” and an “electric distribution company” as defined in Sections 102 and 2803 of the Pennsylvania Public Utility Code, 66 Pa.C.S. §§ 102, 2803. PPL Electric is also a “public utility” as defined by the Federal Power Act, 16 U.S.C. § 824(e), a transmission owner, and a member of PJM Interconnection, L.L.C. (“PJM”).

This proceeding was initiated on December 19, 2025, when PPL Electric filed the above-captioned “Letter Of Notification Of PPL Electric Utilities Corporation, Filed Pursuant To 52 Pa. Code Chapter 57 Subchapter G, For Approval To Build Approximately 1.1 Miles of New Parallel Double Circuit 230 kV Transmission Taps that are Needed to Connect the Existing Susquehanna-Harwood #1 & #2 Transmission Lines to the New Tomhicken 230 kV Switchyard that are Respectively Located in Luzerne County, Pennsylvania” (the “LON”) with the Commission.

On December 30, 2025, the OCA filed a Notice of Intervention and Public Statement.

On January 7, 2026, the OCA filed a Protest.

On March 12, 2026, Erika Cook filed a Protest.

On March 13, 2026, John Zola filed a Protest.

On March 20, 2026, a Scheduling Order was issued, which, in part, adopted a procedural schedule for the Letter of Notification proceeding.

On March 24, 2026, an In-Person Evidentiary Hearing Notice was issued, setting the hearing in the above-captioned matter for Thursday, September 17 and Friday, September 18, 2026 at 10:00 AM.

On May 7, 2026, OCA filed its first Motion to Consolidate.

On May 13, 2026, PPL Electric filed its direct testimony.

On May 19, 2026, Erika Cook filed a Motion to Deny the Pending Applications and Zoning

Exemption Petition Submitted by PPL Electric Without Prejudice.

On May 27, 2026, PPL Electric filed its Answer to the OCA's first Motion to Consolidate.

On June 8, 2026, PPL Electric filed its Answer to Erika Cook's first Motion to Deny Applications/Petition Without Prejudice.

On June 18, 2026, the OCA's first Motion to Consolidate was denied.

On June 23, 2026, Erika Cook's Motion to Deny Applications/Petition Without Prejudice was denied.

On June 30, 2026, public input hearings were held in Hazleton, PA.

On July 8, 2026, the OCA, Erika Cook, and John Zola submitted their direct testimony.<sup>11</sup>

On July 15, 2026, the OCA submitted supplemental direct testimony pertaining to public input hearing testimony.

On August 7, 2026, PPL Electric submitted its rebuttal testimony.

Also on August 7, 2026, the OCA filed its Renewed Motion for Consolidation.

On August 12, 2026, Erika Cook submitted a Renewed Motion to Deny the Application (LON) Without Prejudice or Stay the Application (LON).

On August 27, 2026, PPL Electric filed its Answer to OCA's Renewed Motion for Consolidation.

On September 1, 2026, PPL Electric filed its Answer to Erika Cook's Renewed Motion to Deny the Application (LON) Without Prejudice or Stay the Application (LON).

On September 4, 2026, the OCA, Erika Cook, and John Zola submitted their surrebuttal testimony in this matter.

On September 8, 2026, the ALJs issued an Order Denying the Renewed Motion to Deny

---

<sup>11</sup> Mr. Zola provided his direct testimony at the June 30, 2026 public input hearings, but served HIGHLY CONFIDENTIAL direct testimony, supplemental to his oral direct testimony, on July 8, 2026.

the Application Without Prejudice of Stay the Application filed by Ms. Cook.

Also on September 8, 2026, the ALJs issued an Order Denying the Renewed Motion for Consolidation of OCA.

On September 14, 2026, PPL Electric served its rejoinder testimony.

Also on September 14, 2026, PPL Electric filed Objections and Motion to Strike Portions of the Written Testimony of the OCA.

On September 17 and 18, 2026, the hearing took place as scheduled.

On September 18, 2026, the OCA filed a Motion to Amend or Withdraw Expert Witnesses' Admissions Pursuant to 52 Pa. Code Section 5.350(f) in this proceeding.

Also on September 18, 2026, the OCA filed an Answer to PPL Electric's Objections and Motion to Strike Portions of the Written Testimony of the OCA.

On September 22, 2026, the ALJs issued an Order Addressing Briefs and Denying PPL Electric's Motion to Strike.

PPL Electric hereby files this Main Brief, as directed by the Scheduling Order issued on March 20, 2026, the Order Addressing Briefs issued on September 22, 2026, and the Commission's regulations.

### **III. LEGAL STANDARDS**

#### **A. BURDEN OF PROOF**

PPL Electric is seeking Commission approval to build new overhead 230 kV HV transmission lines as set forth in the LON. Section 332(a) of the Public Utility Code ("Code")<sup>12</sup> 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

---

<sup>12</sup> 66 Pa.C.S. § 332(a).

which is substantial and legally credible.”<sup>13</sup> The preponderance of evidence standard requires proof by a greater weight of the evidence.<sup>14</sup> This standard is satisfied by presenting evidence more convincing, by even the smallest amount, than that presented by another party.<sup>15</sup>

Additionally, any finding of fact necessary to support an adjudication of the Commission must be based upon substantial evidence.<sup>16</sup> Substantial evidence is such relevant evidence as a reasonable mind might accept as adequate to support a conclusion.<sup>17</sup> Although substantial evidence must be “more than a scintilla and must do more than create a suspicion of the existence of the fact to be established,”<sup>18</sup> the “presence of conflicting evidence in the record does not mean that substantial evidence is lacking.”<sup>19</sup> Relatedly, Pennsylvania law is clear that “[m]ere bald assertions, personal opinions or perceptions do not constitute evidence.”<sup>20</sup>

If the applicant sets forth a *prima facie* case, then the burden shifts to the opponent.<sup>21</sup> 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.<sup>22</sup> Critically, while PPL Electric ultimately has the

---

<sup>13</sup> *Samuel J. Lansberry, Inc. v. Pa. PUC*, 578 A.2d 600, 602 (Pa. Cmwlth. 1990).

<sup>14</sup> *Commonwealth of Pennsylvania v. Williams*, 732 A.2d 1167 (Pa. 1999).

<sup>15</sup> *Brown v. Commonwealth of Pennsylvania*, 940 A.2d 610, 614 n.14 (Pa. Cmwlth. 2008).

<sup>16</sup> *Met-Ed Indus. Users Group v. Pa. PUC*, 960 A.2d 189, 193 n.2 (Pa. Cmwlth. 2008) (citing 2 Pa.C.S. § 704).

<sup>17</sup> *Borough of E. McKeesport v. Special/Temporary Civil Service Commission*, 942 A.2d 274, 281 (Pa. Cmwlth. 2008).

<sup>18</sup> *Kyu Son Yi v. State Board of Veterinarian Medicine*, 960 A.2d 864, 874 (Pa. Cmwlth. 2008) (citation omitted).

<sup>19</sup> *Allied Mechanical and Elec., Inc. v. Pennsylvania Prevailing Wage Appeals Board*, 923 A.2d 1220, 1228 (Pa. Cmwlth. 2007) (citation omitted).

<sup>20</sup> *Mid-Atlantic Power Supply Ass'n v. Pa. PUC*, 746 A.2d 1196, 1200 (Pa. Cmwlth. 2000) (citing *Bureau of Corrections v. City of Pittsburgh, Pittsburgh City Council*, 532 A.2d 12, 14 (Pa. 1987)); see also *West Penn Power Co. v. Pa. PUC*, 219 A.3d 716, 2019 Pa. Commw. Unpub. LEXIS 532, at \*24-25 (Pa. Cmwlth. 2019).

<sup>21</sup> *McDonald v. Pennsylvania Railroad Co.*, 36 A.2d 492 (Pa. 1940).

<sup>22</sup> *District of Columbia's Appeal*, 21 A.2d 883 (Pa. 1941). See, e.g., *Application of Pennsylvania Power & Light Co.*, Docket Nos. A-110500F0196, et al., 1994 Pa. PUC LEXIS 65 (Initial Decision issued 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).

burden of proof to show that the Commission should authorize its request to site and construct the proposed HV transmission lines, other parties would bear the burden of proof to demonstrate that the Commission should adopt any alternatives to PPL Electric's Project and/or impose any specific conditions upon or modifications to the Project.<sup>23</sup>

## **B. ASSESSMENT OF WITNESS CREDIBILITY**

The Commission, as the ultimate finder of fact in this case, has the authority to weigh all evidence presented and to make determinations regarding the credibility of the witnesses in the proceeding, and the weight to give to the testimony of the same.<sup>24</sup> In evaluating witness credibility, the Commission has held that “the fact finder must consider the witness's manner of testifying, as well as the apparent candor, intelligence, personal interest and bias, or lack of it, when determining what weight shall be given to their testimony.”<sup>25</sup> The fact finder may also consider “the witness’s conduct on the stand, demeanor, manner of testifying, . . . intonation of voice, and the witness’s positiveness and uncertainty as to facts.”<sup>26</sup> Finally, it is well-established that “conflicting statements are admissible for the purpose of impeaching a witness’s credibility.”<sup>27</sup>

In addition, the Commission looks to the Pennsylvania Rules of Evidence when evaluating “the difference between expert and lay testimony and opinions in order to address which witnesses can be relied upon for which issues under applicable legal standards.”<sup>28</sup> While the Commission

---

<sup>23</sup> See 66 Pa.C.S. § 332(a); *NRG Energy, Inc. v. Pa. PUC*, 233 A.3d 936, 950-951 (Pa. Cmwlth. 2020), *appeal denied*, 244 A.3d 346 (Pa. 2021) (“If NRG did not bear a burden to present something to support its methodology, it would be difficult, if not impossible, for [utility] to respond with evidence explaining why the alternative should not be accepted”).

<sup>24</sup> *Pennsylvania Public Utility Commission, Bureau of Investigation and Enforcement v. Jerome McCree, Sr.*, Docket No. C-2023-3037385, 2025 Pa. PUC LEXIS 44, \*20 (Order entered Feb. 7, 2026) (citing *Hess v. Pa. PUC*, 107 A.3d 246 (Pa. Cmwlth. 2014), *York Water Company v. Pa. PUC*, 414 A.2d 138 (Pa. Cmwlth. 1980), *Pennsylvania Communities Organizing for Change, Inc. v. Pa. PUC*, 89 A.3d 338 (Pa. Cmwlth. 2014)) (“McCree”).

<sup>25</sup> *McCree*, at \*\*20-21.

<sup>26</sup> *McCree*, at \*21 (citing *In re Gaston’s Estate*, 361 Pa. 105, 62 A.2d 904 (1949)).

<sup>27</sup> *Commonwealth v. Valenzuela*, 408 Pa. Super. 399, 406 (Pa. Super. 1991) (citing *Commonwealth v. Updegrove*, 413 Pa. 599, 198 A.2d 534 (1964)) (emphasis added).

<sup>28</sup> *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

has recognized that lay witnesses, including those who testify at public input hearings, are qualified to provide opinions based on their personal experiences,<sup>29</sup> it has also recognized that some matters, such as “the health effects of the line, the probability of structural failure, and the effect on real estate values,” require expertise to offer competent testimony.<sup>30</sup> The Commission also clarified that to be an “expert,” a witness must have “any reasonable pretension to specialized knowledge on the subject under investigation.”<sup>31</sup>

### **C. STANDARDS FOR APPROVAL OF A LETTER OF NOTIFICATION**

Pursuant to Section 1501 of the Code, an electric utility has a statutory obligation to provide safe, adequate, and reliable service to its customers.<sup>32</sup> The HV transmission lines proposed in this LON consist of: (1) the approximately 1.1 miles of Tap Lines; and (2) the two new approximately 0.1-mile-long Connecting Lines.<sup>33</sup>

In order to grant an application for the rebuild of an HV transmission line, the Commission must generally find and determine the following as to the proposed HV line:

- (1) That there is a need for it.
- (2) That it will not create an unreasonable risk of danger to the health and safety of the public.
- (3) That it is in compliance with applicable statutes and regulations, providing for the protection of the natural resources of this Commonwealth.
- (4) That it will have minimum adverse environmental impact, considering the electric power needs of the public, the state of the available technology and the available alternatives.<sup>34</sup>

---

Nos. A-2009-2082652, *et al.*, 2010 Pa. PUC LEXIS 434, at \*27-30 (Opinion and Order entered Feb. 12, 2010), *affirmed*, 25 A.3d 440 (hereafter “*Susquehanna-Roseland Commission Order*”).

<sup>29</sup> *Id.* at 19-20.

<sup>30</sup> *Id.* at 20.

<sup>31</sup> *Id.* at 20 (citing *Miller v. Brass Rail Tavern, Inc.*, 664 A.2d 525, 528 (Pa. 1995)).

<sup>32</sup> 66 Pa.C.S. § 1501.

<sup>33</sup> PPL Electric St. No. 1, p. 2.

<sup>34</sup> 52 Pa. Code § 57.76(a) (emphasis added).

The Code does not define “need.” However, an electric utility can demonstrate that there is “a need” for a transmission line project under 52 Pa. Code § 57.76(a)(1) where the project resolves violations of the utility’s internally developed planning and reliability criteria.<sup>35</sup> Further, the Commission has previously approved Letters of Notification in which the necessity has arisen from a large load customer’s request to take transmission-level service,<sup>36</sup> consistent with a utility’s obligation and right to provide service to customers pursuant to the terms and conditions of its existing, Commission-approved tariff.<sup>37</sup> Part of the need determination for projects that are customer-driven or customer-initiated is whether the Customer’s request would result in violations of the planning criteria established by PJM, North American Electric Reliability Corporation (“NERC”), and PPL Electric. A showing that the project is needed to resolve such planning criteria violations, and that it is necessary to accommodate the interconnecting customer’s request, should be sufficient to establish the need for the Project.

Furthermore, Pennsylvania courts have recognized that there is a need for reliable regional

---

<sup>35</sup> See *Hess v. Pa. PUC*, 107 A.3d 246, 262-263 (Pa. Cmwlth. 2014), *appeal denied*, 632 Pa. 678, 117 A.3d 1282 (Pa. 2015); *Application of PPL Electric Utilities Corporation filed Pursuant to 52 Pa. Code Chapter 47, Subchapter G, for Approval of the Siting and Construction of the North Lancaster Honey Brook # 1 & # 2 138/69 kV Transmission Lines in Lancaster County, Pennsylvania*, Docket Nos. A-2014-2430565, *et al.*, 2015 Pa. PUC LEXIS 77, at \*49 (Initial Decision issued Feb. 27, 2015) *adopted without modification* (Order entered Apr. 23, 2015) (“*PPL North Lancaster-Honey Brook*”) (holding that a project which alleviates violations of an electric utility’s own planning criteria provides sufficient evidence to support a finding of need).

<sup>36</sup> *Letter of Notification of PPL Electric Utilities Corporation for approval to construct the Susquehanna 230 kV and 500 kV Transmission Line Project in Conyngham and Salem Townships in Luzerne County, Pennsylvania, Petition for Waiver of Certain Provisions of the Commission’s Regulations for Commission Review of Siting and Construction of Electric Transmission Lines set forth at 52 Pa. Code § 57.71 et seq.*, Docket Nos. A-2025-3056806, *et al.*, at 6-7, 9 (Final Order entered September 25, 2025) (“PPL Electric submits that construction of the Susquehanna 230 kV and 500 kV Transmission Line Project is necessary to provide 230 kV and 500 kV service to a new PPL Electric customer. . . . Additionally, PPL Electric submits that the customer’s initial load is approximately 120 MW and will increase in stages to approximately 1,440 MW by 2030 . . . Finally, PPL Electric submits that the project was presented at PJM Interconnection LLC’s Transmission Expansion Advisory Committee meetings and assigned supplemental project number s3706.”)

<sup>37</sup> See, e.g., 66 Pa.C.S. §§ 1103, 1501, 2802(12); 52 Pa. Code § 57.19; *Popowsky v. Pa. PUC*, 910 A.2d 38, 48-56 (Pa. 2006); *Pa. Gas Co. v. Pub. Serv. Comm’n*, 83 Pa. Super. 557, 565-66 (1924); *Philadelphia Transp. Co. v. Pa. PUC*, 37 A.2d 138, 147 (Pa. Super. 1944); *Application of Leatherstocking Gas Co., LLC, for Approval to Supply Natural Gas Serv. to the Pub. in N. Susquehanna Cnty., in the Twps. of Bridgewater, Forest Lake, Great Bend, Harmony, New Milford, and Oakland, and in the Boroughs of Great Bend, Hallstead, Lanesboro, Montrose, New Milford, Oakland and Susquehanna*, Docket No. A-2011-2275595, 2012 Pa. PUC LEXIS 1391, at \*22 (Order entered Aug. 30, 2012).

electric service and transmission systems.<sup>38</sup> 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.<sup>39</sup>

Clearly, “need” is a broad concept, and a utility is not required to show a project is “absolutely necessary.”<sup>40</sup>

Finally, the plain language of 52 Pa. Code § 57.76(a)(1) states that an electric utility must demonstrate there is “a” need for a transmission line project.<sup>41</sup> “A” need is an indefinite article, meaning that it lacks specificity for the proceeding noun, *i.e.*, “need”; conversely, “the” is a definite article, meaning that the proceeding noun, *i.e.*, “need,” would be specific.<sup>42</sup> The relevant inquiry is whether a utility has “establish[ed] a need for the Project pursuant to the Commission’s Regulations and applicable law.”<sup>43</sup> It is well settled that a public utility must decide in the first instance what facilities are needed and where to locate those facilities; unless the public utility acted in an arbitrary or capricious manner, its decision should remain undisturbed.<sup>44</sup> The Commission is not a “super board of directors” that acts to second guess a utility.<sup>45</sup> Therefore, so long as a utility demonstrates there is “a” need for a given project, it has satisfied the requirement

---

<sup>38</sup> See *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).

<sup>39</sup> 66 Pa.C.S. §§ 2802(12), (20) and 2803.

<sup>40</sup> See *Hess v. Pa. PUC*, 107 A.3d 246, 260-61 (Pa. Cmwlth. 2014).

<sup>41</sup> 52 Pa. Code § 57.76(a)(1).

<sup>42</sup> See *Patricca v. Zoning Bd. of Adjustment*, 590 A.2d 744, 751 (Pa. 1991) (“The word ‘the’ is a definite article and is used . . . before a noun, with specifying or particularizing effect, as opposed to the indefinite or generalizing force of the indefinite article ‘a’ or ‘an’”) (citations omitted).

<sup>43</sup> *Letter of Notification of PPL Electric Utilities Corporation Filed pursuant to 52 Pa. Code Chapter 57, Subchapter G, for Approval to Rebuild the Existing Double-Circuit Stanton-Summit #3 and #4 230 kV Transmission Lines Connecting the Stanton 230-69 kV Substation and a Two-Pole Turn Structure That Are Respectively Located in Luzerne and Lackawanna Counties, Pennsylvania*, Docket No. A-2022-3037374, at 18 (Opinion and Order entered June 13, 2024).

<sup>44</sup> See *e.g.*, *Lower Chichester Township v. Pa. PUC*, 119 A.2d 674 (Pa. Super. 1956); *Abington Electric Co. v. Pa. PUC*, 198 A. 901 (Pa. Super. 1938).

<sup>45</sup> *Metropolitan Edison Co. v. Pa. PUC*, 437 A.2d 76, 80 (Pa. Cmwlth. 1982) (“The Commission is not empowered to act as a super board of directors for the public utility companies of this state.”) (citations omitted); See also *Pa. PUC, et al. v The Columbia Water Co.*, Docket Nos. R-2008-2045157, *et al.*, 2009 Pa. PUC LEXIS 1423 (Opinion and Order entered May 28, 2009).

of 52 Pa. Code § 57.76(a)(1).

With respect to health and safety under 52 Pa. Code § 57.76(a)(2), the Commission has repeatedly held that HV lines that meet or exceed the National Electric Safety Code (“NESC”) requirements do not create an unreasonable risk of danger to the health and safety of the public.<sup>46</sup>

With respect to natural resources and the environment under 52 Pa. Code § 57.76(a)(3), the Pennsylvania Supreme Court has concluded that Article I, Section 27 of the Pennsylvania Constitution, i.e., the Environmental Rights Amendment,<sup>47</sup> placed Pennsylvania’s public natural resources in trust and named the Commonwealth as its trustee, to conserve and maintain those resources for the benefit of all people, including future generations.<sup>48</sup> In carrying out these obligations, the Commonwealth, and its agencies, may subject the individual rights of citizens to clean air, pure water, and to the preservation of natural, scenic, historic, and esthetic values to reasonable regulation.<sup>49</sup>

The Commission has determined that its existing rules and policy satisfy its obligations under the Environmental Rights Amendment as described in *PEDF*.<sup>50</sup> The Commission further explained in *Penelec* that:

The Commission’s regulatory scheme for high-voltage line transmission siting cases, therefore, provides for a robust, evidence-based deliberative process that provides due process for all interested parties. The Commission, consistent with our role as a fiduciary responsible for the preservation of the Commonwealth’s natural resources, and consistent with PEDF, acts with prudence, loyalty and impartiality when adhering to these regulations. In this

---

<sup>46</sup> See *Susquehanna-Roseland Commission Order* at \*166; *Application of PP&L for Approval to Locate and Construct a 138 kV Transmission Line Between West Allentown and Salisbury Substations*, Docket No. A-00104160 (Order entered July 20, 1984); *Application of PP&L for Authorization to Locate and Construct its Hamlin 138 kV Electric Transmission Line*, Docket No. A-00101826 (Order entered Apr. 3, 1981); *Larken v. Philadelphia Electric Co.*, 38 Pa. PUC 777 (1961).

<sup>47</sup> PA. CONST. art. I, § 27.

<sup>48</sup> *Pa. Environmental Defense Foundation v. Com. Of Pa.*, 161 A.3d 911 (Pa. 2017) (“*PEDF*”).

<sup>49</sup> *PEDF*, at 931; see also *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 Nos. A-2016-2565296, *et al.*, pp. 12-14 (Order entered March 8, 2018) (“*Penelec*”).

<sup>50</sup> *Penelec*, pp. 13-14; see also 52 Pa. Code §§ 69.3105, 69.3106.

manner, we fulfill our responsibility to protect the public's natural resources from depletion or degradation, while also allowing legitimate development that improves the lot of Pennsylvania's citizenry, as the Pennsylvania Supreme Court recognized in *Robinson Township v. Com. of Pa.*, 623 Pa. 564, 658, 83 A.3d 901, 958 (2013).<sup>51</sup>

Generally, the Commission has found compliance with the applicable environmental statutes and regulations where the applicant agrees to obtain any and all necessary environmental permits prior to construction and to comply with any conditions on those permits during construction.<sup>52</sup> Importantly, however, 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.<sup>53</sup> In addition, the Commission has concluded an applicant can satisfy 52 Pa. Code § 57.76(a)(3) by demonstrating that a transmission line will be located within existing ROWs and/or the property of the customer to be served, and "state and federal agencies have confirmed that they either have no concerns regarding impacts on endangered or threatened species, or that they will work with [the applicant] to ensure that the construction does not negatively impact such species."<sup>54</sup>

---

<sup>51</sup> *Penelec*, p. 14.

<sup>52</sup> See, e.g., *Joint Letter of Notification of Mid-Atlantic Interstate Transmission, LLC And PPL Electric Utilities Corporation For The Martins Creek-Siegfried #2 230 Kilovolt Transmission Line Loop to Klecknersville 230 Kilovolt Substation Project in Moore Township, Northampton County, Pennsylvania*, Docket Nos. A-2022-3036551, *et al.* (Initial Decision issued June 21, 2023) *adopted without further Commission action* (Final Order entered July 26, 2023) ("*Klecknersville Order*"); *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 issued Feb. 9, 2012) (Opinion and Order Denying Exceptions entered June 7, 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 issued Mar. 28, 2011), *adopted with modification on other grounds* (Opinion and Order entered Mar. 15, 2012); *Susquehanna-Roseland Commission Order* at \*191-201.

<sup>53</sup> *Energy Conservation Council of Pennsylvania v. Pa. PUC*, 25 A.3d 440, 452 (Pa. Cmwlth. 2011) (hereinafter "*Susquehanna-Roseland Appeal Order*").

<sup>54</sup> *Application of PPL Electric Utilities Corporation, for Approval to Rebuild Approximately Six Miles of the Breinigsville-Alburtis 500 kV Transmission Line in Lower Macungie and Upper Macungie Townships, Lehigh County*,

With respect to the selection of a proposed route for an HV transmission line under 52 Pa. Code § 57.76(a)(4), the Commonwealth Court of Pennsylvania 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.<sup>55</sup> Importantly, a utility is not required to conduct a siting study or to evaluate alternative routes for an HV transmission line project that is the subject of a letter of notification.<sup>56</sup> Moreover, the Commission has recognized that its regulations do not require the utility to show no impact; instead, they require “through reasonable regulation, the impacts of a transmission line to be minimal considering the needs of the public.”<sup>57</sup> In addition, the Commonwealth Court has concluded that it is appropriate for the Commission to consider the length of the HV transmission line when determining whether it would have a minimum adverse environmental impact.<sup>58</sup> In the *TrAILCo* case, the Commonwealth Court held that “[b]y exempting HV lines of less than two miles in length from the [full siting] application process, including the requirements of providing information on environmental impacts, this regulation raises the presumption that an HV line less than two miles in length... has a minimum adverse environmental impact.”<sup>59</sup> Indeed, requiring a utility to consider and evaluate *every* alternative “would effectively eliminate siting HV lines in Pennsylvania, a goal clearly not intended by the regulation.”<sup>60</sup>

---

*Pennsylvania; Petition for Waiver of Certain Provisions of the Commission’s Regulations for Commission Review of Siting and Construction of Electric Transmission Lines set forth at 52 Pa. Code § 57.71 et seq.*, Docket No. A-2019-3007945, at p. 19 (Order entered Aug. 14, 2019) (“*Breinigsville-Alburtis Order*”).

<sup>55</sup> *Susquehanna-Roseland Appeal Order*, 25 A.3d at 449-50 (quoting *Energy Conservation Council of Pa. v. Pa. PUC*, 995 A.2d 465, 479-80 (Pa. Cmwlth. 2010) (“*TrAILCo*”).

<sup>56</sup> See 52 Pa. Code § 57.72(d)(4).

<sup>57</sup> *Klecknersville Order* at, p. 43 .

<sup>58</sup> *Energy Conservation Council of Pa. v. Pa. PUC*, 995 A.2d 465, 482 (Pa. Cmwlth. 2010), *reargument denied*, *TrAILCo*.

<sup>59</sup> *Id.* (emphasis added).

<sup>60</sup> See *Susquehanna-Roseland Commission Order* at \*114; see also *In Re: Application of PPL Electric Utilities Corporation (PPL) for Approval of the Siting and Reconstruction of the Proposed Coopersburg # 1 and # 2 138/69 kV Tap in Upper Saucon Township, Lehigh County and Springfield and Richland Townships, Bucks County, Pennsylvania (Coopersburg kV transmission line)*, Docket Nos. A-2008-2022941, *et al.*, at p. 31 (Opinion and Order

#### **IV. SUMMARY OF ARGUMENT**

The LON should be approved without modification or condition, and the Protests of the OCA, Mr. John Zola, and Ms. Erika Cook should be denied. PPL Electric must site and construct the HV transmission lines proposed in the LON to interconnect the Customer, and comply with its obligation to serve customers who desire to obtain service from PPL Electric under the terms and conditions of its existing, Commission-approved tariff. Moreover, the Project is designed to address the Customer's immediate needs, as well as ensure that appropriate infrastructure is in place to serve the future needs of the Customer, other customers in the area, and the future needs of PPL Electric's system.

At the outset, the scope of this proceeding is critically important. PPL Electric filed this LON under 52 Pa. Code Ch. 57, Subch. G. Under these regulations, a public utility must (a) obtain Commission approval to "to locate and construct a HV transmission line or any portion thereof" and (b) demonstrate "compliance with existing laws" before it can commence construction of an HV transmission line.<sup>61</sup> To obtain the Commission's approval, the utility must satisfy the four criteria set forth in 52 Pa. Code § 57.76(a) in order for the Commission to approve the siting and construction of an HV transmission line. The plain language of these regulations—and the wealth of Commission precedent applicable to letters of notification—make explicitly clear that the only authorizations being sought and granted in this place are the authority "to locate and construct a HV transmission line or any portion thereof." With the scope of this proceeding in mind, it is clear that the ALJs and the Commission should approve the LON.

There is no dispute that the Tomhicken 230 kV Switchyard Project qualifies for the use of a "letter of notification"—an abbreviated filing—in lieu of a "full siting application." The

---

entered July 24, 2009) ("Further, we do not accept the proposition implicit in this Exception that PPL or any public utility applicant must perform an environmental analysis on every alternative route that might be available.")

<sup>61</sup> 52 Pa. Code § 57.71.

Tomhicken 230 kV Switchyard Project will be located within ROW on PPL Electric-owned property and the property of the sole customer to be served by the line; thus, it qualifies for disposition as a letter of notification under 52 Pa. Code § 57.72(d)(1)(iii). Moreover, this Project involves a proposed route for the subject HV lines that is 2 miles or less; thus, it qualifies for disposition as a letter of notification under 52 Pa. Code § 57.72(d)(1)(vi). There is no factual dispute on this point.

Similarly, there is no material dispute as to whether “there is a need” for the proposed HV transmission lines.<sup>62</sup> The record evidence demonstrates that these HV lines are necessary for PPL Electric to interconnect a customer to the grid, in compliance with its legal obligation to serve. OCA’s experts do not dispute the existence of this need. In addition, the only feasible alternative engineering solution offered by OCA would require constructing approximately 9.9 miles of HV transmission lines on properties not owned by PPL Electric or the Customer, where no transmission lines are currently located. PPL Electric demonstrated that this alternative was not reasonable, and would result in substantially greater impacts than the Project as proposed. While Mr. Zola and Ms. Cook have attempted to dispute the need for the Project by raising concerns about ongoing litigation surrounding the Customer’s land use and zoning approvals, these concerns are easily addressed. PPL Electric has indicated that it will only proceed with construction if a need persists.

Ultimately, OCA’s attempt to dispute need boils down to its concerns with transmission costs, cost allocation and cost recovery, related to transmission facilities constructed to interconnect large load customers—and specifically data centers—to the grid. Those concerns do not alter that a need exists for the Project. And, moreover, those concerns simply ignore that PPL Electric will interconnect the Customer pursuant to the terms, conditions, and requirements of its

---

<sup>62</sup> 52 Pa. Code § 57.76(a)(1).

Commission-approved tariff, under Rate Schedule LP-6. PPL Electric and the Customer are bound by the terms and conditions of the Company's tariff. PPL Electric is obligated to construct these HV transmission lines to interconnect the Customer, because the Customer has requested service in conformance with those terms and conditions. Furthermore, OCA's concerns regarding transmission costs, cost allocation and cost recovery are not foreclosed by this proceeding; the Commission's regulations and precedent are clear that the Commission need not make and does not make any findings or determinations regarding these issues in a siting proceeding that would foreclose OCA's pursuit of them in a separate proceeding before an appropriate forum.

PPL Electric also demonstrated that the HV transmission lines "will not create an unreasonable risk of danger to the health and safety of the public."<sup>63</sup> The contemplated HV transmission lines will be constructed in conformance with PPL Electric engineering and design standards, which meet or exceed the standards of the NESC. No party disputes these facts.

While OCA attempts to argue the instant Project will create unreasonable risks by raising concerns about the adequacy and availability of generation and capacity in the PJM region, these concerns are not about the proposed HV transmission lines. Moreover, OCA's witness admitted that its concerns regarding generation or supply shortfalls and their impacts are unquantified speculation, and that he performed no actual analysis of these risks as a part of his testimony.

The Company also rebutted the health and safety concerns raised by Ms. Cook and members of the public regarding the proposed HV transmission lines. The subject facilities are appropriately set back from the edge of the ROW and any nearby properties, and have been appropriately designed to minimize the risk of fire hazards. Moreover, the Company will apply its policy to manage magnetic fields, and has designed the subject HV lines in a manner that limits magnetic field exposures. Finally, the Company demonstrated that its use of helicopters to conduct

---

<sup>63</sup> 52 Pa. Code § 57.76(a)(2).

routine inspections of HV transmission line facilities are reasonable and appropriate.

Finally, the Company satisfied the criteria set forth in 52 Pa. Code § 57.76(a)(3)-(4). PPL Electric emphasizes that any claims or concerns regarding the environmental impacts of the Customer's facility are not relevant to this proceeding; the Commission's jurisdiction and review in this case is limited to PPL Electric's proposed HV transmission lines. The record evidence demonstrates PPL Electric has satisfied 52 Pa. Code § 57.76(a)(3) by providing information on regulatory permit requirements and agency coordination regarding cultural and environmental resources, and committing to obtain all required permits and comply with all conditions imposed therein. PPL Electric has similarly satisfied 52 Pa. Code § 57.76(a)(4), by demonstrating that the only "alternative route" offered by the OCA in this proceeding would require construction of approximately 9 times the length of HV lines on properties owned by persons other than PPL Electric and the Customer to be served.

For these reasons and as more fully explained below, PPL Electric requests that the ALJs and the Commission approve the Company's LON, which is necessary to permit the prompt construction of the HV transmission lines proposed by the Tomhicken 230 kV Switchyard Project.

## **V. ARGUMENT**

### **A. INTRODUCTION**

The electric transmission system is the "backbone" of the electric transmission grid. Indeed, transmission facilities are vital to supplying reliable electric service:

The nation's interconnected transmission system ("Transmission Grid") serves as the backbone for safe and reliable delivery of large amounts of electricity from generating stations over substantial distances to customers served by transmission and local distribution systems. It is critical that the Transmission Grid be planned and designed to ensure reliable electric service is provided under all loading conditions or when certain elements of the Transmission

Grid are out of service (system contingencies) due to planned or unplanned outages.<sup>64</sup>

The nation's electric system is comprised of three basic components: generation, transmission, and distribution. Generating plants typically produce electricity at a relatively low voltage. Transformers located adjacent to the generating plants increase or "step up" the voltage to transmission-level voltages, depending on the size of the generating facility and the distance the electricity must travel for delivery to customers. After the voltage is stepped up, the power is transmitted to substations, where the voltage level is sequentially stepped down for ultimate delivery into the distribution system. Distribution transformers then further reduce the voltage from primary to secondary distribution levels for ultimate delivery to customers.<sup>65</sup>

PPL Electric has a statutory obligation to provide safe and reliable service to its customers.<sup>66</sup> As a member of PJM, PPL Electric participates in, and employs, a regional transmission system planning process and identifies facilities that require reinforcement to enable it to meet this obligation and plan appropriate measures to assure reasonably continuous supply to customers, even during adverse conditions. The planning process was described in detail in PPL Electric Hearing Exhibit No. 2, Letter of Notification, Attachment 1 – Necessity Statement.

In order to grant a contested letter of notification for the construction and siting of a high voltage transmission line, the Commission must find and determine the following as to the proposed HV lines:

- (1) That there is a need for it.
- (2) That it will not create an unreasonable risk of danger to the health and safety of the public.
- (3) That it is in compliance with applicable statutes and regulations, providing for the protection of the natural resources of this

---

<sup>64</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 1 – Necessity Statement, p. 3.

<sup>65</sup> See *Susquehanna-Roseland Commission Order* at \*32-33.

<sup>66</sup> See 66 Pa. C.S. § 1501.

Commonwealth.

(4) That it will have minimum adverse environmental impact, considering the electric power needs of the public, the state of the available technology and the available alternatives.<sup>67</sup>

PPL Electric will separately address each of these required findings. However, the scope of issues that are legitimately contested in this proceeding is extremely limited.

OCA purports to dispute whether PPL Electric has satisfied the requirements of 52 Pa. Code § 57.76(a)(1) and (2). However, OCA's witnesses both conceded that there is a need for the subject HV transmission lines: the Customer has requested to interconnect to PPL Electric's transmission system through the contemplated HV transmission lines.<sup>68</sup> Moreover, OCA's witnesses both confirmed that they presented no analysis regarding the risks of danger to the health and safety of the public of the proposed HV transmission lines.<sup>69</sup> Perhaps recognizing that the admissions of its witnesses were fatal to its case, OCA attempted to amend its witnesses' prior admissions on the eve of the cross-examination of these witnesses.<sup>70</sup> However, that request was correctly denied by the ALJs.<sup>71</sup> When OCA attempted to rehabilitate its witnesses on redirect to change the matters conclusively established by those admissions, both of its witnesses admitted that the only basis they had for amending their admissions was because counsel told them those admissions were contrary to OCA's legal positions and arguments.<sup>72</sup> Simply stated, OCA has

---

<sup>67</sup> 52 Pa. Code § 57.76(a) (emphasis added).

<sup>68</sup> *See, e.g.*, PPL Electric Cross Exhibit No. 17 (both OCA witnesses Felder and Konidena admitted that they do not contest the need for the Project).

<sup>69</sup> *See, e.g.*, PPL Electric Cross Exhibit No. 18 (OCA Witness Mr. Felder admitting that his concerns about health and safety are not with respect to the subject HV transmission lines, but the amount of generation supply and reserves on the PJM system, and OCA Witness Mr. Konidena admitting that he did not opine upon this issue); *see also* Tr. 629 (OCA Witness Mr. Felder admitting that he has not quantified any risks of danger to public health or safety related to the Project).

<sup>70</sup> *See* Tr. 555-556; Motion of the Office of Consumer Advocate to Amend or Withdraw Expert Witnesses' Admissions Pursuant to 52 Pa. Code § 5.350(f) (dated Sept. 18, 2026) ("OCA Motion to Amend").

<sup>71</sup> Tr. 601, 604.

<sup>72</sup> *See* OCA Motion to Amend, p. 3 (stating that "[t]he cause or impetus for the required amendments relates to separate hearing preparation sessions that the OCA counsel of record held with each expert witness in advance of the scheduled hearings."); *see also* Tr. 685-685 (OCA Witness Mr. Felder admitting that he sought to amend PPL Electric Cross

advanced no credible facts to dispute PPL Electric's showings under 52 Pa. Code § 57.76(a)(1)-(2), and it also did not raise any disputes regarding the showings required under 52 Pa. Code § 57.76(a)(3)-(4).

PPL Electric has relatedly rebutted the concerns raised by the *pro se* protestants in this matter, Mr. Zola and Ms. Cook. While Mr. Zola disputes whether the Project is needed due to ongoing litigation surrounding the Customer's zoning and land use approvals, this does not change the fact that if the Customer constructs its facilities, it has requested service that PPL Electric is obligated to provide. Moreover, as explained in Section V.B.6., *infra*, PPL Electric has made clear that it will only proceed with construction of these facilities so long as a need persists. PPL Electric similarly responded to Ms. Cook's concerns regarding need, the risks and hazards associated with the contemplated HV transmission lines, and the environmental impacts of the proposed Project.

Finally, PPL Electric acknowledges that there are a number of ongoing, broadly-applicable proceedings before the Federal Energy Regulatory Commission ("FERC") and the Commission regarding the interconnection of large load customers to the grid.<sup>73</sup> While those proceedings involve important and complex issues, it is imperative to recognize that the approvals sought by PPL Electric in this proceeding do not foreclose further development of broader issues related to large load interconnections in the PJM region in other matters pending before FERC or the Commission. Indeed, PPL Electric's LON is limited to its specific request for approval to site and construct specific HV transmission lines in a specific location, based upon the state of the law as it exists today.

---

Exhibit 17 only after being advised he should do so by counsel), and 756, 761 (OCA Witness Mr. Konidena admitting that he sought to amend PPL Electric Cross Exhibit 17 after obtaining advice from counsel).

<sup>73</sup> See, e.g., *PJM Interconnection, L.L.C., Reliability Backstop Procurement to Address Resource Adequacy Concerns Stemming From Large Loads*, Docket No. ER26-3380-000; *Proposal of PJM Interconnection, L.L.C. to Establish Interim Resource Adequacy Service and a Large Load Registry to Address System Reliability*, Docket No. ER26-3515-000; *Motion Directing Staff to Issue Tentative Order Pursuant to the Public Utility Commission's Provisions at 52 Pa. Code Section 57.72 (Emergency load control and energy conservation by electric utilities) and Establish a*

Therefore, and for the reasons explained below, PPL Electric has met its burden with respect to each of the findings required by Section 57.76(a) of the Commission's regulations.

**B. THERE IS AN UNDISPUTED NEED FOR THE PROPOSED HV TRANSMISSION LINES**

To approve the LON, the Commission must first find and determine, "as to the proposed HV transmission line . . . [t]hat there is a need for it."<sup>74</sup> Demonstrating need is "the threshold issue which must be proven before the rest of the case is evaluated,"<sup>75</sup> an inquiry that examines the problem that the proposed HV lines are designed to address, while also considering "the electrical power needs of the public, the state of the available technology and the available alternatives."<sup>76</sup> Importantly, the Commission's need standard is limited to the proposed HV lines and does not require a showing that the proposed HV lines are "absolutely required" from an engineering or reliability perspective, only that a need exists.<sup>77</sup>

The HV transmission lines proposed in the Tomhicken Project are driven by the undisputed need to interconnect and serve the Customer requesting transmission-level service from PPL Electric.<sup>78</sup> Consistent with its obligation to provide non-discriminatory, safe, and reliable service under the Code, as well as its duties as a transmission owner within PJM, PPL Electric evaluated and identified this need, considered alternative solutions, and developed a proposed solution that meets the initial and future anticipated loads of the Customer. PPL Electric submitted the Tomhicken Project to PJM for review and approval as a Supplemental Project, in full compliance with PJM's existing requirements and procedures for Supplemental Projects. In addition, PPL

---

*Technical Conference On Large Computational Load Cost Allocation*, 3064961-CMR (Public Meeting held Sept. 10, 2026).

<sup>74</sup> 52 Pa. Code § 57.76(a)(1) (emphasis added).

<sup>75</sup> See *Susquehanna-Roseland Commission Order* at \*35.

<sup>76</sup> *Id.* at \*31 (internal quotations omitted) (citing *Pa. Power & Light Co. v. Pa. PUC*, 696 A.2d 248 (Pa. Cmwlth. 1997)).

<sup>77</sup> See *Hess v. Pa. PUC*, 107 A.3d 246, 260-61 (Pa. Cmwlth. 2014).

<sup>78</sup> PPL Electric St. No. 1, pp. 3-4.

Electric has submitted the instant LON to the Commission for review and approval, in full compliance with the Commission’s existing requirements and procedures for letters of notification under 52 Pa. Code Ch. 57, Subch. G. Consistent with these existing requirements and procedures, PPL Electric has demonstrated that the contemplated HV transmission lines are an efficient and appropriate solution to address the Customer’s need for transmission-level service. PPL Electric will provide this service pursuant to the Company’s Commission-approved tariff and the executed Electric Service Agreement (“ESA”), which contain important safeguards against stranded costs as well as other protections.

Critically, none of the parties contest PPL Electric’s stated need to interconnect the customer and OCA has explicitly conceded that a need for the proposed HV transmission lines exists. Moreover, none of OCA’s “alternatives” offer viable means to address the Customer’s interconnection needs and OCA has conducted no analysis of the feasibility or impacts of its 9-mile-long greenfield “Nescopeck Alternative” as compared to PPL Electric’s proposal to site and construct less than 2 miles of proposed HV transmission lines solely upon property owned by PPL Electric and the Customer. On the other hand, during the course of this proceeding, PPL Electric has demonstrated that none of the OCA’s proposed alternatives are feasible or reasonable.<sup>79</sup> PPL Electric also explained why the ALJs and the Commission must reject the OCA’s misguided attempts to widen the scope of this proceeding to include determinations regarding transmission costs and their appropriate allocation. Transmission rates and their reasonableness lie exclusively within FERC’s jurisdiction, and this singular LON proceeding is not the appropriate forum to introduce heightened standards of approval for transmission line applications serving large load customers or to predict the outcome of ongoing large-load interconnection policy proceedings.

---

<sup>79</sup> See Section V.B.3.b.v., *infra*.

Therefore, and as more fully explained below, PPL Electric has demonstrated that there is a need for the Project under 52 Pa. Code § 57.76(a)(1).

**1. The Commission’s need determination under 52 Pa. Code § 57.76(a)(1) relates to the proposed HV transmission lines**

The Commission’s need determination in this proceeding is limited to whether there is a need for the HV transmission lines proposed as a part of the Tomhicken Project.<sup>80</sup> The Commission’s regulations define a “HV transmission line” or “HV line” as “[a]n overhead electric supply line with a design voltage greater than 100,000 volts.”<sup>81</sup> Likewise, the Commission’s pre-siting and construction approval process under 52 Pa. Code Ch. 57, Subch. G concerns applications by public utilities “for authorization to locate and construct a HV transmission line or any portion thereof . . .”<sup>82</sup> Thus, the scope of the Commission’s review in this proceeding is limited to the proposed HV transmission lines.

Non-HV transmission line facilities are not within the scope of review or approvals sought by PPL Electric under Ch. 57, Subch. G, which consistently reference “the proposed HV line” and the showings that utilities must make regarding the proposed HV line, not other utility facilities.<sup>83</sup> This narrow scope was confirmed by the Commonwealth Court in *Board of Supervisors of Springfield Twp. v. Pa. PUC*, in which the court rejected a municipality’s arguments that the Commission was required to consider alternative engineering configurations as part of its evaluation of alternative routes for the proposed transmission lines.<sup>84</sup> The Commonwealth Court emphasized that the requirements in Subchapter G were limited to the proposed HV lines, reviewed

---

<sup>80</sup> See 52 Pa. Code § 57.76(a)(1) (“[t]he Commission will not grant the application, either as proposed or as modified, unless it finds and determines as to the proposed HV line . . . [t]hat there is a need for it) (emphasis added).

<sup>81</sup> 52 Pa. Code § 57.1.

<sup>82</sup> *Id.* at 57.71.

<sup>83</sup> In contrast, in Section 619 zoning exemption proceedings, the Commission does look past the proposed HV lines to determine whether proposed utility “buildings” are reasonably necessary for the convenience or welfare of the public and, therefore, exempt from local zoning ordinances. *Del-AWARE Unlimited, Inc. v. Pa. PUC*, 513 A.2d 593, 596 n.4 (Pa. Cmwlth. 1986), *allowance for appeal denied*, 527 A.2d 547 (Pa. 1987).

<sup>84</sup> See *Bd. of Supervisors of Springfield Twp. v. Pa. PUC*, 41 A.3d 142 (Pa. Cmwlth. 2012) (“*Springfield Twp.*”).

the relevant language contained in the regulations, and concluded that “[n]one of the regulations dealing with HV transmission line applications require the Commission to consider alternative configurations as the Township contends.”<sup>85</sup> The same inquiry holds true here. The Tomhicken Switchyard facilities<sup>86</sup> are not HV lines, and the Customer’s service location is not an HV line. As such, the Commission cannot and should not base its review of the proposed HV transmission lines upon these non-HV transmission line facilities.

Even if the non-HV transmission line facilities are within the scope of this proceeding, it is well settled that a public utility must decide in the first instance what facilities<sup>87</sup> are needed and where to locate those facilities, unless the public utility acted in an arbitrary or capricious manner, its decision should remain undisturbed.<sup>88</sup> PPL Electric established that the non-transmission line facilities proposed as part of the Tomhicken Project are needed to properly serve the Customer, are appropriately designed to anticipate future load needs in the area, and will sensibly be constructed adjacent to the Customer’s facilities on the Customer’s property.<sup>89</sup> No further determinations regarding the contemplated non-HV transmission line facilities are required.<sup>90</sup>

The HV transmission lines proposed in this LON consist of: (1) approximately 1.1 miles of new Tap Lines that will connect the existing Susquehanna-Harwood #1 & #2 230 kV lines into the new Tomhicken Switchyard; and (2) two new approximately 0.1-mile-long Connecting Lines that will connect the new Tomhicken Switchyard to the new Customer-owned 230-34 kV

---

<sup>85</sup> *Id.* at 148.

<sup>86</sup> For example, the proposed Tomhicken Switchyard will include bus equipment, circuit breakers, motor operated disconnects, transformers, and line and control relays. PPL Electric St. No. 1-RJ, p. 12.

<sup>87</sup> 66 Pa.C.S. § 102 (defining “facilities”). An HV transmission line is just one type of “facility,” and the specific facility that is the focus of the Commission’s siting and construction review under 52 Pa. Code Ch. 57, Subch. G.

<sup>88</sup> See e.g., *Lower Chichester Township v. Pa. PUC*, 119 A.2d 674 (Pa. Super 1956); *Abbington Electric Co. v. Pa. PUC*, 198 A. 901 (Pa. Super 1938).

<sup>89</sup> See, e.g., PPL Electric St. No. 1, pp. 6-7; PPL Electric St. No. 1-R, pp. 20-21.

<sup>90</sup> *Springfield Twp.* at 148-49 (emphasizing that the Commission’s transmission line siting regulations do not require or contemplate Commission review and determination regarding alternative engineering configurations).

substation.<sup>91</sup> The proper scope of the ALJs' and the Commission's considerations in this matter is focused upon the approximately 1.3 miles of proposed HV lines.

Importantly, much of the evidence presented by OCA is specific to the proposed Tomhicken Switchyard and **not** the proposed HV transmission lines.<sup>92</sup> For example, OCA Witness Mr. Konidena challenges the Company's design decisions regarding the Tomhicken 230 kV Switchyard.<sup>93</sup> However, the OCA's concerns regarding the configuration and design of the switchyard facilities are not the proper focus of the need inquiry under 52 Pa. Code § 57.76(a)(1) because these facilities are not subject to the Commission's pre-siting and construction approval process for HV lines.<sup>94</sup> For this reason, the OCA's claims regarding the Tomhicken Switchyard facilities bear little to no weight on the issues pending before the ALJs and the Commission.

## **2. An undisputed need for the proposed HV transmission lines exists**

The HV transmission lines proposed in this LON are driven by the undisputed need to provide 230 kV electric service to the Customer at an initial load of 12 MW. As explained in the Direct Testimony of PPL Electric Witness Mr. Lookup, the Customer's load will increase in stages to approximately 276 MW by December 2027, and to approximately 965 MW by 2033. The Customer will be served by the proposed Tomhicken Switchyard, which bifurcates the Susquehanna-Harwood #1 and #2 230 kV Transmission Lines to create the Susquehanna-

---

<sup>91</sup> PPL Electric St. No. 1, p. 2.

<sup>92</sup> See, e.g., OCA St. 2, p. 4, lines 14-17 (failing to distinguish the Tomhicken Switchyard facilities from the HV transmission lines at issue in this proceeding), p. 5, lines 11-13 (relating to the cost allocation of the breaker-and-a-half ("BAAH") design within the proposed Tomhicken Switchyard), p. 6 (claiming that the Tomhicken Switchyard consists of the HV transmission lines being constructed), p. 30, line 1 through p. 32, line 3 (offering critiques and recommendations related to the proposed Tomhicken Switchyard configuration); OCA St. 2-SR, p. 8 line 17 through p. 10, line 2 (criticizing the BAAH configuration and related transmission cost allocation); p. 14, line 13 through p. 19, line 14 (criticizing the BAAH configuration and related transmission cost allocation); p. 21, line 4 through p. 23, line 2 (concerning the BAAH configuration and Phase 2 design and necessity), p. 26, line 1 through p. 30 line 17 (discussing the cost allocation of Tomhicken Switchyard facilities).

<sup>93</sup> OCA St. 2, pp. 24-30. Ultimately, however, Mr. Konidena agreed that the BAAH design "provides greater operational reliability than a ring bus configuration." OCA Statement 2, p. 30.

<sup>94</sup> *Springfield Twp.* at 148-49.

Tomhicken #1 and #2 and the Tomhicken-Harwood #1 and #2 230 kV Transmission Lines.<sup>95</sup> No party disputes that the Customer has requested transmission level service and that interconnection is required to provide that service.<sup>96</sup>

PPL Electric is required to provide the Customer with its requested service. Section 1501 of the Code obligates PPL Electric to “furnish and maintain adequate, efficient, safe, and reasonable services and facilities,”<sup>97</sup> and PPL Electric has a general obligation to serve customers in its service territory in a non-discriminatory manner, subject to the terms and conditions of its tariffs and certificate of public convenience.<sup>98</sup> PPL Electric’s “obligation to serve, by its very nature, includes the responsibility to site and construct transmission and distribution facilities to meet the needs of customers within its service territory.”<sup>99</sup> Pennsylvania appellate courts and the Commission have further confirmed this obligation to serve.<sup>100</sup>

Moreover, PPL Electric’s Commission-approved tariff establishes the terms under which the Company can and must provide the Customer with service. PPL Electric’s tariff has the force

---

<sup>95</sup> PPL Electric St. No. 1, pp. 3-4.

<sup>96</sup> See, e.g., OCA St. 2, p. 45 (“The alternatives analysis confirms that no viable alternative exists to a physical transmission switchyard for a 965 MW customer requiring 230 kV interconnection. My testimony does not contest the need for the Tomhicken Switchyard to serve this customer.”); see also OCA St. 2, pp. 8, 10, 16, 21, 25, 36, 38, 42-43, and OCA St. 2-SR, pp. 11-12 (conceding that the Customer requested interconnection, while expressing disagreement with PPL Electric’s design choices to meet that need); Cook Direct, pp. 5-6 (acknowledging that the Customer has requested service but disputing the propriety of the Customer’s planned development and enterprise); Zola Direct, Public Input Hearing Tr. 201 (acknowledging that the Customer has requested service but disputing the propriety of the Customer’s planned development and enterprise).

<sup>97</sup> 66 Pa.C.S. § 1501; see also *id.* § 1103(a).

<sup>98</sup> See, e.g., 66 Pa.C.S. §§ 1103, 1501, 2802(12); 52 Pa. Code § 57.19; *Popowsky v. Pa. PUC*, 910 A.2d 38, 48-56 (Pa. 2006); *Pa. Gas Co. v. Pub. Serv. Comm’n*, 83 Pa. Super. 557, 565-66 (1924); *Philadelphia Transp. Co. v. Pa. PUC*, 37 A.2d 138, 147 (Pa. Super. 1944); *Application of Leatherstocking Gas Co., LLC, for Approval to Supply Natural Gas Serv. to the Pub. in N. Susquehanna Cnty., in the Twps. of Bridgewater, Forest Lake, Great Bend, Harmony, New Milford, and Oakland, and in the Boroughs of Great Bend, Hallstead, Lanesboro, Montrose, New Milford, Oakland and Susquehanna*, Docket No. A-2011-2275595, 2012 Pa. PUC LEXIS 1391, at \*22 (Order entered Aug. 30, 2012).

<sup>99</sup> *Application of Pennsylvania Electric Co.*, Docket No. A-110400F0033, 1997 Pa. PUC LEXIS 63, \*34 (Initial Decision dated Mar. 4, 1997).

<sup>100</sup> See, e.g., *Pa. Gas Co. v. Pub. Serv. Comm’n*, 83 Pa. Super. 557, 565-66 (1924); *Philadelphia Transp. Co. v. Pa. PUC*, 37 A.2d 138, 147 (Pa. Super. 1944); *Application of Leatherstocking Gas Co., LLC, for Approval to Supply Natural Gas Serv. to the Pub. in N. Susquehanna Cnty., in the Twps. of Bridgewater, Forest Lake, Great Bend, Harmony, New Milford, and Oakland, and in the Boroughs of Great Bend, Hallstead, Lanesboro, Montrose, New Milford, Oakland and Susquehanna*, Docket No. A-2011-2275595, 2012 Pa. PUC LEXIS 1391, at \*22 (Order entered Aug. 30, 2012).

and effect of law,<sup>101</sup> and is binding on all concerned parties, including PPL Electric.<sup>102</sup> PPL Electric must adhere to the terms and conditions of its tariff when providing service, and cannot depart from those terms and conditions absent modification.<sup>103</sup> In turn, a public utility's Commission-approved tariff provisions are *prima facie* reasonable, and challengers have a "very heavy burden of providing that the facts and circumstances leading to the creation of the tariff provision have changed so drastically as to render the application of the tariff provision unreasonable."<sup>104</sup>

Pertinent here, PPL Electric's Commission-approved tariff Rate Schedules LP-5 and LP-6 are applicable to customers taking service at and above 69 kV.<sup>105</sup> As PPL Electric Witness Mr. Lookup described, the Customer will be served under Rate Schedule LP-6, based upon its anticipated peak electric demand and the anticipated in-service date.<sup>106</sup> Rate Schedule LP-6, as approved by the Commission on June 11, 2026,<sup>107</sup> is specifically applicable to large load (e.g., data center) customers that commenced service on or after October 1, 2025, and who have a peak electric demand of 50 MW or greater at a single facility, or at least equal to 75 MW in the aggregate among facilities within a 10-mile radius.<sup>108</sup> In addition to the binding terms of Rate Schedule LP-

---

<sup>101</sup> See, e.g., *Brockway Glass Co. v. Pa. PUC*, 437 A.2d 1067, 1070 (Pa. Cmwlth. 1981) ("Tariffs, of course, can include schedules of rates, and all rules, regulations, practices or contracts involving rates and have the force of law and are binding on both the utility and its customer.") (internal citation omitted).

<sup>102</sup> 66 Pa.C.S. § 1303.

<sup>103</sup> *Id.*; see also *PPL Elec. Utils. Corp. v. City of Lancaster*, 125 A.3d 837, 842 n.7 (Pa. Cmwlth. 2015) ("A tariff has the force of law and is binding on the utility and its customers") (citing *Penn. Elec. Co. v. Pa. PUC*, 663 A.2d 281, 284 (Pa. Cmwlth. 1995); *Kossmann v. Pa. PUC*, 694 A.2d 1147, 1151 (Pa. Cmwlth. 1997) ("Once approved, the tariff provisions are legally binding on both the utility and its customers."))

<sup>104</sup> *Shenango Twp. Bd. of Supervisors v. Pa. PUC*, 686 A.2d 910, 914 (Pa. Cmwlth. 1996) (emphasis added) (citations omitted).

<sup>105</sup> PPL Electric St. No. 1-R, p. 11.

<sup>106</sup> PPL Electric St. No. 1-R, p. 11. Mr. Lookup also explained that the Customer initially requested service from PPL Electric under prior Rate Schedule LP-5, and executed an appropriate customer service agreement and ESA pursuant to that rate schedule. Since that time, Rate Schedule LP-6 has been approved and would apply to this Customer upon interconnection. PPL Electric is also in the process of renegotiating the ESA with the Customer to meet the requirements of Rate Schedule LP-6.

<sup>107</sup> See *Pa. PUC, et al. v. PPL Electric Utilities Corp.*, Docket Nos. R-2025-3057164, et al. (Opinion and Order entered June 11, 2026).

<sup>108</sup> PPL Electric St. No. 1-R, p. 11.

6, the Customer has entered into an ESA with PPL Electric, which includes additional terms for the proposed interconnection as well as built-in protections that will safeguard the Company and other transmission ratepayers from any stranded costs, should the Project not move forward or the Customer's projected load not materialize. Mr. Lookup discussed the protections contained in Rate Schedule LP-6 and the ESA at length in his Rebuttal Testimony.<sup>109</sup> OCA Witness Mr. Felder also admitted to having reviewed Rate Schedule LP-6 and his awareness of many of the specific requirements contained in this rate schedule that would apply to this Customer.<sup>110</sup> Rate Schedule LP-6 and the ESA, therefore, establish the requirements the Customer must adhere to in order to obtain service. All evidence of record demonstrates that the Customer has agreed to adhere to the requirements contained in PPL Electric's existing, Commission-approved tariff and the ESA.<sup>111</sup>

The other parties do not dispute that there is a need for PPL Electric to interconnect the Customer and provide it transmission-level service. OCA's witnesses have conceded, in written testimony, direct admissions, and on the stand, that a need for these HV lines exists.<sup>112</sup> Indeed, both OCA Witnesses Felder and Konidena admitted that there is a need for the Project and that they "do[] not contest the need for the Tomhicken Switchyard to serve this customer."<sup>113</sup> While Protestants Cook and Zola dispute the status of Customer's proposed development, they do not dispute that the Customer has requested service, has executed the appropriate agreements, and has agreed to obtain service from PPL Electric under its Commission approved tariff.<sup>114</sup> Thus, an

---

<sup>109</sup> See PPL Electric St. No. 1-R, pp. 12-14.

<sup>110</sup> Tr. 642-648. PPL Electric further notes that all of these tariff requirements were adopted pursuant to a Commission-approved settlement in its most recent base rate case at Docket Nos. R-2025-3057164, et al., and that OCA was a signatory to this settlement. While PPL Electric acknowledges that a settlement is not precedential, it is important to recognize that PPL Electric **has adhered to the terms and conditions of this settlement** with respect to the terms of service applicable to the instant Customer, and OCA has not demonstrated otherwise.

<sup>111</sup> See, e.g., PPL Electric St. No. 1-R, p. 12.

<sup>112</sup> See, e.g., OCA St. 1, p. 21 (acknowledging that the transmission upgrades contemplated under the Project are needed to serve the Customer); OCA St. 2, p. 62 (explaining that the reliability need for this Project is predicated on the Customer's interconnection); OCA St. 2-SR, pp. 32-33 (quoting direct testimony explaining that the reliability need for this Project is predicated on the Customer's interconnection)

<sup>113</sup> PPL Electric Cross Exhibit No. 17.

<sup>114</sup> See, e.g., Zola Direct, Public Input Hearing Tr. 202-04; Cook Direct, p. 7.

undisputed need for the proposed HV transmission lines exists and is supported by the record evidence in this proceeding.

**3. PPL Electric demonstrated that the subject HV lines are needed to safely and reliably serve the Customer's projected Phase 1 load**

PPL Electric has a responsibility to provide transmission assets and maintain them in an adequate, efficient, safe, reliable, and reasonable manner to meet the needs of the electric system and the expectations of its customers.<sup>115</sup> To achieve this, PPL Electric engages in proactive planning and action to ensure that its system operates safely and reliably and can supply electricity to all customer loads in a manner that is reliable and economical.<sup>116</sup> As explained in the LON, PPL Electric's transmission system planning process ensures that the Company's transmission facilities are planned and constructed so that they: (1) "can accommodate forecasted system flows during summer and winter peak load"; (2) "can adequately serve each customer's need regarding capacity, voltage, and reliability for all load levels throughout the daily load cycle"; (3) "can sustain contingencies and disturbances with minimal customer service interruptions"; and (4) "are in conformance with [NERC], [PJM], and the Transmission Owner's reliability criteria for all normal and emergency operating conditions."<sup>117</sup>

The Tomhicken Project is a Supplemental Project approved by PJM. PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 1 describes the transmission planning process for supplemental projects like this one, which demonstrates PJM's thorough evaluation designed to ensure that the proposed solution is appropriate and will not cause harm to the transmission system as a whole. As explained in this document:

New load customers are covered under Attachment M-3 Procedure of the Open Access Transmission Tariff ("OATT"). PPL Electric submits to PJM and presents the supplemental project assumptions

---

<sup>115</sup> PPL Electric St. 1, at p. 3.

<sup>116</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 1, p. 4.

<sup>117</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 1, p. 4.

and methodology yearly at the PJM Subregional Regional Transmission Expansion Planning (“RTEP”) December meeting. The supplemental project driver of “Customer Service” is used for new customer requests. PPL Electric submits the project need information to PJM detailing the requested load amount, location, and requested in-service date. PPL Electric then presents the need at the next TEAC (>200 kV) or Subregional-RTEP (<200 kV) meeting. At a subsequent meeting, PPL Electric presents the proposed solution to serve the requested load. PPL Electric provides the solution files to PJM including changes to the network model, contingency changes, and short-circuit model changes. PJM then studies the proposed solution to ensure that the changes do no harm (DNH test) to the system by creating overloads, voltage violations, or other criteria violations. PPL Electric will include in the solution any upgrades that are required to serve the customer load in the DNH case year. When the project passes the DNH test a supplemental project number is assigned and PPL Electric submits the project into the local plan. The project then is added into the RTEP model in the next case creation cycle. Any customer load increases above the DNH harm case year will be included in the PPL Electric’s Load Forecast submission to PJM. The load increases are then incorporated into the RTEP case creation. Any overloads, voltage violations, or other criteria violations caused by the increase of load on PPL Electric’s system are then resolved through the PJM Competitive Planning Process.<sup>118</sup>

PPL Electric presented the Project to PJM, completed the M-3 Supplemental Project Process, and conducted the DNH tests. PJM assigned the Project supplemental number 3528.<sup>119</sup> Thus, PJM has fully evaluated the Project need and design and has determined that it will appropriately serve the Customer without causing harm to the Company’s transmission system.

**4. PPL Electric demonstrated there are no reasonable or feasible alternative engineering solutions to serve the Customer’s need**

PPL Electric also performed a comprehensive analysis to identify feasible and cost-effective solutions to best serve the Customer, while seeking to minimize impacts upon the local environment and surrounding community. PPL Electric’s evaluation of alternatives focused on serving the Customer’s initial load, while also accommodating the Phase 2 work contemplated to

---

<sup>118</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 1, pp. 4-5.

<sup>119</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 1, p. 5.

address the further needs of this Customer and others at a later date.<sup>120</sup> Here, the Company considered two feasible solutions and ultimately chose the solution proposed in this LON.

First, PPL Electric considered expanding the existing Harwood 230 kV Substation to install three new 230 kV bays, which would require relocating the existing 230 kV capacitor to accommodate the new 230 kV bays and installation of seven new 230 kV breakers, as well as re-termination of the existing Susquehanna #1 & #2 lines into the new bay positions.<sup>121</sup> In addition to the substation expansion, this alternative would require installing two new double-circuit 230 kV transmission lines over approximately 3 miles within new greenfield ROW to connect to the Customer's substation.<sup>122</sup>

Second, PPL Electric considered (a) splitting and extending the existing Susquehanna-Harwood #1 & #2 230 kV Transmission Lines to terminate into a new 230 kV switchyard, and (b). extending two double-circuit 230 kV transmission lines from the new 230 kV switchyard to the new Customer-owned 230-34 kV substation.<sup>123</sup> Ultimately, PPL Electric selected this alternative as the proposed solution, as fully explained in Attachment 1 to the LON.

PPL Electric rejected the first alternative due to the significant environmental, community, and landowner impact anticipated by the installation of approximately 3 miles of new 230 kV transmission lines, which were not present under the proposed solution. In addition, PPL Electric anticipates that the ultimate demand of the customers served by the facilities involved with the Project will be approximately 2,000 MW. This factor, combined with the need anticipated as part of the scope of Phase 2, would build out all but one line position at Harwood substation, which in turn would limit the ability of PPL Electric to accommodate other requests and load growth in the

---

<sup>120</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 1, p. 7.

<sup>121</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 1, p. 7.

<sup>122</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 1, p. 7.

<sup>123</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 1, p. 7.

Hazleton area. As designed, the Tomhicken Project best positions the Company to meet this future load growth while also minimizing the environmental impacts of the new construction.<sup>124</sup>

OCA was the only party that raised potential “alternatives” to the Company’s proposed solution. PPL Electric established that none of these “alternatives” are feasible, a conclusion that OCA Witness Mr. Konidena agreed with.<sup>125</sup> In total, Mr. Konidena evaluated four alternatives to the Project, including Dynamic Line Ratings (“DLR”), Non-Transmission Alternatives (“NTA”), distribution system connection, and direct connection to the proposed Nescopeck 230 kV Switchyard.<sup>126</sup> PPL Electric Witness Mr. Swartzentruber explained that Mr. Konidena conceded that three of these engineering alternatives were not feasible:

First, with respect to DLRs, Mr. Konidena agreed with PPL Electric’s conclusion that connecting Customer load with DLR alone is not a viable alternative, because a physical interconnection requirement exists independently of line ratings, and because DLR is not a valid solution for Transmission Planning load flow analysis. (OCA Statement 2, pp. 33-34.) Next with respect to NTAs, Mr. Konidena agreed that the physical transmission interconnection required by the Project cannot be replaced by NTA technology. (OCA Statement 2, p. 36.) Third, Mr. Konidena agreed with PPL Electric that the Customer load “cannot be served from a 12 kV distribution system,” and thus distribution system connection is not a viable alternative. (OCA Statement 2, p. 38.)<sup>127</sup>

As PPL Electric Witness Mr. Swartzentruber summarized, “I agree with Mr. Konidena’s testimony that these three alternatives are not suitable. In fact, there appears to me to be zero dispute that none of the three engineering solution alternatives (i.e., DLR, NTAs, distribution system connection) are reasonable or feasible to address the identified need for this Project.”<sup>128</sup> Thus, it is undisputed that three of OCA’s “alternatives” could not feasibly meet the Project’s need.

---

<sup>124</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 1, p. 7.

<sup>125</sup> See PPL Electric St. No. 2-R, pp. 4-5.

<sup>126</sup> OCA Statement 2, p. 32. The proposed Nescopeck 230 kV Switchyard is contemplated in Phase 2 and is not planned as part of Phase 1, which is the subject of this LON.

<sup>127</sup> PPL Electric St. No. 2-R, pp. 4-5.

<sup>128</sup> PPL Electric St. No. 2-R, p. 5.

As a fourth option, Mr. Konidena proposed the so-called “Nescopeck Alternative,” under which PPL Electric’s proposed 1.1-mile-long transmission lines—served by facilities located on the Customer’s property—would be replaced with a 9-mile-long greenfield HV transmission line served by facilities not contemplated for construction until Phase 2 of the Tomhicken Project and located on properties other than property owned by PPL Electric or the Customer to be served. PPL Electric Swartzentruber pointed out the obvious flaws with the “Nescopeck Alternative”:

Specifically, there are a number of engineering factors associated with this proposal that would substantially increase the cost and complexity of the Project, warranting its rejection. First is landowner and right-of-way (“ROW”) considerations. The Company would almost certainly be required to acquire many more parcels of land or easements over land in order to obtain sufficient ROW for the Project. This would involve substantial negotiation with landowners and the creation of engineering and design solutions depending on the Company’s ability to acquire ROW. The proposal would also require additional Erosion and Sediment controls for roads, construction pads, or other structures. Additionally, the Company would anticipate the potential for more significant terrain challenges resulting from this alternative because of the topography between the proposed Nescopeck and Tomhicken sites. This would raise costs and could require additional structures. There is also additional permitting risk associated with this alternative, as the Company would be required to obtain more permits and agency approvals for things like railroads, highways, streams, and airports. This alternative also begets the additional consideration of viewsheds, landowner impacts, and electrical and ground clearances. Another critical consideration is the exposure resulting from the line length. By nature, longer transmission lines result in more exposure to elements and therefore a higher risk of outages. The Company would have to consider whether the need for the longer, 9-mile transmission line segment would outweigh the engineering solutions required to mitigate risks and exposure. This would also increase the number of new structures required from 13 to approximately 60.<sup>129</sup>

---

<sup>129</sup> PPL Electric St. No. 2-R, pp. 5-6.

Mr. Konidena's "Nescopeck Alternative" appears to be a reverse-engineered solution designed to address the perceived cost allocation issues raised by the OCA in this proceeding.<sup>130</sup> In presenting the "Nescopeck Alternative," Mr. Konidena has simply proposed a configuration more likely to allocate the majority of Project costs to the customer without any analysis of engineering, environmental, or social factors.<sup>131</sup> The "Nescopeck Alternative" is neither feasible nor reasonable and should be rejected.

**5. OCA's claims regarding transmission costs, cost allocation, and cost recovery do not alter the fact that an undisputed need exists**

Although OCA conceded that there is a need for the subject HV transmission lines, it appears that it intends to contest the "need" based upon issues of cost, cost allocation, and cost recovery.<sup>132</sup> Importantly, OCA's claims regarding transmission costs, cost allocation, and cost recovery do not alter the fact that an undisputed need for the Tomhicken Project exists. As explained above, OCA's witnesses have explicitly conceded that a need exists and that they do not dispute that need in their testimony. These concessions were made in their direct testimony and conclusively established through admissions made by both Mr. Felder and Mr. Konidena.<sup>133</sup>

Contrary to OCA's characterizations, this LON proceeding does not include a request for Commission approval of the Project's costs, which will ultimately be placed into FERC-

---

<sup>130</sup> See *Summit-Lackawanna; Susquehanna-Roseland Commission Order* at \*114; see also *In Re: Application of PPL Electric Utilities Corporation (PPL) for Approval of the Siting and Reconstruction of the Proposed Coopersburg # 1 and # 2 138/69 kV Tap in Upper Saucon Township, Lehigh County and Springfield and Richland Townships, Bucks County, Pennsylvania (Coopersburg kV transmission line)*, Docket Nos. A-2008-2022941, *et al.*, at p. 31 (Opinion and Order entered July 24, 2009) ("Further, we do not accept the proposition implicit in this Exception that PPL or any public utility applicant must perform an environmental analysis on every alternative route that might be available.")

<sup>131</sup> See OCA St. 2, p. 43.

<sup>132</sup> See Tr. 588.

<sup>133</sup> See PPL Electric Cross Exhibit No. 17. PPL Electric maintains that the legal effect of OCA's witnesses admissions was to conclusively establish these facts for the record. 52 Pa. Code § 5.350(f) ("*Effect of admission.* A matter admitted under this section is conclusively established unless the presiding officer on motion permits withdrawal or amendment of the admission. An admission by a party under this section is for the purpose of the pending action only and is not an admission by him for another purpose. An admission may not be used against a party in another proceeding."). PPL Electric reserves the right to respond to any attempts by OCA to qualify these admissions in its Reply Brief.

jurisdictional transmission rates, or their appropriate allocation or recovery.<sup>134</sup> While the Commission oversees the siting and location of HV transmission lines, issues of transmission cost allocation are under the exclusive jurisdiction of the FERC.<sup>135</sup> As the Third Circuit explained:

[T]he Supreme Court has consistently found the States' attempts to second-guess the reasonableness of FERC tariffs preempted pursuant to the filed-rate doctrine. That doctrine provides that interstate power rates filed with FERC or fixed by FERC must be given binding effect by state utility commissions determining intrastate rates . . . as a matter of federal pre-emption through the Supremacy Clause. Once FERC determines that a rate is 'reasonable,' state utilities cannot impose any inconsistent rate—even when acting in an area of exclusive state jurisdiction.<sup>136</sup>

FERC also recently confirmed that its jurisdiction squarely includes the ability to investigate the reasonableness of PJM tariff provisions related to interconnecting large load data centers with the interstate transmission system, stating:

That authority includes jurisdiction over the wholesale sale and transmission of electricity in interstate commerce, including all facilities used for such sale and transmission. As relevant here, the Commission must ensure that the rates, charges, and classifications for such transmission of electricity--as well as the practices directly affecting such transmission of electricity--are just and reasonable and not unduly discriminatory or preferential. The Supreme Court has held that the Commission's authority over interstate transmission is not limited to wholesale transmission service and that the Commission has authority over unbundled retail transmission service. As part of its transmission authority, the Commission has exercised jurisdiction over the terms of certain interconnections to the transmission system as an element of transmission service, including the interconnection of wholesale load to the transmission system.<sup>137</sup>

---

<sup>134</sup> See OCA St. 2, pp. 108-09.

<sup>135</sup> 16 U.S.C. §§ 824(b), 824e(a); see also *Hughes v. Talen Energy Mktg., LLC*, 578 U.S. 150, 153 (2016).

<sup>136</sup> *Transource Pa. LLC v. DeFrank, et al.*, 156 F.4th 351, 376 (3d Cir. 2025) (internal quotations and citations omitted).

<sup>137</sup> *PJM Interconnection, L.L.C.*, 195 F.E.R.C. ¶ 61,211, Docket No. EL26-67-000, 2026 FERC LEXIS 842, at \*40-41 (June 18, 2026) (emphasis added). Notably, OCA witness Felder specifically cites to this order, which makes clear both (1) the scope of FERC's jurisdiction over these issues and (2) that FERC is taking action to address the issues that Mr. Felder proceeds to raise in his testimony. See OCA St. 1, p. 11.

This position is consistent with the routine language included in Commission orders approving letters of notification, which specifically notes that no decisions are being made about project costs or accounting.<sup>138</sup>

---

<sup>138</sup> See, e.g., *Letter of Notification of Mid-Atlantic Interstate Transmission, LLC and FirstEnergy Pa. Elec. Co. for approval to construct the East Sayre – East Towanda 115 kV Transmission Line Interconnection Project located in Wysox Township, Bradford County, Pennsylvania*, Docket Nos. A-2026-3063996, et al., at p. 5 (Order entered Oct. 1, 2026) (stating that the Commission’s “approval of the Letter of Notification does not address the issues of accounting treatment, and cost recovery”); *Letter of Notification of Keystone Appalachian Transmission Co. and FirstEnergy Pa. Elec. Co. for approval to construct the Bredinville – McCalmont 138 kV Transmission Line Interconnection Project located in Butler Township, Butler County, Pennsylvania*, Docket Nos. A-2026-3063030, et al., at p. 5 (Order entered Oct. 1, 2026); *Letter of Notification of Mid-Atlantic Interstate Transmission, LLC for approval to construct 230 kV Transmission Line connections to the Three Mile Island 500 kV Substation and TMI 230 kV Substation located in Londonderry Township, Dauphin County, Pennsylvania*, Docket No. A-2026-3064369, at p. 5 (Order entered Oct. 1, 2026); *Letter of Notification of Mid-Atlantic Interstate Transmission, LLC for Approval of the Jackson – Three Mile Island 230 kV Transmission Line Rebuild and Reconductor Project in Londonderry Township, Dauphin County, Conoy Township, Lancaster County, and Conewago, Dover, Jackson, and Newberry Townships, York County, Pennsylvania*, Docket No. A-2026-3063643, at p. 5 (Order entered Aug. 27, 2026); *Letter of Notification of Transource Pennsylvania, LLC for Approval to Construct 230 kV and 500 kV transmission lines to Bramah Substation located in Peach Bottom Township, York County, Pennsylvania*, Docket No. A-2026-3060029, 2026 Pa. PUC LEXIS 247, at \*6 (Order entered Aug. 6, 2026); *Letter of Notification of PPL Electric Utilities Corporation for Approval to Relocate approximately 0.4 miles of the Keystone – Juniata 500 kV Transmission Line and Juniata – Alburtis 500 kV Transmission Line in Centre Township, Perry County, Pennsylvania*, Docket No. A-2025-3059384, 2026 Pa. PUC LEXIS 174, \*7 (Order entered Jun. 4, 2026); *Letter of Notification of PPL Electric Utilities Corporation for approval to reconstruct a section of the Frackville – Columbia 230 kV Transmission Line located in Catawissa, Cleveland, Conyngham, Franklin, Hemlock, Locust, Montour, and Roaring Creek Townships, Columbia County, and Butler Township, Schuylkill County, Pennsylvania*, Docket No. A-2025-3057843, 2026 Pa. PUC LEXIS 40, \*9 (Order entered Feb. 19, 2026); *Letter of Notification of PPL Electric Utilities Corporation for approval to construct the Susquehanna 230 kV and 500 kV Transmission Line Project in Conyngham and Salem Townships, Luzerne County, Pennsylvania*, Docket Nos. A-2025-3056806, P-2025-3056867, at p. 9 (Order entered Sept. 25, 2025); *Letter of Notification of PPL Electric Utilities Corporation for approval to reconstruct the Fox Hill – Shawnee 230 kV Transmission Line and Shawnee – Bushkill 230 kV Transmission Line located in Smithfield Township, Monroe County, Pennsylvania*, Docket No. A-2025-3054291, 2025 Pa. PUC LEXIS 237, \*9 (Order entered Jul. 24, 2025); *Letter of Notification of PPL Electric Utilities Corporation for approval to reconstruct the Harwood – East Palmerton 230 kV Transmission Line and Siegfried – East Palmerton 230 kV Transmission Line located in Jim Thorpe Borough and Banks, Franklin, Lehigh, Lower Towamensing, Packer, Penn Forest, and Towamensing Townships, Carbon County, Hazle Township, Luzerne County, and Allen and Lehigh Townships, Northampton County, Pennsylvania*, Docket No. A-2024-3047924, 2024 Pa. PUC LEXIS 175, \*10 (Order entered Jun. 13, 2024); *Letter of Notification of PPL Electric Utilities Corporation for approval to reconstruct sections of the Siegfried – Frackville 230 kV Transmission Line, Eldred – Frackville 230 kV Transmission Line, and Columbia – Frackville 230 kV Transmission Line located in Butler Township, Schuylkill County, Pennsylvania*, Docket No. A-2023-3040694, 2023 Pa. PUC LEXIS 237, \*8 (Order entered Sep. 21, 2023); *Letter of Notification of PPL Electric Utilities Corporation for approval to reconstruct the South Akron-Millwood 230 kV Transmission Line located in East Lampeter, Pequea, Upper Leacock, West Earl, and West Lampeter Townships, Lancaster County, Pennsylvania*, Docket No. A-2022-3034794, 2022 Pa. PUC LEXIS 419, \*9 (Order entered Dec. 22, 2022); *Letter of Notification of PPL Electric Utilities Corporation for approval to reconstruct a section of the Saegers-Elmsport/Clinton-Elmsport 230 kV Transmission Line and the Saegers-Elmsport/Saegers-Clinton 230 kV Transmission Line located in Brady, Clinton, and Washington Townships, Lycoming County, Pennsylvania*, Docket No. A-2022-3034224, 2022 Pa. PUC LEXIS 337, \*9 (Order entered Oct. 27, 2022); *Letter of Notification of PPL Electric Utilities Corporation for approval to reconstruct the Manor-Millwood 230 kV Transmission Line located in Conestoga, Manor, and Pequea Townships, Lancaster County, Pennsylvania*, Docket No. A-2021-3029689, 2022 Pa. PUC LEXIS 101, \*8 (Order entered Mar. 10, 2022); *Letter of Notification of PPL Electric Utilities Corporation for approval to reconstruct the Elmsport-Lycoming # 2 and # 3 230 kV*

Approval of this LON does not require making any findings related to the reasonableness of transmission costs, or their allocation or recovery.<sup>139</sup> The Commission's regulations do not contemplate that it will consider evidence surrounding issues of FERC-jurisdictional transmission costs, or the allocation of such costs.<sup>140</sup>

OCA's attempts to attack the transmission costs, cost allocation, and cost allocation through this LON appear to be based on its mistaken belief that the Commission's siting and construction approval would foreclose the ability to challenge those issues. However, PPL Electric Witness Mr. Taylor explained that these FERC-jurisdictional issues can be and are more appropriately pursued at the federal level. For instance, OCA has, and would retain, its right under Section 206 of the Federal Power Act ("FPA") to challenge an existing transmission rate, tariff provision, classification, or practice as unjust or unreasonable. As PPL Electric Witness Mr. Taylor explained:

Importantly, approval of this LON would not predetermine how the broader issues raised by OCA are addressed in future proceedings. It would not constitute approval of the ultimate allocation or recovery of Project costs, nor would it limit OCA's ability to challenge those matters through applicable FERC processes or prevent PJM, FERC, or the Commission from adopting future requirements related to resource adequacy, curtailment, capacity responsibility, registries, or other large-load policies. Those issues remain subject to review in the proceedings specifically designed to address them.

Accordingly, I continue to believe that the Commission can evaluate and approve the facilities proposed in the Project based on the requirements governing LON approvals without determining the allocation, recovery, or treatment of Project costs or addressing the broader transmission planning, tariff, resource adequacy, and large load policy issues raised by OCA. Those issues can continue to be evaluated through ongoing state, regional, and federal proceedings

---

*Transmission Line located in Williamsport Borough and Armstrong and Washington Townships, Lycoming County, Pennsylvania*, Docket No. A-2021-3029267, 2022 Pa. PUC LEXIS 73, \*8 (Order entered Feb. 24, 2022).

<sup>139</sup> See 52 Pa. Code § 57.72(d)(4) (stating that the required content of a letter of notification is limited to the information set forth in 52 Pa. Code § 57.72(c) (1)—(3), (5) and (6)).

<sup>140</sup> 52 Pa. Code § 57.75(e).

in which they are currently being considered. The issue presented here remains whether the facilities PPL Electric proposes to construct satisfy the requirements applicable to this transmission siting proceeding.<sup>141</sup>

The Commission's approval of this LON would not mark a final determination regarding the Project's costs or their allocation.<sup>142</sup> OCA and other interested parties maintain the ability to argue their position(s) at the federal level, or to argue their policy position in any of the several ongoing federal and statewide proceedings that are actively addressing cost allocation for large load data center customers.<sup>143</sup>

**6. The Commission need not delay approval of the LON based upon litigation surrounding the Customer's land use and zoning approvals**

Lastly, while PPL Electric recognizes that there is ongoing litigation related to the Customer's land use and zoning approvals, the Company maintains that this pending litigation need not delay the Commission's review of the Project. As PPL Electric Witness Mr. Lookup emphasized, the Company is "not in the business of building transmission lines to nowhere that serve no purpose. PPL Electric will continue to coordinate with the Customer regarding its development progress to align its construction activities; however, the Company will only proceed with construction if a need persists."<sup>144</sup> Moreover, Commission precedent does not require a utility to obtain all necessary permits prior to approval, but instead conditions commencement of

---

<sup>141</sup> PPL Electric St. No. 5-RJ, p. 23.

<sup>142</sup> OCA's Answer to PPL Electric's Motion to Strike appears to concede this point. See OCA Answer to Motion to Strike, p. 12 ("OCA's witnesses have recommended changes concerning tariff provisions, cost allocation, cost recovery, or related matters does not render those recommendations irrelevant to the issues before the Commission. The OCA will not ask the Commission in its briefs to make determinations regarding PPL Electric's transmission rates, cost allocation, cost recovery, or tariff provisions.").

<sup>143</sup> See PPL Electric St. No. 5-RJ, pp. 8-12, 22-23. See also *Petition of PPL Electric Utilities Corporation for Approval of Its Non-Bypassable Consumer Protection Transmission Rider, Elimination of its Transmission Service Charge, Changes to Its Generation Supply Charges, Changes to Its Retail Tariff, and Changes to Its Electric Generation Supplier Coordination Tariff*, Docket Nos. P-2026-3065186, et al. The OCA also filed a Formal Complaint against PPL Electric with the Commission on October 2, 2026, at Docket No. C-2026-3065756 challenging the Company's transmission rate cost allocation policies.

<sup>144</sup> PPL Electric St. No. 1-R, pp. 14-15.

construction upon the utility obtaining all necessary permits.<sup>145</sup> Thus, to the extent that the Commission is concerned about pending land use litigation in this instance, the Commission could condition its approval and PPL Electric's commencement of the construction of the subject HV lines upon the Customer obtaining all necessary permits.

## **7. Conclusion regarding need**

PPL Electric has demonstrated that there is a need for the proposed HV transmission lines; these lines are needed to interconnect and provide transmission level service to the Customer, pursuant to the terms and conditions of PPL Electric's existing, Commission-approved tariff. None of the parties dispute this need and OCA concedes that this need exists. While OCA advanced alternatives to the Project as proposed, OCA failed to demonstrate that any of its proposed alternatives are reasonable. Moreover, OCA's policy-based challenges should be denied, as they rely on the Commission making determinations outside the scope of the Commission's jurisdiction and outside the limited scope of this proceeding. Even if OCA's proposed alternatives or cost allocation concerns were valid—and they are not—PPL Electric addressed these concerns by evaluating each alternative advanced and rebutting OCA's policy arguments during the course of this proceeding. Therefore, and for the reasons more fully explained in the Company's testimony and exhibits, the ALJs and the Commission should find and determine that there is a need for the HV transmission lines proposed in this LON.

### **C. PPL ELECTRIC DEMONSTRATED THAT THE PROPOSED HV TRANSMISSION LINES WILL NOT CREATE AN UNREASONABLE RISK OF DANGER TO THE HEALTH AND SAFETY OF THE PUBLIC**

PPL Electric must show that the proposed HV transmission lines will not create an

---

<sup>145</sup> See *Susquehanna-Roseland Appeal Order*, 25 A.3d at 453 (finding no legal error where the Commission approved PPL Electric's application to construct a new HV transmission line or by allowing construction to begin on the proposed line before receiving a permit from the National Park Service for a particular segment of the proposed HV line); see also *Heidi Fiedler v. Metropolitan Edison Company*, Docket No. C-2018-3003642 (Order entered July 16, 2020) (emphasis added).

unreasonable risk of danger to the health and safety of the public.<sup>146</sup> The Commission has consistently determined that transmission lines that meet or exceed the NESC requirements do not create an unreasonable risk of danger to the health and safety of the public.<sup>147</sup>

**1. The proposed HV transmission lines associated with the Tomhicken 230 kV Switchyard Project will meet and exceed the NESC Standards**

The Tap Lines and Connecting Lines for the Project will not create any unreasonable risk of danger to public health or safety. They will be designed, constructed, operated, and maintained in a manner that meets or surpasses all applicable NESC minimum standards and all applicable legal requirements.<sup>148</sup>

The NESC is not intended as a design specification, but its provisions do establish minimum design requirements.<sup>149</sup> Specifically, the NESC includes loading requirements and clearances for the design, construction, and operation of power lines.<sup>150</sup> The NESC specifies strength and loading rules based on three different grades of construction, the highest of which is Grade B, which provides the highest safety margin and is required where poles support spans crossing limited access highways, railroads, and waterways.<sup>151</sup> All of the Company's transmission lines are designed for Grade B construction, to ensure higher levels of structural reliability and safety to withstand environmental conditions such as ice and wind.<sup>152</sup>

PPL Electric has developed its own internal design specifications and safety rules which meet or surpass all requirements specified by the NESC. For instance, the Project is designed with

---

<sup>146</sup> 52 Pa. Code § 57.76(a)(2).

<sup>147</sup> See, e.g., *Susquehanna-Roseland Commission Order* at \*166; *Application of PP&L for Approval to Locate and Construct a 138 kV Transmission Line Between West Allentown and Salisbury Substations*, Docket No. A-00104160 (Order dated July 20, 1984); *Application of PP&L for Authorization to Locate and Construct its Hamlin 138 kV Electric Transmission Line*, Docket No. A-00101826 (Order dated April 3, 1981); *Larken v. Philadelphia Electric Co.*, 38 Pa. PUC 777 (1961).

<sup>148</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 4, p. 1.

<sup>149</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 4, p. 1.

<sup>150</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 4, p. 1.

<sup>151</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 4, p. 1.

<sup>152</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 4, p. 1.

clearances that are at least 3 feet higher than NESC standards. These design standards are also incorporated into structure loading and line design in order to accommodate ice and wind conditions which could impact conductor sags and tensions of the line.<sup>153</sup> The Company's transmission lines are designed to exceed the NESC requirements with respect to ice and wind loading conditions, meaning that the Company's lines are designed to operate in extremely inclement weather.<sup>154</sup> Further, the Company's design standards include a clearance-to-ground buffer in excess of NESC-required clearances to account for construction and design tolerances and the filling or grading of land within the ROW by property owners.<sup>155</sup> This design standard also significantly reduces the risk of inadvertent contact with a transmission line.<sup>156</sup>

Importantly, no party challenged the Company's showing that the design and engineering specifications utilized by the Company, including the design of the proposed HV lines and of the proposed towers, are reasonable and acceptable. Indeed, Mr. Konidena's testimony confirms that the design and engineering specifications used by the Company are reasonable and acceptable. Specifically, Mr. Konidena states that the Ambient Adjusted Ratings ("AAR") used by the Company in its need determination reflect AAR-compliant values under FERC Order 881, and that the Customer's load could not be accommodated under the normal and emergency AAR of the existing Susquehanna-Harwood double-circuit 230 kV transmission lines.<sup>157</sup> He also concedes that the Company's utilization of a BAAH design for the Tomhicken Switchyard itself "provides greater operational reliability than a ring bus configuration."<sup>158</sup>

Finally, with respect to the health and safety determinations to be made pursuant to 52 Pa. Code § 57.76(a), Mr. Konidena specifically indicated that his testimony did not opine on whether

---

<sup>153</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 4, p. 2.

<sup>154</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 4, p. 2.

<sup>155</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 4, p. 2.

<sup>156</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 4, p. 2.

<sup>157</sup> OCA St. 2, pp. 17-19.

<sup>158</sup> OCA St. 2, p. 30.

the Project would create an unreasonable risk of danger to the health and safety of the public, and that this determination is outside the scope of his expertise.<sup>159</sup> Indeed, Mr. Konidena admitted that this determination was based upon his understanding of the Project as a transmission planning engineer.<sup>160</sup>

## **2. The LON adequately addresses electric and magnetic field mitigation**

Although there is no current scientific evidence demonstrating that magnetic fields cause any adverse health effects or pose a health or safety threat to the public, PPL Electric has established a policy to design its new and rebuilt transmission lines to reduce magnetic fields.<sup>161</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 4, p. 5 explains that the Company’s policy generally prescribes the use of a line design that provides ground clearances higher than the required NESC ground clearance and reverse phasing of new double-circuit lines where it is feasible to do so, depending on cost. The implementation of additional modifications to reduce magnetic field levels is also considered, provided those modifications can be made at low or no cost and will not interfere with operation of the transmission line.<sup>162</sup> The Company’s policy will be applied to the Tomhicken 230 kV Switchyard Project, and as discussed in Section V.C.1., *supra*, the Project is designed with clearances that are at least 3 feet higher than NESC standards, which further limits magnetic field exposures.

Ms. Cook disputed the electromagnetic field (“EMF”) fact sheet provided by the Company, and several other individuals at the public input hearings also raised concerns related to EMFs.<sup>163</sup> However, the Company established within its original filing that its policy ensures that transmission lines are designed to reduce EMF exposure. The instant Project is designed for zero

---

<sup>159</sup> PPL Electric Cross Exhibit No. 24, p. 2; PPL Electric Cross Exhibit No. 26, p. 2.

<sup>160</sup> Tr. 756.

<sup>161</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 4, p. 5.

<sup>162</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 4, p. 5.

<sup>163</sup> See Cook Direct, p. 13.

EMF exposure at the edge of the ROW, and there are not currently any dwellings or structures located on the edge of the Company's ROW, meaning that there is a further buffer.<sup>164</sup>

**3. PPL Electric demonstrated that other concerns regarding health and safety are not warranted**

**a. OCA's "resource adequacy" concerns do not demonstrate that the subject HV transmission lines will cause an unreasonable risk to the health and safety of the public**

Several of the concerns raised by OCA Witness Mr. Felder in his testimony are related to resource adequacy within the PJM region. Specifically, Mr. Felder testifies about the possibility of blackouts and other reliability concerns resulting from shortfalls in generation and capacity within the PJM region.<sup>165</sup> Critically, however, Mr. Felder confirmed that he discusses "reliability concerns" regarding "resource adequacy" with respect to the availability and reliability of generation service to serve the PJM region.<sup>166</sup> However, generation service is not transmission service,<sup>167</sup> and this LON does not involve generation service.<sup>168</sup> Mr. Felder also did not quantify any of his perceived risk to resource adequacy stemming from the Project.<sup>169</sup>

OCA Witness Mr. Konidena also discusses reliability risks in his testimony as those perceived risks pertain to the cost allocation and benefit of the Project.<sup>170</sup> Yet, the Commission's regulations at Section 57.76(a) provide in relevant part that, in order to grant the LON, the Commission must determine that "the proposed HV line: . . . (2) . . . will not create an unreasonable

---

<sup>164</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 4, p. 5.

<sup>165</sup> See, e.g., OCA St. 1, pp. 6-7, 15, 18, 30; OCA St. 1SR, pp. 6-11, 14, 17-19; Tr. 624.

<sup>166</sup> Tr. 624-26; PPL Electric Cross Exhibit No. 6.

<sup>167</sup> Tr. 625-26.

<sup>168</sup> PPL Electric Witness Mr. Taylor confirmed that OCA's concerns about "resource adequacy" relates to the electrons that must be delivered over PPL Electric's facilities, while "service reliability" relates to the safe deliverability of those electrons. Tr. 510. In essence, OCA's concerns in this proceeding are about whether there is "milk at the grocery store" not whether the available milk can be safely delivered. See Tr. 510-511. The approvals requested by PPL Electric in this case, and the Commission's findings and determinations under 52 Pa. Code § 57.76(a)(2), relate to the facilities needed to safely deliver electrons (i.e., the milk) and not the availability of those electrons (i.e., whether there is milk at the store).

<sup>169</sup> Tr. 629-30.

<sup>170</sup> See OCA St. 2, pp. 44-48.

risk of danger to the health and safety of the public.” 52 Pa. Code § 57.76(a). Importantly, the scope of the health and safety determination is related to the proposed HV lines themselves. While OCA attempts to couch its position in the general language of 66 Pa.C.S. §§ 1501 and 2807, those provisions of the Public Utility Code must be applied in the context of the siting matter currently pending before the Commission.<sup>171</sup> The LON does not involve PPL Electric generation service or facilities, nor does it involve the sweeping findings and/or determinations regarding the capacity market and PJM. Rather, it involves a request to site and construct HV transmission lines, and the service to be provided over those lines.

This broader resource adequacy concern introduced by OCA is, therefore, misplaced. Further, OCA’s testimony does not support any findings related to an unreasonable risk of danger to the health and safety of the public resulting from the HV transmission lines proposed in the instant proceeding or the service that would be provided over the same. And, as Mr. Felder indicated, there are a number of other proceedings pending at both the federal and state levels related to resource adequacy issues.<sup>172</sup> Those proceedings are the appropriate forums in which to pursue resource adequacy-related issues; this singular siting proceeding for one transmission line project for one electric utility is not.

Finally, PPL Electric’s existing Commission-approved tariff and the ESA in place with the Customer contain adequate protections. Indeed, Mr. Felder acknowledged his review of several of these provisions and still did not address them within his testimony.<sup>173</sup> Specifically, Mr. Felder agreed that Rate Schedule LP-6:

- Includes minimum requirements for an electric service agreement for a large load customer to obtain service under the rate schedule;<sup>174</sup>

---

<sup>171</sup> OCA St. 1, p. 20, fn. 49; OCA St. 1SR, p. 11.

<sup>172</sup> Tr. 618-19.

<sup>173</sup> Tr. 642-48.

<sup>174</sup> Tr. 642.

- Includes a requirement that the electric service agreement contain an initial term of not less than 10 years;<sup>175</sup>
- Includes a requirement that the electric service agreement will require the customer to provide an initial load grant schedule for up to the first five years of the initial term;<sup>176</sup>
- Includes a requirement that the customer provides security in an amount equal to the cost of upgrades needed to serve the customer, including but not limited to the cost the Company would not have incurred but for the interconnection of the customer, that are placed into transmission rate base and recovered through transmission rates;<sup>177</sup>
- Includes a requirement that the electric service agreement requires security to be provided in the form of a letter of credit, parent guarantee, or other security instrument that is acceptable to PPL Electric for the amount of outstanding revenue guarantee for that service;<sup>178</sup>
- Includes a requirement that the electric service agreement prescribe that in the event of default, the Company can draw on a credit vehicle to ensure payment;<sup>179</sup>
- Requires that until a customer served under the schedule's rate-based security obligation to satisfy the electric service agreement, the customer will pay applicable rates based upon the greater of actual peak demand values or 80% below that provided on the load grant schedule;<sup>180</sup>
- Requires that after the customer's rate-based security obligation is satisfied, the electric service agreement will require the customer to pay the applicable rate based upon either peak demand or the load grant schedule;<sup>181</sup>
- Contains an exit fee requirement;<sup>182</sup>
- Establishes specific requirements related to a contribution in aid of construction ("CIAC");<sup>183</sup> and
- Includes a voluntary interruptible option.<sup>184</sup>

Thus, OCA Witness Mr. Felder does not dispute that Rate Schedule LP-6 contains baseline requirements that are specifically designed to mitigate the risk that transmission investments made

---

<sup>175</sup> Tr. 642.

<sup>176</sup> Tr. 642-43.

<sup>177</sup> Tr. 643.

<sup>178</sup> Tr. 643-44.

<sup>179</sup> Tr. 645-46.

<sup>180</sup> Tr. 646.

<sup>181</sup> Tr. 646.

<sup>182</sup> Tr. 646.

<sup>183</sup> Tr. 647.

<sup>184</sup> Tr. 647.

to serve large load customers could otherwise be shifted to existing customers.<sup>185</sup>

The Company's Commission-approved tariff and the executed ESA allow the Company to respond to the needs of the grid and to manage the service provided to the Customer in a way that does not interfere with the rest of the system. Not only did OCA's witnesses not address the protections described above, but they did not dispute the effect of these protections and the Company's current ability to respond to grid-related needs and to manage the service it provides.

**b. The HV lines and Tomhicken 230 kV Switchyard are appropriately set back from other properties**

Ms. Cook, along with individuals at the public input hearings, expressed concern that the Tomhicken Switchyard or associated HV transmission lines would be located "dangerously close to many residential properties."<sup>186</sup> Yet, there is little basis for this concern.

As discussed in Section V.C.1, *supra*, the Company treats the NESC as a minimum set of design standards. Facilities within the Company's ROW comply with the NESC guidance for conductor-to-structure plus a buffer distance to account for more extreme weather conditions. While this is more than is required by the NESC, this is a standard PPL Electric contingency.<sup>187</sup> The proposed HV transmission line structures at issue in the instant proceeding are a minimum of 75 feet from the edge of the ROW utilized to the centerline of the ROW, and conductors will be approximately 55 feet from the edge of the ROW.<sup>188</sup> The evidence provided by the Company of its adherence to the NESC guidance as a minimum, with internal guidelines designed to ensure that NESC guidance is exceeded in many circumstances, demonstrates that the Tomhicken Switchyard will not be located dangerously close to residential properties.

---

<sup>185</sup> PPL Electric St. No. 1-R, p. 12.

<sup>186</sup> Cook Direct, p. 13; *see, e.g.*, Tr. at 135, 181, 270, 348-349.

<sup>187</sup> PPL Electric St. No. 2-R, p. 8.

<sup>188</sup> PPL Electric St. No. 2-R, p. 8.

**c. The proposed HV transmission lines do not present an unreasonable fire hazard risk**

Ms. Cook testified that the proposed transmission lines “present a fire hazard to the surrounding homes and forested areas.”<sup>189</sup> However, the Company demonstrated that any potential fire risk, which is already minimal, has been substantially mitigated for its HV transmission lines through engineering, design, and ongoing maintenance. Specifically, the Company’s adherence to the NESC, as described in Section V.C.1., *supra*, addresses many of these issues by nature of the strict adherence to or exceeding of the NESC.<sup>190</sup> Next, the transmission structures will be grounded and bonded, which means that they are designed so that there is a path to ground in the event of lightning, and to dissipate stray voltage.<sup>191</sup> Additionally, the Company utilizes a relay protection system which protects the public as well as the equipment on the system. The relay protection system – the settings for which are more sensitive for transmission lines than on distribution lines – automatically de-energizes the line in the unlikely event that the line or supporting structure fails and the line contacts the ground.<sup>192</sup> Finally, the Company’s regular inspection and maintenance of its transmission facilities means that deficiencies can be corrected and less fuel would be available in the event of a fire.<sup>193</sup>

**d. The use of helicopters to inspect and maintain facilities is reasonable and appropriate**

The Company’s periodic maintenance and inspection program, which helps it to ensure continued public safety and integrity of service, is administered using helicopter patrols, with supplemental foot patrols as needed.<sup>194</sup> Ms. Cook shared her concern that the helicopter maintenance program utilized by the Company would constitute a privacy invasion, as well as a

---

<sup>189</sup> Cook Direct, p. 13.

<sup>190</sup> PPL Electric St. No. 2-R, p. 9.

<sup>191</sup> PPL Electric St. No. 2-R, p. 9.

<sup>192</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 4, p. 4.

<sup>193</sup> PPL Electric St. No. 2-R, p. 9.

<sup>194</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 4, p. 4.

safety hazard.<sup>195</sup> However, the helicopter inspection and maintenance program is regularly used by the Company in order to aerially survey its transmission lines and to perform some maintenance tasks. The subject of any photos taken as a part of aerial surveillance is the facility itself, not homes of nearby landowners.<sup>196</sup> These photos are merely taken for purposes of inspection.<sup>197</sup> Additionally, Mr. Swartzentruber established that helicopters follow their own safety procedures and standards, and the Company does not utilize helicopter maintenance where it would be exceedingly dangerous to do so.<sup>198</sup>

**e. General concerns about the Customer's facility are not relevant to this case**

A significant number of comments received at the public input hearing, as well as testimony provided by both Ms. Cook and Mr. Zola, concerned the Customer itself, and the nature of the Customer's end use of the requested electric service.<sup>199</sup> Yet, the instant proceeding concerns the proposed HV transmission lines, and not the Customer's facilities.<sup>200</sup> The Customer's facilities and the permits and approvals required for the same, as Ms. Cook herself has indicated, are the subject of other proceedings.<sup>201</sup> Therefore, concerns related to the end use of the Customer and related to the Customer's development of its own facilities are not relevant to the instant proceeding.

---

<sup>195</sup> Cook Direct, p. 14.

<sup>196</sup> PPL Electric St. No. 2-R, p. 9.

<sup>197</sup> PPL Electric St. No. 2-R, p. 9.

<sup>198</sup> PPL Electric St. No. 2-R, p. 9.

<sup>199</sup> See, e.g., Tr. 96, 99, 104, 131, 175, 201-202; Cook Direct, pp. 5-6.

<sup>200</sup> As a creature of statute, the Commission "has only those powers which are expressly conferred upon it by the Legislature and those powers which arise by necessary implication." *Feingold v. Bell*, 383 A.2d 791, 794 (Pa. 1977) (citations omitted). The Commission is authorized to regulate public utilities and its siting regulations are specific to public utility HV transmission lines. The Commission's Regulations at Ch. 57 Subch. G do not extend to facilities or operations of a non-utility customer. See 52 Pa. Code §§ 57.71, *et seq.*

<sup>201</sup> Cook Direct, p. 6.

#### **4. Conclusion regarding health and safety**

No party challenged the Company's showing that the design and engineering specifications utilized by the Company, including the design of the proposed HV lines, are reasonable and acceptable. Furthermore, no party presented any evidence that the HV lines will be constructed, operated, or maintained in an unsafe manner. While some parties indicated concerns related to health and safety, none of these parties presented evidence to rebut the Company's showing that the HV transmission lines will not create an unreasonable risk of danger to the health and safety of the public. For these reasons, the LON satisfies the requirement of 52 Pa. Code § 57.76(a)(2) that the proposed HV transmission line will not create an unreasonable risk of danger to the health and safety of the public.

#### **D. THE PROPOSED HV TRANSMISSION LINES ARE IN COMPLIANCE WITH APPLICABLE STATUTES AND REGULATIONS PROVIDING FOR THE PROTECTION OF NATURAL RESOURCES**

The third requirement under Section 57.76 of the Commission's regulations for approval of the siting and construction of transmission lines is that the project is in compliance with applicable statutes and regulations, providing for the protection of the natural resources of this Commonwealth.<sup>202</sup> Although it is not an environmental permitting agency, the Commission is required to comply with the directives set forth in Article I, Section 27 of the Pennsylvania Constitution, *i.e.*, the Environmental Rights Amendment.<sup>203</sup> In carrying out these obligations, the Commonwealth may subject the individual rights of citizens to clean air, pure water, and to the preservation of natural, scenic, historic, and esthetic values to reasonable regulation.<sup>204</sup>

PPL Electric has provided information on regulatory permit requirements and agency

---

<sup>202</sup> 52 Pa. Code § 57.76(a)(3).

<sup>203</sup> *PEDF*, 161 A.3d at 931.

<sup>204</sup> *PEDF*, 161 A.3d at 931; *see also Penelec*, at pp. 12-14.

coordination regarding cultural and environmental resources.<sup>205</sup> This information effectively addresses and exceeds all the requirements of the Commission’s regulations.

Indeed, PPL Electric Witness Mr. Peter Sparhawk explained PPL Electric’s analysis of environmental and land use impacts.<sup>206</sup> Importantly:

- The proposed Project will not affect any national parks, state parks, local parks, recreational areas, or natural landmarks. None of these features are located within the Project Area. Review of the National Conservation Easement Database and PA Conserved Lands websites notes that no conserved lands are crossed by the Project.;<sup>207</sup>
- An online review of the Project Area and surrounding landscape was conducted through the Pennsylvania Historical and Museum Commission (“PHMC”) State Historic and Archaeological Resource Exchange site. There is only one State Historic Preservation Office (“SHPO”) listed or eligible structure within 1 mile of the project area: The Lehigh Valley Railroad. The abandoned railroad is not crossed or spanned by the Project, and the Project will not affect the abandoned railroad. PPL Electric does not anticipate any impacts to SHPO-listed or -eligible structures or districts. Furthermore, based on PPL Electric’s coordination with PHMC, no archaeological or historic architectural resources will be affected by the proposed project.;<sup>208</sup>
- No unique geological, scenic, or natural areas are located within the Project Area.;<sup>209</sup>
- A Pennsylvania Natural Diversity Inventory (“PNDI”) was run for the Project on March 1, 2024, to assess the potential presence of threatened and endangered species and/or special concern species. Specific agencies reviewing the Project included the following:
  1. Pennsylvania Game Commission,
  2. Pennsylvania Fish and Boat Commission,
  3. Pennsylvania Department of Conservation and Natural Resources (“DCNR”), and
  4. U.S. Fish and Wildlife Service.<sup>210</sup>

---

<sup>205</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 3; *see also* PPL Electric St. Nos. 3 and 3-R.

<sup>206</sup> *See generally* PPL Electric St. 3.

<sup>207</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 3, p. 6.

<sup>208</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 3, p. 6.

<sup>209</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 3, p. 6.

<sup>210</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 3, p. 9.

- DCNR requested that a botanical survey be completed for certain species by a qualified botanist at the appropriate time of year, and the agency recommended that a Wild Plant Management Permit be obtained before botanical surveys occur. A botanical survey is to be conducted during the appropriate time of year, as requested by the DCNR.<sup>211</sup>
- The DCNR search indicated that the Project is located within the range of the *Bartonia paniculata ssp. paniculata*, a special concern species of screw-stem found in sandy or peaty acidic wetlands and yielded “Potential Impact – Further Review Required”. According to the Luzerne County NAI, screw-stem is present within the county. On August 7 and 8, 2025, PPL’s Electric’s Permitting Contractor conducted the field survey for Screw-stem (*Bartonia paniculata ssp. paniculata*) and the results were submitted to the DCNR via a Field Survey Summary Report. In response, the DCNR issued a letter on September 29, 2025, stating that no impact was anticipated per the survey with minimization and conservation measures with no further coordination needed for this project. However, PPL Electric will coordinate with DCNR to utilize minimization, conservation, and avoidance measures and adhere to all applicable regulations and permit requirements.<sup>212</sup>
- The PGC advised a conservation measure and deferred comments to USFWS, and the PFBC reported no known impacts to threatened and endangered species and/or special concern species and resources within the Project Area. On November 27, 2024, PPL Electric ran a PNDI for property crossed by the existing Susquehanna-Harwood 230kV Transmission Line. Both the PGC and PFBC indicated no further consultation is required for the Project.<sup>213</sup>
- The USFWS search indicated that the Project is located in the vicinity of northern long-eared bat habitat. The USFWS response indicated tree removal should not occur from May 15th to August 15th. Because tree removal activities will occur outside of the active bat window, PPL Electric does not anticipate any impact to the northern long-eared bat.<sup>214</sup>

As described by PPL Electric Witness Mr. Sparhawk, PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 3 further demonstrates that the Project will not impact various environmental resources, cultural resources and land uses, or that PPL Electric has coordinated (or will continue to coordinate) with the appropriate state and/or federal agencies to obtain all necessary permits.<sup>215</sup>

---

<sup>211</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 3, p. 10.

<sup>212</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 3, pp. 10-11.

<sup>213</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 3, p. 10.

<sup>214</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 3, p. 11.

<sup>215</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 3; PPL Electric St. 3.

While all HV transmission lines will have some impact to the natural and/or human environment, it is important to recognize that the Project is limited to the construction of a new transmission line which is proposed to be located entirely within PPL Electric's existing transmission line ROW and on the property of the sole customer to be served by the line. Thus, the need for a formal siting study is obviated by the fact that any alternative route would require PPL Electric to acquire new ROW on land owned by numerous other landowners to locate the HV lines where none presently exist, necessitating more disruption to landowners and the surrounding environment than the Proposed Route, which will be located entirely on land owned either by PPL Electric or the Customer.<sup>216</sup> In this regard, the proposed route would have fewer environmental impacts and constitute the preferred route in comparison to other alternatives.

PPL Electric has also committed to obtain all required permits prior to construction of the Project, and will comply with any and all conditions placed on such permits by those agencies that have appropriate jurisdiction over environmental matters.<sup>217</sup> As a general matter, the Commission has found compliance with the applicable environmental statutes and regulations where the applicant agrees to obtain any and all environmental permits necessary prior to construction and to comply with any conditions on those permits during construction.<sup>218</sup>

Finally, at no point during this matter did any party contend that the Project was or is in violation of applicable statutes and regulations providing for the protection of the natural resources

---

<sup>216</sup> PPL Electric St. No. 3, pp. 5-6.

<sup>217</sup> PPL Electric St. No. 3, p. 8; PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 3, p. 11.

<sup>218</sup> 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) (Opinion and Order Denying Exceptions entered June 7, 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 issued Mar. 28, 2011), *adopted with modification on other grounds* (Opinion and Order entered Mar. 15, 2012); *Susquehanna-Roseland Commission Order* at \*191-201.

of this Commonwealth. In this regard, PPL Electric's evidence regarding 52 Pa. Code § 57.76(a)(3) is undisputed.

Therefore, and for the reasons more fully explained above, the ALJ and the Commission should find that PPL Electric has demonstrated the proposed HV transmission lines comply with applicable statutes and regulations providing for the protection of the natural resources of the Commonwealth, pursuant to 52 Pa. Code § 57.76(a)(3) and *PEDF*.

**E. THE PROPOSED HV TRANSMISSION LINES WILL HAVE MINIMUM ADVERSE ENVIRONMENTAL IMPACTS**

The Commission's law and policy regarding the siting of HV transmission lines also require an electric utility to show that a HV transmission line will have minimum adverse environmental impacts considering the electric power needs of the public.<sup>219</sup> Importantly, a utility is not required to conduct a siting study or to evaluate alternative routes for a HV transmission line project that is the subject of a letter of notification.<sup>220</sup> PPL Electric has (a) presented clear evidence that demonstrates the proposed HV lines will have a minimum adverse environmental impact, (b) rebutted the OCA's unsubstantiated recommended potential alternative to the proposed HV lines, and (c) fully responded to and addressed concerns regarding potential environmental impacts raised by Ms. Cook and by the public at the public input hearings. Therefore, the ALJs and the Commission should find and determine, consistent with the Commission's existing HV transmission line siting regulations, that the proposed HV lines involved in the Project will have minimum adverse environmental impacts considering the electric needs of the public.

---

<sup>219</sup> See, e.g., 52 Pa. Code § 57.76(a)(4).

<sup>220</sup> See 52 Pa. Code § 57.72(d)(4).

Importantly, the proposed HV lines will be located entirely within property owned by PPL Electric and the Customer.<sup>221</sup> PPL Electric Witness Mr. Sparhawk explained why this distinction is important:

As explained in Attachment 1 – Necessity Statement, the feasible alternative to the Project would involve the construction of two new greenfield double-circuit 230 kV transmission lines, as well as the expansion of the existing Harwood 230 kV Substation, requiring the relocation of the existing 230 kV capacitor. Not only would this alternative limit the ability of PPL Electric to accommodate future load growth in the Hazleton area by building out all but one line position at the Harwood Substation, but it would also require PPL Electric to acquire new ROW for project construction and operation, necessitating more disruption to landowners and the surrounding environment than the Proposed Route, which will be located entirely on land owned either by PPL Electric or by the Customer.<sup>222</sup>

Additionally, efforts were made during the siting process to minimize impacts on existing and future land uses, as well as avoid sensitive natural resources, such as wetlands and streams.<sup>223</sup>

Based on his review of the Project Area, Mr. Sparhawk concluded:

The Project will have minimal adverse environmental impacts when compared to any alternative that would require building new transmission lines where none presently exist. Efforts were made during the transmission line siting process to minimize impacts on existing and future land uses, as well as avoid sensitive natural resources such as wetlands and streams. Where impacts are unavoidable, best management practices will be employed and PPL Electric will obtain and comply with any necessary permits. The Siting Team ultimately decided that the cumulative environmental, engineering and constructability, and social and financial impacts associated with constructing the HV lines proposed here are more favorable when compared to building new transmission lines not presently existing.<sup>224</sup>

Mr. Sparhawk also explained that PPL Electric is working with the permitting agencies to address all environmental concerns.<sup>225</sup> The Project – and PPL Electric’s analysis under the applicable

---

<sup>221</sup> PPL Electric St. No. 3, p. 5.

<sup>222</sup> PPL Electric St. No. 3, pp. 5-6.

<sup>223</sup> PPL Electric St. No. 3, p. 7.

<sup>224</sup> PPL Electric St. No. 3, pp. 11-12.

<sup>225</sup> PPL Electric St. No. 3, pp. 7-12; PPL Electric St. No. 3-R, p. 5.

regulation – as to environmental impacts is undisputed and, for that reason, comports with the directive of 52 Pa. Code § 57.76(a)(4).

OCA Witness Mr. Konidena proposed an alternative to the Project, i.e., the “Nescopeck Alternative.”<sup>226</sup> While Mr. Konidena proposed the alternative primarily from a cost allocation and ratepayer impact perspective, which PPL Electric addressed in Section V.B above, PPL Electric Witness Mr. Sparhawk evaluated the Nescopeck Alternative from an environmental perspective and concluded as follows:

it is important to note that the siting, right-of-way and resulting environmental and land use impacts on constructing such an alternative would be significantly greater than the Project as proposed. Upon my review of Mr. Konidena’s direct testimony, it appears that this would entail the connection of the Customer’s substation directly to the proposed Nescopeck 230 kV Switchyard – which has been proposed as part of a separate and currently ongoing siting application proceeding – which is approximately 9 miles from the Customer’s location. This connection, as PPL Electric stated in response to an Interrogatory from OCA, would certainly result in greater siting and right-of-way impact than the proposed solution. In addition, the Nescopeck Alternative would generally require the acquisition of new transmission line [ROW] which, all else being equal, would result in greater environmental impacts than the short 1.1-mile transmission line and two 0.1-mile connections into the Customer’s yard that are proposed as part of the Tomhicken 230 kV Switchyard Project.<sup>227</sup>

Ms. Cook argued that the proposed Project will result in a “significant amount of environmental impact.”<sup>228</sup> PPL Electric Witness Mr. Sparhawk explained why Ms. Cook’s characterization of the Project is incorrect:

Relative to any other route that could be considered to connect the existing 230 kV system to the proposed PPL Electric switchyard and then to the Customer’s substation, the Project as proposed would result in significantly less impact to the environment in the area. As Ms. Cook notes, the PNDI results did indicate that some habitat and species of concern may potentially exist in the general Project area.

---

<sup>226</sup> OCA St. 2, pp. 39-42.

<sup>227</sup> PPL Electric St. No. 3-R, pp. 3-4 (internal citations omitted).

<sup>228</sup> Cook Direct, p. 14.

These species were documented in Attachment 3 of the filed LON and well as my direct testimony (pp. 9-11), which she quoted in her testimony. Furthermore, a detailed discussion of the agency's initial responses and requests for additional surveys – as well as clearances for various species of concern – was presented in the LON itself in Section V, Land Use and Environmental Evaluation. These discussions clearly showed the efforts underway by PPL Electric to minimize impacts on the environment, permits needed to construct the proposed facilities and compliance commitments with those permits, as well as methods to remediate any impacts that would occur.

Since the LON and direct testimony was filed, PPL Electric's environmental consultant for the Project, Verdantas, provided me with a current status of the ongoing Project consultation and permitting efforts. This update indicated that coverage under the required Chapter 102 NPDES permit and Chapter 105 General Permit has been received and reiterated that the studies, avoidance measures, compliance measures and clearances are as discussed in the LON.

To summarize once again, the Project will have minimal adverse environmental impacts when compared to any alternative that would require building new transmission lines and related facilities where none presently exist. I acknowledge that there is no route which would not have any impacts for this – or any – transmission line project. However, I remain of the view that the route as proposed remains reasonable, and satisfies the requirements of the Commission under 52 Pa. Code § 57.75(e)(3).<sup>229</sup>

Mr. Sparhawk also addressed the concerns raised by members of the public at the public input hearings concerning potential impacts on wetlands, watershed lifecycles, wildlife such as bats, water runoff, environmental impacts generally, and herbicides/pesticides used in ROW maintenance.<sup>230</sup> Specifically, Mr. Sparhawk explained that all of the identified impacts are being minimized or eliminated through Project design and permit conditions, and ongoing consultation with the applicable agencies during project development, construction, and operation.<sup>231</sup> Finally, although Ms. Cook expressed concern regarding the use of the U.S. Environmental Protection

---

<sup>229</sup> PPL Electric St. No. 3-R, pp. 5-6.

<sup>230</sup> See Tr. 98, 130, 155-157, 164, 180-182, 186, 267-268, 336, 343.

<sup>231</sup> PPL Electric St. No. 3-R, p. 6.

Agency-approved herbicide glyphosate to maintain transmission line ROWs,<sup>232</sup> demonstrating any environmental impacts related to the use of this herbicide would “require expert evidence to be persuasive enough to support the proposing party’s burden of proof or persuasion,”<sup>233</sup> which Ms. Cook did not offer.<sup>234</sup>

PPL Electric is taking proactive measures that are designed specifically to address the types of concerns that were raised by certain members of the public. These practices were summarized by Mr. Sparhawk in his Rebuttal Testimony:

For example, wetland impacts are reduced by applying avoidance measures during design and greatly reducing potential impacts on wetlands and streams by choosing a route that requires significantly less right-of-way than any other transmission line solution; potential impacts on species such as the northern long eared bat have been eliminated or greatly reduced through conducting an on-site review of rock outcrops for potential habitat and subsequently modifying the work pads/accesses to avoid areas of concern, as well as abiding by time of year tree clearing restrictions; water runoff and potential impacts on receiving waters are minimized through best management practices and stormwater control measures, as well as compliance with any other requirements of the NPDES construction permit; potential impacts from herbicides and/or pesticides are eliminated by strict adherence to PPL’s *Specification for Transmission Vegetation Management* (LA-79827), which documents requirements for such items as property owner notification, clearing requirements, herbicide application policies (which include using only U.S. EPA-approved herbicides); and other impact-reducing or minimization techniques as discussed throughout the LON and associated documents.<sup>235</sup>

As Mr. Sparhawk stated, “PPL Electric’s goal for this Project – as well as any transmission line project – remains the same: develop and construct a transmission line and associated facilities that reasonably minimize adverse impacts on the natural and human environments; minimize special design requirements and unreasonable costs; and can be constructed and operated in a safe, timely,

---

<sup>232</sup> See Cook Surrebuttal, p. 8.

<sup>233</sup> *Susquehanna-Roseland Commission Order* at \*\*28-29.

<sup>234</sup> See Tr. 534.

<sup>235</sup> PPL Electric St. No. 3-R, p. 7.

and reliable manner. In my opinion, PPL Electric has chosen a Project solution that does exactly that.”<sup>236</sup>

For the reasons explained herein and in the Company’s testimony and exhibits, PPL Electric has satisfied the requirements of 52 Pa. Code § 57.76(a)(4), and demonstrated that the proposed HV transmission lines will have a minimum adverse environmental impact.

---

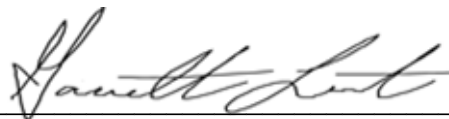
<sup>236</sup> PPL Electric St. No. 3-R, p. 7.

## VI. CONCLUSION

WHEREFORE, PPL Electric Utilities Corporation respectfully requests that Administrative Law Judges Erin L. Gannon and John M. Coogan, and the Pennsylvania Public Utility Commission:

- (1) approve the above-captioned “Letter of Notification of PPL Electric Utilities Corporation, Filed Pursuant to 52 Pa. Code Chapter 57 Subchapter G, For Approval to Build Approximately 1.1 Miles of New Parallel Double Circuit 230 kV Transmission Taps that are Needed to Connect the Existing Susquehanna-Harwood #1 & #2 Transmission Lines to the New Tomhicken 230 kV Switchyard that are Respectively Located in Luzerne County, Pennsylvania”; and
- (2) grant such other approvals and/or waivers as are necessary or appropriate under all of the circumstances.

Respectfully submitted,



Michael J. Shafer (I.D. # 205681)  
PPL Services Corporation  
645 Hamilton Street, Suite 700  
Allentown, PA 18101  
Voice: 610-774-2599  
Fax: 610-774-4102  
E-mail: mjshafer@pplweb.com

Garrett P. Lent (I.D. # 321566)  
David B. MacGregor (I.D. # 28804)  
Lindsay A. Berkstresser (I.D. # 318370)  
Megan E. Rulli (I.D. # 331981)  
Hayley E. Wilburn (I.D. # 336055)  
Post & Schell, P.C.  
17 North Second Street  
12th Floor  
Harrisburg, PA 17101-1601  
Voice: 717-731-1970  
Fax: 717-731-1985  
E-mail: glent@postschell.com  
E-mail: dmacgregor@postschell.com  
E-mail: lberkstresser@postschell.com  
E-mail: mrulli@postschell.com  
E-mail: hwilburn@postschell.com

Date: October 8, 2026

Attorneys for PPL Electric Utilities Corporation

# APPENDIX A

**APPENDIX A**  
**PROPOSED FINDINGS OF FACT**

PPL Electric Utilities Corporation (“PPL Electric” or the “Company”), proposes the following findings of fact:

**A. BACKGROUND AND INTRODUCTION**

1. PPL Electric furnishes electric service to approximately 1.5 million customers throughout its certificated service territory, which includes all or portions of twenty-nine counties and encompasses approximately 10,000 square miles in eastern and central Pennsylvania.<sup>1</sup>

2. PPL Electric is a public utility that provides electric distribution, transmission, and provider of last resort services in Pennsylvania subject to the regulatory jurisdiction of the Commission.<sup>2</sup>

3. PPL Electric owns approximately 5,000 miles of transmission lines operating at 69 kilovolts (“kV”) or higher, approximately 375 substations with a capacity of 10 megavolt amperes or more, and approximately 43,000 miles of distribution lines operating at less than 69 kV.<sup>3</sup>

4. PPL Electric proposes to build approximately 1.1 miles of new double-circuit 230 kV transmission taps (“Tap Lines”) that are needed to connect the existing Susquehanna-Harwood #1 and #2 230 kV Transmission Lines to the new Tomhicken 230 kV Switchyard (“Tomhicken Switchyard”) (collectively, the “Tomhicken 230 kV Switchyard Project” or the “Project”).<sup>4</sup>

5. The Tomhicken Switchyard will bifurcate the Susquehanna-Harwood #1 and #2 230 kV Transmission Lines to create the Susquehanna-Tomhicken #1 and #2 230 kV Transmission Lines and the Tomhicken-Harwood #1 and #2 230 kV Transmission Lines.<sup>5</sup>

---

<sup>1</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, p. 3.

<sup>2</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, p. 3.

<sup>3</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, p. 3.

<sup>4</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, p. 1.

<sup>5</sup> PPL Electric St. No. 1, pp. 3-4.

6. The LON also seeks approval to construct two new double-circuit 0.1-mile-long 230 kV transmission lines (“Connecting Lines”) from the Tomhicken 230 kV Switchyard to a new customer-owned 230-34 kV substation.<sup>6</sup>

7. The new 230 kV Connecting Lines, Tap Lines, and Tomhicken 230 kV Switchyard are located in Hazle Township, Luzerne County, Pennsylvania.<sup>7</sup>

8. The proposed Project qualifies for use of a letter of notification because the proposed high voltage (“HV”) transmission lines will be located entirely within the applicant’s existing transmission line right of way (“ROW”) and the property of the customer to be served by the line, and because it has a proposed route of 2 miles or less.<sup>8</sup>

**B. THERE IS A NEED FOR THE TOMHICKEN 230 KV SWITCHYARD PROJECT**

9. PPL Electric has an obligation to provide non-discriminatory service provide non-discriminatory service to a customer facility at 69 kV or above, and has a general right and obligation to serve customers in its service territory, subject to the terms and conditions of its tariffs and certificate of public convenience.<sup>9</sup>

10. One new customer (“Customer”), located in Hazle Township, has requested 230 kV electrical service with an in-service date of March 2027, at an initial load of 12 megawatts (“MW”).<sup>10</sup>

11. In order to provide service to the Customer, PPL Electric must construct the Project to avoid overloading and voltage violations that would otherwise result from the interconnection of this Customer.<sup>11</sup>

---

<sup>6</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, p. 1.

<sup>7</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, p. 1.

<sup>8</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, p. 22.

<sup>9</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 1 – Necessity Statement, p. 3.

<sup>10</sup> PPL Electric St. No. 1, p. 3.

<sup>11</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, p. 9.

12. The Company anticipates that the Project will eventually facilitate service to multiple customers, due to multiple customer request.<sup>12</sup>

13. The proposed HV transmission lines that PPL Electric requests Commission approval under 52 Pa. Code Ch. 57, Subch. G to site and construct in this case are needed to serve and designed to serve the Customer's immediate demand.<sup>13</sup>

14. PPL Electric will only proceed with construction of the proposed facilities so long as a need for those facilities persists.<sup>14</sup>

15. As a member of PJM, PPL Electric participates in, and employs, a regional transmission system planning process and identifies facilities that require reinforcement to enable it to meet this obligation and plan appropriate measures to assure reasonably continuous supply to customers, even during adverse conditions.<sup>15</sup>

16. PPL Electric's transmission system planning process ensures that the Company's transmission facilities are planned and constructed so that they: (1) "can accommodate forecasted system flows during summer and winter peak load"; (2) "can adequately serve each customer's need regarding capacity, voltage, and reliability for all load levels throughout the daily load cycle"; (3) "can sustain contingencies and disturbances with minimal customer service interruptions"; and (4) "are in conformance with [NERC], [PJM], and the Transmission Owner's reliability criteria for all normal and emergency operating conditions."<sup>16</sup>

---

<sup>12</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 1, p. 5.

<sup>13</sup> PPL Electric St. No. 1, pp. 3-4.

<sup>14</sup> PPL Electric St. No. 1-R, pp. 14-15.

<sup>15</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 1, pp. 4-5.

<sup>16</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 1, p. 4.

17. PPL Electric submitted the Tomhicken Project to PJM for review and approval as a Supplemental Project, in full compliance with PJM's existing requirements and procedures for Supplemental Projects.<sup>17</sup>

18. Specifically, PPL Electric presented the Project to PJM, completed the M-3 Supplemental Project Process, and conducted the DNH tests. PJM assigned the Project supplemental number 3528.<sup>18</sup>

19. PJM has fully evaluated the Project need and design and has determined that it will appropriately serve the Customer without causing harm to the Company's transmission system.<sup>19</sup>

20. PPL Electric's Commission-approved tariff establishes the terms under which the Company can and must provide the Customer with service.

21. PPL Electric will provide transmission-level service to the Customer pursuant to the Company's Commission-approved tariff and the executed Electric Service Agreement ("ESA").<sup>20</sup>

22. The Customer will be served under the Rate Schedule LP-6, based upon its anticipated peak electric demand and the anticipated in-service date.<sup>21</sup>

23. The Company's Commission-approved tariff and ESA contain important safeguards against stranded costs as well as other protections, should the Project not move forward or the Customer's projected load not materialize.<sup>22</sup>

24. The Customer has agreed to adhere to the requirements contained in PPL Electric's existing, Commission-approved tariff and the ESA.<sup>23</sup>

---

<sup>17</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 1, pp. 4-5, 8-9.

<sup>18</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 1, p. 5.

<sup>19</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 1, p. 5.

<sup>20</sup> PPL Electric St. No. 1-R, pp. 10-11

<sup>21</sup> PPL Electric St. No. 1-R, p. 11.

<sup>22</sup> See PPL Electric St. No. 1-R, pp. 12-14.

<sup>23</sup> See, e.g., PPL Electric St. No. 1-R, p. 12.

25. The proposed HV transmission lines are needed to interconnect the Customer.<sup>24</sup>
26. The OCA has explicitly conceded that a need for the proposed HV transmission lines exists.<sup>25</sup>
27. OCA's witnesses admitted there was a need for the Project under penalty of perjury on August 5, 2026.<sup>26</sup>
28. OCA's witnesses attempted to make inconsistent statements regarding the need for the Project during redirect examination.<sup>27</sup>
29. OCA's witnesses testified that they only sought to change their admissions regarding need after consulting with counsel.<sup>28</sup>
30. The inconsistent statements made by OCA's witnesses negatively impact the credibility of their testimony.
31. PPL Electric performed a comprehensive analysis to identify feasible and cost-effective solutions to best serve the Customer, while seeking to minimize impacts upon the local environment and surrounding community.<sup>29</sup>

---

<sup>24</sup> See, e.g., OCA St. 2, p. 45 ("The alternatives analysis confirms that no viable alternative exists to a physical transmission switchyard for a 965 MW customer requiring 230 kV interconnection. My testimony does not contest the need for the Tomhicken Switchyard to serve this customer."); see also OCA St. 2, pp. 8, 10, 16, 21, 25, 36, 38, 42-43, and OCA St. 2-SR, pp. 11-12 (conceding that the Customer requested interconnection, while expressing disagreement with PPL Electric's design choices to meet that need); Cook Direct, pp. 5-6 (acknowledging that the Customer has requested service but disputing the propriety of the Customer's planned development and enterprise); Zola Direct, Public Input Hearing Tr. 201 (acknowledging that the Customer has requested service but disputing the propriety of the Customer's planned development and enterprise).

<sup>25</sup> See, e.g., OCA St. 1, p. 21 (acknowledging that the transmission upgrades contemplated under the Project are needed to serve the Customer); OCA St. 2, p. 62 (explaining that the reliability need for this Project is predicated on the Customer's interconnection); OCA St. 2-SR, pp. 32-33 (quoting direct testimony explaining that the reliability need for this Project is predicated on the Customer's interconnection).

<sup>26</sup> PPL Electric Cross Exhibit No. 17; Tr. 659-62, 754-59.

<sup>27</sup> Compare PPL Electric Cross Exhibit Nos. 17, 18, 19, 20, 27, 28, and 29, with Tr. 659-62, 665-73, 678-83, 684-89 (OCA Witness Mr. Felder's testimony regarding PPL Electric Cross Exhibit Nos. 17, 18, 19, 20), 719-20, 722-33, 745-53, 754-66 (OCA Witness Mr. Konidena's testimony regarding PPL Electric Cross Exhibit Nos. 17, 18, 19, 27, 28, and 29).

<sup>28</sup> Tr. 684-85, 755-58, 760-61, 765-66.

<sup>29</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 1, p. 6.

32. PPL Electric's evaluation of alternatives focused on serving the Customer's initial load, while also accommodating the Phase 2 work contemplated to address the further needs of this Customer and others at a later date.<sup>30</sup>

33. The Company considered two feasible solutions, and ultimately selected the solution proposed in the LON.<sup>31</sup>

34. The first solution considered by PPL Electric was to expand expanding the existing Harwood 230 kV Substation to install three new 230 kV bays, which would require relocating the existing 230 kV capacitor to accommodate the new 230 kV bays and installation of seven new 230 kV breakers, as well as re-termination of the existing Susquehanna #1 & #2 lines into the new bay positions.<sup>32</sup>

35. In addition to the substation expansion, this alternative would require installing two new double-circuit 230 kV transmission lines over approximately 3 miles within new greenfield ROW to connect to the Customer's substation.<sup>33</sup>

36. PPL Electric rejected this first alternative due to the significant environmental, community, and landowner impact anticipated by the installation of approximately 3 miles of new 230 kV transmission lines, which were not present under the proposed solution.<sup>34</sup>

37. Additionally, PPL Electric's anticipation that the ultimate demand of the customers served by the facilities involved with the Project will be approximately 2,000 MW, when combined with the need anticipated as part of the scope of Phase 2, would build out all but one line position

---

<sup>30</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 1, p. 7.

<sup>31</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 1, p. 7.

<sup>32</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 1, p. 7.

<sup>33</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 1, p. 7.

<sup>34</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 1, p. 7.

at Harwood substation, which in turn would limit the ability of PPL Electric to accommodate other requests and load growth in the Hazleton area.<sup>35</sup>

38. The second solution considered by PPL Electric was to (a) split and extend the existing Susquehanna-Harwood #1 & #2 230 kV Transmission Lines to terminate into a new 230 kV switchyard, and (b) extend two double-circuit 230 kV transmission lines from the new 230 kV switchyard to the new Customer-owned 230-34 kV substation.<sup>36</sup>

39. Ultimately, PPL Electric selected this alternative as the proposed solution.<sup>37</sup>

40. The Project alternatives offered by the OCA are not viable means of addressing the Customer's interconnection needs.<sup>38</sup>

41. Alternatives including Dynamic Line Ratings ("DLR"), Non-Transmission Alternatives ("NTA") and a distribution system connection are not feasible engineering alternatives to the Project.<sup>39</sup>

42. The OCA "Nescopeck Alternative" is not a feasible alternative and will have more impacts than PPL Electric's proposed solution set forth in the LON.<sup>40</sup>

43. This LON proceeding does not include a request for Commission approval of the Project's costs.<sup>41</sup>

44. The Project's costs will ultimately be placed into FERC-jurisdictional transmission rates, or their appropriate allocation or recovery.<sup>42</sup>

---

<sup>35</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 1, p. 7.

<sup>36</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 1, p. 7.

<sup>37</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 1, p. 7.

<sup>38</sup> See PPL Electric St. No. 2-R, pp. 4-5.

<sup>39</sup> OCA Statement 2, p. 32; PPL Electric St. No. 2-R, p. 5.

<sup>40</sup> See OCA St. 2, p. 43.

<sup>41</sup> PPL Electric St. No. 1-R, p. 4.

<sup>42</sup> PPL Electric St. No. 5-R, pp. 13-16.

**C. THE TOMHICKEN 230 KV SWITCHYARD PROJECT WILL NOT  
CREATE AN UNREASONABLE RISK OF DANGER TO THE HEALTH  
AND SAFETY OF THE PUBLIC**

45. The Tap Lines and Connecting Lines associated with the Tomhicken 230 kV Switchyard Project will be designed, constructed, operated, and maintained in a manner that meets or surpasses all applicable NESC minimum standards and all applicable legal requirements.<sup>43</sup>

46. All of the Company's transmission lines are designed for Grade B construction, to ensure higher levels of structural reliability and safety to withstand environmental conditions such as ice and wind.<sup>44</sup>

47. PPL Electric designs and constructs projects with high regard to both public and employee safety and follows or exceeds all codes and requirements.<sup>45</sup>

48. The Project is designed with clearances that are at least 3 feet higher than NESC standards.<sup>46</sup>

49. The increased clearances included within the Project design further limit magnetic field exposure.<sup>47</sup>

50. The Company's design standards include a clearance-to-ground buffer in excess of NESC-required clearances to account for construction and design tolerances and the filling or grading of land within the ROW by property owners, which significantly reduces the risk of inadvertent contact with a transmission line.<sup>48</sup>

---

<sup>43</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 4, p. 1.

<sup>44</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 4, p. 1.

<sup>45</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 4, p. 1.

<sup>46</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 4, p. 2.

<sup>47</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 4, p. 5.

<sup>48</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 4, p. 2.

51. The proposed HV transmission line structures at issue in the instant proceeding are a minimum of 75 feet from the edge of the ROW utilized to the centerline of the ROW, and conductors will be approximately 55 feet from the edge of the ROW.<sup>49</sup>

52. PPL Electric has established a policy to design its new and rebuilt transmission lines to reduce magnetic fields, which generally prescribes the use of a line design that provides ground clearances higher than the required NESC ground clearance and reverse phasing of new double-circuit lines where it is feasible to do so, depending on cost.<sup>50</sup>

53. Also under this policy, the implementation of additional modifications to reduce magnetic field levels is also considered, provided those modifications can be made at low or no cost and will not interfere with operation of the transmission line.<sup>51</sup>

54. The instant Project is designed for zero EMF exposure at the edge of the ROW, and there are not currently any dwellings or structures located on the edge of the Company's ROW, meaning that there is a further buffer.<sup>52</sup>

55. Any potential fire risk resulting from the project, which is minimal, has been substantially mitigated for the HV transmission lines through engineering, design, and ongoing maintenance, including the Company's adherence to or exceeding of the NESC.<sup>53</sup>

56. The transmission structures will be grounded and bonded, which means that they are designed so that there is a path to ground in the event of lightning, and to dissipate stray voltage.<sup>54</sup>

---

<sup>49</sup> PPL Electric St. No. 2-R, p. 8.

<sup>50</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 4, p. 5.

<sup>51</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 4, p. 5.

<sup>52</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 4, p. 5.

<sup>53</sup> PPL Electric St. No. 2-R, p. 9.

<sup>54</sup> PPL Electric St. No. 2-R, p. 9.

57. The Company utilizes a relay protection system which automatically de-energizes the line in the unlikely event that the line or supporting structure fails and the line contacts the ground in order to protect the public as well as the equipment on the system.<sup>55</sup>

58. The Company's regular inspection and maintenance of its transmission facilities means that deficiencies can be corrected and less fuel would be available in the event of a fire.<sup>56</sup>

59. The Company's periodic maintenance and inspection program, which helps it to ensure continued public safety and integrity of service, is administered using helicopter patrols, with supplemental foot patrols as needed.<sup>57</sup>

60. The helicopter inspection and maintenance program is regularly used by the Company in order to aerially survey its transmission lines and to perform some maintenance tasks.<sup>58</sup>

61. The subject of any photos taken as a part of aerial surveillance is the facility itself, not homes of nearby landowners, and these photos are merely taken for purposes of inspection.<sup>59</sup>

62. Mr. Swartzentruber established that helicopters follow their own safety procedures and standards, and the Company does not utilize helicopter maintenance where it would be exceedingly dangerous to do so.<sup>60</sup>

63. OCA witness Felder's "reliability concerns" regarding "resource adequacy" are with respect to the availability and reliability of generation service to serve the PJM region.<sup>61</sup>

64. Generation service is not transmission service.<sup>62</sup>

---

<sup>55</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 4, p. 4.

<sup>56</sup> PPL Electric St. No. 2-R, p. 9.

<sup>57</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 4, p. 4.

<sup>58</sup> PPL Electric St. No. 2-R, p. 9.

<sup>59</sup> PPL Electric St. No. 2-R, p. 9.

<sup>60</sup> PPL Electric St. No. 2-R, p. 9.

<sup>61</sup> Tr. 624-26; PPL Electric Cross Exhibit No. 6.

<sup>62</sup> Tr. 625-26.

65. The LON does not involve PPL Electric generation service or facilities.<sup>63</sup>

66. PPL Electric's Rate Schedule LP-6 includes minimum requirements for an electric service agreement for a large load customer to obtain service under the rate schedule.<sup>64</sup>

67. PPL Electric's Rate Schedule LP-6 includes a requirement that the electric service agreement contain an initial term of not less than 10 years.<sup>65</sup>

68. PPL Electric's Rate Schedule LP-6 includes a requirement that the electric service agreement will require the customer to provide an initial load grant schedule for up to the first five years of the initial term.<sup>66</sup>

69. PPL Electric's Rate Schedule LP-6 includes a requirement that the customer provides security in an amount equal to the cost of upgrades needed to serve the customer, including but not limited to the cost the Company would not have incurred but for the interconnection of the customer, that are placed into transmission rate base and recovered through transmission rates.<sup>67</sup>

70. PPL Electric's Rate Schedule LP-6 includes a requirement that the electric service agreement requires security to be provided in the form of a letter of credit, parent guarantee, or other security instrument that is acceptable to PPL Electric for the amount of outstanding revenue guarantee for that service.<sup>68</sup>

71. PPL Electric's Rate Schedule LP-6 includes a requirement that the electric service agreement prescribe that in the event of default, the Company can draw on a credit vehicle to ensure payment.<sup>69</sup>

---

<sup>63</sup> See Tr. 510-511.

<sup>64</sup> Tr. 642.

<sup>65</sup> Tr. 642.

<sup>66</sup> Tr. 642-43.

<sup>67</sup> Tr. 643.

<sup>68</sup> Tr. 643-44.

<sup>69</sup> Tr. 645-46.

72. PPL Electric's Rate Schedule LP-6 requires that until a customer served under the schedule's rate-based security obligation to satisfy the electric service agreement, the customer will pay applicable rates based upon the greater of actual peak demand values or 80% below that provided on the load grant schedule.<sup>70</sup>

73. PPL Electric's Rate Schedule LP-6 requires that after the customer's rate-based security obligation is satisfied, the electric service agreement will require the customer to pay the applicable rate based upon either peak demand or the load grant schedule.<sup>71</sup>

74. PPL Electric's Rate Schedule LP-6 contains an exit fee requirement.<sup>72</sup>

75. PPL Electric's Rate Schedule LP-6 establishes specific requirements related to a contribution in aid of construction ("CIAC").<sup>73</sup>

76. PPL Electric's Rate Schedule LP-6 includes a voluntary interruptible option.<sup>74</sup>

77. Rate Schedule LP-6 contains baseline requirements that are specifically designed to mitigate the risk that transmission investments made to serve large load customers could otherwise be shifted to existing customers.<sup>75</sup>

78. The Company's Commission-approved tariff and the executed ESA allow the Company to respond to the needs of the grid and to manage the service provided to the Customer in a way that does not interfere with the rest of the system.<sup>76</sup>

79. No party challenged the Company's showing that the design and engineering specifications utilized by the Company, including the design of the proposed HV lines and of the proposed towers, are reasonable and acceptable.

---

<sup>70</sup> Tr. 646.

<sup>71</sup> Tr. 646.

<sup>72</sup> Tr. 646.

<sup>73</sup> Tr. 647.

<sup>74</sup> Tr. 647.

<sup>75</sup> PPL Electric St. No. 1-R, p. 12.

<sup>76</sup> PPL Electric St. No. 1, pp. 10-14.

80. Mr. Konidena confirms that the design and engineering specifications used by the Company are reasonable and acceptable.<sup>77</sup>

81. Mr. Konidena admitted on August 5, 2026 that his testimony did not opine on whether the Project would create an unreasonable risk of danger to the health and safety of the public, and that this determination is outside the scope of his expertise.<sup>78</sup>

82. Mr. Konidena admitted that this determination was based upon his understanding of the Project as a transmission planning engineer.<sup>79</sup>

**D. THE TOMHICKEN 230 KV SWITCHYARD PROJECT IS IN COMPLIANCE WITH STATUTES AND REGULATIONS PROVIDING FOR THE PROTECTION OF NATURAL RESOURCES**

83. The Proposed Route will be located entirely on land owned by either PPL Electric or the Customer.<sup>80</sup>

84. PPL Electric has provided information on regulatory permit requirements and agency coordination regarding cultural and environmental resources.<sup>81</sup>

85. The proposed Project will not affect any national parks, state parks, local parks, recreational areas, or natural landmarks. None of these features are located within the Project Area. Review of the National Conservation Easement Database and PA Conserved Lands websites notes that no conserved lands are crossed by the Project.<sup>82</sup>

86. An online review of the Project Area and surrounding landscape was conducted through the Pennsylvania Historical and Museum Commission (“PHMC”) State Historic and Archaeological Resource Exchange site. There is only one State Historic Preservation Office

---

<sup>77</sup> See, OCA St. 2, pp. 17-19, 30.

<sup>78</sup> PPL Electric Cross Exhibit No. 24, p. 2; PPL Electric Cross Exhibit No. 26, p. 2.

<sup>79</sup> Tr. 756.

<sup>80</sup> PPL Electric St. No. 3, pp. 5-6.

<sup>81</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 3; *see also* PPL Electric St. Nos. 3 and 3-R.

<sup>82</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 3, p. 6.

(“SHPO”) listed or eligible structure within 1 mile of the project area: The Lehigh Valley Railroad. The abandoned railroad is not crossed or spanned by the Project, and the Project will not affect the abandoned railroad. PPL Electric does not anticipate any impacts to SHPO-listed or -eligible structures or districts. Furthermore, based on PPL Electric’s coordination with PHMC, no archaeological or historic architectural resources will be affected by the proposed project.<sup>83</sup>

87. No unique geological, scenic, or natural areas are located within the Project Area.<sup>84</sup>

88. A Pennsylvania Natural Diversity Inventory (“PNDI”) was run for the Project on March 1, 2024, to assess the potential presence of threatened and endangered species and/or special concern species.<sup>85</sup>

89. Specific agencies reviewing the Project included the Pennsylvania Game Commission (“PGC”), the Pennsylvania Fish and Boat Commission, the Pennsylvania Department of Conservation and Natural Resources (“DCNR”), and U.S. Fish and Wildlife Service (“USFWS”).<sup>86</sup>

90. DCNR requested that a botanical survey be completed for certain species by a qualified botanist at the appropriate time of year, and the agency recommended that a Wild Plant Management Permit be obtained before botanical surveys occur.<sup>87</sup>

91. A botanical survey is to be conducted during the appropriate time of year, as requested by the DCNR.<sup>88</sup>

92. The DCNR search indicated that the Project is located within the range of the *Bartonia paniculata ssp. paniculata*, a special concern species of screw-stem found in sandy or

---

<sup>83</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 3, p. 6.

<sup>84</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 3, p. 6.

<sup>85</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 3, p. 9.

<sup>86</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 3, p. 9.

<sup>87</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 3, p. 10.

<sup>88</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 3, p. 10.

peaty acidic wetlands and yielded “Potential Impact – Further Review Required”. According to the Luzerne County NAI, screw-stem is present within the county. On August 7 and 8, 2025, PPL’s Electric’s Permitting Contractor conducted the field survey for Screw-stem (*Bartonia paniculata ssp. paniculata*) and the results were submitted to the DCNR via a Field Survey Summary Report. In response, the DCNR issued a letter on September 29, 2025, stating that no impact was anticipated per the survey with minimization and conservation measures with no further coordination needed for this project. However, PPL Electric will coordinate with DCNR to utilize minimization, conservation, and avoidance measures and adhere to all applicable regulations and permit requirements.<sup>89</sup>

93. The PGC advised a conservation measure and deferred comments to USFWS, and the PFBC reported no known impacts to threatened and endangered species and/or special concern species and resources within the Project Area. On November 27, 2024, PPL Electric ran a PNDI for property crossed by the existing Susquehanna-Harwood 230kV Transmission Line. Both the PGC and PFBC indicated no further consultation is required for the Project.<sup>90</sup>

94. The USFWS search indicated that the Project is located in the vicinity of northern long-eared bat habitat. The USFWS response indicated tree removal should not occur from May 15th to August 15th. Because tree removal activities will occur outside of the active bat window, PPL Electric does not anticipate any impact to the northern long-eared bat.<sup>91</sup>

95. PPL Electric has also committed to obtain all required permits prior to construction of the Project, and will comply with any and all conditions placed on such permits by those agencies that have appropriate jurisdiction over environmental matters.<sup>92</sup>

---

<sup>89</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 3, pp. 10-11.

<sup>90</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 3, p. 10.

<sup>91</sup> PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 3, p. 11.

<sup>92</sup> PPL Electric St. No. 3, p. 8; PPL Electric Hearing Exhibit No. 2 – Letter of Notification, Attachment 3, p. 11.

96. No parties contended that the Project was or is in violation of applicable statutes and regulations providing for the protection of the natural resources of the Commonwealth of Pennsylvania.

**E. THE TOMHICKEN 230 KV SWITCHYARD PROJECT WILL HAVE MINIMAL ADVERSE ENVIRONMENTAL IMPACTS**

97. The proposed HV lines will be located entirely within property owned by PPL Electric and the Customer.<sup>93</sup>

98. Efforts were made during the siting process to minimize impacts on existing and future land uses, as well as avoid sensitive natural resources, such as wetlands and streams.<sup>94</sup>

99. The siting, right-of-way, and resulting environmental and land-use impacts on constructing the OCA's proposed Nescopeck Alternative would be significantly greater than the Project as proposed.<sup>95</sup>

100. Relative to any other route that could be considered to connect the existing 230 kV system to the proposed Tomhicken Switchyard and then to the Customer's substation, the Project as proposed would result in significantly less impact to the environment in the area.<sup>96</sup>

101. Impacts to wetlands, watershed lifecycles, wildlife, water runoff, other general environmental impacts, and herbicide and pesticide use are being minimized or eliminated through Project design and permit conditions, and ongoing consultation with the applicable agencies during project development, construction, and operation.<sup>97</sup>

102. Ms. Cook's testimony regarding environmental concerns is lay witness testimony.<sup>98</sup>

---

<sup>93</sup> PPL Electric St. No. 3, p. 5.

<sup>94</sup> PPL Electric St. No. 3, p. 7.

<sup>95</sup> PPL Electric St. No. 3-R, pp. 3-4 (internal citations omitted).

<sup>96</sup> PPL Electric St. No. 3-R, pp. 5-6.

<sup>97</sup> PPL Electric St. No. 3-R, p. 6.

<sup>98</sup> Tr. 532-34.

103. Environmental concerns related to the Customer's facilities are not relevant to the proposed HV transmission lines that are the subject of the LON.

# APPENDIX B

**APPENDIX B**  
**PROPOSED CONCLUSIONS OF LAW**

PPL Electric Utilities Corporation (“PPL Electric”) proposes the following conclusions of law:

1. PPL Electric is requesting Commission approval to construct new overhead high voltage (“HV”) transmission lines that will be located entirely within PPL Electric’s existing transmission line right of way (“ROW”) and the property of the customer to be served by the line and will be less than two miles in length. Section 332(a) of the Public Utility Code (“Code”)<sup>1</sup> provides that the party seeking a rule or order from the Commission has the burden of proof in that proceeding.

2. “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.”<sup>2</sup>

3. The preponderance of evidence standard requires proof by a greater weight of the evidence.<sup>3</sup> This standard is satisfied by presenting evidence more convincing, by even the smallest amount, than that presented by another party.<sup>4</sup>

4. Any finding of fact necessary to support an adjudication of the Commission must be based upon substantial evidence.<sup>5</sup>

5. Substantial evidence is such relevant evidence as a reasonable mind might accept as adequate to support a conclusion.<sup>6</sup> Although substantial evidence must be “more than a scintilla

---

<sup>1</sup> 66 Pa.C.S. § 332(a).

<sup>2</sup> *Samuel J. Lansberry, Inc. v. Pa. PUC*, 578 A.2d 600, 602 (Pa. Cmwlth. 1990).

<sup>3</sup> *Commonwealth of Pennsylvania v. Williams*, 732 A.2d 1167 (Pa. 1999).

<sup>4</sup> *Brown v. Commonwealth of Pennsylvania*, 940 A.2d 610, 614 n.14 (Pa. Cmwlth. 2008).

<sup>5</sup> *Met-Ed Indus. Users Group v. Pa. PUC*, 960 A.2d 189, 193 n.2 (Pa. Cmwlth. 2008) (citing 2 Pa.C.S. § 704).

<sup>6</sup> *Borough of E. McKeesport v. Special/Temporary Civil Service Commission*, 942 A.2d 274, 281 (Pa. Cmwlth. 2008).

and must do more than create a suspicion of the existence of the fact to be established,”<sup>7</sup> the “presence of conflicting evidence in the record does not mean that substantial evidence is lacking.”<sup>8</sup>

6. “Mere bald assertions, personal opinions or perceptions do not constitute evidence.”<sup>9</sup>

7. If the applicant sets forth a *prima facie* case, then the burden shifts to the opponent.<sup>10</sup>

8. 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.<sup>11</sup>

9. While PPL Electric ultimately has the burden of proof to show that the Commission should authorize its request to site and construct the proposed HV transmission lines, other parties would bear the burden of proof to demonstrate that the Commission should adopt any alternatives to PPL Electric’s Project and/or impose any specific conditions upon or modifications to the Project.<sup>12</sup>

---

<sup>7</sup> *Kyu Son Yi v. State Board of Veterinarian Medicine*, 960 A.2d 864, 874 (Pa. Cmwlth. 2008) (citation omitted).

<sup>8</sup> *Allied Mechanical and Elec., Inc. v. Pennsylvania Prevailing Wage Appeals Board*, 923 A.2d 1220, 1228 (Pa. Cmwlth. 2007) (citation omitted).

<sup>9</sup> *Mid-Atlantic Power Supply Ass’n v. Pa. PUC*, 746 A.2d 1196, 1200 (Pa. Cmwlth. 2000) (citing *Bureau of Corrections v. City of Pittsburgh, Pittsburgh City Council*, 532 A.2d 12, 14 (Pa. 1987)); see also *West Penn Power Co. v. Pa. PUC*, 219 A.3d 716, 2019 Pa. Commw. Unpub. LEXIS 532, at \*24-25 (Pa. Cmwlth. 2019).

<sup>10</sup> *McDonald v. Pennsylvania Railroad Co.*, 36 A.2d 492 (Pa. 1940).

<sup>11</sup> *District of Columbia’s Appeal*, 21 A.2d 883 (Pa. 1941). See, e.g., *Application of Pennsylvania Power & Light Co.*, Docket 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).

<sup>12</sup> See 66 Pa.C.S. § 332(a); *NRG Energy, Inc. v. Pa. PUC*, 233 A.3d 936, 950-951 (Pa. Cmwlth. 2020), *appeal denied*, 244 A.3d 346 (Pa. 2021) (“If NRG did not bear a burden to present something to support its methodology, it would be difficult, if not impossible, for [utility] to respond with evidence explaining why the alternative should not be accepted”).

10. The Commission has the authority to weigh all evidence presented and to make determinations regarding the credibility of the witnesses in the proceeding, and the weight to give to the testimony of the same.<sup>13</sup>

11. In evaluating witness credibility, “the fact finder must consider the witness's manner of testifying, as well as the apparent candor, intelligence, personal interest and bias, or lack of it, when determining what weight shall be given to their testimony.”<sup>14</sup>

12. The fact finder may also consider “the witness’s conduct on the stand, demeanor, manner of testifying, . . . intonation of voice, and the witness’s positiveness and uncertainty as to facts.”<sup>15</sup>

13. “[C]onflicting statements are admissible for the purpose of impeaching a witness’s credibility.”<sup>16</sup>

14. The Commission looks to the Pennsylvania Rules of Evidence when evaluating “the difference between expert and lay testimony and opinions in order to address which witnesses can be relied upon for which issues under applicable legal standards.”<sup>17</sup>

15. While lay witnesses, including those who testify at public input hearings, are qualified to provide opinions based on their personal experiences,<sup>18</sup> testimony regarding matters

---

<sup>13</sup>*Pennsylvania Public Utility Commission, Bureau of Investigation and Enforcement v. Jerome McCree, Sr.*, Docket No. C-2023-3037385, 2025 Pa. PUC LEXIS 44, \*20 (Order entered Feb. 7, 2026) (citing *Hess v. Pa. PUC*, 107 A.3d 246 (Pa. Cmwlth. 2014), *York Water Company v. Pa. PUC*, 414 A.2d 138 (Pa. Cmwlth. 1980), *Pennsylvania Communities Organizing for Change, Inc. v. Pa. PUC*, 89 A.3d 338 (Pa. Cmwlth. 2014)) (“McCree”).

<sup>14</sup> *McCree*, at \*\*20-21.

<sup>15</sup> *McCree*, at \*21 (citing *In re Gaston’s Estate*, 361 Pa. 105, 62 Pa. A.2d 904 (1949)).

<sup>16</sup> *Commonwealth v. Valenzuela*, 408 Pa. Super. 399, 406 (Pa. Super. 1991) (citing *Commonwealth v. Updegrove*, 413 Pa. 599, 198 A.2d 534 (1964)). (emphasis added).

<sup>17</sup> *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 Nos. A-2009-2082652, *et al.*, 2010 Pa. PUC LEXIS 434, at \*27-30 (Opinion and Order entered Feb. 12, 2010) (referencing Pa. Rules of Evidence Nos. 701 and 702), *appealed on other grounds*, 25 A.3d 440.

<sup>18</sup> *Id.* at 19-20.

such as “the health effects of the line, the probability of structural failure, and the effect on real estate values,” require expertise to offer competent testimony.<sup>19</sup>

16. To be an “expert,” a witness must have “any reasonable pretension to specialized knowledge on the subject under investigation.”<sup>20</sup>

17. PPL Electric has met its burden of proof to demonstrate that the Project qualifies for the use of a Letter of Notification in lieu of a full siting application, consistent with requirements of 52 Pa. Code §57.72(d)(1).

18. Pursuant to Section 1501 of the Public Utility Code, an electric utility has a statutory obligation to provide safe, adequate, and reliable service to its customers.<sup>21</sup>

19. An electric utility may not site or construct HV transmission lines, *i.e.*, electrical lines with a voltage of 100 kV or higher, without prior Commission approval.<sup>22</sup>

20. Section 57.72(d)(1) authorizes the filing of a Letter of Notification in lieu of a full siting application for the following:

(i) An HV line which is proposed to be located entirely on an existing transmission line right-of-way, so long as the size, character design or configuration of the proposed HV line does not substantially alter the right-of-way.

(ii) An HV line which is proposed to be located entirely within a public road.

(iii) An HV line which is proposed to be located entirely within applicant’s existing transmission line right-of-way and the property of the sole customer to be served by the line, so long as the size, character, design or configuration of the proposed HV line does not substantially alter the right-of-way.

---

<sup>19</sup> *Id.* at 20.

<sup>20</sup> *Id.* at 20 (citing *Miller v. Brass Rail Tavern, Inc.*, 664 A.2d 525, 528 (Pa. 1995)).

<sup>21</sup> 66 Pa.C.S. § 1501.

<sup>22</sup> 52 Pa. Code § 57.71.

(iv) A line for which the voltage is proposed to be increased above its present levels, so long as the size, character, design or configuration of the proposed HV line does not substantially alter the right-of-way.

(v) An HV line which is to be reconductored or reconstructed so long as the size, character, design or configuration of the proposed HV line does not substantially alter the right-of-way.

(vi) An HV line having a proposed route of 2 miles or less.<sup>23</sup>

21. PPL Electric has met its burden of proof to demonstrate that the proposed Project qualifies for use of a Letter of Notification under 52 Pa. Code § 57.72(d)(1)(iii).

22. PPL Electric has met its burden of proof to demonstrate that the proposed Project qualifies for use of a Letter of Notification under Section 52 Pa. Code § 57.72(d)(1)(vi).

23. To be approved, an HV transmission line project submitted as a Letter of Notification must be necessary to address a specific need.<sup>24</sup>

24. The Public Utility Code does not define “need;” however, an electric utility can demonstrate that there is “a need” for a transmission line project under 52 Pa. Code § 57.76(a)(1) where the project resolves violations of the utility’s internally developed planning and reliability criteria.<sup>25</sup>

25. Letters of Notification have been approved where the necessity has arisen from a large load customer’s request to take transmission-level service,<sup>26</sup> consistent with a utility’s

---

<sup>23</sup> *Id.* § 57.72(d)(1) (emphasis added).

<sup>24</sup> *Id.* § 57.72(c)(5); *see also id.* § 57.72(d)(4).

<sup>25</sup> *See Hess v. Pa. PUC*, 107 A.3d 246, 262-263 (Pa. Cmwlth. 2014), *appeal denied*, 632 Pa. 678, 117 A.3d 1282 (Pa. 2015); *Application of PPL Electric Utilities Corporation filed Pursuant to 52 Pa. Code Chapter 47, Subchapter G, for Approval of the Siting and Construction of the North Lancaster Honey Brook # 1 & # 2 138/69 kV Transmission Lines in Lancaster County, Pennsylvania*, Docket Nos. A-2014-2430565, *et al.*, 2015 Pa. PUC LEXIS 77, at \*49 (Initial Decision issued Feb. 27, 2015) *adopted without modification* (Order entered Apr. 23, 2015) (“*PPL North Lancaster-Honey Brook*”) (holding that a project which alleviates violations of an electric utility’s own planning criteria provides sufficient evidence to support a finding of need).

<sup>26</sup> *Letter of Notification of PPL Electric Utilities Corporation for approval to construct the Susquehanna 230 kV and 500 kV Transmission Line Project in Conyngham and Salem Townships in Luzerne County, Pennsylvania*, *Petition*

obligation and right to provide service to customers pursuant to the terms and conditions of its existing, Commission-approved tariff.<sup>27</sup>

26. There is a need for reliable regional electric service and transmission systems.<sup>28</sup>

27. “Need” is a broad concept, and a utility is not required to show a project is “absolutely necessary.”<sup>29</sup>

28. The plain language of 52 Pa. Code § 57.76(a)(1) states that an electric utility must demonstrate there is “a” need for a transmission line project.<sup>30</sup> “A” need is an indefinite article, meaning that it lacks specificity for the proceeding noun, *i.e.*, “need”; conversely, “the” is a definite article, meaning that the proceeding noun, *i.e.*, “need,” would be specific.<sup>31</sup>

29. The relevant inquiry is whether a utility has “establish[ed] a need for the Project pursuant to the Commission’s Regulations and applicable law.”<sup>32</sup>

---

*for Waiver of Certain Provisions of the Commission’s Regulations for Commission Review of Siting and Construction of Electric Transmission Lines set forth at 52 Pa. Code § 57.71 et seq.*, Docket Nos. A-2025-3056806, *et al.*, at 6-7, 9 (Final Order entered September 25, 2025) (“PPL Electric submits that construction of the Susquehanna 230 kV and 500 kV Transmission Line Project is necessary to provide 230 kV and 500 kV service to a new PPL Electric customer. . . . Additionally, PPL Electric submits that the customer’s initial load is approximately 120 MW and will increase in stages to approximately 1,440 MW by 2030 . . . Finally, PPL Electric submits that the project was presented at PJM Interconnection LLC’s Transmission Expansion Advisory Committee meetings and assigned supplemental project number s3706.”)

<sup>27</sup> See, e.g., 66 Pa.C.S. §§ 1103, 1501, 2802(12); 52 Pa. Code §§ 57.19; *Popowsky v. Pa. PUC*, 910 A.2d 38, 48-56 (Pa. 2006); *Pa. Gas Co. v. Pub. Serv. Comm’n*, 83 Pa. Super. 557, 565-66 (1924); *Philadelphia Transp. Co. v. Pa. PUC*, 37 A.2d 138, 147 (Pa. Super. 1944); *Application of Leatherstocking Gas Co., LLC, for Approval to Supply Natural Gas Serv. to the Pub. in N. Susquehanna Cnty., in the Twps. of Bridgewater, Forest Lake, Great Bend, Harmony, New Milford, and Oakland, and in the Boroughs of Great Bend, Hallstead, Lanesboro, Montrose, New Milford, Oakland and Susquehanna*, Docket No. A-2011-2275595, 2012 Pa. PUC LEXIS 1391, at \*22 (Order entered Aug. 30, 2012).

<sup>28</sup> See *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).

<sup>29</sup> See *Hess v. Pa. PUC*, 107 A.3d 246, 260-61 (Pa. Cmwlth. 2014).

<sup>30</sup> 52 Pa. Code § 57.76(a)(1).

<sup>31</sup> See *Patricca v. Zoning Bd. of Adjustment*, 590 A.2d 744, 751 (Pa. 1991) (“The word ‘the’ is a definite article and is used . . . before a noun, with specifying or particularizing effect, as opposed to the indefinite or generalizing force of the indefinite article ‘a’ or ‘an’”) (citations omitted).

<sup>32</sup> *Letter of Notification of PPL Electric Utilities Corporation Filed pursuant to 52 Pa. Code Chapter 57, Subchapter G, for Approval to Rebuild the Existing Double-Circuit Stanton-Summit #3 and #4 230 kV Transmission Lines Connecting the Stanton 230-69 kV Substation and a Two-Pole Turn Structure That Are Respectively Located in Luzerne and Lackawanna Counties, Pennsylvania*, Docket No. A-2022-3037374, at 18 (Opinion and Order entered June 13, 2024).

30. A public utility must decide in the first instance what facilities are needed and where to locate those facilities; unless the public utility acted in an arbitrary or capricious manner, its decision should remain undisturbed.<sup>33</sup>

31. The Commission is not a “super board of directors” that acts to second guess a utility.<sup>34</sup>

32. PPL Electric has met its burden of proof to demonstrate that the proposed Project is needed to address a specific need to provide electric service to a new customer in Luzerne County.

33. A Letter of Notification must be consistent with “applicable law or Commission policy regarding transmission line siting and, therefore, in the public interest.”<sup>35</sup>

34. The Commission’s law and policy regarding a full siting “application” requires the Commission to determine: (1) that there is a need for the HV transmission line; (2) That the HV transmission line will not create an unreasonable risk of danger to the health and safety of the public; (3) that the HV transmission line is in compliance with applicable statutes and regulations providing for the protection of the natural resources of this Commonwealth; and (4) that the HV transmission line will have minimum adverse environmental impact, considering the electric power needs of the public, the state of available technology and the available alternatives.<sup>36</sup>

---

<sup>33</sup> See e.g., *Lower Chichester Township v. Pa. PUC*, 119 A.2d 674 (Pa. Super. 1956); *Abbingdon Electric Co. v. Pa. PUC*, 198 A. 901 (Pa. Super. 1938).

<sup>34</sup> *Metropolitan Edison Co. v. Pa. PUC*, 437 A.2d 76, 80 (Pa. Cmwlth. 1982) (“The Commission is not empowered to act as a super board of directors for the public utility companies of this state.”) (citations omitted); See also *Pa. PUC, et al. v The Columbia Water Co.*, Docket Nos. R-2008-2045157, *et al.*, 2009 Pa. PUC LEXIS 1423 (Opinion and Order entered May 28, 2009).

<sup>36</sup> 52 Pa. Code § 57.76(a).

35. With respect to health and safety under 52 Pa. Code § 57.76(a)(2), the Commission has repeatedly held that HV lines that meet or exceed the National Electric Safety Code (“NESC”) requirements do not create an unreasonable risk of danger to the health and safety of the public.<sup>37</sup>

36. PPL Electric has met its burden of proof to demonstrate that the proposed HV transmission lines will not create an unreasonable risk of danger to the health and safety of the public.

37. With respect to natural resources and the environment under 52 Pa. Code § 57.76(a)(3), the Pennsylvania Supreme Court has concluded that Article I, Section 27 of the Pennsylvania Constitution, i.e., the Environmental Rights Amendment,<sup>38</sup> placed Pennsylvania’s public natural resources in trust and named the Commonwealth as its trustee, to conserve and maintain those resources for the benefit of all people, including future generations.<sup>39</sup>

38. In carrying out these obligations, the Commonwealth, and its agencies, may subject the individual rights of citizens to clean air, pure water, and to the preservation of natural, scenic, historic, and esthetic values to reasonable regulation.<sup>40</sup>

39. The Commission has determined that its existing rules and policy regarding HV transmission line siting satisfy its obligations under the Environmental Rights Amendment as

---

<sup>37</sup> 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 500 kV Transmission Line*, Docket Nos. A-2009-2082652, *et al.*, 2010 Pa. PUC LEXIS 434, at \*166 (Order entered Feb. 12, 2010); *Application of PP&L for Approval to Locate and Construct a 138 kV Transmission Line Between West Allentown and Salisbury Substations*, Docket No. A-00104160 (Order entered July 20, 1984); *Application of PP&L for Authorization to Locate and Construct its Hamlin 138 kV Electric Transmission Line*, Docket No. A-00101826 (Order entered Apr. 3, 1981); *Larken v. Philadelphia Electric Co.*, 39 Pa. PUC 777 (1961).

<sup>38</sup> PA. CONST. art. I, § 27.

<sup>39</sup> *Pa. Environmental Defense Foundation v. Com. Of Pa.*, 161 A.3d 911 (Pa. 2017) (“PEDF”).

<sup>40</sup> PEDF, at 931; see also *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 Nos. A-2016-2565296, *et al.*, pp. 12-14 (Order entered March 8, 2018) (“Penelec”).

described in *Pa. Environmental Defense Foundation v. Com. Of Pa.*, 161 A.3d 911 (Pa. 2017) (“PEDF”).<sup>41</sup>

40. Generally, the Commission has found compliance with the applicable environmental statutes and regulations where the applicant agrees to obtain any and all necessary environmental permits prior to construction and to comply with any conditions on those permits during construction.<sup>42</sup>

41. 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.<sup>43</sup>

42. An applicant can satisfy 52 Pa. Code § 57.76(a)(3) by demonstrating that a transmission line will be located within existing ROWs and/or the property of the customer to be served, and “state and federal agencies have confirmed that they either have no concerns regarding

---

<sup>41</sup> *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 Nos. A-2016-2565296 et al., at pp. 12-14 (Order entered March 8, 2018) (“Penelec Order”) (“Our siting Regulations are in accord with the Environmental Rights Amendment by requiring that the environmental impact of the proposed transmission siting route be minimized.”).

<sup>42</sup> 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) (Opinion and Order Denying Exceptions entered June 7, 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 issued Mar. 28, 2011) (Opinion and Order entered Mar. 15, 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 (Opinion and Order entered Feb. 12, 2010).

<sup>43</sup> *Energy Conservation Council of Pennsylvania v. Pa. PUC*, 25 A.3d 440, 452 (Pa. Cmwlth. 2011) (hereinafter “Susquehanna-Roseland”).

impacts on endangered or threatened species, or that they will work with [the applicant] to ensure that the construction does not negatively impact such species.”<sup>44</sup>

43. With respect to the selection of a proposed route for an HV transmission line under 52 Pa. Code § 57.76(a)(4), the Commonwealth Court of Pennsylvania 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.<sup>45</sup>

44. A utility is not required to conduct a siting study or to evaluate alternative routes for an HV transmission line project that is the subject of a letter of notification.<sup>46</sup>

45. The Commission’s regulations do not require the utility to show no impact; instead, they require “through reasonable regulation, the impacts of a transmission line to be minimal considering the needs of the public.”<sup>47</sup>

46. It is appropriate for the Commission to consider the length of the HV transmission line when determining whether it would have a minimum adverse environmental impact.<sup>48</sup>

47. “By exempting HV lines of less than two miles in length from the [full siting] application process, including the requirements of providing information on environmental

---

<sup>44</sup> *Application of PPL Electric Utilities Corporation, for Approval to Rebuild Approximately Six Miles of the Breinigsville-Alburtis 500 kV Transmission Line in Lower Macungie and Upper Macungie Townships, Lehigh County, Pennsylvania; Petition for Waiver of Certain Provisions of the Commission’s Regulations for Commission Review of Siting and Construction of Electric Transmission Lines set forth at 52 Pa. Code § 57.71 et seq.*, Docket No. A-2019-3007945, at p. 19 (Order entered Aug. 14, 2019) (“*Breinigsville-Alburtis Order*”).

<sup>45</sup> *Susquehanna-Roseland*, at 449-50 (quoting *Energy Conservation Council of Pa. v. Pa. PUC*, 995 A.2d 465, 479-80 (Pa. Cmwlth. 2010) (“*TrAILCo*”).

<sup>46</sup> See 52 Pa. Code § 57.72(d)(4).

<sup>47</sup> *Klecknersville Order* at p. 43 .

<sup>48</sup> *Energy Conservation Council of Pa. v. Pa. PUC*, 995 A.2d 465, 482 (Pa. Cmwlth. 2010), *reargument denied*, 210 Pa. Commw. LEXIS 318 (Pa. Cmwlth. 2010) (“*TrAILCo*”).

impacts, this regulation raises the presumption that an HV line less than two miles in length... has a minimum adverse environmental impact.<sup>49</sup>

48. Requiring a utility to consider and evaluate *every* alternative “would effectively eliminate siting HV lines in Pennsylvania, a goal clearly not intended by the regulation.”<sup>50</sup>

49. PPL Electric has met its burden of proof to demonstrate that the Project is in compliance with applicable statutes and regulations providing for the protection of the natural resources of this Commonwealth.

50. The Commission’s law and policy regarding the siting of HV transmission lines also requires an electric utility to show that an HV transmission line will have minimum adverse environmental impacts considering the electric power needs of the public.<sup>51</sup>

51. A utility is not required to conduct a siting study or to evaluate alternative routes for an HV transmission line project that is the subject of a Letter of Notification.<sup>52</sup>

52. It is appropriate for the Commission to consider the length of the HV transmission line when determining whether it would have minimum adverse environmental impact.<sup>53</sup>

---

<sup>49</sup> *Id.* (emphasis added).

<sup>50</sup> See *Summit-Lackawanna; Application of PPL Electric Utilities Corp. 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, at at \*114 (Opinion and Order Entered Feb. 12, 2010); see also *In Re: Application of PPL Electric Utilities Corporation (PPL) for Approval of the Siting and Reconstruction of the Proposed Coopersburg # 1 and # 2 138/69 kV Tap in Upper Saucon Township, Lehigh County and Springfield and Richland Townships, Bucks County, Pennsylvania (Coopersburg kV transmission line)*, Docket Nos. A-2008-2022941, *et al.*, at p. 31 (Opinion and Order entered July 24, 2009) (“Further, we do not accept the proposition implicit in this Exception that PPL or any public utility applicant must perform an environmental analysis on every alternative route that might be available.”)

<sup>51</sup> See, *e.g.*, 52 Pa. Code § 57.76(a)(4).

<sup>52</sup> See 52 Pa. Code § 57.72(d)(4).

<sup>53</sup> *Energy Conservation Council of Pa. v. Pa. PUC*, 995 A.2d 465, 482 (Pa. Cmwlth. 2010), *reargument denied*, 210 Pa. Commw. LEXIS 318 (Pa. Cmwlth. 2010) (“*TrAILCo*”).

53. The Commission’s regulations presume that an HV line less than two miles in length has a minimum adverse environmental impact.<sup>54</sup>

54. PPL Electric has met its burden of proof to demonstrate that the Project is consistent with the Commission’s law and policy requiring a public utility to demonstrate an HV transmission line will have minimum adverse environmental impacts.

55. PPL Electric has met its burden of proof to demonstrate that the Project qualifies for use of an LON, addresses a specific need to provide electric service to a new customer in Luzerne County, and is consistent with applicable law and Commission policy regarding transmission siting and, therefore, is in the public interest.

56. The Commission’s transmission line siting regulations contained in Chapter 57, Subchapter are limited to the proposed HV lines and do not require the Commission to consider alternative engineering configurations.<sup>55</sup>

57. While the Commission oversees the siting and location of HV transmission lines, issues of transmission cost allocation are under the exclusive jurisdiction of the FERC.<sup>56</sup>

58. “States’ attempts to second-guess the reasonableness of FERC tariffs [is] preempted pursuant to the filed-rate doctrine. That doctrine provides that interstate power rates filed with FERC or fixed by FERC must be given binding effect by state utility commissions determining intrastate rates . . . as a matter of federal pre-emption through the Supremacy Clause.”<sup>57</sup>

---

<sup>54</sup> *Id.* (emphasis added). Similarly, the Commission has previously concluded that where a transmission line “will be constructed entirely on existing ROW...consideration of an alternative route is unnecessary.” *Breinigsville-Alburtis Order*, at p. 6 (emphasis added).

<sup>55</sup> *Id.* at 148.

<sup>56</sup> 16 U.S.C. §§ 824(b), 824e(a); *see also Hughes v. Talen Energy Mktg., LLC*, 578 U.S. 150, 153 (2016).

<sup>57</sup> *Transource Pa. LLC v. DeFrank, et al.*, 156 F.4th 351, 376 (3d Cir. 2025) (internal quotations and citations omitted).

59. “Once FERC determines that a rate is ‘reasonable,’ state utilities cannot impose any inconsistent rate—even when acting in an area of exclusive state jurisdiction.”<sup>58</sup>

---

<sup>58</sup> *Transource Pa. LLC v. DeFrank, et al.*, 156 F.4th 351, 376 (3d Cir. 2025) (internal quotations and citations omitted).

# APPENDIX C

**APPENDIX C**  
**PROPOSED ORDERING PARAGRAPHS**

PPL Electric Utilities Corporation (“PPL Electric” or the “Company”) proposes the following ordering paragraphs:

1. The Letter of Notification Of PPL Electric Utilities Corporation, Filed Pursuant To 52 Pa. Code Chapter 57 Subchapter G, For Approval to Build Approximately 1.1 Miles of New Parallel Double Circuit 230 kV Transmission Taps that are Needed to Connect the Existing Susquehanna-Harwood #1 & #2 Transmission Lines to the New Tomhicken 230 kV Switchyard that are Respectively Located in Luzerne County, Pennsylvania filed at Docket No. A-2025-3059443 is approved.
2. The Protests of the Office of Consumer Advocate, Erika Cook, and John Zola filed at Docket No. A-2025-3059443 are denied.
3. All other such approvals and/or waivers that are necessary or appropriate to approve the above-captioned Letter of Notification are granted.
4. The proceeding at Docket No. A-2025-3059443 be marked closed.

# Appendix D

## **1997 Pa. PUC LEXIS 63**

Pennsylvania Public Utility Commission

March 4, 1997

Docket No. A-110400F0033

### ***PA Public Utility Commission Decisions***

#### **Reporter**

1997 Pa. PUC LEXIS 63 \*

### **Application of Pennsylvania Electric Company for Review and Approval of the Siting and Construction of a Proposed 115 Kv Transmission Line Extending From The Proposed Ward Substation to the Existing 115 Kv Tower Hill Substation in the Townships of Lawrence and Jackson, Tioga County, Pennsylvania**

---

#### **Core Terms**

---

route, substation, tower, was, has, electric, negotiate, customer, proposed line, transmission line, siting, right-of-way, township, load, protest, phase, property owner, manufacture, voltage, furnace, outage, transmission, distribution system, reliability, agricultural land, distribution line, forest, fluctuate, plant, cost

#### **Opinion**

---

[\*1]

#### **INITIAL DECISION**

Before Allison K. Turner Administrative Law Judge

March 4, 1997

#### **SUMMARY**

Penelec has presented substantial evidence in this proceeding supporting its Application to locate and construct the Ward to Tower Hill 115 Kv line. That evidence demonstrates that the Application meets the requirements of the Commission's High Voltage Transmission Line Siting Regulations. 52 Pa. Code § 57.71, et. seq.

Penelec received a request from Ward-ACP to provide service to the new manufacturing plant it is building in Penelec's service territory. Ward is now in the beginning phase (Phase I) of this project. Ward presently takes power from Penelec through its 34.5 Kv distribution system. The

34.5 Kv service is not fully satisfactory as a source of power, and will not be at all sufficient as the plant is developed to full capacity. Ward will build its own substation to enable it to take bulk power from Penelec at 115 Kv. Ward will convert the 115 Kv to 34.5 Kv at its substation, and thus it will continue to operate at the same voltage it uses now. The bulk power arrangement will operate as a more reliable source.

Penelec is required by law to provide service to all such customers [\*2] upon request. Penelec conducted extensive studies to evaluate the present and future need for this project. Ward-ACP offered substantial supporting evidence regarding its specific electric consumption patterns and needs.

The evidence shows that Penelec must construct the proposed line to prevent any "objectionable voltage fluctuations" both at Ward's facility and for Penelec's other customers served from Penelec's Tower Hill Substation. It must also construct the line to provide adequate capacity to cover any outage at Penelec's neighboring Osceola Substation, and to provide adequate capacity for future growth in the area. Thus, the proposed line will not be solely for the use and convenience of Ward.

The various protestants that have actively opposed the Application have raised issues of restrictions of their use of their land as property owners, or aesthetic impairment, of good faith negotiations, of proper permitting and approval, and of the desire of one of them for a direct connection between Penelec's new substation and one of its own to enhance the reliability and/or adequacy of service that Penelec provides to it at wholesale. Penelec has either rebutted these allegations, [\*3] or shown that the issues should be resolved through other available legal or negotiation procedures. The purchased power issue is not directly relevant to the issue of need for the line. Since it is a wholesale sale, it might be the subject for a complaint before FERC.

Protestants have not established that Penelec's proposed route over or adjacent to their land would be injurious to the public health and/or safety, or severely restrict or prevent their use or planned use of their land.

Penelec has employed a reasonable process for identifying and selecting a route for the Proposed Line. The overall objective in Penelec's route selection process was to select an environmentally sound, economically feasible, and licensable route between the Ward and Tower Hill Substations. In Penelec's route selection process, Penelec initially compared the suitability of six alternative routes for the Proposed Line before selecting a preferred route.

In Penelec's attempts to acquire the right-of-way for the Proposed Line, Penelec took into consideration property owners' individual desires related to the route across their property. The end result was the identification of a Negotiated Route that attempts [\*4] to balance environmental and land use contributions, functional requirements, and cost. The evidence in this case supports the conclusion that the Negotiated Route is reasonable, and is based upon relevant and germane factors.

The issues of damages caused by any impairment of the Protestants' use of their property will be determined by a Common Pleas Court in subsequent condemnation proceedings, if they become necessary. Penelec must first obtain a certificate of eminent domain from the

Commission before exercising this power through the Courts, 15 P.S. § 1511; 52 Pa.Code § 57.71, but the Commission does not have jurisdiction over valuation and damages in eminent domain proceedings.

Penelec's siting application should be approved.

## PROCEDURAL HISTORY

On August 19, 1996, Penelec filed an application with the Pennsylvania Public Utility Commission (the "Commission") pursuant to Chapter 57 of the Pennsylvania Code, Subchapter G, 52 Pa. Code §§ 57.71, et seq., to site and construct a 115 kilovolt (Kv) transmission line (Application). Penelec, which is an arm of GPU Energy, Inc. (GPU), seeks siting approval of the line to serve Ward Manufacturing Company's (Ward) subsidiary, Ward's [\*5] Advanced Cast Products Division (Ward-ACP or Ward), which has established and will expand a metal casting operation in Tioga Junction, Lawrence Township, Tioga County. Ward is now served by Penelec's 34.5 Kv distribution system.

Penelec gave due notice of the filing of the Application to property owners within the proposed right-of-way and to appropriate government officials and agencies, as required by the Commission's regulations at [52 Pa. Code § 57.74\(c\)](#). In addition, newspaper notices of the filing of the Application were published and proofs of publication were filed with the Commission.

A telephonic prehearing conference was scheduled and held on November 5, 1996. The case was assigned to Administrative Law Judge Allison K. Turner (ALJ) for hearing and disposition. Penelec had been directed to publish the time and date of the prehearing conference according to Commission regulations. It filed proof of publication on November 1, 1996.

On October 21, 1996, Helena DiMaio filed a letter protest opposing installation of poles and electric wires near her home. On November 8, 1996, Kim Albanese filed a several-page letter protest opposing the transmission line siting on his property [\*6] for a number of reasons. Barry Schoenly, a land owner, and Gary Dunn of the Tri-County Rural Electric Cooperative made their opposition known by attending the telephonic prehearing conference.

In all, 8 persons attended the telephonic prehearing conference, and they have been considered the active parties for purposes of service of documents by Penelec. The Commission has regularly served orders and sent hearing notices to a larger group including both the affected property owners and the active parties.

On December 5, 1996, Ward filed a formal Petition to Intervene, which was granted by Interim Order # 2. In all, 4 Interim Orders were issued dated December 16 and 17, 1996, January 15, and February 3, 1997.

On December 26, 1996, Penelec filed a Petition to Amend its proposed route as permitted by Commission regulations. Penelec gave due notice of the filing of the Petition to Amend to the property owners within the proposed right-of-way and to appropriate government officials and agencies, as required by the Commission's regulations at [52 Pa. Code § 57.74\(c\)](#). In addition, newspaper notices of the filing of the Petition were published and proofs of publication were filed with the Commission. [\*7] Parties were notified by Interim Order 3 that they would have an

opportunity to present testimony on the amended proposed route at evidentiary hearings to be held locally.

Evidentiary hearings were scheduled to be held January 22 and 23, 1997 in Mansfield, PA. In the event, only one day, January 22, 1997 (January 22 hearing) was needed. The hearing for January 23, 1997 was cancelled. The testimonial record was closed January 22, 1997. However, the evidentiary record was held open until January 31, 1997 to allow Penelec to file several late-filed exhibits requested by the ALJ to make the record more complete. These exhibits were filed on or about January 30, 1997, and admitted by Order # 4 (Penelec Exhibit 2, a map and Penelec Exhibit 3, tariff sheets). The evidentiary record was closed by ALJ Order # 4 on February 3, 1997.

Penelec called four witnesses: Andrew J. Zulkowsky (AJZ), Engineering and System Planning; Robert J. Kasisky (RJK) Siting Project Leader; Robert J. Houston (RJH) Environmental Siting Consultant; and, Larry Feirick, Right Of Way Negotiating Agent. Penelec submitted 9 exhibits to accompany its prepared statements. Also the original application and its exhibits were [\*8] admitted into the record (Penelec Exhibit 1).

Ward called two witnesses: Arthur P. Guidi, Jr. (Guidi), Vice President, and Robert J. Blair (Blair), Executive Director of Tioga County Development Corporation (TCDC) who submitted prepared testimony (Ward 1 and 2). Ward submitted no other exhibits.

Four protestants testified: Gary Dunn (Dunn), for Tri-County Rural Electric Cooperative (TCREC or Tri-County); Helena DiMaio; Barry Schoenly; and Kim Albanese, who also incorporated his letter-protest as part of his statement (Alb. Statement 1). Transcripts totalling 296 pages have been created (citations to transcript pages are denoted by Tr. or N.T.).

Both Ward and Penelec intended to file briefs. A responsive briefing schedule was established by briefing letter dated January 31, 1997. The Main Briefs were due February 14, 1997, and the Responsive Briefs were due February 28, 1997. However, two Protestants' Briefs were filed on February 14, 1997, as well as Penelec's and Ward's. (Ward MB, Penelec MB; Alb MB, TCREC L/B)

One of these briefs was from TCREC. It was a letter-brief that had a number of pages of tables attached that showed historical data regarding its service from Penelec. As [\*9] TCREC stated, none of this information had been put on the record at the January 22 hearing. TCREC had plenty of notice and opportunity to prepare and submit evidence at that hearing. By submitting additional information in this manner, TCREC was in effect depriving Penelec of its due process right to confront and respond to it.

On February 19, 1997, the ALJ convened a conference call to discuss the matter with TCREC, Penelec and Ward. Penelec and TCREC were encouraged to submit affidavits with relevant information on the reliability issue. Both of them had to submit affidavits for TCREC's tables to be considered. If no affidavits were received within 5 working days of the conference call, or by

February 26, 1997, TCREC understood that its brief would be stricken. Both affidavits, dated February 26, 1997, were received on February 28, 1997 (TC Affdvt, and Pen Affdvt). <sup>1</sup>

**[\*10]**

By letter dated February 21, 1997, all parties were notified that the provisions for Responsive/Reply briefs had become moot, that the later deadline was removed, and that no further briefs were to be filed. The parties were allowed to request to be permitted to file reply briefs, but no such request was made. The parties were also informed of ALJ actions regarding the TCREC brief.

OALJ requested expedited transcript service and set foreshortened briefing periods in an effort to produce an early initial decision to help speed up the process before the Commission. <sup>2</sup> This is in response to Ward's expressed desire to receive a Commission decision as early as possible to enable it to start the next phase of its plant development as early as possible. Ward needs a 1-year lead time to plan and implement Phase 2 of its business plan.

### **GENERAL DESCRIPTION OF THE PROPOSED [\*11] WARD TO TOWER HILL 115 KV LINE <sup>3</sup>**

As presently proposed, the line is approximately 7.15 miles long and will be constructed on a right-of-way that is approximately 120 feet wide.

The route for the Proposed Line is Penelec's Negotiated Route. <sup>4</sup> A description of the Negotiated Route of the line is set forth below (Penelec Statement RJH-1 and supporting Exhibits):

The Negotiated Route is approximately 7.15 miles long. It exits the proposed Ward Substation, heads northeast through rangeland into forest land, bends to the east to twice cross an unnamed tributary to the Tioga River, then continues [\*12] through forest land, totaling approximately 0.99 miles. It bends to the northeast, crosses a private road, continues through forest land, bends to the southeast and then to the east through forest land and agricultural land, totaling approximately 1.72 miles. It bends to the southwest, then to the southeast through agricultural land and forest land, crosses an unnamed tributary to Mutton Lane Creek and Township Road 779 before it continues through forest

---

<sup>1</sup> The ALJ contacted the Harrisburg office of the Pennsylvania Rural Electric Association (PaREA) to request public information about TCREC. She received copies of the cover page and pages 24 and 25 of its 1997 Directory (hereafter 1997 Directory, PaREA & AEC, Inc.), and page 1 of TCREC's Annual Report. Official notice is hereby taken of the facts therein under [52 Pa.Code § 5.408](#).

<sup>2</sup> Extensive portions of this decision incorporate, and sometimes blend, language from both Ward's and Penelec's briefs, without specific attribution.

<sup>3</sup> A general description of the planned design and construction of the Ward to Tower Hill 115 Kv Line is explained in detail at Penelec's Statement RJH-1 and supporting Exhibits. The Proposed Line will be designed and constructed in accordance with normal Penelec specifications for transmission line engineering. The conductor configuration for the line will show three 795 MCM ACSR phase conductors 1.108 inches in diameter.

<sup>4</sup> The right-of-way described above is the Negotiated Route that was the subject matter of Penelec's Petition to Amend dated December 26, 1996, consistent with Interim Order # 4 dated February 3, 1997. For purposes of this Application, the Negotiated Route is considered Penelec's Proposed Route for the 115 Kv Ward to Tower Hill Line.

land where it bends to the southeast through forest land and agricultural land, crossing another unnamed tributary to Mutton Lane Creek, Township Road 777 and additional agricultural land, totaling approximately 1.53 miles. It then bends to the northeast through agricultural land, crosses State Route 1020, continues through agricultural land, traverses forest land, rangeland, then forested wetland, totaling approximately 0.90 miles. It then bends to the southeast through forested and non-forested wetland, traverses agricultural land, crosses Hammond Creek and State Route 328, continues through agricultural land, some forest land and agricultural land, where it bends to the east through agricultural land, crosses Township Road 711, [\*13] and continues through agricultural land, totaling approximately 1.29 miles. It then bends to the southeast through agricultural land, crosses Hammond Creek, traverses agricultural land, crosses State Route 1013 and continues through agricultural land where it bends to the southwest following existing Penelec ROW through rangeland to the Tower Hill Substation, totaling approximately 0.72 miles.

A typical supporting structure will be a single steel pole rising at least 80 feet above the ground surface; the tallest pole will be approximately 100 feet above the ground. A typical structure is shown on Penelec Exhibit RJK-1.

Minimum conductor-to-ground clearance will be 36 feet under normal [\*14] conditions and a clearance of 34 feet during extreme load and weather conditions. The minimum distance from conductors to the supporting structures will be 43 inches under normal conditions and 40 inches during extreme conditions.

Approximately sixty (60) structures will be placed along the center line of the right-of-way of the Proposed Line. The average span of the structure will be 700 feet.

The Proposed Line is designed to accommodate a 34.5 kV distribution line underbuild. The 34.5 kV line will be added to the structures in the future as needed.

The estimated construction cost of the Proposed Line is \$ 1.7 million, and construction is scheduled for completion in December, 1997. <sup>5</sup>

## **FINDINGS OF FACT**

1. Pennsylvania Electric Company/GPU Energy, Inc. is a corporation providing electric service for compensation in Pennsylvania. Penelec furnishes electric service to approximately 563,000 customers in thirty-one Pennsylvania counties [\*15] and two New York counties, and has its principal office at 2800 Pottsville Pike, P.O. Box 16001, Reading, Pennsylvania 19640-0001.

2. Ward Manufacturing Company is an industrial customer of Penelec with an established plant in Blossburg, PA. It is developing a plant in Tioga Junction, PA, through its subsidiary, Ward-ACP.

3. In October 1995, Ward-ACP announced that it was constructing an advanced technology metal casting and processing facility for the production of automotive ductile components. Ward St. No. 1, p. 1; Tr. 164. The new operation is a metal casting plant which begins its process by

---

<sup>5</sup> The original preferred route was 6.1 miles, and would have cost \$ 1.4 million.

melting tons of scrap metal in large smelting furnaces. This step consumes large amounts of power in a very short interval.

4. Ward will construct and operate the facility in three phases: Phase I of the construction will be complete in February 1997, cost approximately \$ 66 million, and employ approximately 150 persons; Phase II, now planned to be complete in late 1998, cost \$ 50 million, and employ approximately 250 persons; Phase III will be complete approximately five to seven years after Phase II becomes operational, cost about \$ 80 million, and employ at least 500 persons. Ward St. [\*16] No. 1, p. 1-2; Tr. 71, 170. Many of Ward's new employees will move into the area, although many current residents should also be employed.

5. Ward currently only employs nineteen salaried employees, excluding engineers, and nineteen hourly employees at its new facility. Ward St. No. 1, p. 5; Tr. 148.

6. Of the nineteen salaried employees at Ward's facility, eight moved to the area from outside Tioga County. Of the nineteen hourly employees, three moved from outside the County. 2 Ward St. No. 1, pp. 5-6; Tr. 149-150. By March 1, 1997, Ward will hire eleven additional salaried employees and twenty-six additional hourly employees. Ward St. No. 1, pp. 5-6; Tr. 149-150

7. Ward-ACP's facility will be an electric melt facility, which will use two medium frequency Inductotherm ten-ton furnaces in Phase I, three furnaces in Phase II, and six or seven additional furnaces in Phase III. The furnaces are designed to use a consistent power source to generate a magnetic field to melt raw scrap metal at a very rapid pace. The molten scrap is then used to manufacture automobile safety components. Ward St. No. 1, p. 2; Tr. 71, 148-149, 160.

8. During 1997, Ward-ACP's electricity load level will be about [\*17] 23 mW. By 2002, it will increase to 36 mW. Ward-ACP's load level will eventually increase to 54 mW. Ward St. No. 1, p. 2; Penelec St. AJZ-1, p. 4.

9. The Inductotherm furnaces are designed to melt 17 tons of iron per hour. To do so, the furnaces are designed to be heated to their maximum level (ramp up) within three seconds. Tr. 72-73; 157.

10. Ward's melting practice is called "batch melting." Tr. 148.

11. Penelec provides service to Ward through a 34.5 kV distribution line supplied out of its Tower Hill Substation. Penelec St. AJZ-1, p. 3.

12. If and when Ward takes power from Penelec at 115 kV at its own substation, it will no longer take power through the distribution system, but will take it directly from the transmission system. Ward's consumption then would have no effect on the distribution system.

13. If Ward remains connected to the 34.5 kV distribution system, it will not be able to participate in the developing competitive wheeling market. If Ward is connected to the transmission system, it will be able to participate in this market.

14. Penelec's initial engineering studies determined that its distribution system could not meet Ward's energy demands even during Phase [\*18] I of its operations. Tr. 71.

15. Before Ward could begin initial limited operations at its facility, Penelec constructed a new 115 kV - 34.5 kV substation near Tower Hill, Jackson Township, rebuilt and converted to 115 kV service approximately ten miles of an existing 34.5 kV circuit, then served from its Mansfield Substation to its Tower Hill substation, and supplied approximately 1.7 miles of 34.5 kV circuit out of the Tower Hill Substation. Penelec St. AJZ-1, p.4.

16. Penelec removed approximately seventy-five of its customers from the end of the 34.5 kV line that serves Ward and transferred them to a 34.5 kV line supplied out of its Osceola Substation because the customers would have experienced fluctuations in their electric service when Ward energized its furnaces. Penelec St. AJZ-1, pp. 3-4; Tr. 71, 74.

17. Penelec's Tower Hill Substation is several miles distant from Ward's facility. By serving Ward from the 34.5 kV distribution line, the amount of fault duty available on the line has been reduced, (i.e., the line is more likely to suffer faults that have an impact on service). Penelec St. No. AJZ-1; Tr. 81, 195.

18. The lack of available fault duty on the distribution line **[\*19]** serving Ward increases the risk of objectionable voltage fluctuations at Ward's new facility and for any other customer served from the Tower Hill Substation. Penelec St. No. AJZ-1; Tr. 81, 195.

19. At present, if Ward were to ramp up its furnaces in three seconds, its electric service and the service of any customer served from the Tower Hill Substation would fluctuate (flicker). Penelec St. No. AJZ-1, p.4; Tr. 72, 81, 195.

20. Penelec has requested that Ward ramp up its furnaces over thirty seconds to reduce the voltage required and minimize the likelihood of fluctuations at Ward and for other customers served from the Tower Hill Substation. Penelec St. AJZ-1, p.4.

21. Ward has agreed to ramp up its furnaces over thirty seconds for one year. Ward St. No. 1, pp. 4-5; Penelec St. AJZ-1, p.4; Tr. 73.

22. Continuing to ramp up its furnaces over thirty seconds, rather than three seconds, is not economically efficient. Penelec St. AJZ-1, p.4; Ward St. No. 1, p. 5; Tr. 148.

23. If Ward were to increase the number of furnaces used at its facility, the 34.5 kV distribution line would "overload." Tr. 73, 196-197.

24. All of the electrical equipment in Ward's facility will be operated by computer **[\*20]** and any voltage fluctuations in Ward's power source will cause most of Ward's electrical equipment to shut down. Ward St. No. 1, p. 4; Tr. 177.

25. The Inductotherm furnaces used by Ward are very sensitive to damage caused by voltage fluctuations. Ward St. No. 1, pp. 4-5.

26. Lapses in Ward's operation due to equipment failure or shutdown will cause delays in production and result in possible employee layoffs or furloughs. Ward St. No. 1, pp. 4-5.

27. Because Penelec serves Ward from the Tower Hill Substation, Penelec no longer has the capacity to transfer energy load between its Osceola Substation and its Tower Hill Substation. Penelec St. AJZ-1, p. 5; Tr. 73, 199.

28. If Penelec removes Ward from the 34.5 kV distribution line, Penelec would use the capacity made available on the Tower Hill Substation to swap load between the Osceola Substation and the Tower Hill Substation. Penelec St. AJZ-1, p. 5; Tr. 74.

29. Swapping load between the Osceola and Tower Hill Substations would prevent longer outages when there is a problem at one of the substations. Penelec St. AJZ-1, p. 5; Tr. 74.

30. Penelec's seventy-five customers transferred from its Tower Hill Substation to its Osceola Substation [\*21] are served from a single phase spur approximately two miles in length, putting the customers at greater danger to line exposure and the risks associated with winds and falling trees. Penelec St. AJZ-1, p.4; Tr. 74, 77.

31. Penelec would transfer its seventy-five customers back to the Tower Hill Substation if it served Ward from the proposed 115 kV transmission line, minimizing their line exposure and attendant risks of outages. Penelec St. AJZ-1, p. 5; Tr. 78.

32. Penelec conducted a study of the energy needs of Tioga County over the last five years, which showed an annual growth rate of 2.2 percent. Tr. 83.

33. In June 1996, Lawrence Township, Lawrenceville Borough and Nelson Township were added to the "49 CORRIDOR Enterprise Zone" (Zone), the largest rural Enterprise Zone in the Pennsylvania Enterprise Zone Program. Ward St. No. 2, p. 7.

34. The areas where the proposed line will have supply impact and of the Zone overlap but are not identical.

35. Businesses in the Zone are eligible for low interest state loans, tax credits, priority for training funding, and other incentives designed to encourage commercial and industrial growth in the region. Ward St. No. 2, p. 7.

36. During [\*22] the summer of 1996, eight of the ten industrial employers in Zone indicated that they were either involved in expansion projects or expected to expand their operations within the next few years. Ward St. No. 2, p. 7.

37. In conducting its study of the area's energy needs, Penelec did not consider planned expansions at Georgia Pacific Corporation and Kaminski Lumber Company, Inc., or the construction of a new gas storage project by the Tioga Gas Storage Company. Tr. 84.

38. Penelec's expected annual growth rate for the area's energy needs would have been higher than 2.2 percent if it had considered planned expansions at Georgia Pacific Corporation and Kaminski Lumber Company, Inc., and the construction of a new gas storage project by the Tioga Gas Storage Company. Tr. 84 -85

39. Georgia Pacific Corporation has invested more than \$ 8 million and has hired seventy additional employees (from thirteen in 1995, to eighty-three now). Georgia Pacific will continue to expand its operations. Ward St. No. 2, p. 5.

40. Kaminski Lumber Company, Inc. is in the process of expanding its hardwood finishing operations, and it will hire two or three additional employees. Additional manufacturing equipment [\*23] will be used which will require additional electricity. Ward St. No. 2, pp. 5-6.

41. Tioga Gas Storage Company, a subsidiary of Tejas Power Corporation, will operate a new gas storage project in Tioga County, which is expected to employ between fifty and 100 persons during construction and ten to 15 persons during operations. As part of the project, a compressor station and office will be constructed, which will also require electricity. Ward St. No. 2, p. 6.

42. United Salt, Inc. has announced that as part of the Tioga Gas Storage Company project, it will locate a manufacturing facility in Tioga Township to dehydrate the sale brine extracted. It is expected to employ between sixty and eighty persons. Ward St. No. 2, p. 6.

43. PennDOT has started expansion of U.S. Route 15 through Tioga County as a four-lane, limited access highway. Planning is underway for that portion of the highway through Lawrence Township, which will include a full interchange in the Lawrenceville area. The entire expansion project is scheduled to be completed by 2002. Ward St. No. 2, p. 6.

44. Lawrence Township is constructing a \$ 3.4 million municipal sewage collection system and treatment facility. Ward St. [\*24] No. 2, p. 6.

45. Tioga Borough has started construction of a \$ 2.5 million municipal sewage collection and treatment system. Ward St. No. 2, p. 6.

46. Lawrenceville Borough is developing a new municipal water treatment facility. Ward St. No. 2, p. 6.

47. Gary Dunn, Supervisor of Field Services for the Tri-County Rural Electric Cooperative, testified that the proposed line is needed to handle additional energy demands in the area. Tr. 228.

48. Penelec designed the proposed 115 kV line to accept a 34.5 kV distribution circuit in the future. Penelec St. AJZ-1, p. 6; Tr. 75, 200.

49. Penelec initially anticipated installing the 34.5 kV distribution line on the underbuild in about ten years. Tr. 201.

50. In light of expected growth of which it was not aware when it conducted its study, Penelec now anticipates that it may accelerate its schedule for installing the 34.5 kV distribution line on the underbuild. Tr. 202, 208.

51. Penelec retained GAI Consultants ("GAI") to conduct an environmental assessment and line route study. Penelec St. RJK-1, p. 3; Tr. 99-100. GAI recommended a preferred route. RJK-3, Blue Route

52. In September 1996, Penelec contracted with Universal Field Services to [\*25] obtain the required rights-of-way. Tr. 100.

53. After negotiating with several landowners along the route through its agents, United Field Services, Penelec agreed to revise the preferred route to accommodate several landowners' requests. Tr. 108-109, 133. RJK-3, Yellow Route

54. In December 1996, GAI issued a report in which it found the variation reasonable. Penelec Exhibit 1-A.

55. GAI evaluated each criterion listed in [52 Pa. Code § 57.75\(e\)](#) in evaluating the revisions made to the preferred route. Penelec Exhibit 1-A, p. 23, Tr. 136.

56. Penelec has designed the line using a staggered conductor arrangement, which will minimize the magnetic field generated. Penelec St. RJK-1, p. 3.

57. Penelec will use accepted safety practices, including the National Electrical Safety Code and Occupational Safety and Health Administration guidelines in the design, construction and maintenance of the line and associated facilities. Penelec St. RJK-1, p. 3.

58. If a line should fall into a wetland area, the line will separate and the relays will de-energize the line. Tr. 214.

59. Construction of the line near a gas well poses no safety concern. Tr. 215.

60. Barry L. Schoenly owned Lots 11-1, 11-2, [\*26] and 11-3 when he received notice of the Proposed Route. RJK-3. He was negotiating, and has since concluded a sale of this property. While he negotiated the sale, he also negotiated and entered into a right-of-way agreement with Penelec whereby the line route was moved to the edge of these lots so that it would have the least impact possible on the sale value of the lots. He believed that the negotiated route would be as shown on Penelec 2.

61. Kim Albanese owns Lots 11-4 and 11-5. RJK-3. He has not allowed Penelec's agents access to his land. He has not negotiated a right-of-way agreement with Penelec. He thought that the change from the proposed route to the negotiated route would take a different form, which was at one time intended. Penelec 2. The negotiated route is not acceptable to him.

62. Helena DiMaio owns Lot 78. RJK-3. The line would not have crossed her land under the Propose Route. Penelec negotiated a right-of-way agreement with the owner of the neighboring property, and now, under the negotiated route, although the line still will not cross her property, it will be about 80 feet from her home, and will be directly in her view. N.T. 236-40

63. TCREC was energized in [\*27] December, 1937, and now has 16,533 members. It serves 16,571 accounts via 2,964 miles of line in Bradford, Cameron, Clinton, Lycoming, McKean, Potter and Tioga Counties. Thus, it serves the northern tier counties from central to western Pennsylvania, an area that is rural and sparsely populated. It paid a total of \$ 8,146,617 for 136,118,643 mW of purchased wholesale power [presumably over the 1996 calendar year]. 1997 Directory, PaREA & AEC, Inc.

64. TCREC purchases power at wholesale from Penelec via its 34.5 kV distribution system. It does not oppose the need for, nor the route of, the line. Both the original preferred and the negotiated routes have the same or very similar impact on its land. TCREC wants to establish a direct feed to its own Jackson Substation from Penelec's Tower Hill substation a distance of about 700 feet. TCREC would then take its purchased power at 115 kV which it thinks would be a more reliable source than its present 34.5 kV connection, and would thus enable it to provide more reliable service to its member customers.

65. Penelec's 34.5 kV feed to TCREC underwent 9 scheduled and 23 unscheduled outages from 1991 through 1996. They ranged in duration from [\*28] 0.3 hours to 12.5 hours, for a grand total of 50.5 hours and an overall average of 2.2 hours. TC Affdvt and TCREC MB

66. The Jackson Center delivery point is located within Penelec's Susquehanna Region, where it provides service to approximately 67,000 customers over 4,559 square miles of very rural and mountainous land. Pen Affdvt, p.1

67. The Jackson Center delivery point is located in a remote and rural area, and the infrastructure used to serve Jackson Center is very similar to that found throughout the entire Susquehanna Region. Id., p.2

68. The Jackson Center delivery point experienced, on average, 2.7 hours of unscheduled outages per year, not including the one in 1995 that occurred during a major snowstorm. Such storm outages are generally removed from compiled data when reviewing system performance data. Id., p.1

69. The Jackson Center delivery point experienced fewer unscheduled interruption hours per year than other Susquehanna Region customers, who experienced, on average, approximately 4 hours of unscheduled interruptions per year. Id.

70. In 1996, when Penelec rebuilt portions of its 115 kV and 34.5 kV systems to provide service to the new Ward-ACP foundry, [\*29] Penelec also rebuilt and improved the 34.5 kV facilities used to serve the Jackson Center delivery point. Id., p.2

71. Prior to 1996, the Jackson Center delivery point was served from the Mansfield Substation, over a long 34.5 kV distribution line, with a total exposure of about 21.5 miles, the service area of which included the areas of Mansfield, Tower Hill, Millerton, Jackson Center and parts of Lawrence Township. Id.

72. Late in 1996, service to the Jackson Center delivery point was transferred from Mansfield to a 34.5 kV distribution circuit out of the newly constructed Tower Hill Substation. The total amount of exposure on this new line is approximately 10.1 miles; its service area includes only the areas of Millerton, Jackson Center, and parts of Lawrence Township. Id.

73. In January, 1997, a remote control switch was added to an existing switch on this line. On February 25, 1997, the switch was integrated into the Penelec Dispatch Center in Johnstown, making it fully operational. This switch can also be operated manually. When alerted by a fault on the line, Penelec's system operators can remotely open the switch and reclose the breaker.

The remote control feature [\*30] of this switch further reduces the amount of exposure on this line to 4.25 miles. *Id.*, pp.2-3; TJC Affdvt, p.1

74. A dedicated breaker at the Tower Hill substation to serve only the Jackson Center delivery point does not meet Penelec's operating practices. The cost of a breaker is estimated at \$ 80,000 installed. The breaker and associated circuit would have the capacity to serve at least 18 mW of load, or approximately 9,000 residential customers. The Jackson Center load is only about 1.8 mW. Pen Affdvt, p.4

75. Installation of this breaker would tie up a substation egress location, making it more difficult and/or costly to serve other customers in the future. The breaker would require periodic maintenance which would be paid for by Penelec as an operating cost. *Id.*

76. A dedicated breaker in the Tower Hill substation serving only the Jackson Center delivery point at the same time Ward is served by the proposed transmission line would not impact the service to Ward either positively or negatively. It would have little or no effect on service to other Penelec customers in the local service area. *Id.*

## LEGAL AUTHORITY

The Public Utility Code (Code) requires that an electric [\*31] utility such as Penelec provide reasonable extensions of service at the request of its customers. [66 Pa.C.S. § 1501](#). The Code at this section also invests the Commission with the jurisdiction over the reasonableness and safety of the manner in which public utility service is provided. *Id.* One way the Commission has exercised this jurisdiction is by adopting regulations regarding the siting of high voltage electric transmission lines. *52 Pa.Code §§ 57.71-57.76*

The Commission's regulations at *52 Pa. Code § 57.71* require prior approval before a public utility may construct a high voltage (i.e., greater than 100 kV) transmission line. Section 57.72(c) delineates the information that the Commission requires a public utility to submit with its application for such approval. In determining whether to approve a proposed high voltage transmission line, the Commission must make four principal findings, outlined at [52 Pa. Code § 57.76\(a\)](#) as follows:

- (1) That there is a need for [the proposed line].
- (2) That [the proposed line] will not create an unreasonable risk of danger to the health and safety of the public.
- (3) That [the proposed line] is in compliance with applicable statutes [\*32] and regulations providing for the protection of the natural resources of this Commonwealth.
- (4) 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.

In considering whether an electric utility has met the above-quoted criteria, the Commission will accept evidence upon and consider the following matters pursuant to [52 Pa. Code § 57.75\(e\)](#):

- (1) the present and future necessity of the proposed line in furnishing service to the public;
- (2) the safety of the proposed line;

- (3) the impact of the proposed line on the environment, including the effects, if any, on archaeological, geologic, historic, natural, scenic, wilderness and recreation areas; and
- (4) the availability of reasonable alternative routes.

The Legislature has recently enacted statutes, which have been signed by the Governor, that provide for generation choice for customers of electric cooperatives (amending Title 15 of the Pennsylvania Consolidate Statutes by adding Chapter 74), and for the restructuring of the electric utility industry (by amending Title 66 of the Pennsylvania [\*33] Consolidated Statutes to include new Chapter 28). House Bill No. 1509, Act No. 138, effective January 1, 1997 (Act 138).

These statutes have not been in effect long enough for the Commission to have much experience applying them.<sup>6</sup> However, the general thrust is that cooperatives and utilities should allow customers to have choice in selecting generation sources from which they buy power, and to transform the monopoly-based electric utility industry into a competitive market place. In order to accomplish these ends, Pennsylvania will have to have a transmission system with enough capacity and interconnections to allow power to flow to any customer who wants to shop for power generation, and enough flexibility to allow a variety of customers to take power either directly from the transmission grid or indirectly through the local distribution system.

**a. [\*34] Section 1501 and New Chapter 28 of the Code**

Penelec asserts, and I agree that Section 1501 of the Public Utility Code, 66 Pa. CS § 1501, establishes Penelec's obligation to furnish and maintain adequate, efficient, safe, and reasonable services and facilities. The Courts and the Commission have confirmed that the provision of electricity is a service which the utility must furnish in an adequate and reasonable manner. [Rohrbaugh v. Pa.PUC, 663 A.2d 809 \(Pa.Cmwlth. Ct. 1995\)](#). Penelec's obligation to serve, by its very nature, includes the responsibility to site and construct transmission and distribution facilities to meet the needs of customers within its service territory. Penelec MB at 36.

The duty to serve, and/or the nature of electric service has been redefined by new Chapter 28.<sup>7</sup> Act 138 does not include specific changes to the definition of service found at Section 102 of the Code. However, it does remove the generation of electricity from regulated monopoly electric service. Act 138 must be read as being merged into and part of all relevant sections of the Code, including Section 1501<sup>8</sup>.

**[\*35]**

Although service no longer includes generation, it does seem to include provision of access to purchase and receive generation from other sources. Transmission and distribution of electricity remain regulated as a natural monopoly, and electric distribution companies remain

---

<sup>6</sup> On February 13, 1997, at Docket M-00960890, F.0003, the Commission issued its Order Re: Electric Restructuring Filings Made Pursuant to [66 Pa.C.S. § 2806 \(E\)](#).

<sup>7</sup> Act 138 amends the definition of **public utility** by adding a new exclusion which is not relevant here. Act 138, § 2

<sup>8</sup> [1 Pa.C.S. §§ 1953](#) and 1954.

the provider of last resort in their service territories, unless otherwise provided. Electric utilities must provide open, non-discriminatory access to other suppliers of electric generation at the end of 4 years. Section 2802 of the Code, relating to Declaration of Policy, sub-sections (12), (14) and (16). Since Penelec's proposed line, if built, will allow Ward access to sources of generation other than Penelec, Penelec will comply with this new element of its duty to provide service, at least in part, by constructing this line. Act 138 raises a host of other issues raised for electric distribution companies which it would be indulgent to spend time and space to discuss here.

## **b. The Commission's Jurisdiction Over Electric Cooperatives Under Act 138**

The new provisions added to the Electric **[\*36]** Cooperative Corporations Law <sup>9</sup> create a **duty for electric cooperatives**, within 4 years, to provide open and non-discriminatory access to other electric generation suppliers that have been licensed or certified by the Commission, or are existing jurisdictional utilities, to make sales to end-use customer/ members of the cooperative. Act 138 also creates the **right of member/customers to purchase and receive electric generation from another source** at the end of a transition and phase-in period. The timing of restructuring is generally tied to the timing established for jurisdictional utilities. [15 Pa.C.S. § 7405](#). The Commission has no jurisdiction to enforce these provisions. In general, it has no jurisdiction over electric cooperatives. The only new jurisdiction that is created is that the commission shall certify <sup>10</sup> those cooperatives who will sell and supply generation outside their boundaries, and may, upon request by the cooperative, review its transition surcharge. [15 Pa.C.S. § 7406 \(A\)](#) and (E)

### **[\*37]**

Obviously, in the future, Penelec will have to allow cooperatives to have open access to its transmission system, and will have to, under some circumstances, provide joint access facilities with TCREC to its member/customers. TCREC might then have the basis for a complaint before this Commission if Penelec does not provide it reliable access to its transmission facilities. However, there is not now such a cause of action, and in any event, TCREC has not raised these issues. In fact, TCREC's participation in this case has been limited and poorly supported. TCREC's only issue is its demand to take 115 kV service directly from the Tower Hill substation.

That substation is not even part of the Application. It is already built and in operation. The Commission does exercise jurisdiction over the siting of substations. And, at present, it does not exercise jurisdiction over wholesale sales.

However, it is beneficial for the Commission to review the transmission and distribution facilities which will have to carry the power that will be bought by end-use customers as the electric

---

<sup>9</sup> Generally [15 Pa.C.S. §§ 7301](#). et seq.

<sup>10</sup> The cooperative must obtain certification from the Commission of its financial responsibility and technical capability, including maintenance of adequate reserve margins; it shall abide by the same rules and regulations that utilities must follow including payment of utilities gross receipts tax; and, there is an exemption for small utilities. [15 Pa.C.S. § 7406 \(C\)](#) and (D). On March 3, 1997, an application for certification as an electric generation supplier was filed by PaREA staff.

generation industry is restructured, when the opportunity arises. Therefore, TCREC's issues are included in the [\*38] discussion here.

## **PRESENT AND FUTURE NEED FOR THE PROPOSED LINE**

### **a. Ward's Short Term Needs**

Mr. Zulkosky explained that in mid-1995 Ward Manufacturing personnel contacted Penelec Marketing and Economic Development representatives. Ward Manufacturing indicated that it wanted to build an automobile parts manufacturing plant near Tioga Junction, Lawrence Township, Tioga County. The construction of the plant would be in three phases, and the operation of the plant would involve the use of induction furnaces which consume large amounts of electricity. Induction furnaces would be used to melt scrap metal and could then be used to manufacture automobile parts. (N.T. p.p. 70,71).

Initial engineering studies by Penelec indicated that the existing distribution system was not capable of supplying adequate service to Ward Manufacturing to meet Phase I of Ward Manufacturing's proposed plant construction. Further engineering studies indicated that in order to meet Ward Manufacturing's time schedule for construction and operation of the plant in 1996 and 1997, Penelec would have to make significant changes to its transmission and distribution systems in 1996.

Penelec did make significant [\*39] changes in its transmission and distribution system in order to meet Ward Manufacturing's immediate need for service, as follows:

A new 115 kV - 34.5 kV substation was built near Tower Hill in Jackson Township. Approximately ten (10) miles of an existing 34.5 kV circuit was rebuilt and converted to 115 kV, and presently sources the Tower Hill Substation. This new 115 kV circuit is supplied from the Mansfield Substation. Approximately 1.7 miles of new 34.5 kV circuit was built and integrated into an existing 34.5 kV circuit near the Tower Hill Substation. This circuit is now supplied from the Tower Hill Substation and provides 34.5 kV service to Ward Manufacturing.

(Statement AJZ-1, p.3)

Presently, Ward Manufacturing receives all of its electric power from a 34.5 kV distribution circuit that is fed from the Penelec Tower Hill Substation (Statement AJZ-1, p.5). Even in its Phase I construction and operation, Ward Manufacturing will require large amounts of electricity.

### **b. Short Term Needs in The Service Area**

Mr. Zulkosky testified that when Ward Manufacturing energizes its furnaces, any customer on the 34.5 kV circuit served from the Tower Hill Substation would be exposed [\*40] to objectionable voltage fluctuations or "flicker" (Statement AJZ-1, p.4). As an interim step to eliminate potential "flicker", Penelec also moved approximately 75 customers from the end of the 34.5 kV circuit that provides service to Ward Manufacturing, and transferred them to a 34.5 kV circuit supplied out of the Osceola Substation (Statement AJZ-1, p.4).

Prior to the improvements made in 1996, nearly all of Jackson Township was served by a long 34.5 kV circuit out of the Mansfield Substation. This circuit was long, as Mansfield is some 15 miles away. The exposure to faults causing service interruptions and flickering was concomitantly great.

These Jackson Township customers are now served by a 34.5 kV circuit out of Tower Hill Substation. This means that the circuit is much shorter and has much less exposure than the previous 34.5 kV circuit out of Mansfield Substation. The reduction in exposure will reduce the number of line outages these customers experience (Statement AJZ-1, p.3).

Penelec described other improvements in the quality of service to customers in Jackson Township as follows:

Prior to the improvements made in 1996, nearly all of Jackson Township was served by a [\*41] long 34.5 kV circuit out of the Mansfield Substation. The 115 kV - 34.5 kV transformer at Mansfield, which supplied this 34.5 kV circuit, is an unregulated transformer. This meant that the voltage levels on this 34.5 kV circuit were subject to the same voltage swings seen by the local transmission system. The 115 kV - 34.5 kV transformer at the new Tower Hill Substation is equipped with a load tap changer ("LTC") which allows the 34.5 kV voltage to be closely regulated. Therefore, the voltages seen by the customers in Jackson Township are more steady now because we have the ability to regulate them at their source, the Tower Hill Substation.

(Statement AJZ-1, p.3)

### **c. Penelec's Interim Steps**

By making these interim changes to its system, Penelec was able to meet Ward Manufacturing's Phase I needs and was able to improve the quality of service to customers in the surrounding area. As can be seen, Penelec has generally reinforced and improved its system in this section of its service of its service territory. With the construction of the proposed line, if the Commission approves it, the reinforcement and improvement will be continued.

### **d. Ward's Long Term Needs**

The portions [\*42] of Penelec's transmission and 34.5 kV system that presently serve Ward Manufacturing and the surrounding communities have limitations and are inadequate to serve Ward Manufacturing's future needs. The various limitations associated with Penelec's existing supply system were described by Penelec as follows (N.T. p.p. 72-74):

The first limitation for Ward is the manner in which they would like to operate their furnaces. During those initial conversations in 1995, Ward explained to us that they wanted to energize their furnaces over a three-second ramp-up time, and I explained to them that that was unacceptable because that would cause objectionable voltage flicker to the rest of the customers. ...So that's one limitation.

The other limitation for Ward is that the distribution system that is now being used to supply their Phase I loads is not capable of handling the Phase II loads or the Phase III loads; it simply would overload.

As far as GPU Energy's limitations go, because we've used the capacity on the distribution system to serve Ward, we no longer have the ability to swap load between the Osceola Substation and the new Tower Hill Substation; therefore, in the event of a problem [\*43] at either substation, we could no longer use that tying distribution system to pick up the customers and the load at Osceola with Tower Hill and vice versa; therefore, if there was a problem, the outage would be extended...

Based on this analysis of the existing 34.5 kV supply system, Penelec concluded that the construction of the Proposed 115 kV Line will be necessary to provide adequate capacity and reliability to supply electrical loads to Tower Hill and surrounding areas.

#### **e. Long Term Needs In The Service Area**

In order to satisfy outstanding capacity and reliability requirements for the area, Penelec proposed to construct the planned 115 kV transmission line. The decision to construct a 115 kV line included an analysis of the present and future needs of Ward Manufacturing and the surrounding area (N.T. 82). Penelec considered, among other things: whether the 115 kV line would correct existing limitations on the system; how the line would allow the area to grow; what the projected load growth was for the area; and what future growth could be projected.

The primary considerations that lead Penelec to conclude that a 115 kV line was needed (N.T. 81,83) are two fold. First [\*44] the thermal rating of the 34.5 line now serving Ward will not handle the increased power flow caused by Ward's increasing demand. It would simply overload and stop functioning. The second consideration is flicker. Serving Ward at 34.5 kV would decrease the amount of available fault current, increasing the level of flicker. Ward has testified that flicker would disrupt the 90% of its operations that depend on computer operating action.

Once Ward Manufacturing is served at 115 kV, they will be taken off the 34.5 kV distribution system. That will also allow the 75 customers who had been moved to the Osceola 34.5 kV line to be returned to their normal feed out of the Tower Hill Substation (Statement AJZ-1, p.5).

The construction of the 115 kV line will allow greater operating flexibility of Penelec's distribution system. By moving Ward Manufacturing to the 115 kV system, Penelec will free up the capacity of its 34.5 kV system and allow Penelec to cover outages on other circuits of its distribution system (Statement AJZ-1, p.5).

Finally, the Proposed 115 kV Line is projected to meet future reliability and capacity needs as well. The load growth in the Osceola and Elkland area is forecasted [\*45] to grow by 2 MW in 1997, and by an additional 6.5 MW by the end of 1998 (Statement AJZ-1, p.5).

With this projected growth and under the current system configuration (all customers, including Ward served by the 34.5 kV distribution system without the 115 kV connection), Penelec will have limited ability to cover outages of the Osceola Substation. However, once Ward Manufacturing is removed from the 34.5 kV system, there will be adequate capacitation on the 34.5 kV system to cover the Osceola outage. This also means that other work necessary to cover an Osceola Substation outage can be deferred. (Statement AJZ-1, P.5)

#### **f. Meeting More Distant Future Needs**

The Proposed Line is also designed to carry a future 34.5 kV underbuild. Mr. Zulkosky explained the reason for the future 34.5 kV underbuild (Statement AJZ-1, p.6).

In order to serve long-range load growth in the Jackson, Tioga and Lawrence Township areas, we will be required to build another 34.5 kV circuit and source it out of the Tower Hill Substation. When this additional 34.5 kV circuit is built, it will be installed on the proposed 115 kV Tower Hill Substation to Ward Manufacturing pole line, preventing the need for another [\*46] 34.5 kV pole line, therefore preventing the need for any additional rights-of-way from local landowners.

(Statement AJZ-1, p.6).

#### **g. Ward's Support of Need For the Line**

Penelec's proposed line is needed to prevent any "objectionable voltage fluctuations, " or flickering of electric service, both at Ward's new facility and for Penelec's other customers served from the Tower Hill Substation. The proposed line is also necessary to provide adequate capacity to cover any outage at Penelec's Osceola Substation and to provide adequate capacity for future growth in the area.

Ward needs many of the improvements to its service that would be created by the proposed line. For instance, Ward's fault duty would increase if Penelec served it from the proposed 115 kV transmission line, and no fluctuations in service would occur. Penelec St. AJZ-1, p. 4; Tr. 87, 196. Also, Ward would have sufficient energy to continue with its planned phases of operation if Penelec served it from the proposed 115 kV transmission line. Tr. 74, 81, 195. Ward could then ramp up several of its furnaces in three seconds without causing voltage fluctuations if Penelec served it from the proposed 115 kV transmission [\*47] line. Tr. 78, 81, 196-197. 75.

Needed benefits would be created in the surrounding communities as well. Adequate short circuit duty would exist on the 34.5 kV distribution line supplied out of Tower Hill to prevent voltage fluctuations for other customer if Penelec served Ward from the proposed 115 kV transmission line. Tr. 74-75, 81. For instance, now, because Penelec serves Ward from the Tower Hill Substation, Penelec no longer has the capacity to transfer energy load between its Osceola Substation and its Tower Hill Substation. Penelec St. AJZ-1, p. 5; Tr. 73, 199. If Penelec removes Ward from the 34.5 kV distribution line, Penelec would use the capacity made available on the Tower Hill Substation to swap load between the Osceola Substation and the Tower Hill Substation. Penelec St. AJZ-1, p. 5; Tr. 74. Swapping load between the Osceola and Tower Hill Substations would prevent longer outages when there is a problem at one of the substations. Penelec St. AJZ-1, p. 5; Tr. 74.

At present, Penelec's seventy-five customers transferred from its Tower Hill Substation to its Osceola Substation are served from a single phase spur approximately two miles in length, putting the customers [\*48] at greater danger to line exposure and the risks associated with winds and falling trees. Penelec St. AJZ-1, p.4; Tr. 74, 77. Penelec would transfer its seventy-five customers back to the Tower Hill Substation if it served Ward from the proposed 115 kV transmission line, minimizing their line exposure and attendant risks of outages. Penelec St. AJZ-1, p. 5; Tr. 78.

Finally, Penelec's study of future load growth shows need for the line. Penelec did not take into account some of the planned commercial and industrial expansion plans in the area because it did not know about them. Based on information about these plans new to it that has been placed on this record, Penelec stated that its projected load growth would be higher than shown by its previous study.

These, in summary, are the reasons that Ward argues that Penelec is correct when it asserts the proposed line is needed. Ward MB at 5-13.

### **PENELEC'S PROPOSED ROUTE**

Robert J. Kasisky, team leader and project consultant, was responsible for route selection, engineering, safety matters, and all aspects leading up to construction of the proposed line. Mr. Kasisky explained the events that led to the selection of several possible routes [\*49] for the 115 kV line (N.T. p.p. 99-100).

When the sites for the Tower Hill Substation and the proposed site for the Ward Substation were identified by Penelec, the project of "route selection" was sent out for competitive bid. As part of the bid requirements, the contractor would be responsible for selecting a route and performing environmental studies and analysis consistent with Pa. PUC requirements (N.T. 99-100).

In the spring of 1996, a contract was awarded to GAI Consultants, Inc. (GAI Consultants or GAI) of Monroeville, Pennsylvania. Using the information supplied by Penelec, GAI Consultants analyzed sites for the proposed route and in July, 1996, produced the report and appendices entitled 115 kV Transmission Line and Future 34.5 kV Distribution Line from Ward Substation to Tower Hill Substation; Tioga County, Pennsylvania. ("Exhibit 1 - GAI Consultants Report, July 1996 and Appendices"). Penelec incorporated Exhibit 1 - GAI Consultants Report, July 1996 and Appendices into its Application as the basis for route for the Proposed Line (N.T. 100).

Sometime in September of 1996, Penelec contracted with Universal Field Services to secure rights-of-way along the route identified [\*50] by Exhibit 1 - GAI Consultants Report, July 1996 and Appendices. Universal Field Services ran into difficulties in their attempts to acquire a right-of-way along the proposed route (N.T. 100).

In their discussions and negotiations, Universal Field Services was told by some of the property owners along the route, that they would prefer to have the line moved to a different location on their property. In some instances, property owners preferred to have the proposed line moved to accommodate such issues as future building sites, or future development (N.T. 109). Mr. Kasisky indicated that as a result of the requests by individual property owners, he instructed Universal Field Services representatives to adhere to the following guidelines in negotiations with property owners:

- If the line as proposed by Exhibit 1 - GAI Consultants Report, July 1996 would cross a parcel, attempt to negotiate a route within that parcel to meet the property owner's concerns;

- If the property owner wanted to relocate the line in a manner that the line would cross a new property, no attempt should be made to relocate the line without the consent of the new property owner.

In this way, Penelec sought [\*51] to address each property owner's individual preferences while avoiding arbitrarily moving the line onto a new property.<sup>11</sup> The end result was the acquisition of a "Negotiated Route" for the line that was a variation of the route proposed by Exhibit 1 - GAI Consults Report, July 1996.

Mr. Kasisky testified that in November, after Penelec had [\*52] established a "Negotiated Route" and had a portion of it surveyed, a copy of the Negotiated Route was sent to GAI Consultants to determine whether it was an acceptable alternative to Penelec's original proposal (N.T. p.p. 101-103). In December of 1996, GAI Consultants reported to Penelec that the Negotiated Route was, in fact, a reasonable alternative. GAI Consultants' analysis and conclusions regarding the Negotiated Route formed the basis for GAI Consultants Report and Appendices dated December 1996 (Exhibit 1-A, GAI Consultants Report, December 1996).

In more detail, after Penelec retained GAI to conduct an environmental assessment and line route study for the proposed 115 kV transmission line (Penelec St. RJK-1, p. 3; Tr. 99-100),<sup>12</sup> it proceeded as follows. GAI used a four-mile wide corridor to evaluate potential impacts on archaeological and historic resources, scenic areas, unique geologic areas, wilderness areas and airports. GAI determined and compared the land use on and adjacent to six alternative routes. In addition, GAI studied twenty-four environmental and socio-economic resource criteria to determine impacts for six alternative routes. The twenty-four resource criteria [\*53] were based upon Commission regulations, as well as traditional environmental impact assessment criteria (Penelec Exhibit No. 1).

Based upon environmental opportunities and constraints, GAI identified eight segments between Ward's facility and the Tower Hill Substation. GAI then assembled the eight segments into six possible combinations to form the six alternative routes. (*Id.*, at pp. 1-2 - 1-3). GAI observed the existing environment and predicted environmental effects of the alternative routes, as well as mitigation measures.<sup>13</sup>

#### [\*54]

---

<sup>11</sup> Some of the property owner protestants argue that they should have been accorded the same choices that Penelec gave to the neighboring property owner not originally affected by the preferred route. They argue that Penelec's policy is unfair to them. I disagree. It is appropriate for Penelec to differentiate between property owners directly in its selected preferred route and those to be affected only if the line is to be rerouted to other property in an attempt to satisfy an owner in the first group. If it did not, the preferred route would have little meaning, and the route would be at the preference of every property owner. This would undercut the whole planning process.

<sup>12</sup> An explanation of GAI's transmission line siting methodology is set forth in Penelec Exhibit 1, at pp. 1-1 - 1-2. In general, this analysis involves evaluation of three primary areas: (1) a 120-foot right-of-way; (2) an area adjacent to the proposed right-of-way that would be in view of sensitive resources; and (3) the area two miles on either side of the centerline of the right-of-way for each alternative route.

<sup>13</sup> GAI studied land use (pp. 2-1 - 2-6), plant and wildlife habitat (pp. 2-7 - 2-16), hydrology (pp. 2-17 - 2-19), scenic and recreational areas (pp. 2-19 - 2-20), wilderness and natural areas (pp. 2-20 - 2-21), terrain and landscape (pp. 2-21 - 2-25), archaeological and historic resources (pp. 2-25 - 2-27), airports (p. 2-28), unique geologic resources (p. 2-28 - 2-29) and soil and sedimentation (pp. 2-29 - 2-31).

The preferred route was selected based on its environmental soundness, economic feasibility and licensability. Of the twenty-four resources identified and analyzed, eighteen would not have been affected by any of the alternative routes. GAI evaluated the remaining six resources (steep terrain, streams, highways and road crossings, forest land cleared, forested wetland converted, and nonexisting rights-of-way). Based on an analysis of each of these factors, GAI identified Alternative No. 4 as the preferred route.

Penelec will take certain actions to minimize soil and sedimentation impacts, including, among others, preparing and complying with site-specific erosion and sedimentation control plans, as well as constructing and utilizing diversion ditches, filter fences and sediment traps (Penelec Exhibit 1, p. 2-31).

When GAI received the variations to the original preferred route it had recommended to Penelec, it evaluated them as one new route, called the **negotiated route**. RJK-3. In December 1996, GAI issued a report in which it found the variations reasonable (Penelec Exhibit 1-A). In so finding, GAI evaluated each criterion listed in [52 Pa. Code § 57.75\(e\)](#) (Tr. 136). According [\*55] to GAI:

The Negotiated Route . . . represents the closest this project can get to the Preferred Route while satisfying the needs and desires of property owners from which the right-of-way is being obtained.

Penelec Exhibit 1-A, p. 23.

Ward and Penelec assert, and I agree, that Penelec has conducted an exhaustive, multifaceted technical analysis in siting the proposed 115 kV line. The preferred route for the line, and the negotiated version thereof, represents the best balance of environmental and land use considerations, functional requirements, cost and the preferences of individual landowners.

This does not mean that the individual protests should be taken lightly. Three protestants participated actively at the hearing, and presented their positions clearly.

#### **a. Individual Land Owner Protestants**

**Barry Schoenly** asked many questions during testimony of Penelec witnesses about the process to secure permits, and whether those required had been obtained. Penelec's witnesses testified that they had obtained all necessary licenses and permits, and that the line was fully permitted. Also, the difference between the permitting process that a utility and a non-utility developer [\*56] must follow was explained. Schoenly also testified, N.T. 259-270, that when he signed his right-of-way agreement after negotiations, he believed that the line would follow a different route than is now presented as the negotiated route. Penelec testified that this different route had indeed at one time been the intended route, but that one of the other land owners had changed his mind, so that this particular section of the route had had to be re-routed again. Finally, Schoenly stated that he is very concerned that the route could change again, and that if it does, his buyers could sue him for damages because the titled land is not as they agreed it would be. Schoenly and others at the hearing were given Kasisky's phone number, and that of a local office employee that they can contact if any problems with title, vegetation clearance, etc., do arise.

Schoenly did not actually protest the route of the line over these two parcels because he had entered into a right-of-way agreement with Penelec, and had sold them burdened with the right-of-way. To the extent that Penelec has agreed to communicate and work with him about his other concerns, his protest should be considered satisfied. **[\*57]**

**Helena DiMaio**, N.T. 236-240, presents the Commission with a puzzling problem. She is an adjacent property owner; that is, the line route does not cross her land at all, but crosses an adjoining parcel. As such she got no direct notice about the line, but found out about it from employees of Universal Field services (UFS) working on the neighbor's land. N.T. 239. She did not see the newspaper ads. N.T. 238. The owner of the neighboring property which is traversed by the line has negotiated a right-of-way that takes the line right along the boundary between their two parcels. This keeps the line away from her residence and fields, but locates it within 80 to 100 feet of DiMaio's residence. N.T. 223-24

DiMaio testified that she is the owner of a four-acre tract of land in Millerton, Pennsylvania (N.T. 236). The Proposed Line is not located on her property. The route for the Proposed Line is located on an adjoining property and is close to the property boundary line (N.T. 237). DiMaio testified that although the route of the line is not on her property, she will have a full view of the line and she will have to live with it. Id. Mrs. DiMaio noted that the original proposed **[\*58]** route, [which is shorter and cheaper than the negotiated route], is another route that the Company could use that "could go up alongside of peoples' lands that would get compensated, and in the future they could sell more to the companies and it wouldn't be a problem". Id. Mrs. DiMaio also indicated that she bought her property for the view and the view is no longer going to be there. Id.

Since the line is so close to DiMaio's home, it is well within the **curtilage** area where the utility could not exercise the power of eminent domain if the home owner did not agree to a line route location. <sup>14</sup> N.T. 223-24. But Mrs. DiMaio has no recourse, and the curtilage protection does not apply to her, because the line is not going to be on her property.

**[\*59]**

Judge Palladino, writing for the Commonwealth Court, directed the Commission to afford adjacent property owners a hearing when an inactive line was to be reconductored and re-energized, because they would be adversely affected by it. <sup>15</sup> However, what is the Commission to give such owners a hearing for if there is no relief it can grant them?

Resistant land owners can force utilities to resort to eminent domain proceedings, where they are entitled to valuation and damages. The Commission has no role in these proceedings except to originally grant the right to the utility to exercise eminent domain. But eminent domain

---

<sup>14</sup> [15 Pa.C.S. § 1511 \(b\) \(i\)](#). Section 1511 provides for additional powers of certain public utilities, including the power of eminent domain for acquisition of right of way for transmission of electricity, but only after obtaining the permission of the Public Utility Commission, as evidenced by a certificate. The authority created in the Commission here is also recognized and incorporated in the Commission's regulations at [52 Pa. Code § 57.75 \(i\)](#).

<sup>15</sup> Memorandum Opinion and Order, 761 C.D.1991, May 24, 1991, decided in re A-110550 F.0055, PECO Letter-Petition re the Woodbourne-Heaton Line, 78 Pa.P.U.C. 486 (March, 1993)

only lies against the land actually physically burdened, except where some adverse taking can be established.

Ms. DiMaio's enjoyment of her view could be considered as similar to air rights, or losses [\*60] of light caused by "spite walls". Her loss of enjoyment of her property could be considered an adverse taking. To my knowledge, such loss of enjoyment has never been so recognized. By recognizing the due process right to a hearing, Judge Palladino has acknowledged potential harm to adjacent land owners, and thus their inchoate rights to redress and damages, but without specificity. The Commission may recognize these rights, but since it does not have jurisdiction over damages, it cannot further define them.<sup>16</sup>

The establishment of adjacent property owners' rights will complicate and raise the costs of transmission line routing and construction. And with the restructuring of the electric industry, transmission facilities are likely to be in demand throughout the state. However, here, although I do not think that Penelec should have to alter the route to benefit Ms. DiMaio, it seems only fair that [\*61] she should be entitled at least to have her claims of loss of value heard.

Therefore, Helena DiMaio's protest should be granted.

**Kim Albanese** (Albanese) presents the issues facing a directly affected property owner. N.T. 240-258. Albanese testified that he is the owner of Parcels 11-4 and 11-5 as identified on Penelec Exhibit RJK-3 (N.T. p. 241). Mr. Albanese explained that he has constructed a cabin on this property that is very close to the Preferred Route and there are other "perc" sites on the parcel that are affected by the Negotiated Route (N.T. p.p. 241-245). These "perc" sites are recorded with the Department of Environmental Protection (DEP); also, the Tioga County Planning Commission has knowledge of them. Albanese has no building permits for any planned future dwellings. N.T. 253-254.

Mr. Albanese testified that both the Preferred Route and the Negotiated Route would affect proposed building sites on his parcel (N.T. p. 243), but that the preferred route would have taken much less of his property. N. T. 250. This can easily be seen on RJK-3. He is particularly concerned about the visual impact of clear cutting on the more extensive right of way. *Id.* Albanese indicated [\*62] that he would prefer to have the route of the line moved in a northern direction away from all of his proposed building sites (See generally, N.T. p.p. 243-252).

Penelec contends that it has been, and still is, open to negotiations of the route across the Albanese property (N.T. 279).

Penelec explained, through Mr. Kasisky, that it has been unable to pursue a northerly route across the Albanese property for the following reasons:

- (i) Mr. Kosan, an adjoining property owner to the Albanese property, changed his desire to grant Penelec a northern route across his property. The change in the route across the Kosan property changed the trajectory of the route across the Albanese property;
- (ii) Because Mr. Albanese refused to allow Penelec access to his property, Penelec could not determine exactly where to site the route across the Albanese property (N.T. p.p. 277-

---

<sup>16</sup> The case in which this issue arose is now on appeal to the Pennsylvania Supreme Court. Commission Docket B-00933472

278). Mr. Kasisky further indicated that Penelec's inability to access the Albanese property also prevented it from determining where Mr. Albanese's cabin is (N.T. p. 278).

Albanese has suffered by the negotiations with neighboring property owners, and the resulting negotiated route. As a result of the relocation [\*63] of the route onto adjacent property, and of negotiations with the owners, the route to be proposed was moved in such a way as to cross much more of Albanese's property rather than less. This is one unfortunate potential outcome of Penelec's negotiation policy which it should guard against. Albanese was opposed to the original route because it was almost directly over the one cabin he has built on his land. The final version of the negotiated route avoids the cabin, but stretches across a much longer part of the parcel, and still is relatively near some of his "perc" sites. There was an interim version of the negotiated route, which was more acceptable to him, but the neighboring property owners wanted the route in a different location on their land, which caused the route to lie in the present location proposed for it.

Albanese made his situation worse by refusing access to his land for surveying, *Id.*, and refusing to talk with Penelec's agents after a certain point in time. He testified he talked to an Al Silvius of UFS on or around early September, 1996, discussing with him different routes. N.T. 255. He opines in his brief that Penelec's failure to abide by the route discussed [\*64] with Silvius is a malicious personal attack on him. I disagree. The time these discussions were held was very early in the right-of-way acquisition process, and Silvius could not have committed Penelec to Albanese's first proposal. Silvius was not active in the negotiations, although he did have preliminary discussions with Albanese. N.T. 286-87. The evidence shows that many negotiations and a number of changes to the original preferred route were made after the Albanese/Silvius contact. Albanese cut himself off from this process by refusing to participate in it further.<sup>17</sup> On the other hand, although Penelec correctly complied with Albanese's refusal to deal with its agents, there was time enough for Penelec to see if he had changed his mind. According to Albanese's brief, discussions have begun again as of February 5, 1997.

**[\*65]**

Albanese presented impassioned explanations of his position in his letter-protest, in his testimony and in his brief. He finds himself in the position of having recently bought a large parcel of rural land as peaceful get-away for himself and his family. He envisions eventually having cabin homes for each of his six children to use. He grieves that no land seems safe from some kind of development. Unfortunately, he is probably correct that there is no escape from the increasing development caused by modern growth. I note here that Albanese will be able to pursue damages through condemnation proceedings, an option that is not at present available to DiMaio.<sup>18</sup>

---

<sup>17</sup> As Penelec noted, Albanese retained an attorney, who entered his appearance and requested that all service on and contacts with Albanese be made through him. Although direct contact with Albanese was eliminated by this, Albanese was still available for contact through his attorney. Penelec did contact the attorney in the latter part of November or the early part of December, and was told that Albanese's instructions had not changed. N.T. 279, 281-82.

<sup>18</sup> If Penelec must get its right of way by condemnation, it will own that portion of Albanese's land in fee simple, 15 Pa.S. § 1511, as opposed to obtaining use by an easement. This seems to contradict Albanese's argument in his brief about taxes. I have not discussed this argument because I could not find any factual support for it in the record.

As previously [\*66] stated, Albanese has made his situation more difficult by not allowing Penelec's right-of-way agents on his land, and avoiding negotiations with them about a possible route across his property since the end of September, 1996. N.T. 282. He rejects the negotiated route, and seeks a route variation that would either affect someone else's land more, or would call for several corners in a fairly small distance in engineering terms.

In this instance, Penelec's position is reasonable, and Albanese's is not. Penelec should not have to reroute the line to avoid Albanese's property, nor all of his "perc" sites, completely. However, Penelec states it continues to be open to negotiations with Albanese, and I encourage him to enter into good faith negotiation with it. However, Albanese's protest as it stands on the record should be denied.

#### **b. TCREC'S Protest**

Gary Dunn, Supervisor of Field Services, testified on behalf of Tri-County Rural Electric Cooperative. Mr. Dunn testified that the Penelec Tower Hill Substation is some 700 feet from the site of a proposed Tri-County Substation (Jackson substation) that serves approximately a thousand Tri-County members (N.T. p.229).

The Proposed Line [\*67] crosses Tri-County property adjacent to the Tower Hill Substation (Appendix 1-A, GAI Drawing, December 1996). Tri-County is one of the affected property owners who has not signed a right-of-way agreement for the Proposed Line (N.T. p. 108).

The Jackson substation presently will be served by a Penelec 34.5 kV distribution line. Earlier in the Application process, Tri-County had requested that they be served from a separate line from the Tower Hill Substation to their Jackson substation (Id.) Tri-County believes that service to them would be more reliable if they were not tied into any of the 34.5 lines that come out of the Tower Hill Substation (Id.).

Mr. Dunn testified that the Tri-County Board and Management are not ready to sign the right-of-way agreement until they negotiate the issue further (Id.).

On cross-examination, Mr. Dunn agreed that service presently provided to the Jackson substation has been pretty reliable (N.T. p. 233). As far as Mr. Dunn's testimony is concerned, there is little or no connection between adequacy of service to the Jackson substation and the present Application (see generally, N.T. p.p. 233, 236).

TCREC does not oppose the need for the [\*68] line nor the route as proposed. It does not contend that the line will reduce reliability, nor create unsafe conditions. In fact, it wants access to Penelec's new Tower Hill substation to **improve** the reliability of the service it purchases from Penelec, and thereby the service that it provides to its own member/customers. TCREC wants to put itself in a very similar position to that in which Ward will be. It wants to take a direct 115 kV feed, step it down to 34.5 kV, and distribute the power at that voltage to its own consumers. The only real difference is that the Jackson substation is much closer to Tower Hill than Ward is.

In its affidavit, Tri-County shows the outage history at the Jackson Center delivery point. Penelec does not quarrel with the accuracy of the historical data. However, Penelec in its

affidavit avers that this is adequate service for a remote and rural area such as that around Jackson center; that its own customers in its service territory in this area had on average higher outage hours than shown in Tri-County's documents; that it has made significant reinforcements and improvements to the facilities that serve Jackson Center; and, that therefore the [\*69] incidence of unscheduled outages going forward should be greatly reduced.

The connection that TCREC seeks would most probably improve the reliability of its service from Penelec, and act as a reinforcement to its system. This would be in the public interest, not only because of improved reliability, but also because it would most probably support better quality transmission of outside generation as the industry is restructured. Whether or not the Commission has or will exercise jurisdiction over transmission facilities for wholesale sales under Act 138 is not clear to me.

However, I agree with Penelec that the relief that TCREC seeks and the gravamen of its protest<sup>19</sup> are irrelevant to the issues here, i.e., to the routing of the line, the need for it and other matters that Penelec must and has addressed in this proceeding. TCREC has seized the opportunity presented by Penelec's need for crossing its property to try to leverage a better service deal for itself. There is nothing intrinsically wrong with this business bargaining. However, it is not a sufficient basis to sustain a protest in this case.

[\*70]

Therefore, TCREC's protest should be denied.

## **SAFETY AND CONSTRUCTION ISSUES**

Penelec has designed the line using a staggered conductor arrangement, which will minimize the magnetic field generated. In addition, Penelec will use accepted safety practices, including the National Electrical Safety Code and Occupational Safety and Health Administration guidelines in the design, construction and maintenance of the line and associated facilities (Penelec St. RJK-1, p. 3).

Penelec also testified that construction of the line across wetlands and closer to gas wells poses no additional safety concerns (Tr. 214-215). If a line should fall into a wetland area, the line will separate and the relays will de-energize the line (Tr. 214). No contrary evidence has been produced, and no contrary argument has been made. Therefore, I conclude that Penelec's proposed 115 kV transmission line poses no unreasonable safety risks.

The only other issues related to the safety of the line involve the method typically used by Penelec to clear and maintain its rights-of-way. On cross examination, Mr. Kasisky indicated that right-of-way maintenance is normally contracted to outside companies but Penelec's practice [\*71] is to mechanically clear rights-of-way and to selectively treat stumps with chemical spray (N.T. 111, 112).

Kasisky also explained that where property owners request that no spray be used on their property, it notes those areas and does not use spray at all (Id. p. 112).

---

<sup>19</sup> TCREC has not actually filed a formal written protest. Rather its protest was expressed by Gary Dunn's participation and testimony, and further defined by TCREC's letter-brief and affidavit.

Penelec asserts, and I agree, that the un rebutted record evidence demonstrates that the proposed project will not create any unreasonable health or safety risks to Penelec's customers, employees, contractors or members of the general public. As planned, the Proposed Line will meet or exceed National Electric Safety Code standards; this will be required in the Order. Further, Penelec plans to implement techniques in order to reduce electric and magnetic fields at a reasonable cost where consistent with the project's functional requirements.<sup>20</sup>

[\*72]

## CONCLUSION

WHEREFORE, for all the foregoing reasons, the Administrative Law Judge concludes that the Application of Pennsylvania Electric Company for Review and Approval of the Siting and Construction of a Proposed 115 kV Transmission Line Extending From the Proposed Ward Substation to the Existing 115 kV Tower Hill Substation in the Townships of Lawrence and Jackson, Tioga County, Pennsylvania, as amended, shall be approved, Helena DiMaio's protest shall be granted, and all other protests shall be denied, based on the findings of fact and conclusions of law and the discussion set forth here.

## CONCLUSIONS OF LAW

1. The Commission has jurisdiction over the parties and the subject matter. *66 Pa. C.S. §§ 102, 103 and/or 1101, and 1501.*
2. Penelec's Application, as modified, contains all of the information required by the Commission's regulations at [52 Pa. Code §§ 57.72](#) and 57.75.
3. As a public utility, Penelec has the duty to make "changes, alterations, ... extension, and improvements to [its] service and facilities as shall be necessary or proper for the accommodation, safety, and convenience of its patrons, employees and the public". [66 Pa. C.S. § 1501](#).
4. Penelec is required [\*73] to make application for the siting of high voltage transmission lines, including 115 kV, and demonstrate that such a line is needed, will not create unreasonable risk, is in compliance with statutory and regulatory environmental protection requirements, and that it will have minimum adverse environmental impact. *52 Pa. Code §§ 57.1 and 57.76.*
5. Penelec has met its burden of proof to show the proposed line meets the requirements of [52 Pa. Code § 57.76](#).
6. Construction and siting of this transmission line will serve public convenience and necessity, and is in the public interest.

---

<sup>20</sup> Penelec explained in its Application to site and construct the 115 kV Ward to Tower Hill Line that the line would be constructed in a "delta" configuration to help minimize magnetic fields. Calculations using the ENVIRO program, which is part of the Electric Power Research Institute's ("EPRI") Transmission Line Workstation, indicate that the magnet field at the edge of the right-of-way will be less than 26 mG with the line fully loaded (217 mW). At normal loading (52 mW), the magnetic field will be less than 7 mG at the edge of the right-of-way.

7. The Commission has jurisdiction over the subject matter and the parties to this proceeding.
8. Penelec has shown sufficient need and engineering justification for the proposed 115 kV transmission line extending from the existing 115 kV Tower Hill Substation to the proposed Ward substation in the Townships of Lawrence and Jackson, Tioga County.
9. The construction, operation and maintenance of the line will not create an unreasonable risk of danger to the health or safety of the public.
10. Penelec should be granted the legal authority to construct the proposed 115 kV transmission line extending from the [\*74] proposed Ward Substation to the existing 115 kV Tower Hill Substation in the Townships of Lawrence and Jackson, Tioga County.

## **ORDER**

### **THEREFORE, IT IS ORDERED:**

1. That the Application filed by Pennsylvania Electric Company with the Pennsylvania Public Utility Commission at Docket No. **A-110400F0033** for authorization to site and construct a proposed 115 kV transmission line extending from the proposed Ward Substation to the existing 115 kV Tower Hill Substation in the Townships of Lawrence and Jackson, Tioga County, Pennsylvania, is hereby granted as described and conditioned by these ordering paragraphs.
2. That the proposed 115 kV transmission line extending from the proposed Ward Substation to the existing 115 kV Tower Hill Substation in the Townships of Lawrence and Jackson, Tioga County, Pennsylvania, shall be constructed and maintained in a manner that complies with the standards of the National Electrical Safety Code; and
3. That the proposed 115 kV transmission line extending from the proposed Ward Substation to the existing 115 kV Tower Hill Substation in the Townships of Lawrence and Jackson, Tioga County, Pennsylvania, be constructed, operated and maintained in compliance [\*75] with all applicable statutes and regulations for the protection of Penelec's employees, its customers the general public and the natural resources of the Commonwealth.
4. The construction, operation and maintenance of the proposed 115 kV transmission line extending from the proposed Ward Substation to the existing 115 kV Tower Hill Substation in the Townships of Lawrence and Jackson, Tioga County will be in compliance with all applicable statutes and regulations for the protection of the natural resources of the Commonwealth.
5. Penelec shall install on the 115 kV transmission line in the delta configuration, or in the best configuration to minimize the electromagnetic field produced by the line.
6. The construction, operation and maintenance of the proposed 115 kV transmission line extending from the proposed Ward Substation to the existing 115 kV Tower Hill Substation in the Townships of Lawrence and Jackson, Tioga County will have minimal environmental impacts considering the electric power needs of the public, the state of available technology and available alternatives, and shall be in compliance with all applicable environmental protection statutes and regulations.

7. Penelec [\*76] shall carry out right of way clearance according to its guidelines so as to avoid or minimize clearcutting, and shall only remove permanently that vegetation which will grow to heights that would threaten the integrity of the structures or the conductors of the line. Penelec shall not use herbicides if the landholder objects to their use.
8. Penelec shall continue to provide a method of access for the affected property owners to an appropriate employee for help in resolving problems with clearance or other right of way problems.
9. The protests of the Tri-County Rural Electric Cooperative, Inc., and Kim Albanese are hereby dismissed; the protest of Barry Schoenly shall be considered satisfied; and, the protest of Helena DiMaio shall be sustained.
10. Tri-County Rural Electric Cooperative, Inc.'s Affidavit in Support of Letter Submitted February 14, 1997, and the tables with the Letter, and Pennsylvania Electric Company's Affidavit Response to Tri-County' Rural Electric Cooperative, Inc.'s Letter Submitted February 14, 1997 are hereby admitted into the record at this docket.
11. Official notice is taken of the 1997 Directory of PaREA and AEC, Inc., pages 24 and 25, and TCREC's 1995 [\*77] Annual Report, page 1.
12. The case at Docket No. A-110400 F.0033 shall be marked closed.

Allison K. Turner

Administrative Law Judge

Date: March 4, 1997

PA Public Utility Commission Decisions

## **2012 Pa. PUC LEXIS 298**

Pennsylvania Public Utility Commission

February 9, 2012

A-2011-2247862; A-2011-2264762; A-2011-2264773

### ***PA Public Utility Commission Decisions***

#### **Reporter**

2012 Pa. PUC LEXIS 298 \*

### **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**

---

#### **Core Terms**

---

route, transmission line, right-of-way, has, was, transmission, electric, siting, study area, alternative route, substation, reliability, score, corridor, interstate, conductor, load, pre hearing, foot, rights-of-way, recommend, vegetate, voltage, public utility, species, forest, environmental impact, contingency, mitigate, highway

**Opinion By:** [\*1] LONG

#### **Opinion**

---

#### **INITIAL DECISION**

Pennsylvania Electric Company (Penelec) filed an application seeking approval to site and construct a 115 kV transmission line in Bedford County, Pennsylvania, known as the Bedford North-Osterburg East HV transmission line (Bedford-Osterburg Line). The application demonstrates compliance with the relevant statute and regulations and will be granted.

#### **I. PROCEDURAL HISTORY**

On June 3, 2011, Penelec filed the application for the Bedford-Osterburg Line. The Office of Administrative Law Judge issued a notice on June 28, 2011, scheduling a prehearing conference for August 30, 2011 at 10:00 a.m. On June 29, 2011, I issued a Prehearing Conference Order notifying the parties of the obligation to file prehearing memoranda on or before August 26, 2011, and other procedural protocols.

Notice of the application and prehearing conference was published by Penelec in two newspapers of general circulation, the *Bedford Gazette* and the *Altoona Mirror*, on July 13, 2011 and July 19, 2011. <sup>1</sup> Both notices provided instructions for the filing of protests which were due no later than August 23, 2011 and provided the date, time and location of the prehearing conference. **[\*2]** Similar notice was also published in the *Pennsylvania Bulletin* by the Commission's Secretary's Bureau on July 16, 2011. <sup>2</sup>

The prehearing conference was held as scheduled on August 30, 2011. I conducted the conference in Pittsburgh with the court reporter. Parties were also permitted to appear in the Commission's hearing room in Harrisburg and participate by telephone. Several individuals and other interested parties attended the prehearing conference and were provided an opportunity to participate: Diane Wittmer; Joan Senchyshyn; Karl Alan King; Carol McLaughlin; and J. Roy Bence.

Following the prehearing conference I issued a prehearing order dated August 30, 2011. That order set forth the litigation schedule agreed upon by those present at the prehearing conference, including dates for the evidentiary hearing.

A petition to intervene was filed by Texas Eastern Transmission, L.P. (Texas Eastern) on July 12, 2011, **[\*3]** and was granted without objection at the August 30th prehearing conference. Formal protests were filed by Karl Alan King <sup>3</sup> and J. Roy Bence <sup>4</sup> on August 17, 2011 and August 23, 2011 respectively. By letter received on September 12, 2011, Rebecca Beegle Fair notified me that she wanted to actively participate in the proceedings.

Penelec filed two petitions for eminent domain for properties owned by the protestants, Mr. King and Mr. Bence. <sup>5</sup> However, Penelec was able to reach private agreements with these individuals and the petitions were withdrawn on November 23, 2011.

As scheduled, an evidentiary hearing was held on December 13, 2011, in the Commission's Pittsburgh hearing **[\*4]** room. John L. Munsch, Esquire appeared on behalf of Penelec. His co-counsel, Mr. Anthony C. DeCusatis was permitted to appear by telephone. Similarly, counsel for the Intervener Texas Eastern, Daniel P. Delaney, Esquire appeared by telephone. No protestants, affected landowners or other interested parties appeared. Penelec moved for the admission of the Bedford-Osterburg Line application and the written testimony of six witnesses into the record. Cross-examination of the witnesses was waived and the statements were admitted without objection. <sup>6</sup> The hearing resulted in a transcript of 36 pages.

---

<sup>1</sup> [52 Pa. Code § 57.75\(a\)](#).

<sup>2</sup> **41 Pa. Bull. 3950**.

<sup>3</sup> A-2011-2264773.

<sup>4</sup> A-2011-2264762.

<sup>5</sup> In accordance with Commission procedure, these petitions were consolidated with the application by order dated October 17, 2011.

<sup>6</sup> Penelec Sts. 1, 1-A, 2, 3, 4, 4-A, 5 and 6.

Penelec filed a brief in support of the application on January 5, 2012. By letter dated January 6, 2012, Texas Eastern informed me that it supported the application and would not be filing a brief. The record was closed by order dated January 9, 2012.

On January 17, 2012, I received correspondence from Rebecca Beegle Fair which expressed her opposition to the proposed transmission [\*5] project. By order dated January 18, 2012, I re-opened the record and permitted Penelec and Texas Eastern to file objections to the admission of the letter into the record. On January 25, 2012, Penelec filed a response to the order and sought leave to submit supplemental testimony of David Kozy, Jr. to address matters raised in Ms. Beegle Fair's letter. By letter dated January 25, 2012, Texas Eastern took no position on the admission of Ms. Beegle Fair's letter into the record. By further letter, Texas Eastern did not object to the admission of Mr. Kozy's statement into the record and waived cross-examination of the witness. Accordingly, by order dated February 2, 2012, both Ms. Beegle Fair's January 17th letter and the supplemental testimony of David Kozy, Jr. with accompanying attachment was admitted into the record, and the record was re-closed.<sup>7</sup>

[\*6]

After a full and complete review of the record and brief filed in this matter, I make the following:

## II. FINDINGS OF FACT

1. Penelec, a subsidiary of the FirstEnergy Corporation, is a public utility that delivers electric power to approximately 600,000 customers in a service territory that encompasses about 17,000 square miles within 32 Pennsylvania counties, including Bedford County. The Penelec bulk electric system consists of facilities rated at 115 kilovolts (kV), 138 kV, 345 kV and 500 kV. (Application at P 4.)<sup>8</sup>

2. Penelec is proposing to build a new transmission line from the existing Bedford North Substation, located on business route 220, north of the I-76 interchange near the Borough of Bedford, Bedford County, to an existing transmission line adjacent to the Osterburg East Substation, located on State Route 869, north of Old Route 220 in East St. Clair Township, Bedford County. The proposed line extension will be slightly over six miles [\*7] in length and will be designed and constructed as a single circuit (consisting of three phase conductors) to operate at 115 kV. (Application at PP 5, 7; Penelec St. 5 at 5-6.)

3. The cost of the project is \$ 3.3 million. (Penelec St. 3 at 7.)

4. Pending approval by the Commission, Penelec intends to begin construction in January 2013 and complete the project by June 2013.

### A. Electrical Need ([52 Pa. Code § 57.76\(a\)\(1\)](#))

---

<sup>7</sup> The reader is directed to refer to the February 2, 2012 order for a lengthy discussion of the procedural history surrounding the participation of Ms. Fair and Penelec's response thereto. The exhibits admitted into the record were identified as RFK-1 and Penelec St. 5-A.

<sup>8</sup> The Application was admitted into the record as Ex. JTT-1.

5. The Bedford-Osterburg Line is needed: (1) to resolve potential violations of applicable reliability criteria that would occur in the event of the loss of identified transmission facilities; and (2) to provide adequate transmission capacity to meet current and expected customer demands in Bedford County. (Penelec St. 2<sup>9</sup> at 4.)

**[\*8]**

6. Penelec must comply with reliability standards established by the North American Electric Reliability Corporation (NERC). Under Section 215 of the Federal Power Act, NERC has been certified by the Federal Energy Regulatory Commission (FERC) to develop and enforce mandatory reliability standards that apply to FERC jurisdictional facilities. NERC's reliability standards are approved by FERC, and a transmission owner's failure to adhere to those standards can result in serious penalties. (*Id.*)

7. PJM is the FERC-approved Regional Transmission Organization (RTO) for the transmission system serving all or parts of 13 states, including Pennsylvania. As an RTO, PJM is responsible for assuring that its transmission owners comply with NERC's planning and operating standards for the bulk (above 100 kV) electric system within PJM's control area. (*Id.*)

8. NERC's reliability standards require that transmission owners design their bulk electric systems to operate under approved thermal and voltage criteria: (1) during anticipated peak load conditions when all of their facilities are in operation; and (2) giving consideration to credible potential outages of facilities on the bulk electric **[\*9]** system. (*Id.* at 5-6.)

9. NERC's reliability standards require a transmission owner to analyze its system to determine whether: (1) peak loads can be safely supplied when all of its facilities are in operation; and (2) its loads can be safely supplied if one or more facilities are out of service.

10. To analyze its ability to meet NERC's reliability criteria, Penelec modeled the operation of its transmission and distribution systems to determine if parts of its system would experience thermal overloads or would violate prescribed voltage criteria if various contingencies were to occur. (Penelec St. 2 at 7.)

11. Penelec's analysis identified potential violations of reliability criteria at various 115 kV substation sites that would result from single contingency conditions using what, at the time of the analysis, were projected 2011 and 2013 peak loads. The model showed that an outage of either Penelec's Claysville-Curryville 115 kV transmission line or its Curryville-Saxton 115 kV transmission line would cause a voltage collapse and possible loss of load of more than 100 Megawatts (MW) at five substations. In addition, an outage of Penelec's Saxton-Snake Springs 115 kV or the Allegheny-Somerset **[\*10]** 115 kV transmission lines would result in violations of applicable planning criteria. (*Id.* at 7-8.)

---

<sup>9</sup> Penelec Statement 2 is the testimony of J. Craig Fraley. Mr. Fraley is a planning supervisor for Penelec and West Penn Power Company employed by FirstEnergy Service Company. His job responsibilities include the planning of the Penelec transmission system to ensure that the system operates reliably over a wide range of conditions. He holds a Bachelors of Science degree in Electrical Engineering from West Virginia University. He is a registered professional engineer in the Commonwealth of Pennsylvania. (Penelec St. 2 at 1-2.)

12. Penelec looked at five possible approaches to try to correct the planning process violations that its analysis identified. Based on its study of each approach, Penelec determined that only the construction of the Bedford-Osterburg Line, to be in service by the end of February 2013, would satisfy all of the functional needs that Penelec's planning process identified. (Penelec St. 2 at 9-10.)

13. PJM reviewed the Bedford-Osterburg Line as part of the process of preparing and updating its Regional Transmission Expansion Plan (RTEP). PJM confirmed the need for the Bedford-Osterburg Line and approved the construction of that line as a "baseline" RTEP project. (Penelec St. 2 at 11.)

14. In the course of operating the transmission system it controls, PJM identified real-time voltage problems in Bedford County that can only be addressed by the Bedford-Osterburg Line. Specifically, the Line is needed to avoid voltage collapse for single (N-1) contingencies, which could result in extended disruption of electric service to numerous customers. (Penelec St. 2 at 10, 12.)

B. Risk to Health [\*11] or Safety ([52 Pa. Code § 57.76 \(a\)\(2\)](#))

15. The right-of-way for the Bedford-Osterburg Line will be 60 feet in width where feasible. If detailed design engineering indicates that the spans between supporting structures have to be longer than currently anticipated, a wider right-of-way may be required in some areas to accommodate the side-to-side movement of longer span lengths. Where the line will parallel, and be located just outside of, a public right-of-way, a narrower right-of-way can be used. (Penelec St. 5<sup>10</sup> at 4-5.)

16. All right-of-way widths will provide the necessary conductor clearances [\*12] and comply with applicable National Electrical Safety Code (NESC) criteria. (*Id.* at 6-7.)

17. The types of supporting wood structures to be used for the Bedford-Osterburg Line are shown in Penelec Exhibits 6 through 12 of the Application. Exhibits 6 through 9 show the tangent structures (poles that support the line where it runs in a straight line), angle structures and "dead-end" structures for the portions of the line that will have a "vertical" configuration. Exhibits 10-12 show the tangent, angle and dead-end structures for the portions of the line that will have a "horizontal" configuration. (*Id.* at 3-4.)

18. A self-supporting steel pole will be used on the Bence property in order to accommodate the maneuvering of farm equipment and avoid the use of guy wires. (Penelec St. 1-A<sup>11</sup> at 4; Attachment 3.)

---

<sup>10</sup> Penelec Statements 5 and 5-A are the testimony of David Kozy, Jr. Mr. Kozy serves as the General Manager of Transmission Engineering for FirstEnergy Service Company. He holds a B.S. degree in civil engineering from the University of Akron. He has worked in the electric utility industry since 1987. He is a registered Professional Engineer in the Commonwealth of Pennsylvania.

<sup>11</sup> Penelec Statements 1 and 1-A are the testimony of John T. Toth. Mr. Toth is employed by FirstEnergy Services as a Supervisor, Transmission Siting. His job responsibilities include the supervision and oversight of members of the Transmission Engineering Group that are responsible for the siting and regulatory approvals for new transmission facilities. Mr. Toth holds an electrical engineering degree from Cleveland State University. He has worked for FirstEnergy since 2005.

**[\*13]**

19. The vertical configuration is used for most of the line. In that arrangement, the three phase conductors are aligned vertically, which requires the minimum right-of-way width. (Penelec St. 5 at 5-6.)

20. In the horizontal configuration, the three phase conductors are aligned on a horizontal plane, which makes it possible to reduce the height of the structures. The horizontal configuration will be used for approximately 3,385 feet of the line located near the runways of the Bedford County Municipal Airport to keep the line below the airspace of the airport and conform to Federal Aviation Administration guidelines. (*Id.* at 5-6.)

21. The structures to be deployed for the Bedford-Osterburg Line were designed in accordance with design standards for 115 kV transmission lines of FirstEnergy Corporation, Penelec's parent, which FirstEnergy applies to all of its electric utility subsidiaries. The structures will meet or be better than the NESC minimum conductor-to-ground clearance of 20.1 feet under all operating conditions. (*Id.* at 5-6.)

22. The phase conductors will be steel-reinforced aluminum consisting of seven inner steel wires and 26 outer aluminum wires. A single aluminum **[\*14]** "static" wire will run above the three transmission conductors to protect them from lightning strikes. The Bedford-Osterburg Line will be constructed to operate at a maximum design temperature of 257 degrees Fahrenheit and will meet all of the NESC's current requirements under all operating conditions. (*Id.* at 5-6.)

23. Penelec will initially clear the right-of-way in accordance with FirstEnergy's vegetation management procedures, which require removing incompatible vegetation within the right-of-way. Overhanging vegetation will be removed, pruned to the main stem or otherwise controlled to prevent interference with the line. Vegetation that is either within the right-of-way or outside the right-of-way with the potential to fall on the line will be cleared. (*Id.* at 9.)

24. Penelec will implement its ongoing Transmission Vegetation Management Program, consistent with FirstEnergy's Vegetation Management Specifications,<sup>12</sup> to ensure that it complies with all federal, state and local vegetation management standards. In particular, Penelec's Transmission Vegetation Management Program will satisfy all of the requirements imposed by NERC Reliability Standard FAC-003-1. (Penelec **[\*15]** St. 5 at 10-12.)

25. Penelec has been negotiating with Rebecca Beegle Fair to acquire tree clearing and trimming rights. Although Ms. Beegle Fair's property is not within the right-of-way, Penelec's forester has identified several trees on the property, adjacent to the right-of-way for the proposed route that may, with further growth, fall and contact the proposed line when it is constructed. However, these tree trimming rights are not necessary for the construction of the transmission line. As of the date of the hearing Ms. **[\*16]** Beegle Fair had not responded to Penelec's offer. (Penelec St. 4 at 4-5; Penelec St. 4-A at 2.)

---

<sup>12</sup> The Commission's Interim Guidelines for Transmission Line Siting Applications at [52 Pa. Code § 69.3107\(a\)](#) recommend that an applicant submit a formal vegetation management plan as part of its Application. Penelec has provided a copy of the FirstEnergy Vegetation Management Specifications in Penelec Exhibit 19 and has provided a copy of its typical notice to landowners of right-of-way maintenance practices in Penelec Exhibit 13. Application at 32.

26. All of the construction activities for the project will be designed to minimize environmental impact by, among other best management practices employed by Penelec, implementing a formal Soil Erosion and Sedimentation Control Plan and restoring and re-seeding areas disturbed in the construction process. (*Id.* at 8-9.)

27. Penelec will follow standard construction practices to ensure that all work is done safely and in compliance with the Occupational Safety and Health Administration's Rules and Regulations, the NESC and all applicable federal and state requirements. (*Id.* at 7; Application at 19.)

28. William H. Bailey, Ph.D. evaluated the expected electric and magnetic fields (EMF) associated with the operation of the Bedford-Osterburg Line in light of the current health-related research on magnetic fields produced by 60 hertz power lines. (Penelec St. 6 <sup>13</sup> at 6.)

**[\*17]**

29. Dr. Bailey explained that the principal scientific methods used to study the effects of EMF are epidemiological studies, which evaluate and quantify the association between exposure to environmental factors and health outcomes in human populations, and laboratory studies, which expose subjects (laboratory animals, tissues, cells) to environmental factors in a controlled situation in order to study one variable and try to ascertain a cause-effect or dose-response relationship. Numerous epidemiological and laboratory studies have been performed to try to assess whether low-frequency magnetic fields pose any health risks. (Penelec St. 6 at 9-10.)

30. All of the existing epidemiological and laboratory studies have been reviewed by national and international agencies with responsibility for public health including the World Health Organization (2007), the IARC (2002), the ICNIRP (2010), the Health Council of the Netherlands (2000, 2001, 2004 and 2009), the National Radiological Protection Board of the United Kingdom (2001 and 2004) and the United States National Institutes of Environmental Health Sciences (1998 and 1999). Based on these extensive reviews, the scientific community has **[\*18]** reached the consensus that the evidence is insufficient to conclude that EMF are a cause of any long-term health effects. (Penelec St. 6 at 12-13.)

31. More recent reports by the Scientific Committee on Emerging and Newly Identified Health Risks in the European Union (2009), the European Health Risk Assessment Network on Electromagnetic Fields (2010) and the Swedish Radiation Safety Authority (2010) have confirmed earlier assessments of the scientific research and concluded that the scientific evidence does not support a link between EMF and any adverse health effects. (*Id.* at 14.)

32. There are no national or Pennsylvania standards for electric or magnetic fields from power lines or any other sources. (*Id.* at 14.) However, the ICNIRP has developed recommended limits on electric fields of 4.2 kilovolts per meter (kV/m) and 2,000 milligauss (mG) that have been

---

<sup>13</sup> Dr. Bailey, in addition to being a Principal Scientist in the Health Services practice of Exponent, Inc., is a research scientist with the Cornell University Medical College. Dr. Bailey was formerly the head of the Laboratory of Neuropharmacology and Environmental Toxicity at the New York State Institute for Basic Research and, for nine years, an Assistant Professor and Postdoctoral Fellow in Neurochemistry at The Rockefeller University. (*Id.* at 2-3.) He has studied and conducted research on EMF for 30 years. See CV attached to Penelec St. 6 for details of Dr. Bailey's research and experience.

applied by the European Union to locations where people spend significant amounts of time. (*Id.* at 7. <sup>14</sup>)

**[\*19]**

33. Transmission lines are not a common source of EMF exposure. (Penelec St. 6 at 6.)

34. The EMF levels associated with the operation of the Bedford-Osterburg Line under normal loading are as follows (Application at 34; Penelec St. 6 at 6):

| Location                                                                                 | Electric Field    | Magnetic Field |
|------------------------------------------------------------------------------------------|-------------------|----------------|
| Directly below the lowest conductor:                                                     | 0.58 kV/m         | 17.76 mG       |
| Edge of the right-of-way (approx. 30 feet from the centerline of the transmission line): | 0.36 to 0.34 kV/m | 9.6 to 8.3 mG  |
| 100 feet from the centerline of the transmission line:<15>                               | 0.2 kV/m          | 5.0 mG         |

<15> As a result of the change in the line route on the King property described in Penelec St. 1-A, there are no occupied residences within 100 feet of the centerline of the proposed line.

35. The EMF levels associated with the Bedford-Osterburg Line will be below the limits recommended by the ICNIRP and used by the European Union for locations where people spend significant amounts of time. (Penelec St. 6 at 6-7.)

36. Dr. Bailey also explained that magnetic fields of approximately 5 mG can be measured approximately one foot from an electric oven or range, two feet from a dishwasher and one foot from a washing machine. (*Id.*)

37. **[\*20]** Penelec has taken EMF mitigation into account in siting the Bedford-Osterburg Line by maximizing the distance from the centerline of the proposed line to any residences or locations where groups of people may gather. (Penelec St. 6 at 8; Application at 21 and 33.)

38. Also, the portions of the line employing a vertical configuration, which are approximately 29,000 feet of the total length of approximately 32,300 feet, will use a "compact delta" design for the phase conductors, which minimizes electric and magnetic field strengths. (Penelec St. 6 at 8; Application at 33; Penelec Ex. 6.)

---

<sup>14</sup> The International Committee on Electromagnetic Safety (ICES) has also developed recommended limits that are somewhat higher than those of the ICNIRP. For electric fields, the ICES recommends limits of 10.0 kV/m on the power line right-of-way and 5 kV/m outside the right-of-way, and for magnetic fields, it recommends a limit of 9,040 mG. (*Id.*)

39. In addition, Penelec is raising the conductor height above the minimum required by the NESC for 115 kV lines, which also minimizes EMF strengths at ground level. (Penelec St. 6 at 8; Application at 29.)

C. Compliance with Applicable Statutes and Regulations for Environmental Protection, § 57.76(a)(3)

40. Penelec will comply with all of the permitting and associated environmental regulatory requirements that may be implicated by the Bedford-Osterburg Line project, as it explained in the Application, Penelec Exhibit 4 and Penelec Statement Nos. 3 and 5.

41. Penelec Exhibit 5 is a matrix showing [\*21] all expected federal, state and local governmental regulatory permitting and licensing approvals that may be required for the project, the agencies involved, the approximate timeline for obtaining the necessary approvals and the current status.

42. Penelec provided additional information explaining why its construction, operation and maintenance of the Bedford-Osterburg Line will be in full compliance with applicable statutes and regulations providing for the protection of the natural resources of the Commonwealth in connection with its explanation of its environmental assessment and siting analysis. (Penelec St. 3; Penelec St. 5 at 7-9; Penelec Exs. 4 and 5.)

43. Penelec will obtain the relevant state and federal permits needed to construct the project and will adhere to all of the conditions set forth in those permits. As part of the permitting process, Penelec will conduct a further, detailed ecological survey of the line route, which will include a wetland delineation and stream identification study.

44. Penelec will implement an erosion and sedimentation control plan, a spill prevention plan and a contingency plan to be in place during the construction of the project. (*Id.* [\*22] and Penelec St. 5 at 7-12.)

45. Penelec will continue to coordinate with state and federal agencies to minimize the potential for impacts to rare species if any such species might be encountered as the project proceeds. (Penelec Ex. 5.)

46. No construction will begin until the necessary permits for the work have been issued. (Penelec St. 5 at 8.)

D. Route Selection and Minimization of Environmental Impact § 57.76(a)(4)

47. GAI Consultants, Inc. prepared a comprehensive study of the environmental and other impacts of the project and assessed viable alternative routes. (Penelec St. 3 <sup>16</sup> at 2; Penelec Ex. 4.)

[\*23]

---

<sup>16</sup> Penelec Statement 3 is the testimony of George T. Reese. Mr. Reese is a senior environmental manager with GAI Consultants, Inc. (GAI). Mr. Reese has been employed by GAI for 24 years. He has directed and managed many of GAI's electric transmission line and natural gas transmission pipeline siting projects since 2003. He holds a Bachelor of Science degree in Biological Sciences from the University of Pittsburgh and a Master of Science degree in Biology from Clarion University.

48. Five alternative routes were selected and evaluated within a defined study area for overall environmental suitability and feasibility. (Penelec St. 3 at 3; Penelec Ex. 4 at iii.)

49. The selected route includes 4,400 linear feet that are coextensive with right-of-way that Penelec already owns. The remaining necessary rights-of-way have been acquired through agreements with landowners, including Mr. King and Mr. Bence. (Penelec St. 4 <sup>17</sup> at 2-3; Penelec St. 4-A at 1-2.)

50. A slight modification was made in the [\*24] selected route to accommodate Mr. King. The revised route description was included at Attachment 2 of Penelec St. 1-A.

51. GAI employed a well-accepted approach for its study by: (1) identifying a study area; (2) establishing transmission corridor siting criteria; (3) applying accepted screening techniques (including those recommended in the Commission's Interim Guidelines at [52 Pa. Code § 69.3105\(1\)](#)) to determine alternative routes for detailed study; (4) conducting a detailed environmental assessment of the study area as the basis for assessing the alternative routes; (5) evaluating the alternative routes based on their impact on specific resource categories; (6) selecting a preferred route for the project through an objective, quantitative analysis of the impacts of each alternative route; and (7) recommending appropriate impact-mitigation measures. (Penelec St. 3; Penelec Ex. 4.)

52. The GAI Report addressed other factors relevant to route selection, such as impacts on historic, scenic or wilderness areas, archeological and geologic resources and airports that lie outside the study area. (Penelec Ex. 4 at Section 2.0.)

53. The proposed [\*25] route, which is approximately 6.1 miles in length, begins at the Osterburg East Substation and heads south to the Bedford North Substation generally following the east side of the I-99 right-of-way. Approximately 0.8 mile of the route is located west of and parallel to I-99. The preferred route, identified as Route 3 in the GAI Report, employs only approximately 1.6 miles of right-of-way that does not parallel or overlap existing electric transmission lines or interstate highway rights-of-way. (Penelec St. 3 at 3; Ex. 1 of the Application.)

54. GAI established a study area that encompasses the existing Osterburg East and Bedford North Substations and intervening areas. The study area is 8.3 miles from north to south, 10.2 miles from east to west, and covers approximately 85 square miles (54,545 acres). (Penelec Ex. 4 at Figure ES-1.)

55. Urban development near the project is concentrated along major roadway corridors, principally United States (U.S.) Route 220. The remainder of the study area is largely dominated by forest and agricultural areas. Interstate 99 and U.S. Route 220 bisect the study area from north to south. (Penelec Exs. 1 and 4.)

56. GAI developed six basic corridor [\*26] siting criteria to screen possible alternative line routes (Application at 20-21; Penelec Ex. 4, Section 1.2):

---

<sup>17</sup> Penelec Statements 4 and 4-A are the written testimony of Mark R. Fowler. Mr. Fowler holds the position as Supervisor, Real Estate Services for FirstEnergy Services Company. His job responsibilities include the acquisition of right-of-way and other real estate interests that may be needed for transmission line projects by FirstEnergy electric utility subsidiaries. Mr. Fowler holds a bachelor degree from Kent State University and has worked in commercial and residential real estate for over 20 years.

- a. Avoid or minimize conflicts with existing and proposed land uses by, for example, using (or paralleling) existing utility transmission line or major transportation corridors when possible;
- b. Avoid or minimize impacts on human, natural, visual, and cultural resources;
- c. Avoid or minimize visibility from populated areas;
- d. Minimize impacts and construction and maintenance costs by selecting shorter, more direct routes;
- e. Locate line routes through terrain where economical construction and mitigation techniques can be employed and where the operation and maintenance of the line is feasible; and
- f. Maintain consistency with Penelec's transmission needs, project schedules, the oversight requirements of regulatory agencies and environmental regulations.

57. GAI used a two-tier process to develop alternative line routes that would connect the Osterburg East and Bedford North Substations. (Penelec Ex. 4, Section 1.3.)

58. As part of the first tier analysis, Penelec conducted two public workshops in the study area in July 2010 to solicit input from local residents, [\*27] officials, businesses, civic organizations, and the general public. (Penelec St. 3 at 5-6.)

59. GAI used recent aerial photography, U.S. Geological Survey topographic maps, information developed from consultation with government agencies and a geographic information system (GIS)-based constraints map of the study area to identify sensitive natural and socioeconomic resources and to develop preliminary segments of the line for further examination. The first tier analysis eliminated several line segments because construction in those areas would create unacceptable impacts. (Penelec Ex. 4; Penelec St. 3 at 2-3.)

60. In the second tier of the analysis, the line segments that survived the first screen were put together in various combinations to demarcate the potentially acceptable alternative routes. Five alternative routes were developed for further study based on the six corridor siting criteria that GAI had established. (Penelec St. 3 at 3 and 6-7; Penelec Ex. 4 at Figures ES-1, 3-1, 3-2 and 3-3.)

61. In general, the routes identified for further study followed the rights-of-way of existing transmission and distribution lines and major highways or, where that was not possible, were [\*28] located in undeveloped areas. (Penelec St. 3 at 3 and 6-7.)

62. GAI conducted a comprehensive environmental inventory of the study area that included existing land uses; scenic, recreational and wilderness areas; soil and sedimentation characteristics; plant and wildlife habitats and fisheries resources (including a search for the presence of endangered or threatened species of flora and fauna); water resources; archeological and historical areas; and geology, terrain and landscape. (Penelec St. 3 at 4; Penelec Ex. 4 at Tables 2.3-1 through 2.6-3.)

63. GAI employed 25 resource categories. The 25 resource categories were developed based on the Commission's siting regulations and other relevant environmental assessment criteria.

Because ten of the resource categories do not occur in or near the study area, GAI used the remaining fifteen categories for its evaluation. (Penelec St. 3 at 4; Penelec Ex. 4 at 55-60.)

64. The impact of each line route was evaluated for each category in units appropriate for that category, such as acres (e.g., for forested land that would have to be cleared), miles (e.g., distance from the line to a valuable resource, such as a park or recreation area) or **[\*29]** crossings (e.g., for stream or river crossings). (Penelec Ex. 4, Section 3.2.)

65. To facilitate the selection of a preferred route, three geographical areas were evaluated: (1) the immediate construction right-of-way; (2) the area adjacent to the proposed right-of-way that would be in view of sensitive resources; and (3) a four-mile wide corridor straddling the centerline of the right-of-way. The four-mile corridor was used to evaluate potential impacts on archaeological and historic resources, scenic areas, unique geologic areas, wilderness areas and airports, as is required by current regulations. (Penelec St. 3 at 4.)

66. Various resources prepared by governmental and nongovernmental agencies were consulted for information pertinent to the project area including comprehensive plans, zoning information, natural heritage inventories and other similar publications. Regulatory agencies including the Pennsylvania Game Commission, Fish and Boat Commission, Department of Conservation and Natural Resources and the United States Fish and Wildlife Service were contacted concerning the potential presence of rare species and sensitive natural and recreational resources, and the Pennsylvania **[\*30]** Historical and Museum Commission's online Cultural Resource Geographical Information System was consulted for information on the cultural resources in the project area. (Penelec St. 3 at 5-6; Penelec Ex. 4 at Appendix B.)

67. Specific resources that could potentially be affected by the construction and operation of the Bedford-Osterburg Line are set forth in Table 3.2-2 of Exhibit 4. Figure 3-1 in Exhibit 4 shows the proposed alternatives superimposed on aerial photographs of the study area. Figure 3-2 shows resources in the study area in proximity to each alternative route. Figure 3.3 identifies resources within the four-mile corridor of each alternative route.

68. Raw data were assembled for the routes using database software. Raw data consist of those measurements compiled for the environmental resource criteria. In order to put resource measurements on a relative scale (acres, feet, etc.) and to obtain an impact score that could be compared across the different alternatives, the raw data were mathematically proportioned to a scale of 1 to 10. In this procedure, the route with the highest score (worst) receives a 10; that with the lowest score (best) receives a 1. (Penelec St. **[\*31]** 3 at 4.)

69. In order to determine the most suitable route, the relative scores for each criterion for each route were totaled. Certain criterion are more important or relevant than others, especially as perceived by the public. Accordingly the criteria were weighted in accordance with the weighting protocol established by the Siting Criteria Council. The impact scores were summed to obtain an overall impact score for each alternative route. These scores were then ranked. Higher scores indicate greater environmental and social impact. (Penelec St. 3 at 4-5; Penelec Ex. 4 at Section 3.4.)

70. The lowest score was achieved by Route 3, which was selected as the preferred route for the Bedford-Osterburg Line. (Penelec Ex. 4 at Sections 3.5.4, 3.6 and Table 3.5-1.)

71. The basis for selecting Route 3 was summarized by Mr. Reese as follows:

Based on the analyses presented in the GAI Report [Penelec Ex. 4], Route 3 is the most suitable alternative based on impacts to environmental and socioeconomic resources. Route 2 ranked as the second most suitable route. The primary differences between these alternatives consist of: miles of non-existing rights-of-way required; forest acres impacted; [\*32] crossings of natural areas; trail crossings; residential and commercial/industrial areas impacted; and miles of steep terrain crossed. Route 2 impacts the greatest amount of forested, commercial/industrial, and residential areas, has an additional trail crossing, and crosses the largest distance of steep terrain among the two alternatives. The commercial/ industrial impacts associated with Route 2 were considered to be substantial by the Bedford County Development Association. Conversely, Route 3 incurs higher impacts only in terms of new, non-parallel rights-of-way required and its proximity to a landscape conservation area. Overall, Route 3 minimizes the cumulative impacts of the entire route amongst all resource categories. Therefore, Route 3 has been identified as the preferred alternative for the project.

(Penelec St. 3 at 7.)

72. Adverse environmental impacts from the construction and operation of the Bedford-Osterburg Line will be avoided or minimized by the rigorous site-selection process employed to determine the preferred line route. Penelec will implement appropriate measures during construction and throughout the subsequent operation of the Bedford-Osterburg Line to [\*33] avoid or minimize impacts to environmental resources. (Penelec St. 5 at 7-12.)

### III. DISCUSSION

The threshold issue in the siting of a transmission line which a utility must establish is whether the upgraded or additional transmission line is "needed" in order to furnish the adequate facilities mandated by Section 1501<sup>18</sup> of the Public Utility Code:

Every public utility shall furnish and maintain adequate, efficient, safe, and reasonable service and facilities, and shall make all such repairs, changes, alterations, substitutions, extensions, and improvements in or to such service and facilities as shall be necessary or proper for the accommodation, convenience, and safety of its patrons, employees, and the public. Such service also shall be reasonably continuous and without unreasonable interruptions or delay. Such service and facilities shall be in conformity with the regulations and orders of the commission. ...<sup>19</sup>

If the applicant establishes that the proposed project is necessary and proper within the meaning of Section 1501, then consideration turns to whether the route selected is appropriate in terms of location, safety, health and environmental impacts, and costs. [\*34]<sup>20</sup> The Commission's evaluation of the environmental impact of a proposed line must meet the

18 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, A-2009-2082652 (Order entered February 12, 2010) (hereinafter referred to as "Susquehanna-Roseland 500 kV Transmission Line"), affirmed sub nom., Environmental Conservation Council v. Public Utility Comm'n, 25 A.3d 440 (Pa. Cmwlth. 2011).

19 66 Pa. C.S. § 1501.

20 Susquehanna-Roseland 500 kV Transmission Line, at 7.

requirements of [Article I, Section 27 of the Pennsylvania Constitution](#),<sup>21</sup> as articulated in the seminal decision of *Payne v. Kassab*:

We hold that Section 27 was intended to allow the normal development of property in the Commonwealth, while at the same time constitutionally affixing a public trust concept to the management of public natural resources of Pennsylvania. The result of our holding is a controlled development of resources rather than no development.

We must recognize, as a corollary of such a conclusion, that decision makers will be faced with the constant and difficult task of weighing conflicting environmental and social concerns in arriving at a course of action that will be expedient as well as reflective of the high priority which constitutionally has been placed on the conservation of our natural, scenic, esthetic and historical resources.

Judicial review of the endless decisions that will result from such a balancing of environmental and social concerns must be realistic and not merely legalistic. The court's role must be to test the decision under review by [\*35] a threefold standard: (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?<sup>22</sup>

This balancing test has been codified in Commission regulations<sup>23</sup> which provide that the determination of the appropriateness of a project must be made by examining the application in the context of Sections 57.75 and 57.76 of the Commission's regulations, which enumerate specific criteria which must be considered.<sup>24</sup> That is, at a minimum, the Commission will not grant an application for a proposed high voltage line unless it finds:

- (1) That there is a need for it.
- (2) That it will not create an unreasonable risk of danger to the health and safety of the public.
- (3) That it is in compliance with applicable statutes and regulations providing for the protection of the natural resources of this Commonwealth.

[\*36]

- (4) 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.<sup>25</sup>

[\*37]

21 Article I, Section 27 of the Pennsylvania Constitution states: "The people have a right to clean air, pure water and to the preservation of the natural, scenic, historic and esthetic values of the environment. Pennsylvania's public natural resources are the common property of all the people, including generations yet to come. As trustee of these resources, the Commonwealth shall conserve and maintain them for the benefit of all the people."

22 312 A.2d 86, 94 (Pa. Cmwlth. 1873), affirmed, 361 A.2d 263 (Pa. 1976). See also Energy Conservation Council of Pennsylvania, 25 A.3d at 446-47.

23 Application of Duquesne Light for the Siting and Construction of a 345 kV Transmission Line in the City of Pittsburgh, PUC Docket No. A-2010-2159814 (Order entered February 10, 2011), slip op. at 5.

24 52 Pa. Code §§ 57.75, 57.76.

25 52 Pa. Code § 57.76(a)(1)-(4).

The proponent of a rule or order in any Commission proceeding has the burden of proof.<sup>26</sup> As the applicant, Penelec has the burden of proving that the proposed project meets all the relevant statutory and regulatory requirements by a preponderance of the evidence.<sup>27</sup> Additionally, any finding of fact necessary to support an adjudication of the Commission must be based upon substantial evidence, which is such relevant evidence as a reasonable mind might [\*38] accept as adequate to support a conclusion.<sup>28</sup> More is required than a mere trace of evidence or a suspicion of the existence of a fact sought to be established.<sup>29</sup>

As discussed in detail below, I find that Penelec has met its burden of proof.

#### A. Need

The "need" for the Bedford-Osterburg Line must be reviewed from the perspective of Penelec's ability to provide adequate and efficient service, since every utility is required to make improvements "as shall be necessary or proper for the accommodation, convenience and safety of its patrons, employees [\*39] and the public."<sup>30</sup> In addition, [52 Pa. Code § 57.76\(a\)\(4\)](#) requires that the Commission consider that the proposed transmission line have a minimal environmental impact "considering the electric power needs of the public, the state of the available technology and the available alternatives."<sup>31</sup>

Penelec's application and supporting statements adequately demonstrate that the Bedford-Osterburg Line is needed in order to provide adequate and reliable service to its ratepayers. Specifically, the Bedford-Osterburg Line is needed: (1) to resolve potential violations of applicable reliability criteria that would occur in the event of the loss of identified transmission facilities; and (2) to provide adequate transmission capacity to meet current and expected customer demands in Bedford County.<sup>32</sup>

#### [\*40]

Penelec must comply with reliability standards established by NERC (North American Electric Reliability Corporation). Under Section 215 of the Federal Power Act,<sup>33</sup> NERC has been certified by the Federal Energy Regulatory Commission (FERC) to develop and enforce mandatory reliability standards that apply to FERC jurisdictional facilities. NERC's reliability standards are approved by FERC, and a transmission owner's failure to adhere to those standards can result in serious penalties.<sup>34</sup>

NERC's reliability standards require that transmission owners design their bulk electric systems to operate under approved thermal and voltage criteria: (1) during anticipated peak load conditions when all of their facilities are in operation; and (2) giving consideration to credible potential outages of facilities on the bulk electric system. The [\*41] applicable reliability criteria provide that neither a single contingency (e.g. the loss of a single-circuit transmission

26 66 Pa. C.S. § 332.

27 *Energy Conservation Council of Pennsylvania v. Public Utility Comm'n*, 25 A.3d 440 (Pa. Cmwlth. 2011); *Energy Conservation Council of Pennsylvania v. Public Utility Comm'n*, 995 A.2d 465 (Pa. Cmwlth. 2010).

28 *Id.*

29 *Norfolk & Western Ry. v. Pa. Publ. Util. Comm'n*, 413 A.2d 1037 (Pa. 1980).

30 66 Pa. C.S. § 1501.

31 *Pennsylvania Power & Light Co. v. Pa. PUC*, 696 A.2d 248, 250 (Pa. Cmwlth. 1997).

32 *Penelec St. 2* at 4.

33 16 U.S.C. § 824o(e)(3). See discussion at *Susquehanna-Roseland 500kV Transmission Line*, slip op. at 25-28.

34 *Penelec St. 2* at 4.

line or transformer) nor multiple contingencies would cause a loss of load. In other words, NERC's reliability standards require a transmission owner to carefully analyze its system to determine whether: (1) peak loads can be safely supplied when all of its facilities are in operation; and (2) its loads can be safely supplied if one or more facilities are out of service.<sup>35</sup>

Penelec's analysis identified potential violations of reliability criteria at various 115 kV substation sites that would result from single contingency (N-1) conditions using what, at the time of the analysis, were projected 2011 and 2013 peak loads.<sup>36</sup> The model showed that an outage of either Penelec's Claysville-Curryville 115 kV transmission line or its Curryville-Saxton 115 kV transmission line would cause a voltage collapse and possible loss of load of more than 100 Megawatts (MW) at five substations. **[\*42]**<sup>37</sup> In addition, an outage of Penelec's Saxton-Snake Springs 115 kV or the Allegheny-Somerset 115 kV transmission lines would result in violations of applicable planning criteria.<sup>38</sup>

Penelec looked at five possible approaches to try to correct the planning process violations that its analysis identified.<sup>39</sup> However, based on careful study of each approach, Penelec determined that four of the alternatives were not adequate to eliminate the potential voltage violations it had identified or would themselves produce overloading conditions on other Penelec facilities. Only the construction of the Bedford-Osterburg Line will satisfy all of the functional needs that Penelec's planning process has identified.<sup>40</sup>

#### **[\*43]**

This conclusion was bolstered by a PJM analysis. Specifically, PJM reviewed the Bedford-Osterburg Line as part of the process of preparing and updating its Regional Transmission Expansion Plan (RTEP).<sup>41</sup> In that process, PJM confirmed the need for the Bedford-Osterburg Line and approved the construction of that line as a "baseline" RTEP project. Additionally, in the course of operating the transmission system over which PJM has operational control, PJM identified real-time voltage problems in Bedford County that can only be addressed by the Bedford-Osterburg Line.

The evidence presented by Penelec fully supports the conclusion that there is a need for the Bedford-Osterburg Line and, therefore, the standard set forth in [52 Pa. Code § 57.76\(a\)\(1\)](#) is satisfied.

#### **B. Route Selection**

The Commonwealth Court has recently held that a utility's route **[\*44]** for a proposed high-voltage transmission line should be approved where 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:

---

<sup>35</sup> Id.

<sup>36</sup> Penelec St. 2 at 7.

<sup>37</sup> Id. at 7-8.

<sup>38</sup> Id. at 8. The facilities referenced above are depicted on the project area map of Penelec's transmission system provided as Confidential Penelec Ex. 2A.

<sup>39</sup> Penelec St. 2 at 9-10.

<sup>40</sup> Id.

<sup>41</sup> Penelec St. 2 at 11-12.

[I]t is settled law that the designation of the route for a HV line is a matter for determination by [a utility's] management in the first instance, and the utility's conclusion will be upheld unless shown to be wanton or capricious. Thus, where 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. This reasoning is equally sound when considering whether a utility has complied with [52 Pa. Code § 57.72\(c\)\(10\)](#), as the information required by this section goes towards establishing the reasonableness of the utility's route selection.<sup>42</sup>

**[\*45]**

However, the route selected by the applicant must demonstrate reasonable efforts to minimize adverse environmental impacts. A utility is required to consider available alternative routes, but need not consider all possibilities. Moreover, it is also 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.<sup>43</sup>

Exhibit 4 of Penelec's Application (GAI Report) for the Bedford-Osterburg Line includes an in-depth analysis of five alternative routes considered by Penelec. This study involved the analysis and weighting of many environmental, social and economic factors to arrive at the selected alternative route. This process has been utilized by other utilities to support transmission line applications approved by the Commission.<sup>44</sup> **[\*46]** The GAI analysis supports the conclusion that the route selected by Penelec for the Bedford-Osterburg Line reasonably balances the electric power needs of the public and minimizes potential environmental impacts.<sup>45</sup>

In general, GAI's approach identified a study area; established transmission corridor siting criteria; applied accepted screening techniques<sup>46</sup> to determine alternative routes for detailed study; conducted a detailed environmental assessment of the study area as the basis for assessing the alternative routes; evaluated the alternative routes based on their impact on specific resource categories; selected a preferred route for the project through an objective, quantitative analysis of the impacts of each alternative route; and recommended appropriate **[\*47]** impact-mitigation measures.<sup>47</sup> Additionally, the GAI Report addressed other factors relevant to route selection, such as impacts on historic, scenic or wilderness areas, archeological and geologic resources and airports that lie outside the study area.

GAI first established a study area that encompasses the existing Osterburg East and Bedford North Substations and intervening areas. The study area is 8.3 miles from north to south, 10.2 miles from east to west, and covers approximately 85 square miles (54,545 acres).<sup>48</sup> Urban development near the project is concentrated along major roadway corridors, principally U.S.

---

42 Energy Conservation Council of Pa. v. Public Utility Comm'n., 25 A.3d 440, 449-50 (2011) (quoting Energy Conservation Council of Pa. v. Public Utility Comm'n., 995 A.2d 465, 479-80 (2010)).

43 Energy Conservation Council of Pa. v. Public Utility Comm'n., 25 A.3d at 448-49.

44 Application of Duquesne Light Company for the Siting and Construction of a 345 kV Transmission Line, PUC Docket No. A-2010-2159814 (Commission Order entered February 10, 2011).

45 52 Pa. Code § 57.76(a)(4).

46 52 Pa. Code § 69.3105(1).

47 Penelec St. 3.

48 Figure ES-1 of Penelec Ex. 4 (GAI Report).

Route 220. The remainder of the study area is largely dominated by forest and agricultural areas. Interstate 99 and U.S. Route 220 bisect the study area from north to south.<sup>49</sup>

**[\*48]**

GAI developed six basic corridor siting criteria to screen possible alternative line routes, as follows:

- 1) Avoid or minimize conflicts with existing and proposed land uses by, for example, using (or paralleling) existing utility transmission line or major transportation corridors when possible;
- 2) Avoid or minimize impacts on human, natural, visual, and cultural resources;
- 3) Avoid or minimize visibility from populated areas;
- 4) Minimize impacts and construction and maintenance costs by selecting shorter, more direct routes;
- 5) Locate line routes through terrain where economical construction and mitigation techniques can be employed and where the operation and maintenance of the line is feasible; and
- 6) Maintain consistency with Penelec's transmission needs, project schedules, the oversight requirements of regulatory agencies and environmental regulations.

After the study area was established, GAI used a two-tier process to develop alternative line routes that would connect the Osterburg East and Bedford North Substations. In the first tier of the analysis, **[\*49]** GAI used recent aerial photography, U.S. Geological Survey topographic maps, information developed from consultation with government agencies and a GIS-based constraints map of the study area to identify sensitive natural and socioeconomic resources and to develop preliminary segments of the line for further examination. As part of this process, Penelec conducted two public workshops in the study area in July 2010 to solicit input from local residents, officials, businesses, civic organizations, and the general public. In addition, various resources prepared by governmental and nongovernmental agencies were consulted for information pertinent to the project area including comprehensive plans, zoning information, natural heritage inventories and other similar publications. Regulatory agencies, including DEP, DCNR, the Pennsylvania Game Commission and the U.S. Fish and Wildlife Service, were contacted concerning the potential presence of rare species and sensitive natural and recreational resources. The Pennsylvania Historical and Museum Commission's online Cultural Resource Geographical Information System was consulted for information on the cultural resources in the project area. **[\*50]** The first tier analysis eliminated several line segments because construction in those areas would create unacceptable impacts.<sup>50</sup>

In the second tier of the analysis, the line segments that survived the first screen were put together in various combinations to demarcate the potentially acceptable alternative routes. A total of five alternative routes were developed for further study based on the six corridor siting criteria that GAI had established.<sup>51</sup> In general, the routes identified for further study followed

---

<sup>49</sup> Ex. 1 of Application.

<sup>50</sup> Application Ex. 4 at 4-7.

<sup>51</sup> Two of the five alternatives conformed to the Commission's more rigorous definition of an "alternative route" (52 Pa. Code § 57.1 et seq.) as "a reasonable right-of-way which includes not more than 25 percent of the right-of-way of the applicant's proposed route." Penelec Ex. 4 at 5.

the rights-of-way of existing transmission and distribution lines and major highways or, where that was not possible, were located in undeveloped areas:

Route 1 is an approximately 6.4 mile route that would use an existing Penelec right-of-way that contains distribution lines and is, generally, within the Interstate 99 corridor. This alternative is located on the west side of Interstate 99 from the Osterburg East Substation to Oppenheimer Run, then on the east side of the [\*51] highway from Oppenheimer Run to the Bedford North Substation. Route 1 would locate the Bedford-Osterburg Line on the right-of-way of existing distribution lines, which would have to be rebuilt to accommodate both those existing distribution lines and the new transmission line.

Route 2 is an approximately 6.5 mile route that generally would follow the west side of the Interstate 99 right-of-way. Route 2 would require 0.6-mile of new right-of-way that would not parallel or overlap either an existing transmission line right-of-way or the interstate highway right-of-way.

Route 3 is approximately 6.1 miles in length, begins at the Osterburg East Substation and heads south to the Bedford North Substation generally following the east side of the Interstate 99 right-of-way. Approximately 0.8 mile of the route is located west of, and parallel, to Interstate 99. Route 3 employs only 1.6 miles of right-of-way that does not parallel or overlap existing electric transmission lines or interstate highway rights-of-way.

Route 4 is an approximately 11.0 mile route that begins at the Osterburg East Substation and proceeds south along the west side of Interstate 99 to just north of Oppenheimer [\*52] Run, where it proceeds in a southeasterly direction towards Imlertown. West of Imlertown, the route proceeds south past Price Ridge and the town of Yount, turns northwestward near Dunning Creek, and continues along an existing Penelec transmission line to the Bedford North Substation. Route 4 would require 7.1 miles of new right-of-way that does not parallel or overlap either existing electric transmission line right-of-way or interstate highway right-of-way.

Route 5 is an approximately 15.7 mile route that begins at the Osterburg East Substation and proceeds south along the west side of Interstate 99 to just north of Oppenheimer Run, where the route follows an easterly and southerly direction along the base of Evitts Mountain through Dunning Cove and Dutch Corner. Mid-way between Stiffler Ridge and Evitts Mountain, the route bends northwestward and continues to the Bedford North Substation along an existing Penelec transmission line. Route 5 would require 10.4 miles of new right-of-way that does not parallel or overlap either existing electric transmission line right-of-way or interstate highway right-of-way.<sup>52</sup>

### [\*53]

As explained hereafter, Route 3 was selected for the Bedford-Osterburg Line because it has the least impact on environmentally sensitive areas, residential properties and sites of possible historic/ archeological significance; minimizes environmental and socio-economic impacts by employing existing right-of-way and following existing linear features to the extent possible; and requires only one mile of new right-of-way that does not overlap or parallel existing power line or public rights-of-way.

---

<sup>52</sup> Penelec St. 3 at 3, 6-7.

GAI next conducted a comprehensive environmental inventory of the study area that included existing land uses; scenic, recreational and wilderness areas; soil and sedimentation characteristics; plant and wildlife habitats and fisheries resources (including a search for the presence of endangered or threatened species of flora and fauna); water resources; archeological and historical areas; and geology, terrain and landscape.<sup>53</sup> The environmental inventory formed the basis for assessing environmental and other impacts of the project.

**[\*54]**

GAI developed 25 resource categories based on the Commission siting regulations and environmental assessment criteria that reflect the data collected in the environmental inventory. Ten of the resource categories do not occur in or near the study area, therefore GAI only used the remaining fifteen categories for its evaluation. The impact of each line route was evaluated for each category in units appropriate for that category, such as acres (e.g., for forested land that would have to be cleared), miles (e.g., distance from the line to a valuable resource, such as a park or recreation area) or crossings (e.g., for stream or river crossings).<sup>54</sup>

To facilitate the selection of a preferred route, three areas were evaluated: (1) the immediate construction right-of-way; (2) the area adjacent to the proposed right-of-way that would be in view of sensitive resources; and (3) a four-mile wide corridor straddling the centerline of the right-of-way. The four-mile corridor was used to evaluate **[\*55]** potential impacts on archaeological and historic resources, scenic areas, unique geologic areas, wilderness areas and airports, as is required by current regulations.<sup>55</sup>

In order to show the impact of each alternative on each resources category on a scale that would permit a meaningful comparison, the unit measurement for each resource category was converted to a score on a scale of 1 to 10, with 1 reflecting the least impact and 10 the most. In this way, a numerical score was calculated for each alternative.<sup>56</sup> Because all of the resource criteria are not equally important **[\*56]** in evaluating the alternative routes, the scores were weighted for their relative importance using a methodology that has been accepted in prior Commission siting proceedings.<sup>57</sup> The lowest (i.e., the best) score was achieved by Route 3,<sup>58</sup> which was selected as the preferred route for the Bedford-Osterburg Line. The basis for selecting Route 3 was summarized by Mr. Reese as follows:

Based on the analyses presented in the GAI Report [Penelec Ex. 4], Route 3 is the most suitable alternative based on impacts to environmental and socioeconomic resources. Route 2 ranked as the second most suitable route. The primary differences between these alternatives consist of: miles of non-existing rights-of-way required; forest acres impacted; crossings of natural areas; trail crossings; residential and commercial/industrial areas

---

<sup>53</sup> 52 Pa. Code § 69.3105(3).

<sup>54</sup> Penelec Ex. 4, Section 3.2 at 60.

<sup>55</sup> Specific resources that could potentially be affected by the construction and operation of the Bedford-Osterburg Line are set forth in Table 3.2-2 of Exhibit 4. Figure 3-1 in Exhibit 4 shows the proposed alternatives superimposed on aerial photographs of the study area. Figure 3-2 shows resources in the study area in proximity to each alternative route. Figure 3.3 identifies resources within the four-mile corridor of each alternative route.

<sup>56</sup> Section 3.3 of Penelec Ex. 4 and Penelec St. 3 at 4. These scores, for each alternative, are set forth in Table 3.3-1 of Penelec Ex. 4.

<sup>57</sup> Penelec St. 3 at 5; E.g., Application of Duquesne Light for the Siting and Construction of a 345 kV Transmission Line in the City of Pittsburgh, PUC Docket No. A-2010-2159814 (Order entered February 10, 2011).

<sup>58</sup> The scores ranged from 5799.2 for Alternative Route 1 to the lowest (best score) of 2776.5 for Alternative Route 3. The next lowest score was for Alternative Route 2, at 3223.2. In short, the ranked scores indicated that Route 3 was clearly the alternative with the least environmental and other impacts.

impacted; and miles of steep terrain crossed. Route 2 impacts the greatest amount of forested, commercial/industrial, and residential areas, has an additional trail crossing, and crosses the largest distance of steep terrain among the two alternatives. The commercial/industrial impacts associated with Route 2 were considered to be substantial by the Bedford County [\*57] Development Association. Conversely, Route 3 incurs higher impacts only in terms of new, non-parallel rights-of-way required and its proximity to a landscape conservation area. Overall, Route 3 minimizes the cumulative impacts of the entire route amongst all resource categories. Therefore, Route 3 has been identified as the preferred alternative for the project.<sup>59</sup>

**[\*58]**

Finally, further mitigation of adverse environmental impacts from the construction and operation of the Bedford-Osterburg Line are outlined in Penelec's Application. Specifically, Penelec will avoid or minimize adverse environmental impacts by implementing appropriate measures during construction and throughout the subsequent operation of the Bedford-Osterburg Line to avoid or minimize impacts to environmental resources. Penelec will obtain the relevant state and federal permits needed to construct the project and will adhere to all of the conditions set forth in those permits.<sup>60</sup> As part of the permitting process, Penelec will conduct a further, detailed ecological survey of the line route, which will include a wetland delineation and stream identification study. Penelec will implement an erosion and sedimentation control plan, a spill prevention plan and a contingency plan to be in place during the construction of the project. Penelec will continue to coordinate with state and federal agencies to minimize the potential for impacts to rare species if any such species might be encountered as the project proceeds.

**[\*59]**

In sum, the Application and testimony support the conclusion that Penelec chose a route that balances the power needs of the public while taking reasonable measures to minimize and mitigate any negative environmental impacts that may result from the construction and operation of the transmission line. The application therefore meets the criterion of Section 57.76(a)(4) of the Commission's regulations.

**C. Health and Safety**

There is sufficient evidence in the record to conclude that the location of the Bedford-Osterburg Line will not cause an unreasonable risk to health and safety. The engineering design and specifications of the lines, support structures and conductors are described in the Application and were further explained in the testimony of David Kozy. He further testified that the design of the line is not only consistent with the design parameters used by Penelec and other FirstEnergy subsidiaries, but that it also meets or exceeds NESC standards. The Commission has held in numerous cases that transmission lines that meet or exceed the NESC requirements do not create an unreasonable risk or danger to the health and safety of the public.<sup>61</sup>

---

<sup>59</sup> Penelec St. 3 at 7.

<sup>60</sup> It should go without saying that approval from the Commission for the construction of an HV transmission line does not relieve the utility from the responsibility to comply with additional restrictions or permit requirements that may be required by other agencies.

<sup>61</sup> Susquehanna-Roseland 500 kV Transmission Line, at 100 (and the cases cited therein).

[\*60]

Further, there is also sufficient testimony in the record to conclude that the proposed line will not cause an unreasonable risk from exposure to electromagnetic fields (EMF). Dr. Baily's exhaustive testimony supports this conclusion. Transmission lines are not common sources of significant EMF exposure. Even so, Dr. Baily evaluated the proposed line and reviewed a significant body of scientific research, including his own, and testified that the line presents no significant threat to health due to EMF. Moreover, Penelec has taken EMF mitigation into account by designing the line to maximize the distance from the centerline of the proposed line to any residences or locations where groups of people may gather, utilizing a compact delta design for the phase conductors and raising the conductor height above the minimum required by NESC for 115 kV lines.<sup>62</sup>

Therefore the proposed Bedford-Osterburg Line meets the requirement of Section 57.76(a)(2).

D. Compliance with Regulations for Protection [\*61] of the Environment

Penelec's application clearly evidences that it has been on consultation and communication with a number of state and environmental agencies responsible for the protection of the Commonwealth's environmental resources. Specifically, Exhibit 5 of the Application provides a matrix of the numerous agencies' contacts and the necessity and status of permit applications that may be required by those agencies. Penelec also states that it will obtain the relevant state and federal permits needed and will not begin construction on the project until it has secured the permits necessary for the work, including necessary erosion and sedimentation<sup>63</sup> permits and whatever further ecological studies may be required by agencies with responsibility to protect rare and endangered plant and animal species. Accordingly, I find that the requirement of Section 57.76(a)(3) has also been met.

[\*62]

E. Conclusion

In conclusion, I find that Penelec has conducted a reasonable and thorough study of alternative routes for the Bedford-Osterburg Line that includes all of the factors and analyses required by the Commission's siting regulations at 52 Pa. Code, Chapter 57, Subchapter G, and recommended in the Commission's Interim Guidelines for Transmission Line Siting Applications. The route selected by Penelec minimizes the cumulative environmental and other impacts of the entire project for all of the relevant resource categories. Further, Penelec has satisfied the Commission's applicable criteria for approval to site, construct and operate the Bedford-Osterburg Line in the manner and in the location described in its Application as amended by the modest route changes detailed in Penelec Statement Nos. 1-A and 4-A. Therefore, the application is approved.

IV. CONCLUSIONS OF LAW

---

<sup>62</sup> Penelec St. 6 at 8.

<sup>63</sup> In her January letter, Ms. Beegle Fair raises a concern about run-off and drainage along I-99. Penelec avers that it will be required to secure appropriate permits from DEP and the local conservation district to control any erosion and sedimentation issues that may arise due to the construction of the transmission line. There is nothing to suggest that Penelec will not be able to secure the necessary permits or that those permits will be inadequate to prevent stormwater or other construction related run-off issues. There is also nothing to suggest that in consultation with DCNR, that Penelec will not be able to mitigate any harm to environmentally sensitive areas. Ex. RBK-1.

1. Penelec has established by sufficient evidence that there is a need for the Bedford-Osterburg Line. [52 Pa. Code § 57.76\(a\)\(1\)](#).
2. The Bedford-Osterburg Line will not create an unreasonable risk of danger to the health and safety of the public. [52 Pa. Code § 57.76\(a\)\(2\)](#) [\*63] .
3. The Bedford-Osterburg Line is in compliance with applicable statutes and regulations providing for the protection of the natural resources of this Commonwealth. [52 Pa. Code § 57.76\(a\)\(3\)](#).
4. The Bedford-Osterburg 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\(a\)\(4\)](#).

#### V. ORDER

THEREFORE,

IT IS ORDERED:

1. That the Application of Pennsylvania Electric Company for the Approval to Locate and Construct the Bedford North-Osterburg East 115kV HV Transmission Line Project Situated in Bedford and East St. Clair Townships, Bedford County, Pennsylvania, PUC Docket No. **A-2011-2247862**, as modified is hereby granted.
2. In view of the withdrawal of the protests to the application filed by Karl Alan King and J. Roy Bence dated October 12, 2011, the motion of Pennsylvania Electric Company to withdraw the petitions for eminent domain docketed at A-2011-2264762 and A-2011-2264773 is granted.
3. That the dockets A-2011-2264762 and A-2011-2264773, shall be marked closed [\*64] and discontinued.

Date: February 9, 2012

Mary D. Long

Administrative Law Judge

PA Public Utility Commission Decisions

## 1994 Pa. PUC LEXIS 65

Pennsylvania Public Utility Commission

October 21, 1994

Docket Nos. A-110500F0196, A-110500F0203

### ***PA Public Utility Commission Decisions***

#### **Reporter**

1994 Pa. PUC LEXIS 65 \*

**Certification Application of Pennsylvania Power & Light Company Filed Pursuant to 52 Pa. Code Chapter 57 With Respect to the Proposed Line Replacement of the Existing West Shore-Carlisle 69 kV Transmission Line with a West Shore-Carlisle 138/69 kV Transmission Line, to be Located, Constructed, Operated and Maintained in the Boroughs of Carlisle and Mechanicsburg And In North Middletown, Middlesex, and Silver Spring Townships, Cumberland County, Pennsylvania Including Applications to Exercise the Power of Eminent Domain.**

---

### **Core Terms**

---

electric, has, transmission line, animal, route, magnetic, was, right-of-way, foot, voltage, horse, health effects, proposed line, stray, track, farm, scientific, exposure, corridor, veterinary, load, magnetic field, protestant, railroad, phase, domain, center line, toxicology, replacement, siting

**Panel:** Before GEORGE M. KASHI Administrative Law Judge

### **Opinion**

---

#### INITIAL DECISION

##### I. INTRODUCTION

###### A. History of the Proceeding

By application filed July 28, 1993, Pennsylvania Power & Light Company ("PP&L"/"Company"/"Applicant") seeks authorization to replace the Existing West Shore-Carlisle 69 kV Transmission Line with a West Shore-Carlisle 138/69 kV Transmission Line, to be Located, Constructed, Operated and Maintained in the Boroughs of Carlisle and Mechanicsburg and in North Middletown, Middlesex, and Silver Spring Townships, Cumberland County, Pennsylvania including Applications to Exercise the Power of Eminent Domain. PP&L gave due notice throughout the proceeding to the property owners within the proposed right-of-way and to appropriate government officials and agencies as required by Commission regulations at 52 Pa. Code Chapter 57. Newspaper notices of the filing were duly published and proof of publications were filed with the Commission.

The matter was assigned to this administrative law judge on August 11, 1993, and a prehearing conference was scheduled for September 22, 1993. Pursuant to notice and Commission regulations at [52 Pa. Code § 57.75](#), PP&L published notice [\*2] of the prehearing conference during the weeks of September 27 and October 4, 1993 in a newspaper of general circulation within each municipality in which the transmission line project would be located, and filed proofs of publication with the Commission on October 12, 1993.

Protests and Petitions to Intervene were filed by Max C. Hempt and Martha D. Hempt (collectively the "Hempts"/"Protestants" ), who own land adjacent to the proposed transmission line. On September 1, 1993, PP&L filed an answer to Protestant's pleading denying the material averments. No other formal or informal protests were filed.

At the September 22, 1993 prehearing conference a "FERC" style procedural schedule was adopted.<sup>1</sup> The schedule was subsequently modified at the protestant's request due to the illness of their counsel.

On December 14, 1993, PP&L filed an Application for the exercise of the power of eminent domain across the protestant's property which was docketed at A-110500F0203. Copies of the Application along with copies of the [\*3] Company's siting application were served upon these condemnees by certified mail in accordance with Commission regulations. The Company also requested, pursuant to [52 Pa. Code § 57.75\(i\)\(1\)](#), that the eminent domain application be consolidated with the siting application. These proceedings were thereafter consolidated for hearing and decision purposes by Order dated December 20, 1993.

On February 14, 1994, the Company filed its direct case consisting of the prepared testimony of Mr. S. Carl Readinger (need) PP&L Stmt. No. 1, Kenneth B. Kuhns (siting and eminent domain) PP&L Stmt. No. 2, Mr. Murray A. Garber (design engineering, and electric and magnetic fields) PP&L Stmt. No. 3, Mr. Latty L. Feirick (right-of-way) PP&L Stmt. No. 4, Mr. Allen C. Cassaday (electric and magnetic fields) PP&L Stmt. No. 5, Dr. Robert J. Gustafson ("stray voltage" ) PP&L Stmt. No. 6, and Dr. Dwight Mercer (electric and magnetic field and animal health) PP&L Stmt. No. 7, and associated exhibits. The Protestants filed their direct testimony on April 18, 1994, consisting of the prepared testimony of Dr. Robert G. Scott, Jr. D.V.M. (Protestants' Statement No. 1) and Mr. Max C. Hempt (Protestants' Statement [\*4] No. 2), with related exhibits. The Company submitted rebuttal statements on May 23, 1994. Surrebuttal was presented by the Protestants on June 1, 1994. An evidentiary hearing was held on June 7, 1994, at which time witnesses for PP&L and the Protestants were presented and cross-examined.

Main briefs were filed by both parties on July 18, 1994 and Reply Briefs were submitted on July 25, 1994. The record closed July 25, 1994.

#### B. Proposed line Discription

The project for which approval is requested consists of replacing an approximately 9-mile segment of the existing West Shore-Carlisle 1 and 2 69 kV lines with a new, double circuit 138/69 kV line approximately 9.38 miles in length, including a rebuilt 1,100-foot section of tap line to the customer-owned Ralston-Purina Substation. PP&L STMT. No. 3 at p. 4. While the new West Shore-Carlisle Line will initially operate at 69 kV, it is being built for 138 kV capacity because conversion to that higher voltage level is expected within the life of this facility. PP&L STMT. No. 1 at p. 10. Completion of this project, in conjunction with existing facilities, will provide a 14.6 mile double circuit, high capacity transmission [\*5] link from the Company's West Shore regional supply substation to its Carlisle area substation, which supplies electricity to about 9,000 customers in the Carlisle area. PP&L STMT. No. 1 at p. 6.

The new West Shore-Carlisle line will consist of six 556.5 KCMIL ASCR conductors and one 1/2-inch diameter, extra high strength (EHS) overhead ground wire. PP&L STMT No. 3 at p. 5. The phase conductors and overhead ground wire will be suspended from approximately 80 single steel poles averaging 90-feet in height, placed at intervals of approximately 700 feet. Id. The minimum conductor-to-ground clearance will be 30 feet at extreme

---

<sup>1</sup> In a "FERC" style hearing process, all the testimony of all parties is prefled in advance of one set of hearings where all testimony is then cross-examined.

thermal conditions and 37.4 feet under normal load and average weather conditions. Id. The proposed line will be designed, constructed, operated and maintained in accordance with the National Electrical Safety Code. Id.

This project will provide adequate current-carrying capacity under normal and emergency operating conditions to supply the current and reasonably projected loads in the Carlisle area; will address reliability concerns; will replace old, deteriorated equipment; and will provide facilities capable of 138 kV operation, which projected **[\*6]** load growth will require. PP&L STMT. No. 1 at p. 2.

The estimated cost to design and construct the project is \$ 5.7 million, including right-of-way costs. PP&L Application, Summary page. The project has an in-service date of December 1995. Id.

PP&L has negotiated right-of-way agreements with all of the affected property owners with the exception of Claremont properties, Inc. and Protestants. PP&L STMT No. 4 at p. 3. Negotiations reached an impasse with the Protestants and the necessary applications for exercise of the power of eminent domain were filed. Id.

## II. FINDINGS OF FACT

1. The applicant is Pennsylvania Power & Light Company ("PP&L"), duly incorporated in Pennsylvania for the purpose of supplying light, heat and power by means of electricity, and having its principal business office at Two North Ninth Street, Allentown, Pennsylvania 18101.

2. PP&L proposes to replace an approximately 9-mile segment of the existing West Shore-Carlisle 1 and 2 69 kV line with a new 138/69 kV double-circuit electric transmission line approximately 9.38 miles in length to be constructed, operated and maintained in the Boroughs of Carlisle and Mechanicsburg and in the **[\*7]** Townships of North Middleton, Middlesex and Silver Spring, Cumberland County, Pennsylvania. PP&L Stmt. 3, p. 4; PP&L Ex. 1, p. D-1.

3. Approximately 9.1 miles of the total length of the proposed West Shore-Carlisle replacement for which approval is requested will be located on Conrail property between Carlisle and Mechanicsburg and on related existing or abandoned rail sidings. PP&L Stmt. 2, pp. 8-9; PP&L Ex. 1, pp. C-5.

4. The West Shore-Carlisle line will be rebuilt for 138 kV operation, but will be operated initially at 69 kV. PP&L Stmt. 1, p. 10;

5. The proposed West Shore-Carlisle line will consist of approximately 80 steel pole structures having an average height of 90 feet and an average span length of approximately 700 feet. PP&L Stmt. 3, p. 5; PP&L Ex. 1, p. D-1 and Figures 1-3.

6. Each pole of the proposed West Shore-Carlisle line will support six 556.5 KCMIL 24/7 strand, aluminum core, steel reinforced (ACSR) phase conductors, a 1/2-inch high-strength steel overhead ground wire and 138 kV insulators. PP&L Stmt. 3, p. 5; PP&L Ex. 1, pp. D-1 and D-2.

7. The proposed West Shore-Carlisle line will be designed and will be constructed, operated and maintained in **[\*8]** accordance with the National Electrical Safety Code, and will include such further design, construction and maintenance features as are required by PP&L design standards. PP&L Stmt. 3, p. 5; PP&L Ex. 1, p. D-1.

8. The estimated cost of the proposed project is \$ 5.7 million, including design, construction and right-of-way costs. PP&L Application.

9. PP&L complied with all filings, notice and service requirements under [52 Pa. Code § 57.74](#). Notice of the filing of the Application was provided to the property owners within the proposed right-of-way and to appropriate government officials and agencies as required by the Commission's regulations. Newspaper notices of the filing of the Application were published, and proofs of publications were filed with the Commission.

10. Protests and Petitions to Intervene were filed by Max C. Hempt and Martha D. Hempt, t/a Hempt Farms, Inc. on or about August 11, 1993. Protestants reside at 941 Limekiln Road, New Cumberland, PA 17070.

11. Protestants own a 482-acre farm in Silver Spring Township, Cumberland County, Pennsylvania. Since 1945, Hempts have been conducting on Hempt Farms the business of breeding, raising, and training trotting [\*9] and pacing horses. They also engage in this horse business in Fairview Township, Lower Allen Township, and South Middleton Township, but these farms do not have breeding facilities and are used for grazing and training. There are an additional 88 acres north of Cumberland Valley High School and 46 acres adjacent to Texaco Road and Hempt Road used for grazing. Protestants STMT No. 2 at p. 2; Protestants Ex. No. 1 & 2.

12. The Hempt Farm is bounded on the north by U.S. Route 11, on the West by warehouses of Hershey Foods, farmland and pasture, on the south by the Conrail railroad tracks and an industrial park containing commercial and industrial businesses adjacent to the south side of the Conrail railroad tracks, and on the east by farmland, pasture, and Laurel Pipeline Pumping Station. Protestants STMT No. 2 at pp. 3 & 4. This property is identified as Tract 33 on the Aerial Map submitted as Ex. C, Sheet 3 of 4, in PP&L's Ex. No. 1.

13. Only quality horses are bred from Hempts' band of mares. The horses bred on the Hempt Farms are well known and sought in Europe, Australia and New Zealand, as well as North America. They have the finest breeding facilities for a mare and [\*10] her foal. For breeding, Hempts charge a breeding fee of \$ 2,500 - \$ 40,000. They also charge for boarding horses. They also train the horses and race some of the foals which are bred on Hempt Farms. They also have a full-time veterinarian and between 40 employees in 1988 to 25 employees in 1993. Protestants STMT No. 2 at pp. 4 & 5.

14. The Hempts are concerned that EMF from the 138/69 kV transmission line will create sickness and sterility in the horses, adversely affecting reproduction, growth, and development of the horses. Protestants STMT No. 2 at p. 8.

15. PP&L seeks permission to condemn a 25-foot right-of-way along 4,685 feet of the Hempt Farm bordering on the south by the Conrail railroad tracks. The Hempts are requesting that the transmission line be located south instead of north of the Conrail railroad tracks. Protestants Statement No. 2, p. 6.

16. On December 14, 1993, PP&L filed an Application for the exercise of the power of eminent domain to obtain right-of-way for this project over the protestants' properties. Copies of the Application and the copies of the Company's Siting Application were served upon these condemnees in accordance with Commission regulations. [\*11] PP&L STMT No. 2, pp. 15-16; PP&L STMT No. 4.

17. The Hempts' proposal is not a reasonable or practical alternative to the Company's preferred route for a variety of reasons. PP&L Stmt. 2, pp. 16-18; PP&L Stmt. 2-R.

18. The Hempts' proposal would place the replacement line on existing residential property. An existing residential dwelling is located south of the Conrail property at the approximate midpoint of the Hempt property. PP&L Stmt. 2-R, p. 5.

19. The proposed West Shore-Carlisle 138/69 kV line is needed to assure system reliability in the Carlisle area; to meet projected regional loads that will exceed the capacity of existing facilities; and to replace the 60-year, deteriorated existing West Shore-Carlisle 1 and 2 69 kV line, which has experienced a higher than normal outage rate and has required extensive on-going maintenance to ensure safe operation. PP&L Stmt. 1, p. 8; PP&L Ex. 1, pp. A-2 and A-7.

20. The proposed West Shore-Carlisle 138/69 kV line will ensure adequate current-carrying capacity under both normal and emergency operating conditions to supply existing and reasonably projected loads in the Carlisle area; resolve reliability concerns in the event [\*12] of outage or overload conditions on other lines supplying the Carlisle area; and improve the ability of the transmission system to handle load transfers between regional substations that may be required by outage or other load-shifting contingencies. PP&L Stmt. 1, pp. 10-13; PP&L Ex. A-8 and A-9.

21. PP&L conducted an extensive analysis of the "core" and "study" areas to determine the best alternative for siting the proposed line. PP&L Stmt. 2, p. 4-5; PP&L Ex. 1, pp. B-1 and B-2. The core area is approximately 8.7

miles long, 3.4 miles wide and 22 square miles in area. The study area consists of a two mile area bounding the core area. PP&L Stmt. 2, p. 6; PP&L Ex. 1, pp. B-1 and B-2.

22. PP&L conducted a detailed inventory of environmental factors to be considered in evaluating and selecting the route of the proposed West Shore-Carlisle line, as required by the Commission's regulations. PP&L Stmt. 2, pp. 6-7; PP&L Ex. 1, pp. B-3 through B-18 and Maps 1-6 of Exhibit B.

23. The inventoried features were analyzed and mapped relative to the core and study areas to select line routes that avoid or minimize the impact on various environmental features. PP&L Stmt. 2, pp. 6-8; **[\*13]** PP&L Ex. 1, pp. B-3 through B-18.

24. Based on its siting analyses, two preliminary route alternatives were identified: (1) the centerline of the existing West Shore-Carlisle 69 kV line; and (2) a route that follows the right-of-way for an active Conrail railroad track. PP&L Stmt. 2, pp. 7-8; PP&L Ex. 1, pp. C-7 and C-2 through C-7.

25. A detailed quantitative and qualitative analysis of the alternative line routes was performed, and its results are summarized on Table 1 at page C-8 of PP&L Ex. No. 1, which is attached hereto and made part hereof as appendix 1.

26. Based upon PP&L analyses, extensive field reviews and input from the public and government agencies, the Company selected a route that, for 9.1 miles of its total 9.38-mile length, is located on Conrail property between Carlisle and Mechanicsburg and related existing or abandoned rail sidings. PP&L Stmt. 2, 8-9; PP&L Ex. 1, p. C-5.

27. The majority of the Company's preferred route lies on the north side of the Conrail tracks. The proposed route does, however, cross to the south side of the tracks at two locations to avoid residences and other facilities. PP&L Stmt. 2, pp. 8-9; PP&L Ex. 1, p. C-5.

28. The Company's **[\*14]** siting analyses showed that its preferred route is superior to rebuilding along the existing center line for the following principal reasons:

a. Constructing virtually the entire line in an existing railroad corridor eliminates the need for a separate, man-made linear feature and, thereby, substantially reduces environmental and land use impacts;

b. The preferred route is closer to two customer-owned substations, which will reduce the length of the two tap lines by a total of 5600 feet;

c. Use of the Conrail property provides some flexibility in adjusting the proposed centerline to avoid potential conflicts, and enables PP&L to acquire a 100-foot easement for most of the line route, which would not be possible if the line were rebuilt on its existing centerline;

d. There are approximately 48 non-condemnable properties along the existing centerline route, and significant costs would have to be incurred to buy a fee interest in properties where right-of-way acquisition is unsuccessful or to reroute the line;

e. Currently, about 65 residences are located within 100 feet of the existing line, whereas only 6 homes would be located within 100 feet of a line rebuilt on the Conrail **[\*15]** route;

f. The proposed line will have a much smaller impact on land use if its right-of-way overlaps the Conrail property, which is an existing, compatible linear feature; and

g. Reconstructing the line in place would impose significant outage limitations during construction; rebuilding along the Conrail corridor will not produce any outage restrictions because the existing line will remain in place until the new line is completed.

PP&L Stmt. 2, pp. 11-12.

29. The Company's preferred route would avoid as many environmental and land use impacts as possible and will have no significant, adverse effect upon: recreational or public use areas; cemeteries or churches; unique geological, scenic or natural areas; sites of archeological significance; endangered or threatened plant or animal species or common plants and animals (use of existing railroad property will minimize both vegetation clearing and access road construction); major water bodies or aquatic resources; airports, railroads, pipelines, communication towers or other utilities. PP&L Stmt. 2, pp. 13-14; PP&L Ex. 1, pp. C-11 through C-15.

30. Where impacts are unavoidable, the Company plans a variety of mitigating **[\*16]** measures including soil erosion and sedimentation control and the maintenance and propagation of compatible vegetation. PP&L Stmt. 2, p. 14; PP&L Ex. 1, pp. C-11 through C-15.

31. Pursuant to [52 Pa. Code § 57.76\(b\)](#), the Company's Certification Application included a request that the Commission approve an expanded "corridor" for the proposed line route in three locations, denominated Corridors "A", "B" and "C." PP&L Ex. 1, p. C-16.

32. Corridor certification has been sought to permit flexibility in establishing the centerline of the proposed line based on the outcome of on-going negotiations for the acquisition of right-of-way. PP&L Stmt. 2, p. 10.

33. Since its Application was filed, the Company has obtained the necessary right-of-way from all affected property owners in Corridor B and is not pursuing its initial request for certification of that corridor. Certification of Corridors A and C is still needed. PP&L Stmt. 2, p. 10.

34. Corridor A is located along the rail siding in the Borough of Carlisle, as shown on the Aerial Exhibit (Sheet 1) in Exhibit C. Conrail reserves the right to review and approve all center line locations and, because it has not yet acquiesced **[\*17]** to the proposed line route in this area, an adjustment of the centerline may be necessary. All structures will be placed on Conrail property and the maximum width of the requested corridor does not extend more than 50 feet beyond the Conrail property line. PP&L Stmt. 2, p. 10; PP&L Ex. 1, p. C-16.

35. Corridor C is located at the eastern end of the proposed line route where the line leaves the active railroad and heads south along an abandoned railroad siding, as shown on Aerial Exhibit (Sheet 4) of Exhibit C and PP&L Stmt. 2, Attachment 1. Conrail owns the property in this area and has requested that PP&L purchase a fee interest rather than an easement, and PP&L is considering the offer. Rerouting of the line in this area may be necessary if an agreement with Conrail cannot be reached. The width of Corridor C varies up to a maximum of 1,300 feet. PP&L Stmt. 2, p. 10; PP&L Ex. 1, p. C-16.

36. The location for the proposed West Shore-Carlisle 138/69 kV line constitutes the best balance of environmental and land use considerations, functional requirements and cost. PP&L Stmt. 2, pp. 18-19.

37. The Conrail property contains Conrail's tracks for an active railroad and a Conrail **[\*18]** access road that runs along the north side of the railroad tracks. PP&L Stmt. 2-R, p. 3.

38. Under the Company preferred route, the proposed centerline of the line replacement will be 27 feet north of the centerline of the Conrail tracks and approximately 20 feet from the Hempts' property line. PP&L Exhibit No. 3 depicts the relative locations of these features as well as a 12 kV distribution line that currently runs along the Conrail property on the north side of the Conrail tracks. PP&L Stmt. 2-R, pp. 3-4.

39. The 12 kV distribution line is currently de-energized and will be removed before the proposed West Shore-Carlisle transmission line is constructed. PP&L Stmt. 2-R, pp. 3-5.

40. Although the support structures and structure arms for the proposed West Shore-Carlisle line will be entirely within Conrail property, the Company is seeking a 30-foot right-of-way across the Hempt property so that a full 100-foot right-of-way (approximately 50 feet on each side of the proposed centerline of the replacement line) will be maintained. PP&L attempts to obtain a 100-foot right-of-way for new or replacement transmission lines, whenever possible. PP&L Stmt. 2-R, pp. 4-5.

41. **[\*19]** PP&L's transmission line siting guidelines provide that: (1) it is desirable to avoid existing and proposed residential development whenever possible as a means of minimizing land use impacts, potential visual intrusions and costs; and (2) commercial, industrial and agricultural areas are generally compatible with transmission facilities. PP&L Stmt. 2-R, p. 6; PP&L Ex. 1, App. A, p. 1.

42. The Commission has reviewed and approved numerous Applications for transmission lines that explicitly employed the Company's guidelines as the basis for developing the preferred routes. PP&L Stmt. 2-R, pp. 5-6.

43. The Hempt proposal would place the right-of-way and probably the proposed replacement line itself within 100 meters of the previously-described residential dwelling. Therefore, the Company would be prohibited from exercising the power of eminent domain to condemn the necessary right-of-way. The homeowner has refused to grant a right-of-way. PP&L Stmt. 2-R, p. 6.

44. The home and barn located on the Hempt property are approximately 1,560 feet and 2,829 feet, respectively, from the preferred line route. PP&L Stmt. 2-R, p. 6.

45. The Conrail access road is located on the north **[\*20]** side of the Conrail property. By putting the proposed line on the north side of the Conrail property, that road can be used to access the Company's transmission line. PP&L Stmt. 2-R, p. 7.

46. If the line were located south of the Conrail track, as the Hempts have proposed, an entirely new road would have to be constructed. Because the railroad bed on the south side of the Conrail tracks is narrow, the support structures and access road would have to be built south of the rail bed over uneven, vegetated terrain. That construction would add costs, require a substantial amount of additional vegetation clearing and increase the environmental impact of the line. PP&L Stmt. 2-R, p. 7.

47. The Hempts' proposed route south of the Conrail tracks would require the Company to acquire more private right-of-way. PP&L Stmt. 2-R, p. 7.

48. The Hempts' proposed route south of the Conrail tracks has the potential to create an interference with an environmentally sensitive pond and wetland area. PP&L Stmt. 2, p. 7.

49. By placing the line on the north side of the Conrail property, the transmission line would be in the same general location historically used as an electric power line **[\*21]** corridor for a 12 kV distribution line that, although currently de-energized, has been located along the Conrail property north of the Conrail tracks for many years. The proposed transmission line will actually be located further from the Hempts' property than that distribution line. PP&L Stmt. 2-R, p. 8; PP&L Ex. 3.

50. The Hempts' opposition to a line route located north of the Conrail track is based on their concerns about the effect of electric and/or magnetic fields on their horses. See Hempt Sts. 1 and 2.

51. The magnetic fields from the proposed West Shore-Carlisle 138/69 kV transmission line will be lower than those produced by the 12 kV distribution line that parallels the Hempt property when it was carrying current. PP&L Stmt. 3, p. 8; PP&L Stmt. 5-R, pp. 4, 7-9; PP&L Ex. 7.

52. At a distance of 50 feet from the centerline of the proposed transmission line, the magnetic fields at the structure and at mid-span of the proposed West Shore-Carlisle 138/69 kV line would be 1.54 milligauss (mG) and 2.34 mG, respectively, at typical 1995 load levels, and 1.44 mG and 2.15 mG, respectively, at typical 2000 load levels. PP&L Stmt. 5-R, p. 4.

53. When the 12 kV distribution **[\*22]** line was operating under normal load conditions, it produced measured magnetic fields of 5.24 mG at the edge of the proposed right-of-way for the West Shore-Carlisle 138/69 kV line. PP&L Stmt. 5-R, p. 7.

54. Although the 12 kV distribution line is currently de-energized, it was in its present location and carried current for many years. PP&L Stmt. 5-R, p. 7.

55. During the period the 12 kV line was in operation, the Hempts' horses experienced no problems that the Hempts considered EMF-related. PP&L Stmt. 5-R, p. 9; PP&L Ex. 7.
56. The Hempts concerns about EMF were prompted largely by articles and news stories in the popular press. Hempt Stmt. 2.
57. Dr. Jack Adams of Carnegie Mellon University, who was engaged by the Hempts to verify the magnetic field levels from the proposed line, stated that those field levels would not concern him and were in fact, typical of fields experienced in residences on a daily basis. PP&L Stmt. 2-R, p. 10; PP&L Ex. 5.
58. The Company took detailed measurements of 60 Hz magnetic fields in the general area of the proposed line. Those measurements confirm that magnetic fields from the proposed line will be within the range of field levels [\*23] experienced in everyday environments. PP&L Stmt. 2, pp. 8-10.
59. On the issues of EMF and animal health and "stray voltage" the Company presented the expert testimony of Dr. Dwight Mercer and Dr. Robert Gustafson. PP&L Sts. 6, 7 and 7-R.
60. Dr. Mercer is Dean of the College of Veterinary Medicine at Mississippi State University, a doctor of veterinary medicine and a Ph.D. in Pharmacology. At the College of Veterinary Medicine, Dr. Mercer is responsible for overall administration of the University's Veterinary Medicine program and is Professor of Toxicology. PP&L Stmt. 7, pp. 1-2.
61. Dr. Mercer has been a farmer for 25 years; has owned and raised horses; and currently runs a 350 acre beef cattle farm. Over the course of his career as a veterinarian, he has treated thousands of horses. PP&L Stmt. 7, p. 4; N.T. 29.
62. Prior to joining Mississippi State University, Dr. Mercer was Branch Chief of the Division of New Animal Drugs at the U.S. Food and Drug Administration (FDA). At FDA, Dr. Mercer also served for ten and a half years directing the Division of Veterinary Medicine Research of the Bureau of Veterinary Medicine. This Division is the primary research arm of [\*24] the Food and Drug Administration and is responsible for the animal research that supports the other research units of the Food and Drug Administration. PP&L Stmt. 7, 1-2.
63. Dr. Mercer is a member of the American Veterinary Medical Association and the Mississippi Veterinary Medical Association. Dr. Mercer is also a fellow of a number of professional organizations, including the American College of Veterinary Toxicology, the American College of Veterinary Pharmacology and Therapeutics, and the American Academy of Comparative and Veterinary Toxicology. He is also a Diplomate of the American Board of Veterinary Toxicology, which is the board that certifies individuals specializing in veterinary toxicology. At present, there are approximately 73 Diplomates of the American Board of Veterinary Toxicology. PP&L Stmt. 7, pp. 2-3.
64. In 1974, Dr. Mercer became the first veterinarian ever to receive the FDA Award of Merit, which he received for his research work. Dr. Mercer has also been awarded the President's Pegasus Award for his work at the College of Veterinary Medicine, and in 1993, he was named Mississippi Veterinarian of the Year for his work with farmers and veterinarians [\*25] throughout the state on toxicology and farm animal problems. PP&L Stmt. 7, p. 3.
65. Dr. Mercer has published approximately 85 scientific articles on the toxicological and pharmacological properties of various agents and several chapters in textbooks. He is on the editorial boards of several journals, including the Journal of Comparative Pathology and Toxicology, the Journal of Food Safety, the Veterinary and Human Toxicology Journal, and the American Journal of Veterinary Research. He is a peer-reviewer of scientific studies submitted for publication to the Journal of Toxicology, the Journal of Infectious Diseases, and the Journal of Public Health, among others. PP&L Stmt. 7, pp. 3-4.
66. Dr. Mercer conducted an independent review of the scientific studies in which animals were exposed to power frequency electric and/or magnetic fields. While science has developed a three-tiered research process that examines: 1) effects at the cellular level, then 2) effects on limited-systems in animals, then 3) effects in whole animals, the whole animal studies are by far the most important, as they can take into account the numerous

natural variables and defense mechanisms of the living [\*26] body. The whole animal studies therefore provide the most reliable basis for assessing whether or not an exposure will cause health effects in living animals. PP&L Stmt. 7, pp. 5-7.

67. Based on his review of animal studies, as well as on his training and experience as a veterinarian and a toxicologist, Dr. Mercer concluded that there is no scientific basis to conclude that exposure to power frequency electric and/or magnetic fields adversely affects reproduction, growth, or development in animals or causes stress in animals. PP&L Stmt. 7, pp. 10 and 12; N.T. 40-41.

68. Dr. Mercer also concluded that the electric and magnetic fields associated with the West Shore-Carlisle 138/69 kV line will not cause adverse health effects in animals, including horses. PP&L Stmt. 7, p. 12; N.T. 51.

69. PP&L also presented the expert testimony of Dr. Robert Gustafson, a researcher and engineer specializing in Agricultural Engineering. He is Chairman of the Department of Agricultural Engineering at Ohio State University. In addition to chairing the Department of Agricultural Engineering, Dr. Gustafson is Professor of Agricultural Engineering. PP&L Stmt. 6, p. 1.

70. Dr. Gustafson has [\*27] a Ph.D. in Agricultural Engineering and is a licensed professional engineer. His specialty within the discipline of Agricultural Engineering is the application of electric power in agriculture, including electrical system planning and agricultural wiring for farms which includes the issue of stray voltage. PP&L Stmt. 6, p. 2.

71. Dr. Gustafson has developed protocols for measuring stray voltage, has investigated the sensitivity of farm animals to varying amounts of electric current that may be associated with stray voltage and has designed mitigation measures to eliminate sources of stray voltage. PP&L Stmt. 6, p. 2.

72. Dr. Gustafson has received several awards for his work in Agricultural Engineering. PP&L Stmt. 6, p. 3.

73. Dr. Gustafson is the author of the textbook "Fundamentals of Electricity for Agriculture;" a university level textbook used for teaching fundamental skills in the use of electricity in agriculture. He has published over 35 articles describing the effects and use of electricity in agriculture, including electrical safety issues, and has authored numerous publications about understanding and solving electrical issues in and around the farm, including [\*28] stray voltage. PP&L Stmt. 6, pp. 3-4.

74. Dr. Gustafson is a member of the American Society of Agricultural Engineers (ASAE). The ASAE is organized to provide nationwide discussion and resolution of issues of importance to the agriculture industry. Within ASAE, he is the Chairman of the Information and Electrical Technologies Division. He is also a member of the Institute of Electrical and Electronic Engineers and the National Association of College Teachers of Agriculture. PP&L Stmt. 6, p. 4.

75. Dr. Gustafson also regularly conducts workshops and seminars for industry groups, county extension agents and local farmers at locations in Ohio and other states which are designed to provide advice on understanding and solving electrical system supply and maintenance problems on farms, including stray voltage. Dr. Gustafson has also made numerous surveys of electrical systems on farms which involve evaluating the farm's electrical systems for compliance with the National Electrical Code and for proper connection and grounding practices, and conducting measurements of neutral to ground potentials, which is an assessment of whether there is stray voltage in the system. PP&L Stmt. [\*29] 6, pp. 4-5

76. Dr. Gustafson was asked by PP&L to conduct an evaluation of whether the proposed West Shore-Carlisle 138/69 kV transmission line would cause an adverse impact from "stray voltage" on agricultural property in the vicinity of the line. PP&L Stmt. 6, pp. 5 and 8.

77. Stray voltage is a small voltage (less than 10 Volts) experienced by an animal when it connects two points that have a different electric potential. Stray voltage is caused either by problems in the grounding of electrical systems on the farm or by problems in the electrical distribution system that serves the farm. For stray voltage to

exist, there must be an electric voltage between grounded equipment or structures and the earth. PP&L Stmt. 6, p. 6.

78. The West Shore-Carlisle 138/69 kV transmission line does not contain a grounded neutral system that is capable of creating stray voltage. As is standard transmission design practice, there is no neutral wire operating at ground potential in the proposed transmission line. Further, there is no physical interconnection with distribution lines along the route of the transmission and the transmission line cannot interact with the neutral system of [\*30] the distribution lines. PP&L Stmt. 6, p. 8.0

79. There are no conditions under which the proposed West Shore-Carlisle line would create stray voltage. Stray voltage is not caused by electric or magnetic fields. PP&L Stmt. 6, p. 9.

80. Ground currents that are found with distribution lines and on-premises wiring are not associated with transmission lines. N.T. 19. Ground currents will not be associated with the proposed West Shore-Carlisle 138/69 kV transmission line. N.T. 19.

81. The Hempts presented the testimony of Dr. Robert Scott. Hempt Stmt. 1. Dr. Scott is a self-employed consultant, a part-time school teacher and a factory representative for Complete Water Systems of Texas. N.T. 52. He has not had a veterinary practice since 1980. N.T. 55. None of the schools where he teaches have accredited veterinary medicine programs. N.T. 54.

82. In the 1980s, Dr. Scott was employed as a sales representative of the company Pro-Ag, selling an animal food product called "Impro." N.T. 56. In 1989, Dr. Scott was ordered by the U.S. Food and Drug Administration to stop his activities in connection with the sale of Impro. N.T. 56.

83. Dr. Scott does not have any degrees [\*31] in human medical or health science. N.T. 54. He did not have an opinion on human health issues. N.T. 55. Dr. Scott also is not an expert in electrical engineering. N.T. 57.

84. Dr. Scott claims that EMF associated with electric lines cause numerous health problems with horses. In fact, he believes that "[o]f all the hazards facing the livestock owner today, none is as insidious and dangerous as the hazard posed by the invasion of his premises by EMF." Hempt Stmt. 1, pp. 6-7 and 11-12.

85. Dr. Scott did not cite a single scientific study. Hempt Stmt. 1. He does not rely on scientific literature to support his claims. N.T. 76.

86. Dr. Scott did not conduct a review of the published scientific literature on EMF and animal health. N.T. 68. He did not try to find out how many studies have been published or to identify any studies he might consider reliable. N.T. 69. He claimed he reviewed about six studies altogether, but he could not name any of those studies. N.T. 69.

87. Dr. Scott admitted that there is a substantial body of scientific literature concluding that EMF does not cause adverse effects on animal reproduction and development. N.T. 70. Dr. Scott, however, [\*32] discounted those studies entirely, although he apparently had not read them. N.T. 70.

88. Dr. Scott could not identify any level of electric or magnetic field that would be unsafe. N.T. 73. He could not say if magnetic field exposures of 2 mG, 3 mG, 10 mG, or any other level would be unsafe. N.T. 73. He also could not identify any level of electric or magnetic field exposures that would be unsafe for horses in general, or unsafe specifically for the horses on the Hempt property. N.T. 74-75.

89. Dr. Scott's claim that exposure to EMF would cause adverse health effects in horses on the Hempt property is not supported by any evidence that the electric and/or magnetic fields associated with the proposed transmission line at the Hempt property would in fact be harmful.

90. In his surrebuttal testimony, Dr. Scott claimed that the reason he could not identify any level of magnetic field that would be unsafe is because he is actually concerned about ground currents. Hempt Stmt. 1-R, p. 1-2.

91. Under cross examination, Dr. Scott admitted that he also did not know what level of ground current he would consider safe or unsafe. N.T. 66.

92. Ground currents will not be associated [\*33] with the proposed transmission line, because the transmission line is not designed to have current flowing to ground. N.T. 20.

93. Dr. Scott believes there is an international conspiracy to cover-up EMF hazards. N.T. 77; Hempt Stmt. 1, p. 12. He believes that the United States government, the Canadian government and the power companies are all part of this conspiracy. N.T. 77. He believes that the U.S. Congress is part of the conspiracy, along with the Environmental Protection Agency and the Food and Drug Administration. N.T. 77.

94. Dr. Scott believes that any person or entity that finds that EMF does not cause adverse health effects would be inherently unreliable. N.T. 77 & 78. See, PP&L Cross-Examination Exhibit No. 1.

95. Dr. Scott's opinion is based entirely on anecdotal reports of his "personal observations." N.T. 79. There is no evidence that these "observations" are a valid basis for determining that exposure to EMF caused any adverse effect. N.T. 71-72, 79, 81-82.

96. Dr. Scott's testimony is unscientific and unreliable and fails to provide any basis for sound decision making.

97. The Company has applied the guidelines of its Magnetic Field Management [\*34] Program, which identify methods to reduce EMF and exposure to EMF at little or no cost. PP&L Stmt. 5, pp. 4-7; PP&L Ex. 1, App. I.

98. Double circuits are required to meet the function requirements of this project. Reverse phasing of the double circuit design for the proposed West Shore-Carlisle line will, therefore, reduce EMF at virtually no additional cost. PP&L Stmt. 5, pp. 6-7. Reverse phasing is a circuit configuration that causes each phase current of one circuit to partially cancel the magnetic fields created by the other circuit's phase currents. PP&L Stmt. 3, p. 7; PP&L Ex. 1, Appendix I, Chart 1.

99. Because of reverse phasing, the proposed West Shore-Carlisle line will have lower magnetic field levels than if the same current were transmitted through circuits with standard phasing. Although the current and, therefore, the magnetic field levels, will differ at various points along the line, data for Segment 3 illustrate the effect of reverse phasing. Based on anticipated, typical load levels, the mid-span edge of right-of-way magnetic fields for Circuit No. 1 are as follows (PP&L Ex. 1, PP&L Ex. 1, pp. D-9 and D-11):

|                 | Standard Phasing | Reverse Phasing |
|-----------------|------------------|-----------------|
| 1995 Load Level | 7.33 mG          | 2.13 mG         |
| 2000 Load Level | 8.05 mG          | 2.41 mG         |

**[\*35]**

100. Field levels must be viewed in light of the fact that power frequency, i.e., 60 Hz, magnetic fields occur wherever there is a flow of electricity, such as current-carrying electric wires, devices or appliances . . . "the typical American home has a background magnetic field level (away from any appliances) ranging from 0.5 mG to 4 mG . . ." N.T. 113.

101. The Company made actual measurements of 60 Hz magnetic fields encountered every day in the general area of the proposed West Shore-Carlisle line. This survey produced measured field levels ranging from 0.5 mG to over 8 mG which measurements indicate that magnetic fields from the proposed West Shore-Carlisle line will be within the range of field levels from existing sources experienced in an average person's daily life. PP&L Stmt. 3, pp. 8-10 and Attachment 2.

102. The proposed West Shore-Carlisle line will not create an unreasonable risk of danger to the health and safety of the public.

103. The record evidence demonstrates that the proposed West Shore-Carlisle line satisfies the criteria for exercise of the power of eminent domain under [15 Pa.C.S. § 1511\(a\)](#) in that the line is necessary or proper for the service, [\*36] accommodation, convenience or safety of the public and the Company has selected a reasonable route.

104. Right-of-way over the Hempt property is required by PP&L to pursue its preferred alternative. PP&L Stmt. 2, pp. 15-19.

105. PP&L has negotiated with the Hempts in good faith. PP&L Stmt. 4, pp. 3-6; PP&L Stmt. 2-R, p. 11.

### III. DISCUSSION

This Commission's regulations at 52 Pa. Code, Chapter 57, § 71-77 provide that, in determining whether to grant certification to construct a high voltage electric transmission line, it will consider at least these matters: (1) the present and future necessity of the proposed kV line in furnishing service to the public; (2) the safety of the proposed kV line; (3) the impact of the proposed kV line on the environment, including but not limited to impacts, if any, on archaeologic, geologic, historical, natural, scenic, wilderness and recreation areas; and (4) the availability of reasonable alternative routes. We will discuss these matters seriatim and then take into consideration those factors raised by the protestant.

#### A. The Present and Future Necessity of the Proposed Line in Furnishing Service to the Public.

The Company's [\*37] regional planning process utilizes actual peak load measurements, customer load-growth information and regional demand forecasts to develop load projections for each distribution circuit and substation. These data are employed in computer load-flow simulations to determine the need for reinforcements dictated by increased capacity requirements. In addition, historical records of line and substation outages are used to assess the probability, duration and severity of future load interruptions that could occur on existing facilities. These analyses are used to assess the need for reinforcements dictated by reliability concerns. PP&L Stmt. 1, pp. 3-4.

If the Company determines that reinforcement is needed to deal with capacity and/or reliability concerns, various means of providing that reinforcement -- e.g., new lines versus additional transformation capacity -- are identified and evaluated. The functional alternative that best meets the Company's overall planning goals is then selected. PP&L Stmt. 1, p. 4.

The process described above was used to identify the need for reinforcement of the transmission system serving the Carlisle area. PP&L Ex. 1, pp. A-6 and A-7. The existing [\*38] West Shore-Carlisle 69 kV line is one of three transmission lines feeding the Company's Carlisle Substation, which serves about 9,000 customers in the Carlisle area. For an approximately nine-mile section, from the Mechanicsburg Substation to the Carlisle Substation, the existing facilities consist of an old, deteriorated, double circuit 69 kV line with low-capacity phase conductors.

By 1995, the load on Circuit No. 1 of the existing West Shore-Carlisle line will equal or exceed its normal and emergency summer ratings and, beyond 1995, continued load growth should be expected. Consequently, capacity requirements clearly justify reinforcement. In addition, potential line outages raise substantial reliability concerns. An outage of one or both circuits on the existing West Shore-Carlisle line would create actual or potential overload conditions on the other transmission lines feeding the Carlisle Substation. Similarly, outages on the other lines could overload the low-capacity conductors of the existing West Shore-Carlisle line. Other outage contingencies that could create overload conditions on the West Shore-Carlisle line or cause extended service interruptions are described [\*39] in Mr. Readinger's testimony. PP&L Stmt. 1, pp. 6-10.

Finally, the existing West Shore-Carlisle 69 kV line is over 60 years old and, therefore, already exceeds its expected service life. Largely for that reason, this line has experienced a higher than normal outage rate and has required extensive on-going maintenance to ensure safe operation. PP&L Stmt. 1, p. 8.

To address the problems with existing facilities, PP&L proposes to rebuild and/or relocate the 9.02 mile section of the West Shore-Carlisle line between the Mechanicsburg and Carlisle Substations with modern, double circuit, 138

kV high capacity conductors. The proposed line will ensure adequate current-carrying capacity under both normal and emergency operating conditions to supply existing and reasonably projected loads in the Carlisle area. By increasing current-carrying capacity, the reliability concerns, based on contingent outage/ overload conditions, will be alleviated. PP&L Stmt. 1, pp. 10-12.

As a functional alternative to rebuilding the West Shore-Carlisle Line, the Company considered constructing a new 230-69 kV Substation in the Carlisle area. That alternative was rejected because it would be substantially [\*40] more costly and, in any event, would not satisfy one of the regional reinforcement requirements, namely, improving the ability of the transmission system to handle load transfers between regional substations during outage or other load-shifting contingencies. PP&L Stmt. 1, pp. 12-13.

The need for this project is uncontested. No party presented any evidence challenging the need for the project.

Applicant has proven that there is an immediate and future need for the reinforcement of the power supply in the proposed application area and that the 138 kV line is the reasonable solution to the problem.

#### B. The Safety of the Proposed Line

PP&L's power line will not create an unreasonable risk of danger to the health and safety of the public. The proposed line would be designed, constructed and operated and maintained in accordance with the Nation Electric Safety Code ("NESC"). PP&L's experience in operating and maintaining transmission lines indicates that there will be no adverse impacts on the operation and the maintenance of the West Shore -- Carlisle 138 kV line. The evidence of record demonstrates that there have been no harmful field effects from operating lines at 138 [\*41] kV. PP&L will install a relay protection system at the substations to de-energize the line in the event a conductor break and contact the ground or other conductor. The de-energized line would be safe. PP&L Ex. 7, App G, p. 2. PP&L's experience with these relays has been successful in the past. PP&L has a required program of periodic maintenance and inspection on all transmission lines. PP&L also has extensive personnel safety rules for employees who work on transmission lines. PP&L Ex. 7, App. G, pp. 3-4.

This Commission has found in numerous cases that construction which either meets or exceeds NESC requirements is a sufficient basis for finding the line does not create and unreasonable risk or danger to the health and safety of the public. Investigation on Commission Motion of the Safety of the Cabot-Wylie Ridge, 500 kV Transmission Line, I.D. 236 (Order adopted Sept. 18, 1981); Application of PP&L for Authorization to Locate and Construct Its Hamlin 138 kV Electric Transmission Line, Docket No. A-00101826 (Order adopted April 3, 1981); Application of PP&L for approval to locate and construct 138 kV Transmission line between West Allentown and Salisbury Substation, [\*42] Docket No. A-00104160 (Order entered July 20, 1984); Larkin v. Phila. Electric Co., 39 Pa. P.U.C. 777 (1961); see also [52 Pa. Code § 57.26](#). The un rebutted testimony and evidence in this proceeding indicates that the West Shore -- Carlisle 138/69 kV line will be constructed to meet or exceed NESC requirements. PP&L M.B. at pp. 31 & 32. We find that it satisfies and exceeds criteria of the Commission siting regulations.

During the course of the proceeding, the Protestants raised three issues regarding the safety of the line: (1) issues regarding electric and/or magnetic fields from the line and the effects on animal health; (2) "stray voltage;" and (3) "ground currents."

#### 1. Electric And Magnetic Fields

##### a. There Is No Basis To Conclude That Exposure To Electric And/Or Magnetic Fields Associated With The Proposed Transmission Line Will Cause Adverse Health Effects In Animals, Including Horses On The Hempt Farm

The focal point of the Protestants' argument is the "safety" of the proposed West Shore -- Carlisle transmission line and, in particular, the alleged effects of electric and magnetic fields ("EMF") on the health of their horses. See Hempt Brief, pp. 21-26. [\*43] The extensive body of scientific evidence relevant to this issue has been explained by Dr. Dwight Mercer, who testified that there is no scientific basis to conclude that power frequency EMF cause adverse health effects in animals, including horses. PP&L Initial Brief, pp. 32-39.

While virtually conceding that Dr. Mercer's interpretation of the scientific evidence is correct, the Protestants contend that such evidence is, nonetheless, insufficient to satisfy PP&L's burden of proof for approval of the proposed transmission line:

PP&L's witnesses have each reached a conclusion that they believe there is no scientific basis to conclude that EMF causes, promotes or contributes to adverse health effects on horses. However, this is significantly different from saying that it has been proven that there are no harmful or adverse health effects on horses. There is no proof in this proceeding that exposure to EMF does not result in adverse health effects on horses.

Hempt Brief, p. 26 (emphasis added).

In essence, the Hempts expect PP&L to "prove a negative" and to do so in a manner that completely allays any "concerns" that may exist in their minds. If this approach were adopted, [\*44] Commission approval of needed transmission facilities would have to be withheld whenever a protestant harbors subjective "concerns" about the "risks" of a line. That kind of "proof" standard is clearly inconsistent with the criteria for approval set forth in the Commission's Chapter 57 regulations; with the Commission's application of those regulations in other transmission line siting cases; and with common sense.

First, the Commission need only find that a proposed line will not create an "unreasonable risk." As Dr. Mercer pointed out, some degree of "risk" attends all human endeavors. N.T. 44. To assess when an activity creates an "unreasonable" risk, the likelihood and severity of the risk must be weighed against the public benefits that accrue from the activity. No one would seriously suggest that the transmission of electricity is a riskless activity. But, neither is riding in a car, train or airplane. The regulations at Chapter 57 do not enjoin the Commission to assure the risklessness of a proposed transmission line since, under that standard, no project would be likely to merit approval even without EMF ever having become an issue. Rather, the Commission is called [\*45] upon to make sensible distinctions about the reasonableness of permitting some degree of "risk" in order to promote the admittedly substantial public benefit derived from electric service. Moreover, the evidence in this case clearly demonstrates that any concern about the "risk" of adverse EMF-related health effects to the Hempts' horses from the proposed line is unwarranted.

We note that it is simply impossible to prove a scientific negative. Specifically, the Hempts' insistence on requiring PP&L to prove that "exposure to EMF does not result in adverse health effects on horses" (Hempt Brief, p. 26) creates a standard which neither PP&L, nor any other utility, could ever meet. No one can scientifically prove a statement that exposure to an agent of any sort does not cause disease or illness. All one can state is whether the scientific evidence supports a conclusion of a causal link or not. That is why good scientists do not say there is no risk or no chance that a particular agent could ever cause disease or illness.<sup>2</sup> N.T. 44. It is simply not possible for scientific research to prove a scientific negative. That is also why the Commission, recognizing this reality, [\*46] set forth the "unreasonable risk" standard contained in [52 Pa. Code § 57.76\(a\)](#).

Finally, and most importantly, it is clear from several recent cases that the Commission has adopted the Company-proposed legal and evidentiary standards explained above in approving proposed transmission lines pursuant to [52 Pa. Code § 57.76\(a\)](#). Thus, the Commission was satisfied that an "unreasonable risk of danger to the health and safety of the public" was not present where: "[T]here is no conclusive evidence that EMF presents a known hazard to human health." Letter Notification Of Philadelphia Electric Company Regarding The Woodbourne-Heaton 230 kV Line, Docket No. A-110550F055 (November 12, 1993). Accord Certification Application Of Pennsylvania Power & Light Company Regarding The Wescosville-Trexlerstown #3 and #4 138/69 kV Line, Docket Nos. A-110500F0162 and 110500F0169 (March 17, 1994) ("We conclude that the testimony and the exhibits demonstrate [\*47] that there is no scientific basis to conclude that magnetic fields from the proposed line would cause adverse health effects."); See also Application Of Pennsylvania Power & Light Company For Approval Of The Proposed Hoffman-Minooka 138/69 kV Supply Line, Docket No. A-110500F0172 (May 19, 1994) (Order, pp. 40-43).

<sup>2</sup> Dr. Mercer does conclude that there is no scientific basis to conclude that exposure to power frequency electric and/or magnetic fields adversely affects the health, reproduction, growth or development of animals. PP&L St. 7, pp. 10-12.

The Hempts raised claims that EMF from the proposed West Shore-Carlisle 138/69 kV transmission line would cause adverse health effects in horses on the Hempt property. See generally Hempt Stmt. 1. In response to these claims, PP&L presented the expert testimony of Dr. Dwight Mercer and Dr. Robert Gustafson.

Dr. Mercer is Dean of the College of Veterinary Medicine at Mississippi State University. PP&L Stmt. 7, p. 1. He is a doctor of veterinary medicine and has a Ph.D. in Pharmacology. Id. At the College of Veterinary Medicine, Dr. Mercer is responsible for overall administration of the University's Veterinary Medicine program and is Professor of Toxicology. Id. at 2. Dr. Mercer is also a farmer who runs a 350 acre beef cattle farm. N.T. 29. He has been a farmer for 25 years. Id. He has owned and raised horses, and over the course of his career [\*48] as a veterinarian, he has treated thousands of horses. PP&L Stmt. 7, p. 4.

Prior to joining Mississippi State University, Dr. Mercer was Branch Chief of the Division of New Animal Drugs at the U.S. Food and Drug Administration (FDA). Id. at 1. At FDA, Dr. Mercer also served for ten and a half years directing the Division of Veterinary Medicine Research of the Bureau of Veterinary Medicine. Id. This Division is the primary research arm of the Food and Drug Administration, and is responsible for the animal research that supports the other research units of the Food and Drug Administration. Id. at 1-2.

Dr. Mercer is a member of the American Veterinary Medical Association and the Mississippi Veterinary Medical Association. Id. at 2. Dr. Mercer is also a fellow of a number of professional organizations, including the American College of Veterinary Toxicology, the American College of Veterinary Pharmacology and Therapeutics, and the American Academy of Comparative and Veterinary Toxicology. Id. He is also a Diplomate of the American Board of Veterinary Toxicology, which is the board that certifies individuals specializing in veterinary toxicology. Id. [\*49] at 2-3. Individuals who are certified by this board are given the title of Diplomate. At present, there are approximately 73 Diplomates of the American Board of Veterinary Toxicology. Id. at 3.

In 1974, Dr. Mercer became the first veterinarian ever to receive the FDA Award of Merit, which he received for his research work. Id. Dr. Mercer has also been awarded the President's Pegasus Award for his work at the college of Veterinary Medicine, and in 1993, he was named Mississippi Veterinarian of the Year for his work with farmers and veterinarians throughout the state on toxicology and farm animal problems. Id.

Dr. Mercer has published approximately 85 scientific articles on the toxicological and pharmacological properties of various agents and several chapters in textbooks. Id. at 4. He is on the editorial boards of several journals, including the Journal of Comparative Pathology and Toxicology, the Journal of Food Safety, the Veterinary and Human Toxicology Journal, and the American Journal of Veterinary Research. Id. at 3. He is a peer-reviewer of scientific studies submitted for publication to the Journal of Toxicology, the Journal of Infectious Diseases, [\*50] and the Journal of Public Health, among others. Id. at 4.

Dr. Mercer conducted an independent review of the scientific studies in which animals were exposed to power frequency electric and/or magnetic fields. Id. at 5. He explained that science has developed a three-tiered research process that examines for effects at the cellular level, then for effects on limited-systems in animals, then for effects in whole animals. Id. at 5-6. Of these studies, the whole animal studies are by far the most important, as they can take into account the numerous natural variables and defense mechanisms of the living body. Id. at 7. The whole animal studies therefore provide the most reliable basis for assessing whether or not an exposure will cause health effects in living animals. Id.

Dr. Mercer noted that several hundred studies have been conducted involving whole animals exposed to power frequency electric and/or magnetic fields, including laboratory studies and field studies. Id. In laboratory studies, the animals are placed in a controlled environment and are exposed to various levels of electric and/or magnetic fields. Id. In the field studies, animals [\*51] are studied in a "real world" environment of electric and magnetic field exposure, such as by being kept under or near existing electric lines. Id. These studies have examined for a wide variety of effects, including stress and effects on reproduction, growth, or development. Id. at 7-10. These have included long-term studies in which several generations of animals have been exposed to power frequency electric and/or magnetic fields for most of their lives. Id.

Dr. Mercer testified that a number of well-designed animal laboratory studies have been conducted using a variety of test animals, including chick embryos, mice, rats, and pigs. Id. at 8. In some of these studies, both parents and successive generations of descendants were continuously exposed to power frequency fields. For example, Seto (1984) conducted a study in which four generations of laboratory animals were exposed to 60 Hz fields for 21 hours a day throughout their lives. The animals were examined for effects on fertility, embryonic development, birth outcome, or growth. The field exposures resulted in no adverse effects on any of these parameters. Id. at 9. In another series of multigenerational [\*52] studies involving 60 Hz fields, Sikov (1984) exposed laboratory animals for 20 hours a day throughout mating, gestation, and birth. When the exposed animals were compared to the unexposed control groups, no significant effects were found on abirth outcome, or survival. Id.

More recently, Rommereim (1987, 1989, 1990) conducted a multigenerational study involving hundreds of laboratory animals that investigated whether chronic exposure to 60 Hz fields would produce adverse effects on reproduction, growth, or development. Id. No fetal malformations or other birth outcome effects were observed as a result of the field exposure, and there were no adverse effects on reproductive behavior, mortality, body weight, or other reproductive indicators. Id. Similarly, recent studies by Margonato (1993), Koch (1991), Huuskonen (1993) and Martin (1992) reported no adverse health effects on laboratory animals from exposure to power frequency fields. Id.

In addition, Dr. Mercer testified that there have been several well-designed and conducted field studies on reproduction and development that involved animals placed under actual existing electric lines. Id. at 10. One [\*53] example is a study that was performed at Iowa State University by Mahmoud & Zimmerman (1982). This study examined swine kept under a 345 kV line throughout their reproductive cycle. The researchers evaluated numerous reproductive parameters. They did not find any fetal effects in any of the offspring and they did not find any effects on reproduction, growth, or development. Id. Another field study was conducted in Sweden by Algers & Hultgren (1987). In this study, the reproductive performance of cows was examined. The investigation involved animals that were kept under a 400 kV line. Evaluations of exposed and unexposed cows and their fetuses revealed no differences between the two groups of animals. Id.

Dr. Mercer explained that there are several ways to evaluate stress in animals. Id. at 11. One method is to measure neuroendocrine changes, such as the cortical steroid levels, which have been shown to increase when animals are stressed. Another way is to evaluate animal performance characteristics. These include, for example in cows, growth rates, feed conversion, and milk production. In fact, milk production in a high-producing cow is very responsive to [\*54] minor stresses. A decrease in one of these performance characteristics could be an indication that the animal is stressed. Id.

He noted that a number of very good studies have evaluated the issue of stress from a performance standpoint. These include a two year study by Amstutz and Miller (1980), which examined a wide variety of farm animals, including horses, whose barns and grazing areas were continually exposed to electric and magnetic fields from a 765 kV electric line. Id. This study evaluated feed conversion, weight gain, rate of weight gain, and carcass quality. Milk production was also measured in dairy cows. The animals were evaluated for the entire grow-out period and were compared to animals of the same genetic stock that were not exposed to the 765 kV line. The Amstutz and Miller study found no effects on grow-out rates, feed conversion, milk production, or other performance characteristics of the animals under the 765 kV line. Id.

A similar study was subsequently performed by Algers and Hennichs (1985). This study examined dairy cattle exposed to the electric and magnetic fields from a 400 kV electric line. Id. The study looked for effects on [\*55] milk production and a number of reproductive parameters. No effects were found on the milk production rates of the dairy cattle that were exposed to the fields from the power line. Id. at 12. Given the fact that milk-producing animals are very sensitive to stress, if there had been a stress effect from exposure to fields from the 400 kV line, there would have been changes reflected in the parameters evaluated by Algers and Hennichs. Id. Since no changes in performance parameters were reported, there is no basis to conclude that 60 Hz fields cause stress in these animals. Id.

Based on his review of these animal studies, as well as on his training and experience as a veterinarian and a toxicologist, Dr. Mercer concluded that there is no scientific basis to conclude that exposure to power frequency electric and/or magnetic fields adversely affects reproduction, growth, or development in animals or causes stress in animals. Id. at 10, 12; N.T. 40-41. Dr. Mercer also concluded that the electric and magnetic fields associated with the West Shore-Carlisle 138/69 kV line will not cause adverse health effects in animals, including horses. Id. at 12; N.T. 51.

PP&L [\*56] also presented the expert testimony of Dr. Robert Gustafson. Dr. Gustafson is a researcher and engineer specializing in Agricultural Engineering. PP&L Stmt. 6, p. 1. He is Chairman of the Department of Agricultural Engineering at Ohio State University. Id. In addition to chairing the Department of Agricultural Engineering, Dr. Gustafson is Professor of Agricultural Engineering. Id.

Dr. Gustafson has a Ph.D. in Agricultural Engineering. Id. He is also a licensed professional engineer. Id. at 2. His specialty within the discipline of Agricultural Engineering is the application of electric power in agriculture, including electrical system planning and agricultural wiring for farms. Id. This specialty area includes the issue of stray voltage. Id. Dr. Gustafson has developed protocols for measuring stray voltage, has investigated the sensitivity of farm animals to varying amounts of electric current that may be associated with stray voltage and has designed mitigation measures to eliminate sources of stray voltage. Id.

Dr. Gustafson has received several awards for his work in Agricultural Engineering, including the A.W. Farrall Young Educator Award [\*57] from the American Society of Agricultural Engineers. Id. at 3. In 1991, he was awarded the National Food and Energy Council Electrification Award. This award is presented for individual contributions to research or education in the food and agriculture industry. Id.

Dr. Gustafson is the author of the textbook "Fundamentals of Electricity for Agriculture." Id. This is a university level textbook used by many professors in the country for teaching fundamental skills in the use of electricity in agriculture. Id. Dr. Gustafson has also published over 35 articles describing the effects and use of electricity in agriculture, including electrical safety issues, and has authored numerous publications about understanding and solving electrical issues in and around the farm, including stray voltage. Id. at 3-4.

Dr. Gustafson is a member of the American Society of Agricultural Engineers (ASAE). Id. at 4. The ASAE is organized to provide nationwide discussion and resolution of issues of importance to the agriculture industry. Within ASAE, he is the Chairman of the Information and Electrical Technologies Division. Id. He is also a member of the Institute [\*58] of Electrical and Electronic Engineers and the National Association of College Teachers of Agriculture. Id.

In addition to his teaching and research, Dr. Gustafson regularly conducts workshops and seminars for industry groups, county extension agents and local farmers at locations in Ohio and other states. Id. These workshops and seminars are designed to provide advice on understanding and solving electrical system supply and maintenance problems on farms, including stray voltage. Id. Dr. Gustafson has also made numerous surveys of electrical systems on farms. Id. at 5. These surveys involve evaluating the farm's electrical systems for compliance with the National Electrical Code and for proper connection and grounding practices, and conducting measurements of neutral to ground potentials, which is an assessment of whether there is stray voltage in the system. Id.

Dr. Gustafson was asked to conduct an independent evaluation of whether the proposed West Shore-Carlisle 138/69 kV electric transmission line would cause an adverse impact from "stray voltage" on agricultural property in the vicinity of the line. Id. As part of his evaluation, Dr. Gustafson [\*59] reviewed the Application submitted by PP&L, as well as drawings of the proposed transmission line, aerial photographs and engineering data supplied by PP&L. Id. at 5, 8.

Dr. Gustafson explained that stray voltage is a small voltage (less than 10 Volts) experienced by an animal when it connects two points that have a different electric potential. Id. at 6. He noted that stray voltage is caused either by problems in the grounding of electrical systems on the farm or by problems in the electrical distribution system

that serves the farm. Id. For stray voltage to exist, there must be an electric voltage between grounded equipment or structures and the earth. Id.

Dr. Gustafson explained that the West Shore-Carlisle 138/69 kV transmission line does not contain a grounded neutral system that is capable of creating stray voltage. Id. at 8. As is standard transmission design practice, there is no neutral wire operating at ground potential in the proposed transmission line. Id. Further, there is no physical interconnection with distribution lines along the route of the transmission and the transmission line cannot interact with the neutral system of the distribution [\*60] lines. Id. Dr. Gustafson concluded that there are no conditions under which the proposed West Shore-Carlisle line would create stray voltage. Id. Dr. Gustafson also noted that stray voltage is not caused by electric or magnetic fields. Id. at 9.

Based on his review of the transmission line design, and on his training and experience as a licensed professional engineer and specialist in agricultural electrical systems, including stray voltage issues, Dr. Gustafson concluded that the proposed West Shore-Carlisle 138/69 kV transmission line will not cause stray voltage on agricultural property in the vicinity of the line. Id. Dr. Gustafson also explained that ground currents that are found with distribution lines and on-premises wiring are not associated with transmission lines. N.T. 19. Dr. Gustafson concluded that ground currents would not be associated with the proposed West Shore-Carlisle 138/69 kV transmission line. N.T. 19-20.

The Hempts presented the testimony of Dr. Robert Scott. Hempt Stmt. 1. Dr. Scott is a self-employed consultant, a part-time school teacher and a factory representative for Complete Water Systems of Texas. N.T. 52. Dr. Scott has [\*61] not had a veterinary practice since 1980. N.T. 55. None of the schools where he teaches have accredited veterinary medicine programs. N.T. 54. In the 1980s, Dr. Scott was employed as a sales representative of the company Pro-Ag, selling an animal food product called "Impro." N.T. 56. In 1989, Dr. Scott was ordered by the U.S. Food and Drug Administration to stop his activities because the sale of Impro was illegal. N.T. 56.

Dr. Scott does not have any degrees in human medical or health science. N.T. 54. He did not have an opinion on human health issues. N.T. 55. Dr. Scott also is not an expert in electrical engineering. N.T. 57.

Dr. Scott claims that EMF associated with electric lines cause numerous health problems with horses. Hempt Stmt. 1, pp. 6-7. In fact, he believes that "[o]f all the hazards facing the livestock owner today, none is as insidious and dangerous as the hazard posed by the invasion of his premises by EMF." Id. at 11-12.

Dr. Scott does not cite a single scientific study. Hempt Stmt. 1. Furthermore, he does not rely on scientific literature to support his claims. N.T. 76. He did not conduct a review of the published scientific literature on [\*62] EMF and animal health. N.T. 68. He did not even try to find out how many studies have been published or to identify any studies he might consider reliable. N.T. 69. He claimed he reviewed about six studies altogether, but he could not name any of those studies. Id. He admitted that there is a substantial body of scientific literature concluding that EMF does not cause adverse effects on animal reproduction and development. N.T. 70. Dr. Scott, however, discounted those studies entirely, although he apparently had not ever read them. Id.

Dr. Scott could not identify any level of electric or magnetic field that would be unsafe. N.T. 73. He could not say if magnetic field exposures of 2 mG, 3 mG, 10 mG, or any other level would be unsafe. Id. He also could not identify any level of electric or magnetic field exposures that would be unsafe for horses in general, or unsafe specifically for the horses on the Hempt property. N.T. 74-75. His claim that exposure to EMF would cause adverse health effects in horses on the Hempt property is completely unsupported by any evidence that the electric and/or magnetic fields associated with the proposed transmission line at [\*63] the Hempt property would in fact be harmful.

In his surrebuttal testimony, Dr. Scott claimed that the reason he could not identify any level of magnetic field that would be unsafe is because he is actually concerned about ground currents. Hempt Stmt. 1-R, p. 1-2. Under cross examination, however, he admitted that he also did not know what level of ground current he would consider safe or unsafe. N.T. 66. His rebuttal testimony contained a map purporting to show how ground currents on the Hempt farm would be increased by the proposed line, but he admitted that he did not in fact know where ground currents,

if any, were going to flow and that his map was entirely hypothetical. N.T. 64-65. In contrast, Dr. Gustafson testified that ground currents will not be associated with the proposed transmission line, because the transmission line is not designed to have current flowing to ground. N.T. 20.

Dr. Scott believes there is an international conspiracy to cover-up EMF hazards. N.T. 77; Hempt Stmt. 1, p. 12. He believes that the United States government, the Canadian government and the power companies are all part of this conspiracy. N.T. 77. He believes that the U.S. Congress [\*64] is part of the conspiracy, along with the Environmental Protection Agency and the Food and Drug Administration. N.T. 77. Dr. Scott also believes that any person or entity that finds that EMF does not cause adverse health effects would be inherently unreliable. N.T. 77. In fact, he believes that a cartoon (See PP&L Cross-Examination Exhibit No. 1) would be more reliable than a report from the National Academy of Sciences finding that EMF did not cause health effects. N.T. 78.

Dr. Scott's opinion is based entirely on anecdotal reports of his "personal observations." N.T. 79. These "observations" are inherently unreliable as a basis for determining that exposure to EMF caused any adverse effect. For example, when questioned by the ALJ, Dr. Scott claimed that he had seen EMF health effects on a farm in Minnesota. N.T. 81. However, he could not provide any information about what level of EMF or ground current he considered to have caused a problem in that instance. N.T. 82. Similarly he claimed that he had seen baby calves tied side by side in a barn that were the same age, but one was smaller than the other. Hempt Stmt. 1, p. 6; N.T. 71. Dr. Scott considered this to be evidence [\*65] of an EMF health effect. However, he had no idea of what EMF exposures the calves had experienced or whether there was any differences in their exposures. N.T. 72.

In short, Dr. Scott's testimony is unscientific, unreliable, frivolous, reflects the bias of an irrational "conspiracy" theory, and we reject in its entirety as failing to provide any basis for sound decision making. Dr. Scott is no expert.

## 2. The Scientific Evidence Does Not Support Claims Of Adverse Human Health Effects From EMF

We have not yet had occasion to address a protest that was based on the purported adverse effects of EMF on the health of horses. We have, however, dealt with issues pertaining to human health effects from exposure to magnetic fields. In the two most recent cases, the Commission in adopting the position of the presiding officer in the case, has concluded that there is no present scientific basis upon which to conclude that exposure to magnetic fields from transmission lines causes adverse health effects in humans. Letter Notification of Philadelphia Electric Company Regarding The Woodbourne-Heaton 230 kV Line, Docket No. A-110550F055 (Order entered November 12, 1993) ("Woodbourne-Heaton"); [\*66] Certification Application of Pennsylvania Power & Light Company Regarding The Wescosville-Trexlerstown #3 and #4 138/69 kV Line, Docket Nos. A-110500F0162 and F0169 (Order entered March 17, 1994) ("Wescosville-Trexlerstown").

In its Woodbourne-Heaton decision, rendered a year ago, the Commission determined, based on the extensive record in that case, "that there is no conclusive evidence that EMF presents a known hazard to human health." (Order, p. 7). In reaching this conclusion, the Commission noted: "We do not discern that the experts presented herein have, in any way, overlooked any available literature, studies or works, generally available to the scientific community for inclusion in the record here." (Order, p. 13).

In reaching an identical conclusion in our Recommended Decision in the Wescosville-Trexlerstown proceeding, we noted (R.D., p. 37):

Our understanding of the science of epidemiology, limited though it may be, suggests that after you have studied a subject matter for some time, things begin to coalesce, certain patterns of findings begin to appear in a number of studies, theories emerge and direction follows. Looking back on the studies involved with [\*67] smoking and cancer, we see how the science of epidemiology, with its limitations, works. This coalescence has not happened in the study of power frequency magnetic fields and cancer.

Based on these facts, and after an extensive review of the epidemiological evidence presented in that case, we stated: "We conclude that the testimony and the exhibits demonstrate that there is no scientific basis to conclude that magnetic fields from the proposed line would cause adverse health effects." (R.D., p. 48). Because no

exceptions were filed, our decision became final without further Commission action pursuant to Section 332(h) of the Public Utility Code, [66 Pa.C.S. § 332\(h\)](#) (Order entered March 17, 1994).<sup>3</sup>

### 3. PP&L's EMF Management Program And Its Application To This Project

Based on the extensive scientific evidence developed to date, which has been discussed in the preceding section, it is clear that EMF should not be regarded as a health hazard. However, the Company believes that it makes sense, as a matter of policy, to deal **[\*68]** with customer concerns about EMF by reducing electric and magnetic fields in new and rebuilt facilities where that can be done with no-cost or low-cost design changes. Consequently, with that goal in mind, PP&L initiated its Magnetic Field Management Program in March 1991. PP&L Stmt. 2, p. 5.

Magnetic fields from overhead power lines and human exposure to those fields can be reduced by a number of methods including increasing ground clearance; balancing phase currents and circuit loads; using low reactance (reverse) phasing; adopting line configurations that reduce the space between phase conductors; increasing right-of-way widths; and, in general, locating lines in less densely populated areas. PP&L Stmt. 5, pp. 4-5. Based upon a detailed investigation of these factors, including their environmental impact, costs and benefits, PP&L developed the guidelines incorporated in its Magnetic Field Management Program, as described in detail in Appendix I of PP&L Exhibit 1. PP&L Stmt. 5, p. 5.

In applying the Magnetic Field Management Program's guidelines to the West Shore-Carlisle project, the Company has selected a design that reduces magnetic field levels at little or no cost and **[\*69]** conforms to the line's functions requirements. Because reliability and capacity concerns dictated that the project be designed as a double circuit line, the Company can implement reverse phasing at virtually no additional cost. PP&L Stmt. 3, pp. 6-7. Reverse phasing is a circuit configuration that causes each phase current of one circuit to partially cancel the magnetic fields created by the other circuit's phase currents. PP&L Stmt. 3, p. 7; PP&L Ex. 1, Appendix I, Chart 1.

Because of reverse phasing, the proposed West Shore-Carlisle line will have lower magnetic field levels than if the same current were transmitted through circuits with standard phasing. Although the current and, therefore, the magnetic field levels, will differ at various points along the line, data for Segment 3 illustrate the effect of reverse phasing. Based on anticipated typical load levels, the mid-span, edge of right-of-way magnetic fields for Circuit No. 1 are as follows (PP&L Ex. 1, pp. D-9 and D-11):

|                 | Standard Phasing | Reverse Phasing |
|-----------------|------------------|-----------------|
| 1995 Load Level | 7.33 mG          | 2.13 mG         |
| 2000 Load Level | 8.05 mG          | 2.41 mG         |

Field levels must be viewed in light of the fact that power frequency, i.e., 60 Hz, **[\*70]** magnetic fields occur wherever there is a flow of electricity, such as current-carrying electric wires, devices or appliances. Therefore, magnetic fields exist at detectable levels in home, work, shopping and similar everyday situations, as well as near transmission and distribution facilities. A recent U.S. Environmental Protection Agency publication titled "EMF In Your Environment" notes (p. 21) that "the typical American home has a background magnetic field level (away from any appliances) ranging from 0.5 mG to 4 mG . . ." N.T. 113.

In addition to the EPA data, the Company made actual measurements of 60 Hz magnetic fields encountered every day in the general area of the proposed West Shore-Carlisle line. To obtain those measurements, Mr. Garber walked and drove through the project area with a gauss meter and recorded magnetic field levels in the locations that an individual, living in the vicinity, would be likely to encounter on a regular basis. This survey produced measured field levels ranging from 0.5 mG to over 16 mG. Those measurements and the EPA's published information clearly indicate that magnetic fields from the proposed West Shore-Carlisle line will be within **[\*71]** the range of field levels from existing sources experienced in an average person's daily life. PP&L Stmt. 3, pp. 8-10 and Attachment 2.

<sup>3</sup> Both the Woodbourne-Heaton and Wescosville-Trexlerstown proceedings included a review and discussion of the so-called "Swedish" studies.

For all of the reasons set forth hereinabove, there is substantial evidence to support a Commission finding that the proposed West Shore-Carlisle line will not create an unreasonable risk of danger to the health and safety of the public. See [52 Pa. Code § 57.76\(a\)\(2\)](#).

C. The Impact of the Proposed Line on the Environment, Including But Not Limited to Impacts, If Any, Upon Archaeologic, Geologic, Historic, Natural, Scenic, wilderness and Recreation Areas

1. PP&L's Siting Analysis And Route Selection Are Clearly Reasonable

An explanation of PP&L's transmission line siting methodology is set forth in PP&L Hearing Exhibit No. 1 at pp. C-1 through C-3. This process has four fundamental components: (1) determination of the project's "core" and "study" areas; (2) compilation of an environmental inventory; (3) selection and analysis of potential preferred and alternative line routes; and (4) selection of the best alternative for siting the proposed new or reconstructed line. PP&L Stmt. 2, pp. 4-5.

The core area is that territory in [\*72] which various alternative routes could feasibly be constructed in order to meet the project's functional requirements while still minimizing environmental impacts and project costs. Simply stated, the core area is initially circumscribed by the beginning and ending points of the proposed line or reconstruction, and is further defined based on various topographical features and existing corridors such as highways, railroads or existing power lines. For the proposed West Shore-Carlisle line, the core area is approximately 8.7 miles long, 3.4 miles wide and 22 square miles in area. The study area consists of a two mile area bounding the core area. A complete description of the core and study areas is set forth in PP&L Hearing Exhibit No. 1 at pages B-1 and B-2. PP&L Stmt. 2, p. 6.

The environmental inventory is a detailed list of environmental factors to be considered when evaluating and selecting transmission line routes, and includes the information required by the Commission's siting regulations. The categories of factors assembled under the environmental inventory include: linear features (existing transmission lines, highways and roads, pipelines, etc.); existing and proposed [\*73] land uses; municipal zoning; municipal boundaries; pertinent geological features (soil conditions, floodplains and slopes); natural and physical features (vegetation, streams and open water, wetlands, wildlife, scenic areas and threatened and endangered species) and unique archaeological and cultural features, if any. The inventoried features are analyzed and mapped relative to the core and study areas to select line routes that avoid or minimize the impact on various environmental features. A detailed environmental inventory is set forth in PP&L Hearing Exhibit No. 1 at pp. B-3 through B-18, and the various inventoried features are depicted on Maps 1 through 6 of Exhibit B thereof. PP&L Stmt. 2, pp. 6-7.

A detailed explanation of the siting analysis conducted by PP&L for the proposed West Shore-Carlisle line is set forth in PP&L Hearing Exhibit No. 1 at pp. C-4 through C-16. Two preliminary line route alternatives were identified using the mapping and analysis procedure described therein: (1) the centerline of the existing West Shore-Carlisle 69 kV line; and (2) a route that follows the right-of-way for an active Conrail railroad track. PP&L Stmt. 2, pp. 7-8.

A detailed [\*74] quantitative and qualitative analysis of the alternative line routes was performed, and its results are summarized on Table 1 at page C-8 of PP&L Exhibit No. 1. Based upon those analyses, extensive field reviews and input from the public and government agencies, the Company selected a route that, for 9.1 miles of its total 9.38-mile length, is located on Conrail property between Carlisle and Mechanicsburg and related existing or abandoned rail sidings. The majority of the preferred route lies on the north side of the Conrail tracks. The proposed route does, however, cross to the south side of the tracks at two locations to avoid residences and other facilities. PP&L Stmt. 2, pp. 8-9.

The Company's analyses showed that its preferred route is superior to rebuilding along the existing center line for the following principal reasons:

- \* Constructing virtually the entire line in an existing railroad corridor eliminates the need for a separate, man-made linear feature and, thereby, substantially reduces environmental and land use impacts;
- \* The preferred route is closer to two customer-owned substations, which will reduce the length of the two tap lines by a total of 5600 feet;
- \* **[\*75]** Use of the Conrail property provides some flexibility in adjusting the proposed centerline to avoid potential conflicts, and enables PP&L to acquire a 100-foot easement for most of the line route, which would not be possible if the line were rebuilt on its existing centerline;
- \* There are approximately 48 non-condemnable properties along the existing centerline route, and significant costs would have to be incurred to buy a fee interest in properties where right-of-way acquisition is unsuccessful or to reroute the line;
- \* Currently, about 65 residences are located within 100 feet of the existing line, whereas only 6 homes would be located within 100 feet of a line rebuilt on the Conrail route;
- \* The proposed line will have a much smaller impact on land use if its right-of-way overlaps the Conrail property, which is an existing, compatible linear feature; and
- \* Reconstructing the line in place would impose significant outage limitations during construction; rebuilding along the Conrail corridor will not produce any outage restrictions because the existing line will remain in place until the new line is completed.

PP&L Stmt. 2, pp. 11-12.

As explained by Mr. Kuhns (PP&L Stmt. **[\*76]** 2), the Company's preferred route would avoid as many environmental and land use impacts as possible and will have no significant, adverse effect upon:

- \* Recreational or public use areas;
- \* Cemeteries or churches;
- \* Unique geological, scenic or natural areas;
- \* Sites of archeological significance;
- \* Endangered or threatened plant or animal species or common plants and animals (use of existing railroad property will minimize both vegetation clearing and access road construction);
- \* Major water bodies or aquatic resources;
- \* Airports, railroads, pipelines, communication towers or other utilities.

Where impacts are unavoidable, however, the Company plans a variety of mitigating measures including soil erosion and sedimentation control and the maintenance and propagation of compatible vegetation. PP&L Stmt. 2, p. 14.

Finally, pursuant to [52 Pa. Code § 57.76\(b\)](#), the Company's Certification Application included a request that the Commission approve an expanded "corridor" for the proposed line route in three locations, denominated Corridors "A", "B" and "C." PP&L Ex. 1, p. C-16. Corridor certification has been sought to permit flexibility in establishing the centerline of the **[\*77]** proposed line based on the outcome of on-going negotiations for the acquisition of right-of-way. Since its Application was filed, the Company has obtained the necessary right-of-way from all affected property owners in Corridor B and is not pursuing its initial request for certification of that corridor. Certification of Corridors A and C is still needed, however. PP&L Stmt. 2, p. 10.

---

\* Includes 1100 feet of the relocated Purina Tap.

Corridor A is located along the rail siding in the Borough of Carlisle, as shown on the Aerial Exhibit (Sheet 1) in Exhibit C. Conrail reserves the right to review and approve all center line locations and, because it has not yet acquiesced to the proposed line route in this area, an adjustment of the centerline may be necessary. All structures will be placed on Conrail property and the maximum width of the requested corridor does not extend more than 50 feet beyond the Conrail property line.

Corridor C is located at the eastern end of the proposed line route where the line leaves the active railroad and heads south along an abandoned railroad siding. See Aerial Exhibit (Sheet 4) of Exhibit C and PP&L Stmt. 2, Attachment 1. Conrail owns the property in this area and has requested that PP&L [\*78] purchase a fee interest rather than an easement, and PP&L is considering the offer. Rerouting of the line in this area may be necessary if an agreement with Conrail cannot be reached. The width of Corridor C varies up to a maximum of 1,300 feet.

In summary, the Company has conducted an extensive, multifaceted technical analysis to site the proposed West Shore-Carlisle line. The location for the line constitutes the best balance of environmental and land use considerations, functional requirements and cost. PP&L Stmt. 2, pp. 18-19.

The Hempts own several parcels of land in Cumberland County that are used for breeding, raising and training trotting and pacing horses. In particular, the Hempts owns approximately 492 acres of land in Silver Spring Township, Cumberland County (the "Hempt property") that is adjacent to the north side of Conrail's property and the proposed right-of-way of the Company's preferred line route. This property is identified as Tract 33 on the Aerial Map submitted as Exhibit C, Sheet 3 of 4, in PP&L's Exhibit No. 1.

The Conrail property contains Conrail's tracks for an active railroad and a Conrail access road that runs along the north side of the railroad [\*79] tracks. The Company proposes to build the proposed line along the north side of the access road on Conrail's property. The proposed centerline of the line replacement will be 27 feet from the centerline of the Conrail tracks and approximately 20 feet from the Hempts' property line. PP&L Exhibit No. 3 depicts the relative locations of these features as well as a 12 kV distribution line that currently runs along the Conrail property on the north side of the Conrail tracks. The 12 kV distribution line has been de-energized and will be removed before the proposed West Shore-Carlisle transmission line is constructed. PP&L Stmt. 2-R, pp. 3-5.

The Company has sought to obtain a right-of-way along the portion of the Hempt property that borders the Conrail property. Because the Hempts have refused the Company's purchase offers, the Company filed an application with the Commission on December 20, 1993 to exercise the power of eminent domain to acquire a 30-foot right-of-way. Although the support structures and structure arms for the proposed West Shore-Carlisle line will be entirely within the Conrail right-of-way, the Company is seeking a 30-foot right-of-way across the Hempt property [\*80] so that a full 100-foot right-of-way (approximately 50 feet on each side of the proposed centerline of the replacement line) will be maintained. PP&L attempts to obtain a 100-foot right-of-way for new or replacement transmission lines, whenever possible. PP&L Stmt. 2-R, pp. 4-5.

The Hempts oppose the Company's preferred route and have proposed that the portion of the West Shore-Carlisle 138/69 kV line replacement adjacent to their property be located south of the Conrail railroad tracks. That proposal is not a reasonable or practical alternative to the Company's preferred route for a host of reasons.

First, and most importantly, the Hempts' proposal would place the replacement line on existing residential property. As shown on the Aerial Map (Exhibit C, Sheet 3 of 4), an existing residential dwelling is located south of the Conrail property at the approximate midpoint of the Hempt property. PP&L's transmission line siting guidelines (PP&L Exhibit No. 1, Appendix A, p. 1) provide that it is desirable to avoid existing and proposed residential development whenever possible as a means of minimizing land use impacts, potential visual intrusions and costs. The guidelines [\*81] also state that commercial, industrial and agricultural areas are generally compatible with transmission facilities. The Commission has reviewed and approved numerous Applications for transmission lines that explicitly employed the Company's guidelines as the basis for developing the preferred routes. PP&L Stmt. 2-R, pp. 5-6.

Second, the Hempt proposal would place the right-of-way and probably the proposed replacement line itself within 100 meters of the previously described residential dwelling. Therefore, the company would be prohibited from exercising the power of eminent domain to condemn the necessary right-of-way. Also, the homeowner has refused to grant a right-of-way. In contrast, the home and barn located on the Hempt property are approximately 1,560 feet and 2,829 feet, respectively, from the preferred line route. PP&L Stmt. 2-R, p. 6.

Third, as previously explained, the Conrail access road is located on the north side of the Conrail property. By putting the proposed line on the north side of the Conrail property, that road can be used to access the Company's transmission line. If the line were located south of the Conrail track, as the Hempts have proposed, an [\*82] entirely new road would have to be constructed. Because the railroad bed on the south side of the Conrail tracks is narrow, the support structures and access road would have to be built south of the rail bed over uneven, vegetated terrain. In addition to increasing costs, that construction would require a substantial amount of additional vegetation clearing and would increase the environmental impact of the line. PP&L Stmt. 2-R, p. 7.

Fourth, the Hempts' proposed route south of the Conrail tracks would require the Company to acquire more private right-of-way. PP&L Stmt. 2-R, p. 7.

Fifth, the Hempts' proposed route south of the Conrail tracks has the potential to create an interference with an environmentally sensitive pond and "wetland" area. PP&L Stmt. 2, p. 7.

Sixth, by placing the line on the north side of the Conrail property, the transmission line would be in the same general location historically used as an electric power line corridor. As previously explained, a 12 kV distribution line, currently deenergized, has been located along the Conrail property north of the Conrail tracks for many years. The proposed transmission line will actually be located further from [\*83] the Hempts' property than that distribution line. PP&L Stmt. 2-R, p. 8; PP&L Ex. 3.

Seventh, as explained by Mr. Murray A. Garber (PP&L Stmt. 3, p. 8) and Mr. Allen C. Cassaday (PP&L Stmt. 5-R), the magnetic fields from the proposed transmission line will be lower than those produced by the previously described 12 kV distribution line when it was carrying current.

Finally, as discussed in greater detail hereafter, although there is no basis to conclude that electric and magnetic fields ("EMF") are a human health hazard, the Company is aware of concerns by some of its customers in this regard. That factor provides added justification for the Company's previously-discussed general siting guideline, which directs that existing residential property should be avoided whenever possible in laying out a route for a transmission line. Thus, compounding its other deficiencies, the Hempts' proposal would place the transmission line in greater proximity to human habitation than the Company's preferred route merely because the Hempts want to put as much distance as possible between the proposed line and their race horses. The Company submits that the Hempts' proposal does not reflect [\*84] an acceptable balancing of the public policy issues and interests at stake in siting an electric transmission line.

As the foregoing discussion suggests, the Hempts' opposition to a line route located north of the Conrail track is an outgrowth of their alleged concerns about the effect of electric and/or magnetic fields on their horses. See Hempt Sts. 1 and 2. As fully explained in Section IV.C.2., infra, there is no basis to conclude that exposure to EMF associated with the proposed transmission line will cause adverse health effects in animals, including horses. Other factors also establish that the Hempts' concerns are unwarranted.

First, as noted above, magnetic field levels associated with the proposed transmission line will be much less than magnetic fields that had been produced by the 12 kV distribution line that runs parallel to the Hempt property on the north side of the Conrail track. Specifically, at a distance of 50 feet from the centerline of the proposed transmission line, the magnetic fields at the structure and at mid-span would be 1.54 milligrams (mG) and 2.34 mG, respectively, at typical 1995 load levels, and 1.44 mG and 2.15 mG, respectively, at typical [\*85] 2000 load levels. PP&L Stmt. 5-R, p. 4. In contrast, when the 12 kV distribution line was operating under normal load conditions, it produced measured magnetic fields of 5.24 mG at the edge of the proposed right-of-way for the West Shore-Carlisle 138/69 kV line. PP&L Stmt. 5-R, p. 7. Although the 12 kV distribution line is now de-energized, it

was in its present location and carried current for many years. PP&L Stmt. 5-R, p. 7. Significantly, the Hempts admitted that during the period the 12 kV line was in operation, their horses had experienced no problems the Hempts considered EMF-related. PP&L Stmt. 5-R, p. 9; PP&L Ex. 7.

Second, the Hempts stated that their concerns about EMF were prompted largely by articles and news stories in the popular press (see Hempt Stmt. 2). However, an independent authority on EMF reassured them that there was no basis for concern. Dr. Jack Adams of Carnegie Mellon University, who was engaged by the Hempts to verify the magnetic field levels from the proposed line, stated that those field levels would not concern him and were in fact, typical of fields experienced in residences on a daily basis. PP&L Stmt. 2-R, p. 10; PP&L Ex. 5.

Third, the [\*86] Company took detailed measurements of 60 Hertz ("Hz") magnetic fields in the general area of the proposed line. Those measurements confirm that magnetic fields from the proposed line will be within the range of field levels experienced in everyday environments. PP&L Stmt. 2, pp. 8-10.

In summary, for all of the reasons set forth above, the Hempts' proposal is not a reasonable or practical alternative to the Company's preferred route.

#### D. PP&L's Proposed Exercise Of The Power Of Eminent Domain Satisfies The Applicable Legal Criteria

As previously explained, PP&L is seeking a certificate of public convenience authorizing its use of the power of eminent domain to acquire a right-of-way across the Hempt property. Pursuant to Section 1511(a) of the Business Corporation Law, public utility corporations possess the power to "take, occupy and condemn property" for the transmission and distribution of electricity. [15 Pa.C.S. § 1511\(a\)](#). However, that power may be exercised for overhead transmission lines only after the Commission has determined that: "[T]he service to be furnished by the corporation through the exercise of those powers is necessary or proper for the service, accommodation, [\*87] convenience or safety of the public." [15 Pa.C.S. § 1511\(c\)](#).

Pennsylvania Appellate Courts have interpreted Section 1511(a) as requiring a condemning utility to show that the proposed transmission line is necessary and that it has not acted want only, capriciously, or arbitrarily in selecting the proposed right-of-way. [Dept. of Environmental Resources v. Pennsylvania Public Utility Commission, 18 Pa. Cmwlth. 558, 335 A.2d 860 \(1975\)](#), [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, however, 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. Pennsylvania Public Utility Commission, 192 Pa. Super. 573, 162 A.2d 18 \(1960\)](#).

PP&L submits and we agree that it has satisfied the criteria for exercise of the power of eminent domain under [15 Pa.C.S. § 1511\(a\)](#). The record evidence demonstrates that the proposed West Shore-Carlisle line is necessary to deal with capacity and reliability concerns; and, to replace [\*88] an old, deteriorated facility. PP&L has inventoried, studied and considered numerous pertinent factors in siting the proposed transmission line and conducted an extensive analysis to evaluate alternative routes based on environmental impact, functional requirements and costs.

Right-of-way over the Hempt property is clearly required by PP&L to pursue its preferred alternative. PP&L Stmt. 2, pp. 15-19. Moreover, PP&L has negotiated in good faith and its reasonable purchase offers have been rejected. PP&L Stmt. 4, pp. 3-6; PP&L Stmt. 2-R, p. 11.

The Company has fully addressed the alternative line route suggested by the Hempts and has demonstrated that it is inferior to the Company's preferred route in numerous respects. The Company also has fully responded to the Hempts' concerns regarding magnetic fields and "stray voltage" and has demonstrated that those concerns are completely unwarranted.

Accordingly, for the reasons set forth above, the Company's Application For The Exercise Of The Power Of Eminent Domain over the Hempt property should be granted.

#### IV. CONCLUSION

For the reasons set forth hereinabove, we hereby find that the grant of the Company's Certification Application [\*89] for the proposed West Shore-Carlisle 138/69 kV transmission line and the grant of the Company's request to exercise the power of eminent domain to acquire a right-of-way across the property of Max C. and Martha D. Hempt is in the public interest.

#### CONCLUSIONS OF LAW

1. The Commission has jurisdiction over the subject matter and the parties to this proceeding.
2. The matter is properly before the Commission.
3. PP&L provided adequate notice as required by the Commission's regulations at [52 Pa. Code Section 57.74](#).
4. PP&L has shown sufficient need and engineering justification for the proposed West Shore-Carlisle 138/69 kV transmission line replacement project. [52 Pa. Code Section 57.76\(a\)\(1\)](#)
5. The construction, operation and maintenance of the line will not create an unreasonable risk of danger to the health or safety of the public. Pa. Code Section 57.76(a)(2)
6. PP&L has the legal authority to construct the West Shore-Carlisle 138/69 kV line as proposed in its Application.
7. The construction, operation and maintenance of the proposed West Shore-Carlisle 138/69 kV line, as proposed, will be in compliance with all applicable statutes and regulations for the protection [\*90] of the natural resources of the Commonwealth. [52 Pa. Code 57.76\(a\)\(3\)](#)
8. The construction, operation and maintenance of the line will have minimal environmental impacts considering the electric power needs of the public, the state of available technology and available alternatives. [52 Pa. Code Section 57.76\(a\)\(4\)](#)
9. The Company has satisfied all applicable criteria for the exercise of the power of eminent domain over the Hempt property as specified by [15 Pa.C.S. § 1511\(a\)](#) and Pennsylvania Appellate Court authority.
10. PP&L's proposed exercise of the power of eminent domain is necessary and proper for the service, accommodation, convenience or safety of the public.

#### ORDER

#### THEREFORE, IT IS ORDERED:

1. That the Application as filed by Pennsylvania Power & Light Company ("PP&L") with the Pennsylvania Public Utility Commission at Docket No. **A-110500F0196** for authorization to replace its existing West Shore-Carlisle 69 kV line with the proposed West Shore-Carlisle 138/69 kV line to be located in the Boroughs of Carlisle and Mechanicsburg and in the Townships of North Middleton, Middlesex and Silver Spring, Cumberland County, Pennsylvania is hereby approved;
2. That the [\*91] West Shore-Carlisle 138/69 kV transmission line, as proposed, be constructed and maintained in a manner that complies with the standards of the National Electrical Safety Code;
3. That the proposed West Shore-Carlisle 138/69 kV transmission line be constructed, operated and maintained in compliance with all applicable statutes and regulations for the protection of the public and the natural resources of the Commonwealth; and
4. That the Application as filed by PP&L with the Commission at Docket No. A-110500F203 to exercise the power of eminent domain across the property of the Hempts be and is hereby approved.

GEORGE M. KASHI, Administrative Law Judge

Dated: October 21, 1994

# Appendix 1

Table 1, "Impact Assessment," on Page C-8, contains a detailed quantitative analysis of the alternative line routes.

TABLE 1

## IMPACT ASSESSMENT

### WEST SHORE-CARLISLE 138/69 KV LINE REPLACEMENT

|                                     |              | EXISTING     | CONRAIL       |
|-------------------------------------|--------------|--------------|---------------|
| IMPACT CATEGORY                     | UNITS        | CENTERLINE   | CORRIDOR      |
| LINE DATA                           |              |              |               |
| Length                              | Feet/Miles   | 47,600/9.02  | 49,500/9.38 * |
| Line to be Removed                  | Feet/Miles   | 0/0          | 53,200/10.08  |
| Private Right-of-Way Required       | Acres        | 94.5         | 11.6          |
| Construction Costs                  | Escalated \$ | 8,400,000    | 5,700,000     |
| LINEAR FEATURES                     |              |              |               |
| Parallel to Public Road             | Feet/Miles   | 16,350/3.10  | 480/.09       |
| Parallel to Railroad                | Feet/Miles   | 950/.18      | 48,050/9.10   |
| Road Crossings                      |              |              |               |
| Major                               | No           | 2            | 2             |
| Minor                               | No           | 13           | 12            |
| LAND USE                            |              |              |               |
| Farmstead                           | No           | 4            | 4             |
| Residential                         | Feet/Miles   | 10,500/1.99  | 2,000/.38     |
| Homes within 100 Feet of Centerline | No           | 65 (Approx.) | 6             |
| Open Space/Recreation               | Feet/Miles   | 0/0          | 2,500/.47     |
| Institutional/Public/Semi-Public    | Feet/Miles   | 2,500/.47    | 0/0           |
| Proposed Residential                | Feet/Miles   | 0/0          | 2,800/.53     |
| GENERALIZED MUNICIPAL ZONING        |              |              |               |
| Residential                         | Feet/Miles   | 5,150/.98    | 9,000/1.70    |
| Forest                              | Feet/Miles   | 1,200/.23    | 0/0           |
| Institutional                       | Feet/Miles   | 2,600/.49    | 1,800/.34     |
| SOILS                               |              |              |               |
| Seasonal High Water Table           | Feet/Miles   | 14,500/2.75  | 11,800/2.23   |
| Flood Prone                         | Feet/Miles   | 2,750/.52    | 3,100/.59     |
| NATURAL FEATURES                    |              |              |               |
| Streams Crossed                     |              |              |               |
| Perennial                           | No           | 3            | 3             |
| Intermittent                        | No           | 2            | 0             |
| Wetlands                            | Feet/Miles   | 300/.06      | 0/0           |
| Woodlands                           | Feet/Miles   | 5,190/.98    | 13,520/2.56   |

[\*92]

PA Public Utility Commission Decisions

---

End of Document

Complaint Proceedings—Respond-

allow bringing in additional  
concerned with an alleged

ers of the Township of

pay for Department of

the Board of Commis-  
y County, is concerned  
ssing, at grade, in the  
Allegheny County.

ie rail-highway crossing  
l in Allegheny County,  
ident in the complaint.  
ty of Allegheny, while  
ceeding, is certainly a

d to allow bringing in  
eeding if none be prej-

hereby made an addi-  
caption is accordingly

oners of South Fayette  
rice hereof, serve upon  
n this proceeding, to-  
act, date, and manner

3. That the County of Allegheny, additional respondent herein,  
file answer to said complaint within 10 days of the date of service  
thereof.

JOHN C. LARKIN

v.

PHILADELPHIA ELECTRIC COMPANY

COMPLAINT DOCKET No. 17472

*Service and Facilities—Electric Companies—Public Safety—Electric Distribu-  
tion Lines—Construction and Maintenance Standards—National Electrical Safety  
Code.*

Over the years, the Commission has recognized that the provisions of the  
National Electrical Safety Code constitute reasonable standards of safe con-  
struction and maintenance practices which have received universal acceptance  
throughout the electric utility industry.

*Public Safety—Electric Distribution Lines—National Electrical Safety Code—  
Overhead Electric Lines.*

Held, an electric company's distribution line along certain parish property  
designed, constructed and operated under safety criteria more stringent than the  
installation and maintenance standards prescribed by the National Electrical  
Safety Code did not present an unreasonable hazard to public safety by virtue  
of its overhead location.

James J. Himsworth, Jr. for John C. Larkin.

Robert P. Garbarino, Samuel G. Miller and Vincent P. McDevitt for  
Philadelphia Electric Company.

BY THE COMMISSION, August 28, 1961:

This service complaint, instituted by the Reverend John C. Larkin,  
Pastor of the Roman Catholic Parish Church, Visitation, B.V.M.,  
Trooper, Montgomery County, complainant, alleges that Philadelphia

Electric Company, respondent, proposes to install an overhead, high voltage, electric transmission line along Trooper Road immediately adjacent to the school and parish property of complainant in West Norriton Township, Montgomery County; that the location of such overhead facilities will constitute an unnecessarily grave threat of danger and physical harm to school children and parishioners, and will constitute a taking of complainant's property without due process of law, in that the said facility location proposed by respondent is unreasonable, arbitrary, and capricious. The complaint requests that, upon final hearing before the Commission, respondent be ordered to cease and desist from the installation of its overhead facilities and, further, that respondent be ordered to locate such facilities underground, either within the public right of way of Trooper Road, or within complainant's property, in such manner as to insure the safety of all persons using complainant's property.

Respondent's answer shows that, within approximately one week following the filing of the instant complaint, respondent completed construction and began the operation of a 33,000-volt distribution line installed on poles and post-type insulators located entirely within the legal right-of-way limits of Trooper Road, along the southeast side thereof, abutting the property of complainant for a distance of approximately 1,166 feet. Respondent's answer also shows that, prior to construction of this overhead distribution line, respondent had requested complainant to grant to it a right of way to install poles, cross-arms, wires, anchor guys, and appurtenances on the property of complainant immediately adjacent to the said right-of-way limits of Trooper Road, and that since respondent has constructed and is now operating the aforesaid overhead line entirely within the public highway, no further rights of way on complainant's property is required. However, respondent's answer admits that complainant expressed his willingness to grant the requested right of way across the parish property, upon condition that the then proposed facilities be placed underground.

Hearing was held on October 19, 1960. Briefs were filed subsequently by both parties.

The Reverend Larkin, appearing as the sole witness for complainant, testified that the parish property has a frontage of 1,166 feet along Trooper Road between Germantown Pike and Ridge Pike; that the existing buildings thereon consist of the rectory, the sexton's house, the school building, and the convent; and that construction of the church building will be started during 1961. This witness also testified

all an overhead, high  
r Road immediately  
complainant in West  
the location of such  
rily grave threat of  
nd parishioners, and  
r without due process  
sed by respondent is  
aplain requests that,  
ndent be ordered to  
erhead facilities and,  
such facilities under-  
of Trooper Road, or  
s to insure the safety

roximately one week  
espondent completed  
-volt distribution line  
ated entirely within  
along the southeast  
ant for a distance of  
also shows that, prior  
s, respondent had re-  
way to install poles,  
es on the property of  
ight-of-way limits of  
nstructed and is now  
thin the public high-  
property is required.  
lainant expressed his  
ross the parish prop-  
ties be placed under-

ere filed subsequently

ness for complainant,  
e of 1,166 feet along  
Ridge Pike; that the  
r, the sexton's house,  
; construction of the  
; witness also testified

that the school building, approximately 325 feet in length, fronting on Trooper Road, but offset therefrom by some 190 feet, comprises eight classrooms, offices and other school facilities, with a current enrollment of over 682 pupils of whom approximately 538 pupils are transported to and from the school by five school buses, which enter and leave the parish property by two double-lane driveways leading into Trooper Road.

Complainant's witness stated that a large macadamized parking area, located between the school building and Trooper Road, is utilized for the parking of automobiles of parishioners and others during mass and while attending parish and school meetings and social functions, and that during school hours the parking area is used for playground purposes. This witness also stated that school buses and the automobiles of parishioners and others enter and leave the parish property by passing under the electric line of respondent, that during certain hours, particularly after parish services, the automobiles are backed up by traffic on Trooper Road into the driveways on the property for periods of one-half hour or more, and that similar conditions occur at the end of the school day when the school buses are leaving the property and are compelled to stop under the electric line before entering traffic on Trooper Road.

According to the testimony of complainant's witness, the location of respondent's electric wires over walks and driveways used by school pupils, parishioners, and others as a means of ingress and egress to and from the parish property constitutes an unnecessary threat of danger and physical harm which could be eliminated if respondent's overhead facilities were placed underground. Witness for complainant explained that Trooper Road is a state highway and that a speed limit of 50 miles per hour is applicable thereto, which with present day traffic conditions could result in an accident involving respondent's poles along the parish property, thus causing the wires to fall and create a serious hazard to those persons using the walks and driveways leading to the parish buildings.

The testimony presented by complainant includes no expert testimony on technical requirements from the standpoint of public safety applicable to respondent's distribution line along Trooper Road, since it is complainant's position that respondent's overhead facilities along the parish property may be a perfectly safe overhead line insofar as overhead facilities can be safe, but that an underground line would be the safer type of construction at this particular location.

The principal witness for respondent, a registered electrical engineer having 35 years of experience in the design, construction, and operation of respondent's electric transmission and distribution lines, testified as to the necessity for the location of respondent's 33,000-volt distribution line along Trooper Road and the technical features of that portion of the line along the parish property. This witness stated that the choice of routes for this distribution line was controlled to a great extent by the location of a new substation (Fair Substation) recently constructed by respondent in order to meet the rapidly growing electric load requirements in the West Norriton area; that the line along Trooper Road, excepting that portion abutting the parish property, is located entirely on 22 abutting properties, the owners of which have granted to respondent the rights to install the line over their properties; that along the parish property the line is installed on poles and post-type insulators located entirely within the legal right-of-way limits of Trooper Road pursuant to highway occupancy permits issued by the State Highway Department. This witness also stated that the distribution line involved herein extends approximately  $1\frac{1}{2}$  miles along Trooper Road between Ridge Pike and Germantown Pike, and comprises one of two principal feeder lines supplying respondent's Fair Substation near Trooper Road and Germantown Pike, which location is the approximate center of the electric load in the West Norriton area.

According to respondent's engineer, the route selected for this line is the most direct, logical, and reasonable of several routes studied by respondent, and its decision to install overhead pole line facilities was the result of extensive studies by respondent's engineers of the nature of terrain, the semirural character of the Trooper Road neighborhood, the traffic and population density, the nature and uses made of the abutting properties, and the possible need for additional utility lines along Trooper Road. Based upon these and other considerations, respondent determined that an overhead line along Trooper Road would be the most practical, reasonable, and efficient type of construction from the public standpoint, and that such aerial facilities would provide the most economical means of connecting the Fair Substation with other parts of respondent's electric supply system.

The record shows that respondent considered the feasibility of an underground line on Trooper Road and the conditions to be met in order to install cables for 33,000-volt operation in underground conduit with provisions for adequate manholes for cable splicing and for suitable cable terminals on poles at each end of the underground line. Respondent's engineer explained that an underground line of

overhead facilities, and that respondent be ordered to locate its facilities underground in such manner as to insure the safety of all persons using complainant's property.

As noted hereinbefore, approximately one week after the filing of this complaint, respondent completed construction of the 33,000-volt overhead line entirely within the legal right-of-way limits of that portion of Trooper Road abutting complainant's property. Accordingly, occupancy of the public highway by respondent's overhead facilities constituted no unlawful taking of complainant's property as averred herein. The public location of respondent's overhead facilities by permission of the State Highway Department, effectively removes from complainant's control any matter relating to the operation and maintenance of such facilities, and as long as respondent's public utility operations are conducted with reasonable diligence and consideration so as not to adversely affect the safety and convenience of the traveling public and others utilizing said Trooper Road, respondent may not be required to remove or modify its facilities without a proper showing that continued occupancy of the public way by respondent will result in unsafe or hazardous conditions contrary to the public interest.

In regard to the principal allegation of this complaint; namely, that the location of respondent's overhead line will constitute an unnecessarily grave threat of danger and physical harm to school children and parishioners using complainant's property, it is noted that the record includes no expert testimony, on behalf of complainant, relative to the technical safety of respondent's facilities and that it is complainant's position that the overhead line along the parish property may be safe, but that an underground line would provide the safer type of construction at this location.

Examination of this record shows that respondent's overhead line along Trooper Road, and within said highway in front of the parish property, was designed, constructed and is now operating under safety criteria more stringent than the installation and maintenance standards prescribed by the National Electrical Safety Code. The record shows that, in the opinion of respondent's engineer, an overhead line installed in accordance with the provisions of the National Electrical Safety Code is clearly and definitely a safe installation, and that such over-

istered electrical engineer construction, and opera-  
l distribution lines, testi-  
respondent's 33,000-volt  
the technical features of  
erty. This witness stated  
a line was controlled to a  
station (Fair Substation)  
to meet the rapidly grow-  
Norriton area; that the  
rtion abutting the parish  
properties, the owners of  
s to install the line over  
erty the line is installed  
entirely within the legal  
nt to highway occupancy  
tment. This witness also  
in extends approximately  
ge Pike and Germantown  
eeder lines supplying re-  
d and Germantown Pike,  
f the electric load in the

oute selected for this line  
of several routes studied  
erhead pole line facilities  
ondent's engineers of the  
the Trooper Road neigh-  
the nature and uses made  
eed for additional utility  
and other considerations,  
ine along Trooper Road  
nd efficient type of con-  
that such aerial facilities  
s of connecting the Fair  
electric supply system.

ered the feasibility of an  
e conditions to be met in  
tion in underground con-  
es for cable splicing and  
h end of the underground  
; an underground line of

this type is subject to failure for many causes including electrolysis or corrosion, that damage to the conduit causing cable failure may result from contractors working in the highway where the under-ground line is located, and that when a breakdown occurs in such facilities, restoration of service requires far more costly repairs taking as much as 10 times longer than comparable repairs to an overhead line.

According to statements of respondent's engineer, underground construction of 1½ miles of line on Trooper Road would cost \$350,000, whereas the existing overhead line was constructed by respondent at a cost of \$50,000; and the cost of installing an underground line in front of the church property alone would have been \$60,000 as compared with respondent's actual cost of \$3,000 for that portion of the existing overhead line. In regard to the foregoing cost comparisons, respondent's engineer stated that the cost of underground installation on a system-wide basis would be of astronomical proportions and that similar excessive costs would be experienced by respondent if all over-head facilities in front of schools, playgrounds, and churches were placed underground.

Testimony by respondent's witness shows that the type of overhead pole line construction involved in this proceeding is used widely throughout the country, that over 900 miles of 33,000-volt overhead line is presently in operation throughout respondent's electric supply system, and that, in scores of locations, such overhead 33,000-volt lines are located adjacent to and over properties occupied by schools, playgrounds, and churches. In regard to the propriety of constructing overhead facilities at such locations, respondent's engineer stated that, during his many years of experience with the operation of respondent's transmission and distribution facilities, he could recall of no instances in which overhead lines have resulted in injury to school children or church-goers. Two witnesses for respondent, both electrical engineers, identified and described for the record a number of photographs submitted as respondent's exhibits herein showing 33,000-volt overhead facilities located adjacent to or across properties of public and private schools and churches, including ten schools and four churches in or near the Montgomery County area.

The instant complaint avers that the proposed location of respondent's overhead line "will constitute a taking of complainant's property without due process of law, in that said proposed location is unreasonable, arbitrary and capricious. . . ." The complaint requests that respondent be ordered to cease and desist from the installation of its

Y COMMISSION:

dered to locate its facilities.  
the safety of all persons

week after the filing of  
action of the 33,000-volt  
at-of-way limits of that  
ant's property. Accord-  
7 respondent's overhead  
omplainant's property as  
ndent's overhead facili-  
Department, effectively  
er relating to the opera-  
as long as respondent's  
reasonable diligence and  
e safety and convenience  
l Trooper Road, respons-  
y its facilities without a  
f the public way by re-  
onditions contrary to the

complaint; namely, that all constitute an unnecessary harm to school children. It is noted that the complaint, relative to the property and that it is common along the parish property would provide the safer

respondent's overhead line  
way in front of the parish  
now operating under safety  
and maintenance standards  
Code. The record shows  
an overhead line installed  
ational Electrical Safety  
tion, and that such over-

head facilities are considered to be equally as safe as an underground line from the standpoint of the public. This record indicates that, although overhead facilities are subject to failure for various causes including vehicular accidents involving the supporting structures or poles, such failures are very infrequent and have not occurred on any lines operated by respondent adjacent to or over properties occupied by schools, playgrounds, and churches.

Over the years, the Commission has recognized that the provisions of the National Electrical Safety Code constitute reasonable standards of safe construction and maintenance practices which have received universal acceptance throughout the electric utility industry. The Commission is cognizant that a certain degree of hazard to public safety exists under or near all electric lines and that such hazard cannot be entirely eliminated in all cases, but may be largely minimized to the extent practicable or necessary at those locations which require more stringent installation and maintenance practices in the interest of public safety. The Commission is also aware that it is not sufficient to provide against possible hazards in new construction only, since deterioration in materials of construction makes it essential that adequate safety be preserved by diligent periodic inspection and maintenance of all electric supply facilities, whether overhead or underground, in any area to which the public has access.

Although there can be no doubt from this record that complainant's action herein is compelled by the finest of motives, viz., the welfare and safety of the school children and the members of his parish, the Commission, nevertheless, is of the opinion that respondent's distribution line along the parish property does not present an unreasonable hazard to public safety by virtue of its overhead location. Accordingly, in view of the failure of complainant to show otherwise, or to present any expert testimony as to the technical safety of respondent's facilities, the Commission will make a finding that the instant complaint has not been adequately supported by the testimony and should be dismissed, and we will so order; THEREFORE,

IT IS ORDERED: That the complaint docketed at C. 17472, instituted by the Reverend John C. Larkin against Philadelphia Electric Company, respondent, be and is hereby dismissed.