
Garrett P. Lent

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File #: 207395

September 13, 2024

VIA ELECTRONIC FILING

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

**Re: Application of PPL Electric Utilities Corporation Filed Pursuant to 52 Pa. Code Chapter 57, Subchapter G, for Approval to (1) Construct The New Three Mile Island – Chanceford 500 kV Line And Chanceford – Peach Bottom 500 kV Transmission Line And (2) Rebuild the Existing Otter Creek – Conastone 230 kV Transmission Line For Future Double Circuit 500 kV Operations And The Rebuilt Chanceford – Doubs 500 kV Transmission Line And The Rebuilt Otter Creek – Conastone 500/230 kV Transmission Line, Located in Chanceford, East Hopewell, And Hopewell Townships In York County, Pennsylvania
Docket No. A-2024-**

Dear Secretary Chiavetta:

Enclosed, for filing on behalf of PPL Electric Utilities Corporation (“PPL Electric” or the “Company”), are the following:

1. The Application and the Attachments in support of the Application;
2. Direct Testimony in support of the Application, which are contained in a separately-bound volume; and
3. The Notice of Filing.

The associated \$350.00 filing fee has been paid by Post & Schell, P.C. as of the time of filing.

Rosemary Chiavetta
September 13, 2024
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Copies of the Application and accompanying Attachments, and Direct Testimony are being served by certified mail, return receipt requested upon the parties indicated on the Certificate of Service associated with the Application.

Copies of the Notice of Filing are being served by certified mail, return receipt requested upon the parties indicated on the Certificate of Service associated with the Notice of Filing.

Subject to the Pennsylvania Public Utility Commission's approval, the Project has a scheduled construction start date of July 2025 for the proposed high-voltage transmission line to meet an in-service date of June 2027.

If there are any questions concerning this matter, please contact me at the addresses or telephone numbers provided above.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Garrett P. Lent". The signature is fluid and cursive, with a large initial "G" and "L".

Garrett P. Lent

GPL/dmc
Enclosures

cc: Jordan Van Order (*via email only*)
Deb Backer (*via email only*)
Office of Consumer Advocate (*ra-oca@paoca.org*)
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 § 57.74(b).

VIA CERTIFIED MAIL: RETURN RECEIPT REQUESTED

Pennsylvania Bureau of Investigation and
Enforcement
Pennsylvania Public Utility Commission
Commonwealth Keystone Building 400
North Street
2nd Floor, Room-N201 Harrisburg,
Pennsylvania 17120
Attn: Alison Kaster

Pennsylvania Department of Environmental
Protection
400 Market Street
10th Floor Rachel Carson State Office
Building
Harrisburg, Pennsylvania 17101
Attn: Regional Permit Coordination Office

Pennsylvania Department of Transportation
Commonwealth Keystone Building
400 North Street, Fifth Floor
Harrisburg, Pennsylvania 17120
Attn: Donald J. Smith, Acting Chief Counsel

Pennsylvania Office of Consumer Advocate
555 Walnut Street
5th Floor Forum Place
Harrisburg, Pennsylvania 17101-1923
Attn: Patrick Cicero, Consumer Advocate

Pennsylvania Office of Small Business
Advocate
555 Walnut Street
1st Floor Forum Place
Harrisburg, Pennsylvania 17101
Attn: NazAarah Sabree, Small Business
Advocate

York County Conservation District
2401 Pleasant Valley Rd Suite #101 Room
#139
York, PA 17402
Attn: Jeff Hill, District Manager

York County Planning Commission
28 E Market Street, 3rd Floor
York, PA 17401
Attn: Felicia Dell, Director

York County Commissioners
28 E Market Street
York, PA 17401
Attn: Julie Wheeler, President

Chanceford Township Supervisors
33 Muddy Creek Forks Road
Brogue, PA 17309
Attn: Kent Heffner, Chairman

Chanceford Township Planning
Commission
33 Muddy Creek Forks Road
Brogue, PA 17309
Attn: John Shanbarger, Chairman

East Hopewell Township Supervisors
8916 Hickory Road
Felton, PA 17322
Attn: Dean Miller, Chairman

East Hopewell Township Planning
Commission
8916 Hickory Road
Felton, PA 17322
Attn: Melissa Hiller, Secretary

Hopewell Township Supervisors
3336 Bridgeview Road, PO Box 429
Stewartstown, PA 17363
Attn: Aaron R. Manifold, Chairman

Hopewell Township Planning Commission
3336 Bridgeview Road, PO Box 429
Stewartstown, PA 17363
Attn: Ann Yost, Chair

President of Metropolitan Edison Company
C/O Tori L. Giesler, Esq.
FirstEnergy Service Company
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P.O. Box 16001
Reading, PA 19612-6001

President of Mid-Atlantic Interstate
Transmission LLC
C/O Tori L. Giesler, Esq.
FirstEnergy Service Company
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P.O. Box 16001
Reading, PA 19612-6001

Daniel T Curran
13114 Collinsville Rd
Brogue, PA 17309

Date: September 13, 2024


Garrett P. Lent

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Application Of PPL Electric Utilities :
Corporation, Filed Pursuant To 52 Pa. Code :
Chapter 57 Subchapter G, For Approval To : Docket No. A-2024-_____
(1) Construct The New Three Mile Island – :
Chanceford 500 kV Transmission Line And :
Chanceford – Peach Bottom 500 kV :
Transmission Line And (2) Rebuild the :
Existing Otter Creek – Conastone 230 kV :
Transmission Line For Future Double :
Circuit 500 kV Operations As The Rebuilt :
Chanceford – Doubs 500 kV Transmission :
Line And The Rebuilt Otter Creek – :
Conastone 500/230 kV Transmission Line, :
Located In Chanceford, East Hopewell, And :
Hopewell Townships In York County, :
Pennsylvania :

APPLICATION OF PPL ELECTRIC UTILITIES CORPORATION

TO THE PENNSYLVANIA PUBLIC UTILITY COMMISSION:

PPL Electric Utilities Corporation (“PPL Electric” or the “Company”) hereby files, pursuant to 52 Pa. Code § 57.72, this Application requesting the Pennsylvania Public Utility Commission’s (“Commission”) approval to (1) construct approximately 1.4 miles of new double circuit 500 kilovolt (“kV”) transmission line (the “Three Mile Island – Chanceford 500 kV Transmission Line” and the “Chanceford – Peach Bottom 500 kV Transmission Line”) between the existing Three Mile Island – Peach Bottom 500 kV Transmission Line¹ to the proposed PPL Electric-owned 500 kV switchyard (“Chanceford Switchyard”), and (2) rebuild approximately 12

¹ Three Mile Island Substation is owned and operated by Mid-Atlantic Interstate Transmission (“MAIT”), a subsidiary of FirstEnergy. Peach Bottom Substation is owned and operated by PECO Energy Company (“PECO”), an Exelon Company.

miles of the existing single circuit Otter Creek – Conastone 230 kV Transmission Line² to a future double circuit 500 kV capacity (the “Chanceford – Doubs 500 kV Transmission Line” and the “Otter Creek – Conastone 500/230 kV³ Transmission Line”, jointly referred to as the “Chanceford – Doubs 500 kV Rebuilt Line”⁴). Collectively, the new and rebuilt double circuit transmission lines and the Chanceford Switchyard are referred to as the “Chanceford 500 kV Rebuild Project” or the “Project.” The Project is located between the existing Peach Bottom – Three Mile Island 500 kV Transmission Line and the Pennsylvania-Maryland border through Chanceford, East Hopewell, and Hopewell Townships in York County, Pennsylvania. This Project is a baseline project required to resolve reliability issues on the 500 kV and 230 kV transmission systems operated by PJM Interconnection, LLC (“PJM”).

The Project consists of (1) building a new transmission line that is less than 2 miles in length and (2) rebuilding an existing transmission line that will be located within existing transmission right-of-way (“ROW”)⁵ or on parcels owned in fee by PPL Electric. For these reasons, and as explained in its Direct Testimony and Attachments to the Application, PPL Electric

² The Otter Creek 230 kV Substation (“Otter Creek Substation”) is owned and operated by PPL Electric. Conastone Substation is owned and operated by Baltimore Gas and Electronic Company (“BGE”), an Exelon Company.

³ The rebuilt Otter Creek – Conastone 500/230 kV transmission line will initially continue to operate as the Otter Creek – Conastone 230 kV transmission line until load increases and the line is re-terminated into the proposed Chanceford 500 kV switchyard. Prior to the system conversion the line will maintain its current name (Otter Creek – Conastone 230 kV transmission line) and after the conversion it will be re-named to its final designation of Chanceford – Conastone 500 kV transmission line). PPL Electric is **not** seeking the Commission’s pre-approval to increase the voltage of this line to 500 kV at this time. PPL Electric will file an appropriate letter of notification pursuant to 52 Pa. Code § 52.72(d)(1)(iv) prior to increasing the voltage from 230 kV to 500 kV.

⁴ PPL Electric will be installing an electrical jumper connection between the Otter Creek – Conastone 230 kV Transmission Line and the future Chanceford – Doubs 500 kV Transmission Line. This jumper connection will be installed within the Pennsylvania section of transmission line and remain in place until the Chanceford – Doubs 500 kV circuit is ultimately ready for energization at its remote end (Doubs Substation in Maryland). The purpose of the jumper will be to operate and monitor both circuits of the transmission line (as the Otter Creek – Conastone 230 kV line segment), in an interim configuration, until ultimately forming the Chanceford – Doubs 500 kV Rebuilt Line at a later date.

⁵ While the Project contemplates widening existing transmission ROW, widening of the ROW is not required to complete the Project.

submits that its proposed route for the Project is reasonable when compared to other alternative routes that would require transmission facilities to be constructed where none currently exist. Indeed, any alternative route that is feasible would have greater adverse environmental impacts, considering the electric power needs driving the Project, the state of technology available and the available alternatives.

Subject to the Commission's approval, construction will begin in July 2025 to support an in-service date of June 2027. In support of this Application, PPL Electric states as follows:

I. INTRODUCTION AND OVERVIEW

1. This Application is filed by PPL Electric, a public utility that provides electric distribution, transmission, and provider of last resort services in Pennsylvania subject to the regulatory jurisdiction of the Commission.

2. PPL Electric's address is as follows:

PPL Electric Utilities Corporation
Two North Ninth Street
Allentown, Pennsylvania 18101

3. PPL Electric's attorneys are:

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

David B. MacGregor (I.D. # 28804)
Garrett P. Lent (I.D. #321566)
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17 North Second Street
12th Floor
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Voice: 717-731-1970
Fax: 717-731-1985
E-mail: dmacgregor@postschell.com
glent@postschell.com
nstobbe@postschell.com

PPL Electric’s attorneys are authorized to receive all notices and communications regarding this Application.

4. PPL Electric furnishes electric service to approximately 1.4 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. 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.

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

6. This Application includes the following accompanying attachments:

- Attachment 1 Necessity Statement;
- Attachment 2 Engineering Description;
- Attachment 3 Description of Right-of-Way;
- Attachment 4 PPL Electric Design Criteria and Safety Practices;
- Attachment 5 Landowners And Agencies List; and
- Attachment 6 52 Pa. Code § 69.3102 Notices.

7. Also accompanying this Application are the following written direct testimonies further explaining and supporting this Application:

PPL Electric Statement No. 1, Direct Testimony of Joseph B. Lookup. Mr. Lookup’s direct testimony will provide an overview of the Project and a discussion of the need for the Project, among other things.

PPL Electric Statement No. 2, Direct Testimony of Kyle Swatzenruber. Mr. Swatzenruber's testimony will discuss the Company's the engineering and design criteria of the Project, as well as PPL Electric's safety considerations, among other things.

PPL Electric Statement No. 3, Direct Testimony of Peter Sparhawk. Mr. Sparhawk's direct testimony will provide information regarding the Company's siting and environmental reviews and evaluation for the Project, among other things.

PPL Electric Statement No. 4, Direct Testimony of Austin Weseloh. Mr. Weseloh's direct testimony will provide background on the right-of-way ROW to be used for the Project and the Company's outreach to landowners, among other things.

8. This Application, including the accompanying Attachments and Statements, which are incorporated herein by reference, contains all of the information required by 52 Pa. Code §§ 57.72(c), 69.1101, 69.3102 – 69.3107.

II. NEED FOR THE PROJECT

A. TRANSMISSION PLANNING

9. PPL Electric has a responsibility to provide transmission assets and maintain them in a manner that is safe, reliable, and resilient to meet the needs of the electric system and the service expectations of its customers. To meet this duty, PPL Electric applies its transmission asset management planning procedure, which includes system performance and condition assessments. These performance and condition assessments identify system needs and prioritize projects based on several variables such as equipment age, condition, maintenance schedule, and impact on system reliability and performance to ensure a reliable electric grid and reasonable service to its customers.

10. PPL Electric engages in proactive planning and action to ensure that its system operates safely and reliably. This allows PPL Electric to identify future reliability problems and correct them before they occur. The system planning process is not designed to wait until a

violation actually occurs before taking measures to resolve it. Rather, the system planning process is designed to prevent violations from occurring in the first place.

11. As explained in Attachment 1 – Necessity Statement, robust transmission planning enables the transmission system to supply electricity to all customer loads in a reliable and economical manner.

12. PJM is a Federal Energy Regulatory Commission (“FERC”) approved Regional Transmission Organization charged with ensuring the reliability of the electric transmission system under its functional control and coordinating the movement of electricity in all or parts of thirteen states and the District of Columbia, including most of Pennsylvania. PPL Electric, an owner of transmission facilities in Pennsylvania, is a member of PJM and actively participates in the PJM transmission planning process.

13. In order to ensure reliable transmission service, PJM prepares an annual Regional Transmission Expansion Plan (“RTEP”)⁶ to ensure power continues to flow reliably to customers. The North American Electric Reliability Corporation (“NERC”), PJM, and transmission owner reliability criteria are used by PJM and the transmission owners to analyze the system and determine if specific transmission upgrade projects are needed to ensure long-term reliable electric service to customers.

14. When PJM's Reliability Analysis identifies a need to solve a reliability issue on electric transmission facilities, PJM opens a Proposal Window to solicit the submittal of potential solutions (i.e., reliability projects) to address those needs.

⁶ PJM’s RTEP process is currently set forth in Schedule 6 of PJM’s Amended and Restated Operating Agreement (“Schedule 6”). Schedule 6 governs the process by which PJM’s members rely on PJM to prepare an annual regional plan for the enhancement and expansion of the transmission facilities to ensure long-term, reliable electric service consistent with established reliability criteria. In addition, Schedule 6 addresses the procedures used to develop the RTEP, the review and approval process for the RTEP, the obligation of transmission owners to build transmission upgrades included in the RTEP, and the process by which interregional transmission upgrades will be developed.

15. The reliability projects that are selected through PJM’s Reliability Window are presented to stakeholders and recommended to the PJM Board of Managers (“PJM Board”) for approval. If approved, such reliability projects are included in the RTEP as Baseline Projects.

16. Importantly, pursuant to Schedule 6 of PJM’s Amended and Restated Operating Agreement, after the PJM Board approves a proposed reliability project, the successful project proponent is obligated to complete the project once PJM and the successful entity execute a Designated Entity Agreement or a Construction Responsibility Letter, which specifically designates the entity or entities having construction responsibility for the Project.

17. As explained in greater detail below and in Attachment 1 – Necessity Statement, this Project is necessary to address transmission reliability issues associated with load growth in the APS and Dominion service territories of the PJM system. Specifically, PJM has identified a number of transmission line and transformer overloads, voltage deficiencies, and non-convergent contingencies that will result from this load growth without the rebuild and deployment of transmission infrastructure, including the Project.

18. The Project as proposed represents a cost efficient and effective means of resolving this issues, as compared to other alternatives. Therefore, and for the reasons more fully explained below, the Commission should approve the siting and construction of the high voltage (“HV”) transmission lines contemplated by the Project.

B. EXISTING SYSTEM

19. PJM operates and coordinates an extensive 500 kV and 230 kV BES that is owned by multiple utilities through all or parts of Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia, and the District of Columbia. This 500 kV and 500 kV system allows for regional transfer of power to supply load throughout the PJM Area.

20. PPL Electric 230 kV and 500 kV transmission lines are part of the PJM interconnection.

21. A map of the existing system configuration is provided as Figure 1-1 in Attachment 1 – Necessity Statement to this Application.

C. DEFINITION OF THE PROBLEM

22. In February 2023, PJM opened a Proposal Window to solicit proposals to address transmission reliability issues associated with load growth in the APS and Dominion service territories of the PJM footprint. PJM identified numerous transmission line and transformer overloads, voltage deficiencies, and non-convergent contingencies that would result from this load growth.

23. As a part of its Proposal Window, PJM sought proposals that would address baseline violations for the 2027-2028 scenario associated with: (1) local constraints that would result directly from serving growing loads in the APS and Dominion zones, through the existing 500 kV networks and into the points of delivery; (2) regional constraints resulting from imports into load center areas to serve growing loads; and (3) necessary reactive power reinforcements that would be needed to address the reactive power needs of the system for the 2027-2028 baseline scenario.

24. PJM received 72 proposals to address the identified reliability concerns, which were separated into three clusters, i.e., East, West and Southern. The East cluster is where the Project is located.

25. PJM then created scenarios consisting of multiple proposals to be evaluated based on performance, scalability, impact, validated cost, risks, and efficiencies. After evaluation and review with stakeholders, to address needs for the East cluster, PJM selected a number of proposals

including PPL Electric's Proposal 374, which are detailed in Attachment 1 – Necessity Statement.⁷ Proposal 374 is the Project that is the subject of this matter.

26. Specific to PJM's analysis of the East cluster, six proposing entities submitted over 15 proposals to address the identified violations as shown in Image 1-1 of Attachment 1 – Necessity Statement. During the window evaluations, PJM confirmed the need for regional and local reinforcements into the BGE system, along with regional reinforcements between the existing Peach Bottom Substation and northern Virginia.

27. PPL Electric submitted one proposal in the East cluster assessment that was considered by PJM, i.e., Proposal 374. PPL Electric Proposal 374 involved (1) bifurcating the existing Three Mile Island – Peach Bottom 500 kV Transmission Line in Chanceford Township, York County, (2) installing a new two bay 500 kV switchyard, and (3) rebuilding the existing Otter Creek – Conastone 230 kV Transmission Line to double circuit design with a 500 kV circuit and a 230 kV circuit.

28. PJM evaluated every proposal submitted for the East cluster individually, as well as various combinations of the proposals and components to identify the more efficient or cost-effective solution. PJM specifically evaluated each proposal submitted based upon: (1) the proposal's ability to enhance the east to west bulk power transfers; (2) the proposal's ability to support the load deliverability and reliability needs for the BGE system; and (3) the proposal's ability to support the additional load demands of the APS and northern Virginia transmission systems. After narrowing the proposals to the top eight, PJM then completed a detailed constructability review as shown in Image 1-2 of Attachment 1 – Necessity Statement.

⁷ The PJM 2022 RTEP Window 3 Reliability Analysis Report can be found at:
<https://pjm.com/-/media/committees-groups/committees/teac/2023/20231205/20231205-2022-rtep-window-3-reliability-analysis-report.ashx>

29. After the evaluation and review with stakeholders, in April 2024 PJM selected the “PJM Combination – 500 kV Scenario” as the preferred solution, which included the Project. This scenario provided the needed reliability reinforcements with the least amount of infrastructure development as compared to alternatives and provided a much higher reliability margin as compared to alternatives. Importantly, this scenario is lower cost and involves developing fewer facilities than other alternatives that would resolve the reliability issues.

30. Indeed, the PJM Combination – 500 kV Scenario offers full utilization of existing ROWs, alleviating limitations in the historically constrained Peach Bottom – Conastone 500 kV Transmission Line corridor. The PJM Combination – 500 kV Scenario proposal also addresses the load deliverability needs into the BGE system which is further exacerbated by the deactivation of key power plant(s) in the BGE zone.

D. THE PROJECT IS NEEDED TO ADDRESS THE RELIABILITY CONCERNS IDENTIFIED BY PJM

31. The Project is necessary to address transmission reliability issues associated with load growth in the APS and Dominion service territories of the PJM system. As detailed in the Attachment 1 – Necessity Statement, PJM has identified a number of transmission line and transformer overloads, voltage deficiencies, and non-convergent contingencies that will result from this load growth. PJM sought proposals that develop robust, holistic and expandable solutions that address these 2027-28 baseline violations.

32. While the Otter Creek – Conastone 230 kV Transmission line will be designed for future 500 kV operations as a part of its rebuild, in anticipation of the need to increase its voltage to 500 kV at a later time, it will initially be operated at 230 kV. PPL Electric is **not** seeking the Commission’s pre-approval to increase the voltage of this line to 500 kV at this time. PPL Electric

will file an appropriate letter of notification pursuant to 52 Pa. Code § 52.72(d)(1)(iv) prior to increasing the voltage from 230 kV to 500 kV.

33. The Project was ultimately reviewed as a part of the “East Cluster” of the PJM 2022 RTEP Window 3 Reliability Analysis Report.⁸ In April 2024, PJM selected the PJM Combination – 500 kV Scenario as the preferred solution, which included PPL Electric’s proposal 374. The PJM Combination – 500 kV Scenario offers the needed reliability reinforcements with the least amount of infrastructure development and with much higher reliability margin compared the other proposals, which are both of higher cost and involves developing a significantly more facilities.

34. PJM and PPL Electric are working collectively to execute a Designated Entity Agreement for PPL Electric to build the proposed Chanceford Switchyard (PJM Upgrade B3800.1), rebuild the existing Otter Creek – Conastone 230 kV Transmission Line as double-circuit 500 kV transmission lines (Chanceford – Doubs 500 kV Transmission Line and Otter Creek – Conastone 500/230 kV Transmission Line) from the proposed Chanceford Switchyard to the Pennsylvania-Maryland border (PJM Upgrade B3800.3), and construct new double circuit 500 kV transmission lines (Three Mile Island – Chanceford 500 kV Transmission Line and Chanceford – Peach Bottom 500 kV Transmission Line) from existing MAIT ROW to Chanceford Switchyard (PJM Upgrade B3800.53). PPL Electric’s required project completion date will be determined pursuant to Schedule 6 of PJM’s Amended and Restated Operating Agreement, and will be stated in the executed Designated Entity Agreement.

⁸ The PJM 2022 RTEP Window 3 Reliability Analysis Report can be found at:
<https://pjm.com/-/media/committees-groups/committees/teac/2023/20231205/20231205-2022-rtep-window-3-reliability-analysis-report.ashx>

III. DESCRIPTION OF THE PROPOSED TRANSMISSION LINE

A. OVERVIEW OF THE PROPOSED PROJECT

35. To address the issues described above, PPL Electric has proposed to (1) construct the new Three Mile Island – Chanceford 500 kV Transmission Line and the Chanceford – Peach Bottom 500 kV Transmission Line between the existing Three Mile Island – Peach Bottom 500 kV Transmission Line⁹ to the proposed Chanceford Switchyard, and (2) rebuild approximately 12 miles of the existing single circuit Otter Creek – Conastone 230 kV Transmission Line¹⁰ to the Chanceford – Doubs 500 kV Transmission Line and the Otter Creek – Conastone 500/230 kV¹¹ Transmission Line.

36. The new Three Mile Island – Chanceford 500 kV Transmission Line and the Chanceford – Peach Bottom 500 kV Transmission Line will be approximately 1.4 miles in length.

37. The rebuild of the existing single circuit Otter Creek – Conastone 230 kV Transmission Line to the Chanceford – Doubs 500 kV Transmission Line and the Otter Creek – Conastone 500/230 kV Transmission Line will be approximately 12 miles in length.

38. The Project will be located in Chanceford, East Hopewell, and Hopewell Townships in York County, Pennsylvania. The Chanceford Switchyard will be located in Chanceford Township.

39. A detailed map of the proposed Project, including the new and rebuilt structure locations, is provided in Figure 3-1 in Attachment 3 – Description of the Project Area.

⁹ See note 1, *supra*.

¹⁰ See note 2, *supra*.

¹¹ See note 3, *supra*.

40. There is currently no pending litigation regarding environmental matters related to the Project. However, as explained below, there are related proceedings to the Project that have been contemporaneously filed with this Application at the Commission.

B. ENGINEERING DESCRIPTION

41. PPL Electric will complete the contemplated new construction and rebuild of the existing facilities as follows:

Three Mile Island – Chanceford and Chanceford – Peach Bottom 500 kV Transmission Lines

42. PPL Electric will construct the double circuit Three Mile Island – Chanceford and Chanceford – Peach Bottom 500 kV transmission lines from the existing Three Mile Island – Peach Bottom 500 kV Transmission Line to the proposed Chanceford Switchyard. MAIT will be responsible for breaking the existing 500 kV transmission line so the PPL Electric-constructed transmission lines could be tied into the 500 kV grid. PPL Electric believes the existing 500 kV transmission line consists of double bundle 2493 ACAR¹² with dual alumoweld OHGW¹³. From the interconnection point, PPL Electric will be using triple bundle 1590 ACSR¹⁴ and dual 19-#9 Alumoweld shield wires. The new double circuit 500 kV transmission lines will continue south for 1.4 miles from the interconnection point to the proposed Chanceford Switchyard.

43. To build the double circuit Three Mile Island – Chanceford and Chanceford – Peach Bottom 500 kV Transmission Lines PPL Electric will install four (4) two pole angle structures each carrying one circuit and three (3) single pole double circuit structures. The structures will range from 50 to 197 feet, with an average height of approximately 71 feet. The spans between

¹² “ACAR” stands for aluminum conductor alloy reinforced.

¹³ “OHGW” stands for overhead ground wire.

¹⁴ “ACSR” stands for aluminum conductor steel reinforced.

the structures will be approximately 975 feet. The ROW varies in width from approximately 150 feet to approximately 325 feet wide.

Rebuilt Chanceford – Doubs 500 kV and Otter Creek – Conastone 500/230 kV Transmission Lines

44. From the existing Otter Creek Substation, PPL Electric will run single bundle 1590 ACSR for several spans until it reaches the proposed Structure 2, where it will transfer to triple bundle 1590 ACSR conductor. This section will also carry a de-commissioned dual 48 count OPGW¹⁵, acting as a shield wire. The OPGW traffic previously carried on this section will then be routed through the Chanceford Switchyard and then into the existing Otter Creek Substation on different cables.

45. The rebuilt Chanceford – Doubs 500 kV Transmission Line will utilize triple bundle 1590 ACSR and dual 48 count OPGW. This will be on shared structures with the rebuilt Otter Creek – Conastone 500/230 kV Transmission Line from the Chanceford Switchyard to the Pennsylvania-Maryland border.

46. The existing Otter Creek – Conastone 230 kV Transmission Line currently utilizes a total of 62 structures (shown in **Figure 3-1** in **Attachment 3**) comprised of: 60 custom steel poles on foundations with an average height of 145 feet; and 2 two-pole angle structures with an average height of 145 feet.

47. To complete the rebuilt Otter Creek – Conastone 500/230 kV Transmission Line, PPL Electric will: (1) replace 57 existing steel monopole structures with 57 new steel monopole structures; (2) replace one existing two pole structure with a three pole structure 230 kV single circuit; (3) replace one existing steel monopole structure with a three pole structure 230 kV single circuit; and (4) install two new double circuit custom poles on the Chanceford Switchyard parcel.

¹⁵ “OPGW” stands for optical ground wire.

The structures will range from 50 to 197 feet, with an average height of approximately 71 feet. The spans between the structures will be approximately 975 feet. The ROW varies in width from approximately 150 feet to approximately 325 feet wide.

48. In total, PPL Electric will install 60 new foundation structures and remove 62 existing foundation structures. The existing structures were originally designed for double circuit 230 kV operation, while the new structures are designed for double circuit 500 kV operation. All new structures will be weathering steel monopoles and will be installed on concrete foundations. All structures will comply with NESC and PPL Electrical clearance requirements.

49. All new rebuilt structures will be located entirely within the existing right-of-way and within a reasonable distance from the existing structures, typically less than 50 feet away from the existing structures. One new structure was required to assure that clearance requirements between the transmission line and grain bin could be achieved.

50. All new structures (i.e., new structure locations that are not within the existing ROW) will be located entirely on PPL Electric-owned properties for the Chanceford Switchyard and Otter Creek Substation.

51. A detailed engineering description is provided in **Attachment 2 – Engineering Description**.

IV. ALTERNATIVES AND SITING REVIEW

A. OVERVIEW OF SITING CONSIDERATIONS

52. The Chanceford 500 kV Project will require PPL Electric to (1) site and construct 1.4 miles of the new Three Mile Island – Chanceford 500 kV Transmission Line and the Chanceford – Peach Bottom 500 kV Transmission Line, and (2) rebuild approximately 12 miles of the existing single circuit Otter Creek – Conastone 230 kV Transmission Line to the Chanceford

– Doubs 500 kV Transmission Line and the Otter Creek – Conastone 500/230 kV Transmission Line.

53. Unlike many full siting applications before the Commission, the Project involves (1) constructing a new HV transmission line within existing ROW and (2) rebuilding an existing line within existing ROW. As explained in Attachment 3 – Project Area Description, each aspect of the Project will take place predominantly within existing transmission line ROW and/or upon PPL Electric-owned parcels of land. Moreover, while the Company intends to widen existing ROW along various portions of the line, such widening is not required to complete the Project and PPL Electric has secured all necessary additional easements and rights to complete such widening.

54. Only the 1.4 mile segment of Project related to the new Three Mile Island – Chanceford 500 kV Transmission Line and the Chanceford – Peach Bottom 500 kV Transmission Line requires the siting and construction of HV transmission lines in new ROW (i.e., ROW parallel to the existing ROW for the Manor – Otter Creek 230 kV Transmission Line). Under 52 Pa. Code § 57.72(d)(vi), a letter of notification may be submitted in lieu of an application for “[a]n HV line having a proposed route of 2 miles or less.” 52 Pa. Code § 57.72(d)(1)(vi). “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 impacts, this regulation raises the presumption that an HV line less than two miles in length... has a minimum adverse environmental impact.” *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*”) (emphasis added).

55. In addition, the remaining 12 mile segment of the Project related to the rebuild of the existing single circuit Otter Creek – Conastone 230 kV Transmission Line to the Chanceford

– Doubs 500 kV Transmission Line and the Otter Creek – Conastone 500/230 kV Transmission Line can be constructed within existing transmission line ROW or on PPL Electric-owned parcels. Under 52 Pa. Code § 57.72(d)(1)(i), a letter of notification may be submitted in lieu of an application for “[a]n 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.” 52 Pa. Code § 57.72(d)(1)(i) (emphasis added). The Commission has previously concluded that where a transmission line “will be constructed entirely on existing ROW...consideration of an alternative route is unnecessary.” *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. 6 (Order entered Aug. 14, 2019) (“*Breinigsville-Alburtis Order*”). Similarly, a siting study is not necessary where “any alternative route would require the location of transmission lines where none presently exist; in this regard, the existing ROW would have fewer environmental impacts and constitute the preferred ROW in comparison to other reasonable alternatives.” *Application Of PPL Electric Utilities Corporation, Filed Pursuant To 52 Pa. Code Chapter 57 Subchapter G, For Approval to Rebuild The Existing Summit-Lackawanna #1 And #2 230 kV Transmission Lines Connecting the Summit 230-69 kV Substation and The Lackawanna 500-230-69 kV Substation in Lackawanna County, Pennsylvania*, Docket Nos. A-2022-3030969 and A-2022-3031013, at p. 32 (Initial Decision dated Nov. 22, 2022), *adopted as final without modification*, Docket Nos. A-2022-3030969 and A-2022-3031013 (Order entered Dec. 23, 2022).

56. As explained in Attachment 3 – Project Area Description, any feasible alternative route for the Project that would address the needs identified in the manner required to comply with the PJM Combination – 500 kV Scenario would require the location of HV transmission facilities where none presently exist and ultimately result in greater environmental impacts than the route proposed for the Project. Importantly, part of its competitive FERC Order 1000 Transmission Solicitation window in 2022, PJM solicited solutions to address the contingency loss of key 500 kV transmission lines. Seventy-two proposals, including 50 greenfield solutions comprising new transmission lines, were submitted and reviewed by PJM. PJM’s review of the proposals included whether the proposed project utilized existing facilities/ROW, scoring the use of existing facilities/ROW as a benefit over new facilities/ROW. PPL Electric’s proposal for the Project was selected as the most appropriate solution partly because it primarily utilized existing facilities and ROW, limiting new impacts.

57. Moreover, the Project in part involves rebuilding existing HV transmission lines for which PPL Electric conducted a siting and routing analysis (i.e., the Otter Creek – Conastone 230 kV Transmission Line). PPL Electric investigated potential alternative routes related to the Otter Creek – Conastone 230 kV Transmission in 2011 at Docket No. A-2011-2228595. The goal of the alternative siting analysis was to determine whether an alternative route for this transmission line could be identified which provided fewer social, environmental, engineering, and economic impacts. The alternative siting analysis involved a comprehensive review of Geographic Information Systems (“GIS”) data sets and aerial photography; conducting field reviews; and subsequently identifying and evaluating potential alternative routes. Results of the alternative analysis determined that there were no feasible alternative routes that would cause fewer social, environmental, engineering, and economic impacts than the existing route. PPL Electric submits

that the same analysis holds true today based upon its engagement with local stakeholders and review and analysis of the project area conducted as a part of this Application.

58. As a part of this Application, PPL Electric has supplied information sufficient to satisfy the Commission’s requirements under 52 Pa. Code § 57.72(c)(7)-(11), as explained below and in Attachment 3 – Project Area Description and the Direct Testimony of Peter Sparhawk (PPL Electric Statement No. 3). PPL Electric has conducted environmental studies within the existing corridor to support construction permitting. However, PPL Electric has not undertaken a siting analysis identifying alternative routes for this Project. Any alternative route would require the location of substantially more HV transmission lines where none presently exist; in this regard, the proposed ROW would have fewer environmental impacts and constitute the preferred ROW in comparison to other reasonable alternatives.

B. PROJECT AREA DESCRIPTION

1. Land Use

59. PPL Electric evaluated the existing land uses on the PPL Electric-owned properties and within 0.25 mile (1,320 feet) of the new 500 kV and existing 230 kV transmission lines. This broader area was reviewed to provide a sense of the landscape in which the Project is located. Land uses were determined based on the United States Geological Survey (“USGS”) 2021 National Land Cover Database (“NLCD”).

60. Assessment of the data shows that agricultural areas are the dominant land use, accounting for approximately two-thirds (66 percent) of the review area, with the primary component being cultivated crops. Forested area bordering the Project ROW accounts for approximately 25 percent of the review area. Low to moderate density development and associated open space is noted across approximately 9 percent of the review area.

61. Impacts to land use are anticipated to be minimal because the Project will be constructed entirely within existing or newly acquired rights-of-way and on PPL Electric's property for the proposed Chanceford Switchyard and existing Otter Creek Substation. The Project will be accessed by using the surrounding state and secondary roads at locations where they intersect the ROW. A few temporary access roads will be necessary outside the ROW to reach several structure locations. Where temporary access roads outside the ROW are necessary, PPL will obtain additional land rights from the property owners, as needed. PPL Electric will use and update previously established access roads within the ROW for construction to the extent practical to further reduce interference with existing land uses.

62. During evaluation for State-owned lands, none were identified along the Project ROW. As shown on Figure 3-1, the majority of the Project crosses York County agricultural conservation easements ("ACEs") and agricultural security areas ("ASAs"). Specifically, the existing Otter Creek – Conastone 230 kV Transmission Line ROW crosses 18 ACEs and 33 ASAs. The Project proposes installing new structures near existing structures within the existing Otter Creek – Conastone 230 kV Transmission Line; therefore, minimal impacts to the York County ACEs and ASAs are anticipated.

63. The proposed Chanceford Switchyard crosses one ACE and two ASAs. Of these, the ACE and one of the ASAs are currently crossed by the existing Otter Creek – Conastone Transmission Line. The proposed Three Mile Island – Chanceford 500 kV and Chanceford – Peach Bottom 500 kV transmission lines cross two ACEs and four ASAs. PPL Electric is coordinating with the York County Conservation District to minimize impacts for the Project.

64. One registered Federal Aviation Administration ("FAA") private airstrip, the Draco airport, is located approximately 0.5 mile east of the Project near the intersection of Draco Road

and Woolen Mill Road. Draco Airport is a turf airstrip that is permitted for use of ultra-light aircraft. Additionally, the Baublitz Airport is located approximately 0.8 miles west of the Project on Muddy Creek Forks Road. The Baublitz Airport is classified as a public commercial airport by the FAA. The closest major commercial airport, the Lancaster Airport, is located approximately 19 miles northeast of the Project.

65. PPL Electric does not anticipate any interference with airport operations since the Project consists of electrical facilities of similar height as the existing facilities. However, PPL Electric will comply with any applicable requirements of the FAA.

2. Cultural Resources

66. No known archaeological resources are located within 0.5 mile of the Project. Two previously recorded historic districts and 12 previously recorded architectural sites were identified within 0.5 mile of the Project, as shown in Table 3-1 of Attachment 3 – Project Area Description.

67. The Project proposes upgrading the existing Otter Creek – Conastone 230 kV Transmission Line by replacing current structures to double circuit 500 kV capacity. The new structures will generally look similar to the existing towers but will be approximately 20 to 30 feet taller, and include an additional circuit. In addition, PPL Electric is seeking to acquire additional voluntary ROW (25 feet on both sides of the current 150-foot-wide ROW) to enhance electric reliability, prevent potential impacts from danger trees, and reduce the number of structures by creating longer spans, where possible. Therefore, no significant impacts are anticipated for the only NRHP-listed resource or any other known architectural resources identified for the Project.

68. PPL Electric is in the initial stage of coordination with the Pennsylvania State Historic Preservation Office (“SHPO”) of the Pennsylvania Historical and Museum Commission (“PHMC”) for the construction of the double circuit 500 kV line rebuild. This coordination is required as part of the approval process necessary to construct the Project and will be completed

in the near future. Based upon the response provided by PHMC, PPL Electric will perform any reviews and field survey/sampling work required to avoid, minimize, and mitigate impacts to archaeological or historic architectural resources that may be located within the Project area.

3. Natural Features

69. Environmental factors reviewed for the Project included unique natural features, soils, waterways, wetlands, 100-year floodplains, vegetation, and threatened and endangered species.

70. Core habitat for the North Branch Muddy Creek Natural Heritage Area (“NHA”) was identified for the Project area, which is explained in further detail below. No additional unique geological, scenic, or natural areas are located within the Project review area.

71. Erosion and sedimentation control plans will be developed and implemented for the Project that will minimize the displacement of soils. These plans will require prior approval from the York County Conservation District. National Pollutant Discharge Elimination System (“NPDES”) permits will be obtained from the Pennsylvania Department of Environmental Protection (“PADEP”), as needed. Any conditions of the NPDES permit will be adhered to as part of the construction process. As such, impacts to local soil resources are anticipated to be minimal.

72. The existing Otter Creek – Conastone 230 kV Transmission Line spans 14 mapped waterways as it extends from the Otter Creek substation in the northeast to the Pennsylvania-Maryland state border in the southwest. In addition, the new Three Mile Island – Chanceford 500 kV and Chanceford – Peach Bottom 500 kV transmission lines will cross one (1) mapped waterway. These mapped waterways include South Fork Otter Creek, Leibs Creek, North Branch Muddy Creek, West Branch Toms Run, as well as two UNTs of Leibs Creek, two UNTs of North Branch Muddy Creek, four UNTs of South Branch Muddy Creek, three UNTs of West Branch Toms Run. Table 3-2 of Attachment 3 – Project Area Description summarizes the PADEP Chapter

93 designated use classifications and special PFBC designations of the streams identified within the Project area along with their locations on Figure 3-1 of Attachment 3 – Project Area Description.

73. The streams identified are spanned by the existing Otter Creek – Conastone 230 kV Transmission Line and will be spanned by the Project. Additionally, the proposed Three Mile Island – Chanceford 500 kV and Chanceford – Peach Bottom 500 kV transmission lines will span South Fork Otter Creek. No permanent impacts to these streams are anticipated since no new culverts or bridges will be required. Construction activities will be conducted using an approved erosion and sedimentation control plan to minimize the effects of stormwater runoff. PPL Electric will obtain all approvals and permits necessary for the construction of the Project and will comply with any conditions placed on those permits.

74. Based on review of the U.S. Fish and Wildlife Service (“USFWS”) National Wetlands Inventory (“NWI”), the existing Otter Creek – Conastone 230 kV Transmission Line ROW crosses two Palustrine, Emergent, Persistent, Temporarily Flooded (PEM1A) wetlands; one Palustrine, Emergent, Phragmites australis/Forested, Broad-Leaved Deciduous, Temporarily Flooded (PEM5/FO1A) wetland; four Palustrine, Emergent, Phragmites australis, Temporarily Flooded (PEM5A) wetlands; seven Palustrine, Forested, Broad-Leaved Deciduous, Temporarily Flooded (PFO1A) wetlands; and two Palustrine, Unconsolidated Bottom, Permanently Flooded, Diked/Impounded (PUBHh) wetlands. The proposed Three Mile Island – Chanceford 500 kV and Chanceford – Peach Bottom 500 kV transmission lines cross one PFO1A wetland.

75. The NWI only provides a general overview of the potential wetlands that may be located within an area. For federal and state permitting purposes, the wetlands and waterways

within the Project area have been delineated, surveyed, and illustrated according to regulatory standards.

76. Per PADEP Chapter 105 (Dam Safety and Waterway Management) regulations, wetlands located in or along the floodplain of a wild trout stream or waters listed as Exceptional Value (“EV”) and the floodplain of streams tributary thereto, are to be considered EV wetlands (25 Pa. Code § 105.17 1(iii)). PPL Electric will avoid impacts to wetlands and streams where possible by aerially spanning these features. PPL Electric will obtain all necessary permits from the PADEP and the United States Army Corps of Engineers and will comply with all of the terms and conditions placed on those permits.

77. The National Flood Hazard Layer (“NFHL”) for Pennsylvania was obtained through the Pennsylvania Spatial Data Access (“PASDA”) database and analyzed for 100-year floodplains within the Project area and surrounding landscape. The NFHL data incorporates all Flood Insurance Rate Map (“FIRM”) databases published by the Federal Emergency Management Agency (“FEMA”), and any Letters of Map Revision (“LOMRs”) that have been issued against those databases since their publication date.

78. The existing Otter Creek – Conastone 230 kV Transmission Line spans the 100-year floodplains associated with several streams along the alignment. Minimal impacts to floodplain areas or floodways are anticipated by the proposed Project activities, since the existing and proposed structures are located entirely outside 100-year floodplain areas. PPL Electric will coordinate with local agencies for regulated floodplain activities.

79. Vegetative cover bordering the majority of the Project’s ROW has been influenced by agricultural and rural residential development. Large areas of the natural vegetative cover in these sections have been removed for conversion to farms and pastures. Woodlands are also

predominant, with larger, more contiguous areas located in proximity to major waterways that incise the landscape such as Leibs Creek, North Branch Muddy Creek, and West Branch Toms Run. Smaller areas of forested cover are present as fragmented woodlots, which provide screening between residential and agricultural properties.

80. Additional vegetation management will be required to modify the existing single-circuit Otter Creek – Conastone 230 kV ROW for double-circuit 500/230 kV operation. The existing ROW is currently maintained in accordance with PPL Electric’s Vegetation Management Program. Only minimal vegetation removal is anticipated because the majority of the Project is being completed within the existing PPL Electric 150-foot-wide ROW, which is currently cleared of trees for safety and maintenance reasons. PPL Electric will seek to acquire an additional 25 feet of ROW along both sides of the existing transmission line corridor on a voluntary basis only. In areas where vegetation management is required, PPL Electric will apply its “*Specifications for Transmission Vegetation Management LA-79827*” to minimize any potential impacts.

81. The Natural Areas Inventory for York County, prepared by the Pennsylvania Natural Heritage Program (“PNHP”), identified one (1) State ranked site within the Project area. The North Branch Muddy Creek Natural Heritage Area (“NHA”) is a large site located between Delta Road (State Route 74) and High Rock Road, which includes floodplains and adjacent areas of North Branch Muddy Creek drainage system. The species of concern inhabiting these shallow wetlands require specific plant communities within a matrix of open canopied habitats.

82. Project-related construction activities will occur within the boundary of the North Branch Muddy Creek NHA, as it bisects a 0.5-mile radius of the existing Otter Creek – Conastone 230 kV Transmission Line between Structure 1-6 and Structure 5-4. The Pennsylvania Department

of Conservation and Natural Resources (“DCNR”) recommends that the floodplain is maintained as a wetland complex composed of multiple types of wetlands with both open and closed canopies.

4. Threatened and Endangered Species

83. Review of the threatened and endangered species that may be encountered within and along the Project includes evaluation of the natural areas identified in the Project area, as well as the Project-related Pennsylvania Natural Diversity Inventory (“PNDI”) responses provided by federal and state agencies that have protective jurisdiction over the surrounding animals, plants, and ecological communities.

84. A Project Environmental Review of the PNDI database was conducted for both the existing Otter Creek – Conastone 230 kV Transmission Line ROW (PNDI-806386) as well as the proposed Chanceford Switchyard and the new Three Mile Island – Chanceford 500 kV and Chanceford – Peach Bottom 500 kV transmission lines (PNDI-812318). The combined PNDI results indicated Potential Impacts with the Pennsylvania Game Commission (“PGC”), Pennsylvania DCNR, Pennsylvania Fish and Boat Commission (“PFBC”), and the USFWS. As such, PPL Electric initiated additional coordination with the state and federal agencies.

85. Based on the nature of the Project, the immediate location, and their detailed resource information, the PGC indicated that no impact is likely to species or resources of concern as a result of the Project. Therefore, no additional coordination with the PGC is required for the Project.

86. The PFBC noted that except for occasional transient species, any rare, candidate, threatened or endangered species under their jurisdiction are not known to exist in the vicinity of the Project area. Therefore, no additional coordination with the PFBC is required for the Project.

87. Based on a detailed PNDI review, the DCNR determined potential impacts to the following state listed species: umbrella magnolia (*Magnolia tripetala*), a state threatened species;

lobed spleenwort (*Asplenium pinnatifidum*), a state rare species; plain ragwort (*Packera anonyma*), a state rare species; nodding trillium (*Trillium cernuum*), a proposed state threatened species; and Lion's foot (*Nabalus serpentaria*), a proposed state threatened species. The DCNR requested that botanical surveys be performed by a qualified surveyor for the above-listed species during their appropriate survey window (May to October). If preferred habitat does not exist on site, a survey may not be necessary. The DCNR also requested a habitat assessment report for the Project, which describes the current land cover, habitat types, and species found on-site. Currently, PPL Electric is conducting botanical studies, reporting, and administrative activities for the Project area between Hight Rock Road and Muddy Creek Forks Road, per detailed consultation with the DCNR. PPL Electric will provide copies of the DCNR clearance once the survey window is complete in October.

88. In 2011, PPL Electric previously conducted a Phase I Bog Turtle Survey for the Conastone – Otter Creek 230 kV transmission line rebuild project per USFWS guidance. The survey report, which covered areas within 300 feet of the existing 150-foot ROW, was provided to USFWS on January 15, 2013. In their response, dated February 14, 2013, the USFWS determined that the effects of the Conastone – Otter Creek 230 kV transmission line rebuild project on the bog turtle are insignificant or discountable. As a result of the updated PNDI obtained for the Chanceford 500 kV Rebuild Project, PPL Electric reinitiated coordination with USFWS on March 5, 2024. The updated USFWS response indicated that no changes were noted for the transmission line rebuild portion of the Chanceford 500 kV Rebuild Project since their previous correspondence in February 2013. Additionally, PPL is currently performing a Phase II Bog Turtle Survey for the proposed Otter Creek Switchyard and will provide updated correspondence from USFWS for this portion of the Project once complete.

89. PPL Electric will continue to consult with the applicable jurisdictional agencies regarding potential impacts to protected species. PPL Electric will obtain all approvals and permits necessary for the construction of the Project and will comply with any conditions placed on those permits.

C. CONCLUSION

90. Based upon the analyses explained above, and more fully detailed in Attachment 3 – Project Area Description and the direct testimony of Mr. Sparkhawk (PPL Electric Statement No. 3), 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. Therefore, PPL Electric submits that the requirements of 52 Pa. Code § 57.76(a)(3) and (4) are satisfied.

V. HEALTH AND SAFETY

91. The proposed Project will not create any unreasonable risk of danger to the public health or safety.

92. The proposed lines will be designed, constructed, operated, and maintained in a manner that meets or surpasses all applicable National Electrical Safety Code (“NESC”) minimum standards and all applicable legal requirements. Descriptions of the NESC standards, PPL Electric’s design criteria, and PPL Electric’s safety practices are provided in Attachment 4 Attachment 4 – Design Criteria and Safety to this Application.

93. Attachment 4 – Design Criteria and Safety accompanying this Application also explains PPL Electric’s standards for Magnetic Field Management. Ground clearances for the

proposed Project will be increased between approximately 3.0 and 7.0 feet higher than those required by the NESC standard in order to reduce the magnetic field exposure. The subject Transmission Lines will also allow for double-circuit operation, which will allow for reverse phasing. A reduction in magnetic field exposure is anticipated due to the higher ground clearances and reverse phasing.

VI. RELATED PROCEEDINGS

94. PPL Electric has contemporaneously filed one (1) Zoning Petition pursuant to 52 Pa. Code § 5.41 and 53 P.S. § 10619, for a finding that one structure to shelter electrical control equipment at the Chanceford Switchyard, is reasonably necessary for the convenience or welfare of the public and, therefore, exempt from any local zoning ordinance.

95. In addition, PPL Electric has contemporaneously filed one (1) Condemnation Application pursuant to 15 Pa. C.S. § 1511(c) for a finding and determination by the Commission, to the extent that any such finding and determination may be required, that the service to be furnished by PPL Electric through the exercise of the power of eminent domain for the Chanceford 500 kV Rebuild Project is necessary or proper for the service, accommodation, convenience or safety of the public.

96. Issues relating to the need for the Application, Condemnation Application and Zoning Petition are interrelated. Pursuant to 52 Pa. Code § 5.81, the Company requests that these related proceedings be consolidated for purposes of hearings, if necessary, and decision.

VII. NOTICE AND SERVICE

97. The public outreach approach for the Project included early stakeholder engagement; public notification, including landowner notifications and news releases; and in-

person public open house meetings. PPL Electric’s public outreach for the Project is more fully described in Attachment 3 – Project Area Description.

98. PPL Electric hosted two separate public open house meetings to provide information on the Project on January 25 and May 29, 2024. The January 25, 2024 public open house meeting was held between 6 p.m. and 8 p.m. at the Chanceford Township Building, located at 33 Muddy Creek Forks Road, Brogue, PA 17309. The May 29, 2024 public open house meeting was held between 6 p.m. and 8 p.m. at the New Bridgeville Fire Company, located at 2870 Furnace Road, Red Lion, PA 17356.

99. PPL Electric has provided public notices in accordance with Section 69.3102 of the Commission’s Interim Siting Guidelines, 52 Pa. Code § 69.3102.

100. PPL Electric has reached out to residents located immediately adjacent to PPL Electric’s fee owned parcels and owners of properties that are crossed by the Line. Copies of the Application will be served upon landowners in accordance with 52 Pa. Code § 57.74. A list of the landowners impacted by this project is provided in Attachment 5 – Agency and Landowner List.

101. PPL Electric has provided information regarding the Project to representatives of Chanceford, East Hopewell, and Hopewell Townships in York County, Pennsylvania. These entities have not objected to the proposed Project. Copies of this Application will be served on the governmental agencies, municipalities, and other public entities and organizations in accordance with 52 Pa. Code § 57.74. A list of these entities and organizations is also provided in Attachment 5 – Agency and Landowner List.

102. A copy of this Application is available for public examination in-person during ordinary business hours at: the Chanceford Township Office located at 33 Muddy Creek Forks Road, Brogue, PA 17309; the East Hopewell Township Office located at 8916 Hickory Road,

Felton, PA 17322; and the Hopewell Township Office located at 3336 Bridgeview Road, PO Box 429, Stewartstown, PA 17363. As soon as practicable after the filing of this Application, PPL Electric will publish notice in newspaper(s) of general circulation in the area of the Project. This notice will: (a) note the filing with the Commission; (b) provide brief description of the Project and its location; and (c) provide any additional information as directed by the Commission. PPL Electric also requests that the Commission publish notice of this Application in the Pennsylvania Bulletin.

103. PPL Electric will provide such additional forms of notice as may be directed by the Commission.

VIII. CONCLUSION

WHEREFORE, PPL Electric Utilities Corporation respectfully requests Pennsylvania Public Utility Commission approval to (1) construct the new Three Mile Island – Chanceford 500 kV Transmission Line and Chanceford – Peach Bottom 500 kV Transmission Line, and (2) rebuild the existing Otter Creek – Conastone 230 kV Transmission Line for future double circuit 500 kV operations as the rebuilt Chanceford – Doubs 500 kV Transmission Line and the rebuilt Otter Creek – Conastone 500/230 kV Transmission Line. PPL Electric Utilities Corporation further requests that the Pennsylvania Public Utility Commission issue any additional approvals or waivers that may be necessary to site and construct the high-voltage transmission lines that are the subject of this Application.

Respectfully submitted,



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Date: September 13, 2024

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APPENDIX A

APPENDIX A
PUC REGULATION CROSS-REFERENCE MATRIX

Administrative Code Section or Statute	PUC Regulation Requirement	Location In Filing
57.72	Form and content of application	
57.72(a)	Applications shall be in conformity with Section 1.31 (relating to form of documentary filings generally). Supporting exhibits such as maps, photographs and other engineering materials may be on paper not exceeding 28 inches by 40 inches.	Attachments 1-6
57.72(b)	The application shall be signed by a person having authority with respect thereto and having knowledge of the matters herein set forth and shall be verified under oath.	Siting Application
57.72(c)	An application shall contain:	
57.72(c)(1)	The name of the applicant and the address of its principal business office	Siting Application
57.72(c)(2)	The name, title and business address of the attorney of the applicant and the person authorized to receive notice and communications with respect to the application if other than the attorney of the applicant.	Siting Application
57.72(c)(3)	A general description – not a legal or metes and bounds description – of the proposed route of the HV line, to include the number of route miles, the right-of-way width and the location of the proposed HV line within each city, borough, town and township traversed.	Siting Application Attachment 3 – Project Area Description PPL Electric St. No. 3
57.72(c)(4)	The names and addresses of known persons, corporations and other entities of record owning property within the proposed right-of-way, together with an indication of HV line rights-of-way acquired by the applicant.	Siting Application Attachment 1 – Necessity Statement Attachment 3 – Project Area Description Attachment 5 – Agency and Landowner List
57.72(c)(5)	A general statement of the need for the proposed HV line in meeting identified present and future demands for service, of how the proposed HV line will meet that need and of the engineering justifications for the	Attachment 1 – Necessity Statement PPL Electric St. No. 1

PPL Electric Utilities Corporation
Appendix A – PUC Cross-Reference

	proposed HV line.	
57.72(c)(6)	A statement of the safety considerations which will be incorporated into the design, construction and maintenance of the proposed HV line.	Attachment 4 – Design and Safety Criteria PPL Electric St. No. 1
57.72(c)(7)	A description of studies which had been made as to the projected environmental impact of the HV line as proposed and of the efforts which have been and which will be made to minimize the impact of the HV line upon the environmental and upon scenic and historic areas, including but not limited to impacts, where applicable, upon land use, soil and sedimentation, plant and wildlife habitats, terrain, hydrology and landscape.	Siting Application Attachment 3 – Project Area Description PPL Electric St. No. 3
52.72(c)(8)	A description of the efforts of the applicant to locate and identify archaeologic, geologic, historic, scenic or wilderness areas of significance within 2 miles of the proposed right-of-way and the location and identity of the areas discovered by the applicant.	Siting Application Attachment 33 – Project Area Description PPL Electric St. No. 3
57.72(c)(9)	The location and identity of airports within 2 miles of the nearest limit of the right-of-way of the proposed HV line.	Attachment 3 PPL Electric St. No. 3
57.72(c)(10)	A general description of reasonable alternative routes to the proposed HV line, including a description of the corridor planning methodology, a comparison of the merit and detriments of each route, and a statement of the reasons for selecting the proposed HV line route.	Siting Application Attachment 3 PPL Electric St. No. 3
57.72(c)(11)	A list of the local, State and Federal governmental agencies which have requirements which shall be met in connection with the construction or maintenance of the proposed HV line and a list of documents which have been or are required to be filed with those agencies in connection with the siting and construction of the proposed HV line.	Attachment 3 – Project Area Description PPL Electric St. No. 3
57.72(c)(12)	The estimated cost of construction of the proposed HV line, and the projected date for completion.	Siting Application Attachment 1 – Necessity Statement PPL Electric St. No. 1
57.72(c)(13)	The following exhibits:	
57.72(c)(13)(i)	A depiction of the proposed route on aerial photographs and topographic maps of suitable detail.	Attachment 3 – Figure 3-1
57.72(c)(13)(ii)	A description of the proposed HV line, including the	Siting Application

	length of the line, the design voltage, the size, number and materials of conductors, the design of the supporting structures and their height, configuration and materials of construction, the average distance between supporting structures, the number of supporting structures, the line to structure clearances and the minimum conductor to ground clearances at mid-span under normal load and average weather conditions and under predicted extreme load and weather conditions.	Attachment 2 – Engineering Description PPL Electric St. No. 2
57.72(c)(13)(iii)	A simple drawing of a cross section of the proposed right-of-way of the HV line and any adjoining rights-of-way showing the placement of the supporting structures at typical locations, with the height and width of the structures, the width of the right-of-way and the lateral distance between the conductors and the edge of the right-of-way indicated	Attachment 2 – Engineering Description
57.72(c)(13)(iv)	A system map which shows in suitable detail the location and voltage of existing transmission lines and substations of the applicant and the location and voltage of the proposed HV line and associated substations.	Attachment 1 – Figure 1-2 Attachment 1 – Figure 1-4
57.72(c)(14)	A statement identifying litigation concluded or in progress which concerns property or matter relating to the proposed HV line, right-of-way route or environmental matters.	Siting Application PPL Electric St. No. 4
57.72(c)(15)	Additional information as the Commission may require.	
57.74(a)	(a) <i>Filing</i> . The applicant shall file with the Commission the original and six copies of the application. An affidavit of service showing the identity of those served under subsections (b) and (c) shall accompany the original and the copies of the application filed with the Commission.	Notice of Filing Certificate of Service
57.74(b)	(b) <i>Copies</i> . At the time of filing, the applicant shall serve a copy of the application by registered or certified mail, return receipt requested, upon the following: (1) The chief executive officer, the governing body and the body charged with the duty of planning land use in each city, borough, town, township and county in which any portion of the HV line is proposed to be located.	Certificate of Service

	<p>(2) The president of the public utility, other than the applicant, in whose service territory any portion of the HV line is proposed to be located.</p> <p>(3) The Department of Environmental Resources, Attention: Bureau of Environmental Planning; Post Office Box 2357, 101 S. Second Street, Harrisburg, Pennsylvania, 17120. (NOTE: now Department of Environmental Protection at different Harrisburg office).</p>	
57.74(c)	<p>(c) <i>Notice.</i></p> <p>(1) At the time of filing, the applicant shall serve a notice of filing and a map of suitable detail showing the proposed route of the proposed facility by registered or certified mail, return receipt requested, upon the following:</p> <p>(i) The Secretary of the Department of Transportation, Room 1200 Transportation and Safety Building, Harrisburg, Pennsylvania 17120.</p> <p>(ii) The Chairman of the Historical and Museum Commission, Post Office Box 1026, Harrisburg, Pennsylvania 17120.</p> <p>(iii) Other local, State or Federal agencies designated in § 57.72 (c)(11)(relating to form and content of application).</p> <p>(iv) The persons, corporations, and other entities designated in § 57.72(c)(4), unless they are served with a copy of the application under § 57.75(i) (relating to hearing and notice).</p>	<p>Notice of Filing</p> <p>Certificate of Service</p>
57.74(c)	<p>(2) The notice of filing shall contain a statement identifying the filing, the date on which the filing was or is to be made, a description of the proposed line, the design voltage, the number of route miles, the right-of-way width and the location of the proposed HV line within each township traversed and a statement that a copy of the application is available for public examination as provided in subsection (d).</p>	<p>Notice of Filing</p>
57.74(d)	<p>(d) <i>Examination.</i> On the day of filing of the application, the applicant shall make a copy of the application available for public examination during ordinary business hours at a convenient location within a county in which any part of the proposed HV will be located.</p>	<p>Siting Application</p> <p>Notice of Filing</p>
57.74(e)	<p>(e) <i>Additional notice.</i> The applicant shall provide an additional notice and shall serve such additional copies of the application without cost as the Commission may require.</p>	<p>N/A</p>

69.1101	<p>To further the State’s goal of making State agency actions consistent with sound land-use planning, and under the act of June 22, 2000 (P. L. 483, No. 67) and the act of June 23, 2000 (P. L. 495, No. 68), the Commission will consider the impact of its decisions upon local comprehensive plans and zoning ordinances. This will include reviewing applications for:</p> <ul style="list-style-type: none"> (1) Certificates of public convenience. (2) Siting electric transmission lines. (3) Siting a public utility “building” under section 619 of the Municipalities Planning Code (53 P. S. § 10619). (4) Other Commission decisions. 	<p>Siting Application</p> <p>Attachment 3 – Project Area Description</p>
69.3102(a)	<p>(a) Applications for electric transmission siting authority should provide the following information with the initial application for siting approval demonstrating its efforts to fully notify landowners who are either owners of land that will be purchased for the transmission project or will be subject to right of way/easement requirements:</p> <ul style="list-style-type: none"> (1) A Code of Conduct/Internal Practices governing the manner in which public utility employees or their agents interact with landowners along proposed rights of way. (2) Copies of information provided to landowners by the public utility of any publicly disseminated notices advising landowners to contact the Commission or the Office of Consumer Advocate (OCA) in the event of improper land agent practices. (3) Copies of all notices sent under § 57.91 (relating to disclosure of eminent domain power of electric utilities). 	<p>Siting Application</p> <p>Attachment 6 – 52 Pa. Code § 69.3102 Notices</p>
69.3102(b)	<p>(b) Applicants for transmission siting authority should serve a copy of the Code of Conduct on all landowners along the proposed route whose property is to be purchased, subject to easement rights or borders the transmission corridor. The Code of Conduct should also be available on the applicant’s website.</p>	<p>Siting Application</p> <p>Attachment 6</p>

69.3102(c)	(c) Applicants for transmission siting authority should provide prior notice to the Commission’s Office of Communications of informational presentations to community groups by the public utility scheduled after the filing of the transmission siting application so that the Commission, OCA and other interested parties can attend meetings or obtain copies of information being disseminated at the presentations.	N/A
69.3103	<p>Applicants for eminent domain authority should follow the following requirements and provide the following information as part of the application:</p> <p>(1) Applicants for transmission siting authority should file applications for all known eminent domain authority as separate filings, but simultaneously with the associated transmission siting applications. Testimonial evidence in support of an eminent domain application should be filed with the application. Subsequent eminent domain authority applications should be filed as soon as reasonably known during the course of the transmission siting application.</p> <p>(2) As part of an eminent domain application, the public utility applicant should present, for those properties subject to condemnation at the time the transmission siting application is filed or later in the siting proceeding, the reason for the exercise of condemnation power for each property and the precise location of the affected property. Supporting maps or legal descriptions of the property to be condemned should be supplied to the extent feasible. Submission of information pursuant to this guideline should be consistent with the filing requirements for the exercise of eminent domain powers under 26 Pa.C.S. § 302(b)(5) (relating to declaration of taking).</p> <p>(3) A public utility transmission siting application should include a summary status report for those properties along the proposed transmission route where negotiations for either property acquisition or rights of way/easements may be ongoing. This information should be supplemented as requested by the administrative law judge or the parties during the course of the transmission siting proceeding.</p>	Condemnation Application
69.3104	Applications for exemption from municipal zoning requirements should provide the following information with the application:	Zoning Petition

	<p>(1) Copies of comprehensive land use plans, zoning ordinances and other documentation relevant to the buildings affected by the exemption request. This information may be filed in either hard copy or electronic format.</p> <p>(2) Provision of metes and bounds or site maps of building sites.</p> <p>(3) A procedure for providing notice to affected municipalities of the request for exemption.</p>	
69.3105(1)	<p>Applications for the siting of electric transmission lines should provide the following information as part of the § 57.72(c) (relating to form and content of application) requirements:</p> <p>(1) Transmission applicants should utilize a combination of transmission route evaluation procedures including high-level GIS data, traditional mapping (including United States Geological Survey data and compilation), aerial maps and analysis of physical site specific constraints raised by affected landowners.</p>	<p>Attachment 3 – Project Area Description</p> <p>PPL Electric St. No. 3</p>
69.3105(2)	<p>Applications for the siting of electric transmission lines should provide the following information as part of the § 57.72(c) (relating to form and content of application) requirements:</p> <p>(2) Transmission applicants should summarize the status of property acquisitions (including fee simple acquisitions and rights of way/easements) as part of the application. The applicant should provide the current status and continuing updates on property acquisition litigation or settlements during the course of the siting proceeding.</p>	<p>Siting Application</p> <p>Attachment 3 – Project Area Description</p> <p>PPL Electric St. No. 4</p>
69.3105(3)	<p>Applications for the siting of electric transmission lines should provide the following information as part of the § 57.72(c) (relating to form and content of application) requirements:</p> <p>(3) In providing information regarding the reasonable alternative routes, the utility actively considered in its final phase of the route selection process, and the relative merits of each, in accordance with § 57.72(c)(10), the applicant should include the</p>	<p>Siting Application</p> <p>Attachment 3 – Project Area Description</p> <p>PPL Electric St. No. 3</p>

	<p>following information:</p> <ul style="list-style-type: none"> (i) The environmental, historical, cultural and aesthetic considerations of each route. (ii) The proximity of these alternative routes to residential and nonresidential structures. (iii) The applicant’s consideration of relevant existing rights of way. (iv) The comparative construction costs associated with each route. 	
69.3106	<p>Applications for siting of electric transmission lines should include as part of the filing requirement under § 57.72(e)(7) the following information: A matrix or list showing all expected Federal, state and local government regulatory permitting or licensing approvals that may be required for the project at the time the application is filed, the issuing agency, approximate timeline for approval and current status. The applicant should provide an update on the status of the regulatory permitting/licensing approvals as the case progresses.</p>	<p>Attachment 3 – Project Area Description</p> <p>PPL Electric St. No. 3</p>
69.3107(a)	<p>(a) <i>Interim guidelines for the use of herbicides and pesticides.</i> Applicants for transmission line siting authority should provide a detailed vegetation management plan that includes the following components:</p> <ul style="list-style-type: none"> (1) A general description of the utility’s vegetation management plan. (2) Factors that dictate when each method, including aerial spraying, is utilized. (3) Vegetation management practices near aquatic and other sensitive locations. (4) Notice procedures to affected landowners regarding vegetation management practices. 	Attachment 6

	(5) Provision of a copy of a landowner maintenance agreement that describes the duties and responsibilities of landowners and the utility for vegetation management to the extent utilized.	
69.3107(b)	(b) <i>Interim guidelines for Electromagnetic Field (EMF) impacts.</i> Transmission siting applications should include the following: A description of the EMF mitigation procedures that the utility proposes to utilize along the transmission line route. This description should include a statement of policy approach for evaluating design and siting alternatives and a description of the proposed measures for mitigating EMF impacts.	Attachment 4 Attachment 6

Attachment 1

CHANCEFORD 500 KV REBUILD PROJECT

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1.0 INTRODUCTION

PPL Electric Utilities Corporation (“PPL Electric”) is requesting Pennsylvania Public Utility Commission (“PUC” or the “Commission”) approval to: (1) construct a new double circuit 500 kilovolt (“kV”) transmission line (the “Three Mile Island – Chanceford 500 kV Transmission Line” and the “Chanceford – Peach Bottom 500 kV Transmission Line”) for approximately 1.4 miles from the existing Three Mile Island – Peach Bottom 500 kV Transmission Line¹ in Chanceford Township, York County to a proposed PPL Electric-owned 500 kV switchyard (“Chanceford Switchyard”); and (2) rebuild approximately 12 miles of the existing Otter Creek – Conastone 230 kV Transmission Line² for future double circuit 500 kV capacity (the rebuilt “Chanceford – Doubs 500 kV Transmission Line” and the rebuilt “Otter Creek – Conastone 500/230 kV³ Transmission Line,” jointly referred to as “Chanceford – Doubs 500 kV Rebuilt Line”⁴). Collectively, the new and rebuilt double circuit 500 kV transmission lines and the Chanceford Switchyard are referred to in this application as the “Chanceford 500 kV Rebuild Project” or the “Project.” The Project is required to resolve reliability issues on the 500 kV and 230 kV transmission systems operated by PJM Interconnection, LLC (“PJM”). The Project, as approved by PJM, includes Mid-Atlantic Interstate Transmission (“MAIT”) breaking the existing

¹ Three Mile Island Substation is owned and operated by Mid-Atlantic Interstate Transmission (“MAIT”), a subsidiary of FirstEnergy. Peach Bottom Substation is owned and operated by PECO Energy Company (“PECO”), an Exelon Company.

² The Otter Creek 230 kV Substation (“Otter Creek Substation”) is owned and operated by PPL Electric. Conastone Substation is owned and operated by Baltimore Gas and Electronic Company (“BGE”), an Exelon Company.

³ The rebuilt Otter Creek – Conastone 500/230 kV Transmission Line will initially continue to operate as the Otter Creek – Conastone 230 kV transmission line until load increases and the line is re-terminated into the proposed Chanceford Switchyard. Prior to the system conversion, the line will retain its current name (i.e., Otter Creek – Conastone 230 kV Transmission line); after the conversion, it will be re-named to its final designation of Chanceford – Conastone 500 kV Transmission Line).

⁴ PPL Electric will be installing an electrical jumper connection between the Otter Creek – Conastone 230 kV Transmission Line and the future Chanceford – Doubs 500 kV Transmission Line. This jumper connection will be installed within the Pennsylvania section of transmission line and remain in place until the Chanceford – Doubs 500 kV circuit is ultimately ready for energization at its remote end (Doubs Substation in Maryland). The purpose of the jumper will be to operate and monitor both circuits of the transmission line (as the Otter Creek – Conastone 230 kV line segment), in an interim configuration, until ultimately forming the Chanceford – Doubs 500 kV Rebuilt Line at a later date.

Three Mile Island – Peach Bottom 500 kV Transmission Line and extending both ends into the proposed 500 kV switchyard in Chanceford Township, York County.

The proposed Chanceford Switchyard will consist of two 500 kV bays built for breaker-and-a-half operation that will initially operate in a three-breaker ring configuration. This configuration will create the new Three Mile Island – Chanceford 500 kV and Chanceford – Peach Bottom 500 kV Transmission Lines.

The existing single circuit Otter Creek – Conastone 230 kV Transmission Line extends from the existing Otter Creek Substation for approximately 12 miles to the Pennsylvania-Maryland border. As part of the Project, the western circuit (the rebuilt Chanceford – Doubs 500 kV Transmission Line) will operate at 500 kV, while the eastern circuit (the rebuilt Otter Creek – Conastone 500/230 kV Transmission Line) will be designed for future 500 kV but initially operate at 230 kV as the Otter Creek – Conastone 230 kV Transmission Line. Future voltage increase will require the Otter Creek – Conastone 230 kV Transmission Line to be re-terminated into the Chanceford Switchyard, at which time the line will be re-named its final designation of Chanceford – Conastone 500 kV Transmission Line. After the Otter Creek – Conastone 500/230 kV Transmission Line is re-terminated, a 0.4-mile segment of existing Otter Creek – Conastone 230 kV Transmission Line, between Otter Creek Substation and proposed Structure 2, will be removed (see **Page 1 of Figure 3-1 in Attachment 3**).

In Maryland, the remaining 500 kV transmission lines will travel from the Pennsylvania-Maryland border and terminate into the existing FirstEnergy Doubs 500-230 kV Substation located in Frederick County, Maryland.⁵ BGE (an Exelon Company) and PSEG Keys Energy Center (“PSEG”) will construct the 500 kV transmission lines in Maryland.

Subject to the Commission’s approval, construction will begin in July 2025 to support an in-service date of June 2027. Within Pennsylvania, PPL Electric will own, operate, and maintain the proposed Chanceford Switchyard and the new and rebuilt double circuit 500 kV transmission lines (the Three Mile Island – Chanceford 500 kV Transmission Line, the Chanceford – Peach Bottom 500 kV Transmission Line, and the collective Chanceford – Doubs 500 kV Transmission Line).

⁵ PPL Electric is not seeking PUC approval with respect to the portions of the Project located in Maryland.

The total estimated cost of this Project, as described below, is approximately \$148.14 million, and the cost will be allocated to Dominion (74.28%), APS (a FirstEnergy Company) (13.16%), PEPCO (an Exelon Company) (10.59%), BGE (0.71%), PECO (an Exelon Company) (0.68%), DPL (an Exelon Company) (0.36%), and PPL Electric Utilities (0.22%).⁶⁷

⁶ The estimated cost was developed using averages of recent costs for similar projects and without an in-depth analysis or field investigation. The cost is subject to change as the constructability of the Project, sequence of construction, and other factors that may affect cost are identified and analyzed as the Project progresses.

⁷ The PPL Electric Utilities cost allocation (0.22%) is subject to change and become a MetEd (a FirstEnergy Company) cost responsibility due to the physical location of the project. This change cannot be made until updates are made available by PJM.

2.0 TRANSMISSION SYSTEM PLANNING PROCESS

The nation’s interconnected transmission grid (“Transmission Grid”) serves as the backbone for the 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 critically important that the Transmission Grid be planned and designed to ensure that reliable electric service can be provided under all loading conditions and when certain elements of the Transmission Grid are out of service (system contingencies) due to planned or unplanned outages. Robust Transmission Planning assures that the transmission system can supply electricity to all customer loads in a manner that is reliable and economical. This System Planning process ensures that both the Bulk Electric System (“BES”)⁸ and non-Bulk Electric System (“non-BES”)⁹ are planned and constructed so that:

- They can accommodate forecasted system flows during summer and winter peak load;
- They can adequately serve each customer’s need regarding capacity, voltage, and reliability for all load levels throughout the daily load cycle;
- They can sustain probable contingencies and disturbances with minimal customer service interruptions; and
- They are in conformance with the North American Electric Reliability Corporation (“NERC”), PJM, and the Transmission Owner’s reliability criteria for all normal and emergency operating conditions.

PJM is a Federal Energy Regulatory Commission (“FERC”)-approved Regional Transmission Organization (“RTO”) charged with ensuring the reliability of the electric transmission system under its functional control (100 kV and above) and coordinating the movement of electricity in all or parts of thirteen states and the District of Columbia, including Pennsylvania (collectively, the “PJM Area”). In order to ensure reliable transmission service, PJM prepares an annual

⁸ Includes transmission facilities operated at voltages of 100 kV or higher.

⁹ Includes transmission facilities operated at voltages less than 100 kV.

Regional Transmission Expansion Plan (“RTEP”)¹⁰ to identify system reinforcements that are required to, among other things, meet the NERC Reliability Standards, PJM reliability planning criteria, and Transmission Owner reliability criteria.

When PJM’s Reliability Analysis identifies a need to solve a reliability issue on electric transmission facilities, PJM opens a Proposal Window to solicit the submittal of potential solutions (i.e., reliability projects) to address those needs.

The reliability projects that are selected through PJM’s Reliability Window are presented to stakeholders and recommended to the PJM Board of Managers (“PJM Board”) for approval. If approved, such reliability projects are included in the RTEP as Baseline Projects.

Importantly, pursuant to Schedule 6 of PJM’s Amended and Restated Operating Agreement, after the PJM Board approves a proposed reliability project, the successful project proponent is obligated to complete the project once PJM and the successful entity execute a Designated Entity Agreement or a Construction Responsibility Letter, which specifically designates the entity or entities having construction responsibility for the Project.

¹⁰ PJM’s RTEP process is currently set forth in Schedule 6 of PJM’s Amended and Restated Operating Agreement (“Schedule 6”). Schedule 6 governs the process by which PJM’s members rely on PJM to prepare an annual regional plan for the enhancement and expansion of the transmission facilities to ensure long-term, reliable electric service consistent with established reliability criteria. In addition, Schedule 6 addresses the procedures used to develop the RTEP, the review and approval process for the RTEP, the obligation of transmission owners to build transmission upgrades included in the RTEP, and the process by which interregional transmission upgrades will be developed.

3.0 THE NEED FOR THE PROJECT

3.1 Existing System

PJM operates and coordinates an extensive 500 kV and 230 kV BES that is owned by multiple utilities through all or parts of Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia, and the District of Columbia. This 500 kV and 500 kV system allows for regional transfer of power to supply load throughout the PJM Area.

PPL Electric 230 kV and 500 kV transmission lines are part of the PJM interconnection. A one-line diagram showing a section of the existing 500 kV and 500 kV system is provided as **Figure 1-1**. A map of the existing system alignment is provided as **Figure 1-2**.

3.2 Project Need

In February 2023, PJM opened a Proposal Window to solicit proposals to address transmission reliability issues associated with data center load growth in the APS and Dominion service territories. PJM identified numerous transmission line and transformer overloads, voltage deficiencies, and non-convergent contingencies.

PJM was seeking proposals that develop robust, holistic and expandable solutions that address the 2027-28 baseline violations associated with:

1. Local constraints as a result of directly serving the load growth in APS and Dominion zones through the respective 500 kV networks and into the points of delivery.
2. Regional constraints resulting from imports into load center areas to serve data center loads. These regional constraints include the following 500 kV transmission paths (together with their paralleling 500 kV circuits):
 - Doubs – Goose Creek
 - Front Royal – Morrisville – Vint Hill – Loudoun/Mosby
 - Meadow Brook – Loudoun/Mosby
 - Morrisville – Bristers – Ox
 - Peach Bottom – Conastone – Brighton – Doubs

3. Needed reactive power reinforcements, both static and dynamic, as deemed necessary, to address the reactive power needs of the system for the 2027 to 2028 baseline scenario.

PJM received 72 proposals specifically to address the reliability concerns in the APS and Dominion service territories. PJM separated the proposals into three clusters (East, West, and Southern). PJM then created scenarios consisting of multiple proposals to be evaluated based on performance, scalability, impact, validated cost, risks, and efficiencies. After evaluation and review with stakeholders, to address needs for the East cluster, PJM selected proposal 374 by PPL Electric (i.e., the Project)¹¹, proposal 344/660 by Exelon, proposal 637 by PSEG, and proposal 837 by FirstEnergy. On December 11th, 2023, the PJM Board approved proposal 374 (i.e., the Project) as a Baseline Upgrade with number B3800.1, B3800.3, and B3800.53.¹²

The Project is also needed to address further anticipated load growth in the area. More specifically, the Otter Creek – Conastone 230 kV Transmission line will be designed for future 500 kV operations as a part of its rebuild. The load growth identified above drives the need for this line to be designed for future 500 kV operations. PPL Electric is committed to filing an appropriate notification of its increase of voltage with the Commission, as a condition of approval of this Application.

¹¹ At this stage the proposed solution was a double circuit 230/500 kV rebuild but has since changed (See Section 5.0 of this Attachment).

¹² The PJM 2022 RTEP Window 3 Reliability Analysis Report can be found at:

<https://pjm.com/-/media/committees-groups/committees/teac/2023/20231205/20231205-2022-rtep-window-3-reliability-analysis-report.ashx>

PJM evaluated every proposal individually, as well as various combinations of the proposals and components to identify the more efficient or cost-effective solution. Based on different combinations of scenarios performed, PJM identified the need for three regional/local transmission solutions in the East cluster, which are reflected in the shortlisted scenarios.

PJM evaluated all the proposals submitted based on:

1. Enhance the east to west bulk power transfers
2. Support the load deliverability and reliability needs for the BGE system; and
3. Support the additional load demands of the APS and northern Virginia transmission systems where a large amount of load growth is being forecasted.

PJM completed a detailed constructability review of the top eight proposals, as shown in **Image 1-2**.

Image 1-2: PJM RTEP 2022 Window 3 Cluster No 2 Cost and Constructability Review



East Cluster Projects – Selected for Detailed Evaluation											
PJM Proposal ID	Proposing Entity	Project Title	Proposed In-Service Date	Proposal Costs (\$M)	Independent Costs (\$M)	Cost Estimate Risks	Cost Containment Risks	Schedule Risks	Constructability Risks	Use of Existing ROW & Brownfield	Outage Coordination Risks
344	Exelon	PECO Expansion Plan for DOM Window 2023	12/1/2029	\$ 168.63	\$ 186.06	Low	Medium-High	Low	Low	Low	Medium
660	Exelon	West Cooper BGE-PEPCO	12/1/2030	\$ 1,105.62	\$ 1,060.63	Low	Medium-High	Low	Low	Low	Medium
548	LS Power	RTEP Window 3 Solution (East)	6/1/2030	\$ 495.83	\$ 609.44	Medium	Medium	Low	Medium	Medium-High	Medium-High
637	PSEG	Proposal D-Conastone-Doubs 500kV	6/1/2027	\$ 684.22	\$ 676.36	Low	Low	Medium	Medium	High	Low
741	PSEG	Proposal G - Peach Bottom-New Brandon Shores 500kV; Peach Bottom-Doubs 500kV	6/1/2028	\$ 1,065.32	\$ 1,178.75	Medium	Low	Medium-High	High	High	Low
487	Transource	Maryland & Pennsylvania Baseline Reliability Solution	3/1/2027	\$ 492.75	\$ 503.43	Low	Medium	Low	Low	Medium	Medium
374	PPL	Otter Creek - Conastone 500 and 230 kV DCT Line	5/1/2027	\$ 154.21	\$ 162.69	Low	Medium-High	Low	Low	Medium	Medium
948	NextEra	New 500/230kV Bartholow substation, new 500/230kV North Delta substation, new 230kV Grisham switchyard, new 500/230kV Goram substation, and Keeney to Waugh Chapel tie-in	6/1/2028	\$ 5,381.25	\$ 6,265.88	Medium	Medium	High	High	High	Low

After the evaluation and review with stakeholders, in April 2024 PJM selected the PJM Combination – 500 kV Scenario as the preferred solution, which included PPL Electric proposal

374 and PSEG proposal 637. The PJM Combination – 500 kV Scenario offers the needed reliability reinforcements with the least amount of infrastructure development and with much higher reliability margin compared the other proposals which are both of higher cost and involves developing a significantly more facilities. The PJM 500 kV combination proposal offers full utilization of existing rights of way (“ROWS”), alleviating limitations in the historically constrained Peach Bottom – Conastone 500 kV Transmission Line corridor. The PJM Combination – 500 kV Scenario proposal addresses the load deliverability needs into the BGE system which is further exacerbated by the deactivation of key power plant(s) in the BGE zone.

5.0 PROPOSED SOLUTION

The Project as initially approved by PJM in December 2023, includes breaking the existing Three Mile Island – Peach Bottom 500 kV Transmission Line in Chanceford Township in York County and extending each end to a proposed new 500 kV switchyard in Chanceford Township by constructing new 1.4-mile long double circuit 500 kV transmission lines (to be referred to as the Three Mile Island – Chanceford 500 kV Transmission Line and the Chanceford – Peach Bottom 500 kV Transmission Line), and rebuilding the existing Otter Creek – Conastone 230 kV Transmission Line to double circuit 500/230 kV capacity.

In April 2024, PJM modified the proposal to include the PJM Combination – 500 kV Scenario (the subject of this application) as the preferred solution which merged PPL Electric proposal 374 with the PSEG proposal 637. The PJM modification changed the termination point of the new 500 kV transmission line from Conastone Substation to Doubs Substation. With this modification, the scope of PPL Electric proposal 374 will remain the same with the exception of PJM’s request to modify the 12-mile rebuild section of the Otter Creek – Conastone 230 kV Transmission Line to be rebuilt for double circuit 500 kV capacity with the western side operating at 500 kV while the eastern side initially operates at 230 kV. Once demand on the system increases, the eastern circuit will be re-terminated into the Chanceford Switchyard and it will then operate at 500 kV and a 0.4-mile segment of the existing Otter Creek – Conastone 230 kV Transmission Line between proposed Structure 2 and the Otter Creek Substation will be removed (see **Figure 3-1 in Attachment 3**). The proposed work required for and/or associated with the Project is described as below:

- PPL Electric is filing a separate application for approval to exercise the power of eminent domain, pursuant to Section 1511 of the Business Corporation Law of 1988, 15 Pa.C.S. § 1511(c), to acquire approximately 4 acres of land to construct a portion of the proposed two bay Chanceford 500 kV Switchyard, which will be built for breaker-and-a-half operation but initially operated in a three-breaker ring configuration (PJM Upgrade B3800.1). The parcel is currently within an Agricultural Security Area (“ASA”) established pursuant to Pennsylvania’s Agricultural Area Security Law (“ASL”), 3 P.S. § 901 et seq., and is subject to an Agricultural Conservation Easement in favor of the

Commonwealth of Pennsylvania and York County. While PPL Electric has reached an agreement to acquire approximately 4 acres of land, there is no statutory authority for releasing the property from the agricultural easement except by condemnation. Because the property is located within an ASA, the exercise of the power of eminent domain by PPL Electric is required to comply with the provisions of Section 13 of the ASL. Furthermore, the landowner understands PPL Electric must condemn his property for the transfer of land to be accomplished and he has agreed to not object to PPL Electric's condemnation of his property.

- FirstEnergy will break the existing Three Mile Island – Peach Bottom 500 kV Transmission Line (PJM Upgrade B3800.2).
- PPL Electric acquired approximately 25.2 acres of new ROW from the break point in FirstEnergy's ROW to the proposed Chanceford 500 kV Switchyard and plans to construct the new double circuit 500 kV transmission lines (PJM Upgrade B3800.53). The new 500 kV line segments will terminate into Chanceford 500 kV Switchyard to create the Three Mile Island – Chanceford 500 kV and the Chanceford – Peach Bottom 500 kV Transmission Lines.
- PPL Electric acquired approximately 2.7 acres of new ROW from the proposed Chanceford 500 kV Switchyard to the existing ROW of Otter Creek – Conastone 230 kV Transmission Line.
- From the tie-in point at the Chanceford Switchyard to the Pennsylvania-Maryland border (approximately 12 miles), PPL Electric is seeking to acquire additional voluntary ROW to expand the corridor by 50 feet (25 feet on each side of the existing 150-foot-wide ROW) along the Chanceford – Doubs 500 kV Rebuilt Line. The purpose of expanding the ROW corridor is to enhance reliability, prevent potential impacts from danger trees, and reduce the number of structures by creating longer spans (where possible). In areas where PPL Electric is unable to acquire the additional voluntary ROW, PPL Electric will design and construct the line to fit entirely within the existing 150-foot-wide ROW and maintain all necessary clearances. The western circuit will operate at 500 kV from Chanceford Switchyard to the Pennsylvania-Maryland border, while the eastern circuit will initially operate at 230 kV from the existing Otter Creek Substation to the Pennsylvania-Maryland

border. The demarcation point between PPL Electric and BGE will be at the Pennsylvania-Maryland border for the rebuilt Chanceford – Doubs 500 kV Rebuilt Line.

- BGE will construct approximately 1.6 miles of the double circuit Chanceford – Doubs 500 kV Transmission Line (PJM Upgrade B3800.4) to the demarcation point with the PSEG section. PSEG will construct approximately 69.5 miles of single circuit 500 kV line (PJM Upgrades B3800.43 and B3800.7) from the BGE demarcation point to Doubs Substation. APS will terminate the new Chanceford – Doubs 500 kV Transmission Line into Doubs Substation (PJM Upgrade B3800.8). The BGE work described within this bullet is not part of the Project that is the subject of this filing.

PJM and PPL Electric are working collectively to execute a Designated Entity Agreement for PPL Electric to build the proposed Chanceford Switchyard (PJM Upgrade B3800.1), rebuild the existing Otter Creek – Conastone 230 kV Transmission Line as double-circuit 500 kV transmission lines (Chanceford – Doubs 500 kV Transmission Line and Otter Creek – Conastone 500/230 kV Transmission Line) from the proposed Chanceford Switchyard to the Pennsylvania-Maryland border (PJM Upgrade B3800.3), and construct new double circuit 500 kV transmission lines (Three Mile Island – Chanceford 500 kV Transmission Line and Chanceford – Peach Bottom 500 kV Transmission Line) from existing FirstEnergy ROW to Chanceford Switchyard (PJM Upgrade B3800.53). PPL Electric’s required project completion date will be determined pursuant to Schedule 6 of PJM's Amended and Restated Operating Agreement, and will be stated in the executed Designated Entity Agreement.

A one-line diagram of the proposed 500 kV and 230 kV systems is provided as **Figure 1-3**. A map of the proposed 500 kV and 230 kV systems final alignment is provided as **Figure 1-4**.

Figure 1-1: Existing 500 kV and 500 kV One Line Diagram

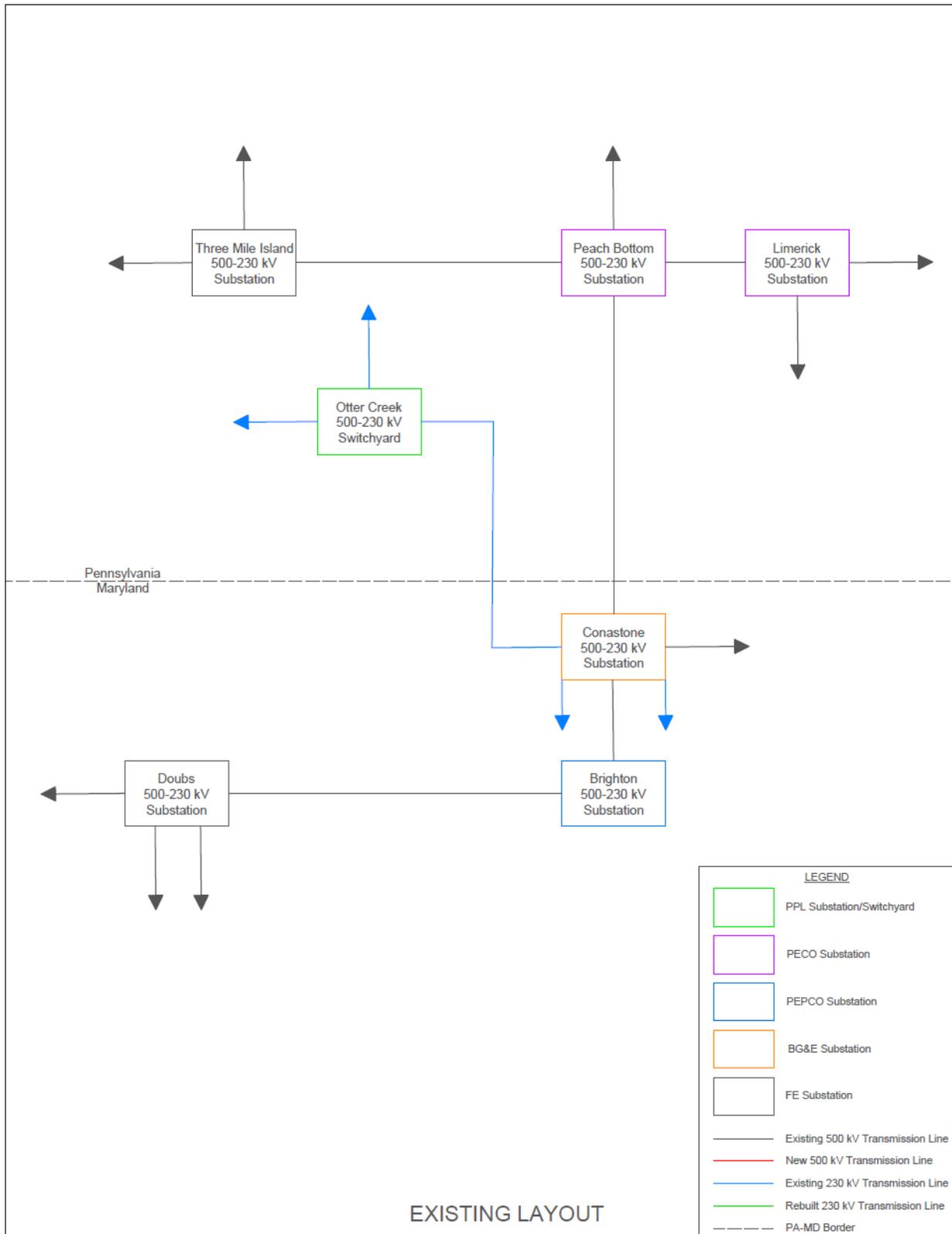
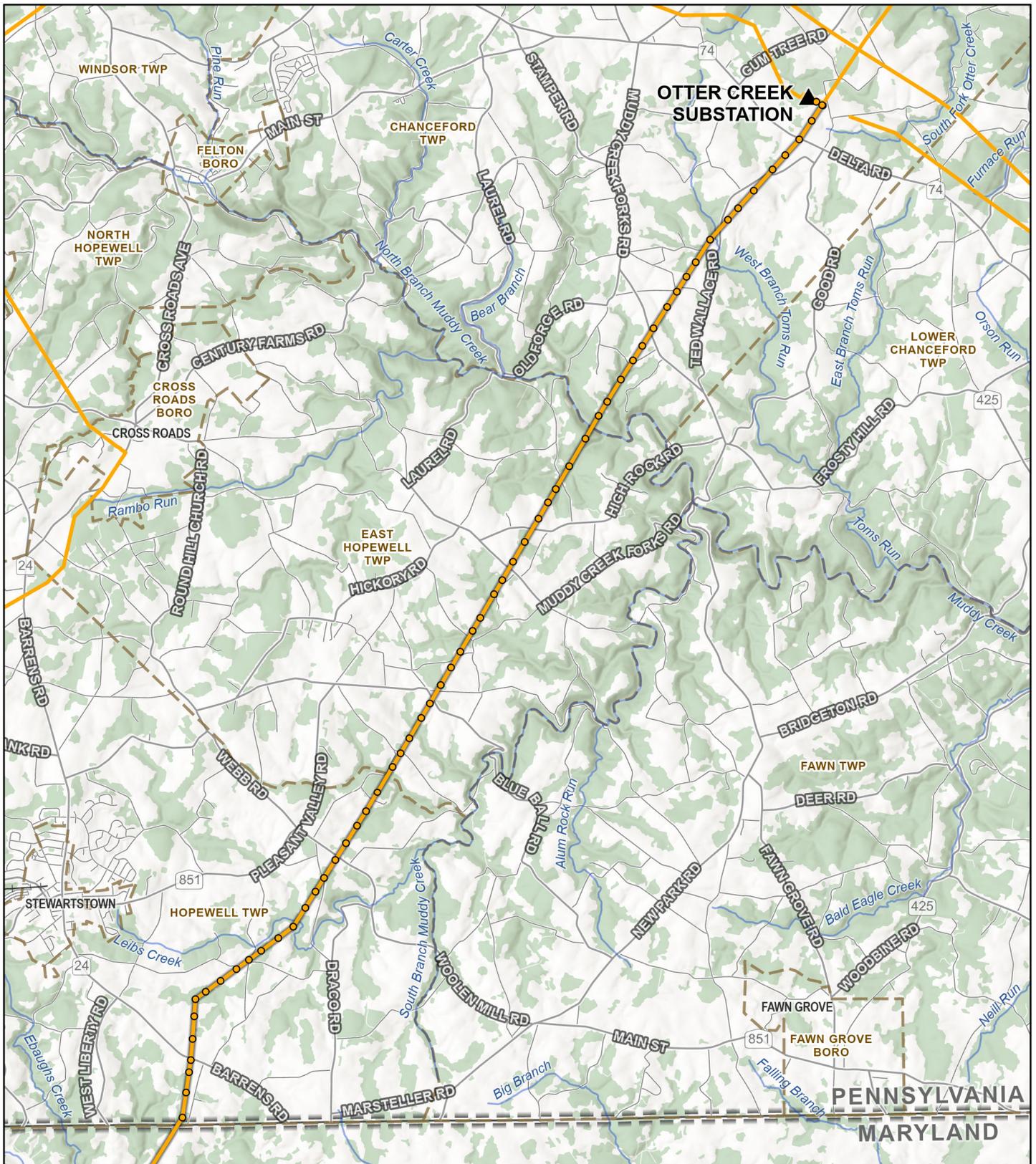


Figure 1-2: Existing System Map



- ▲ Substation or Switchyard
- Existing Structure
- Existing Transmission Line
- - Municipality Boundary

Roads, Railroads,
Municipalities (PASDA 2022)
Rivers, Forest Cover
(USGS 2022)

Coordinate System:
State Plane Pennsylvania South
Datum: North American 1983



Figure 1-2
Existing System Map
Chanceford 500 kV
Transmission Rebuild Project




0 0.5 1
Miles

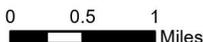




Figure 1-3: Proposed 500 kV and 500 kV One Line Diagram

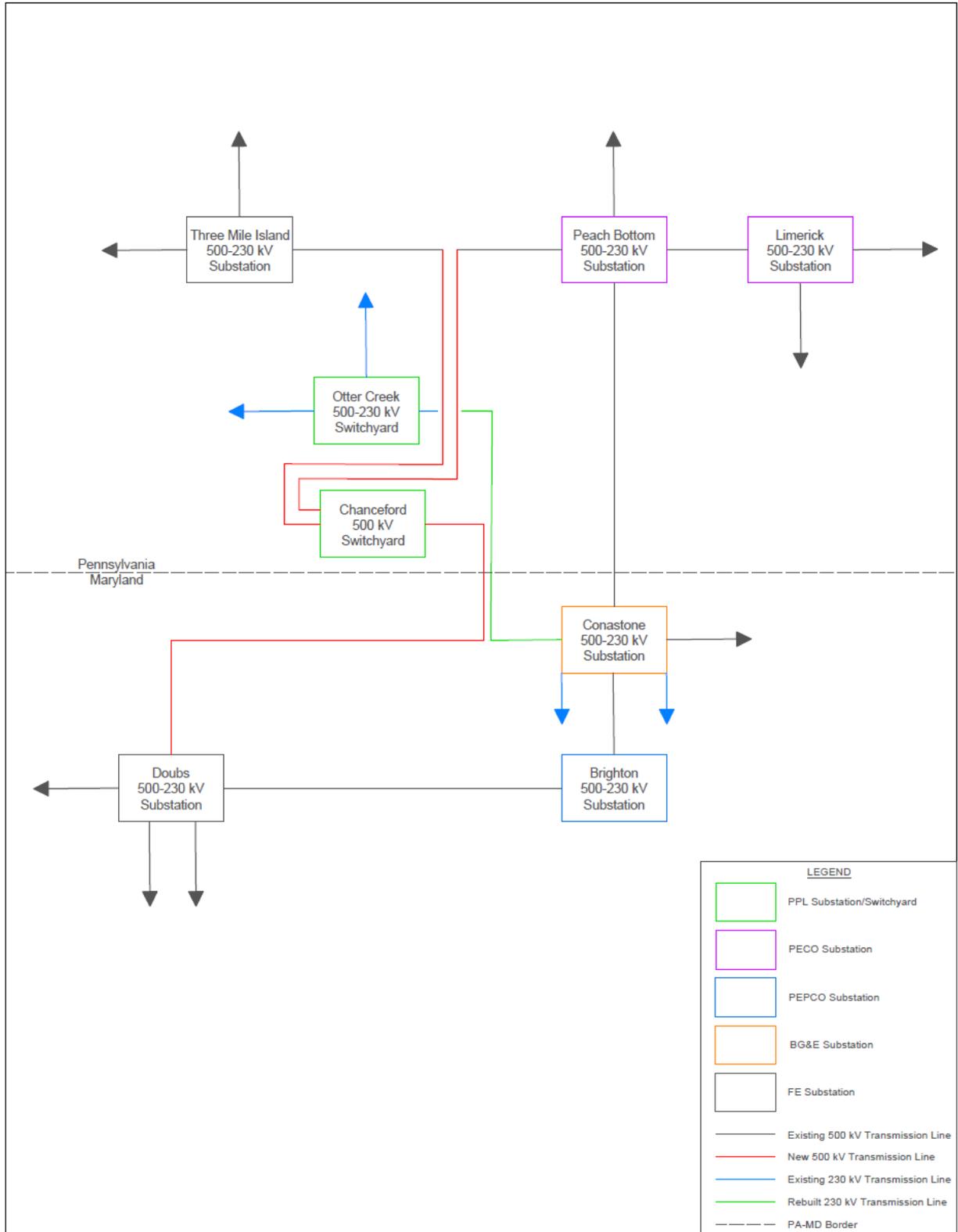
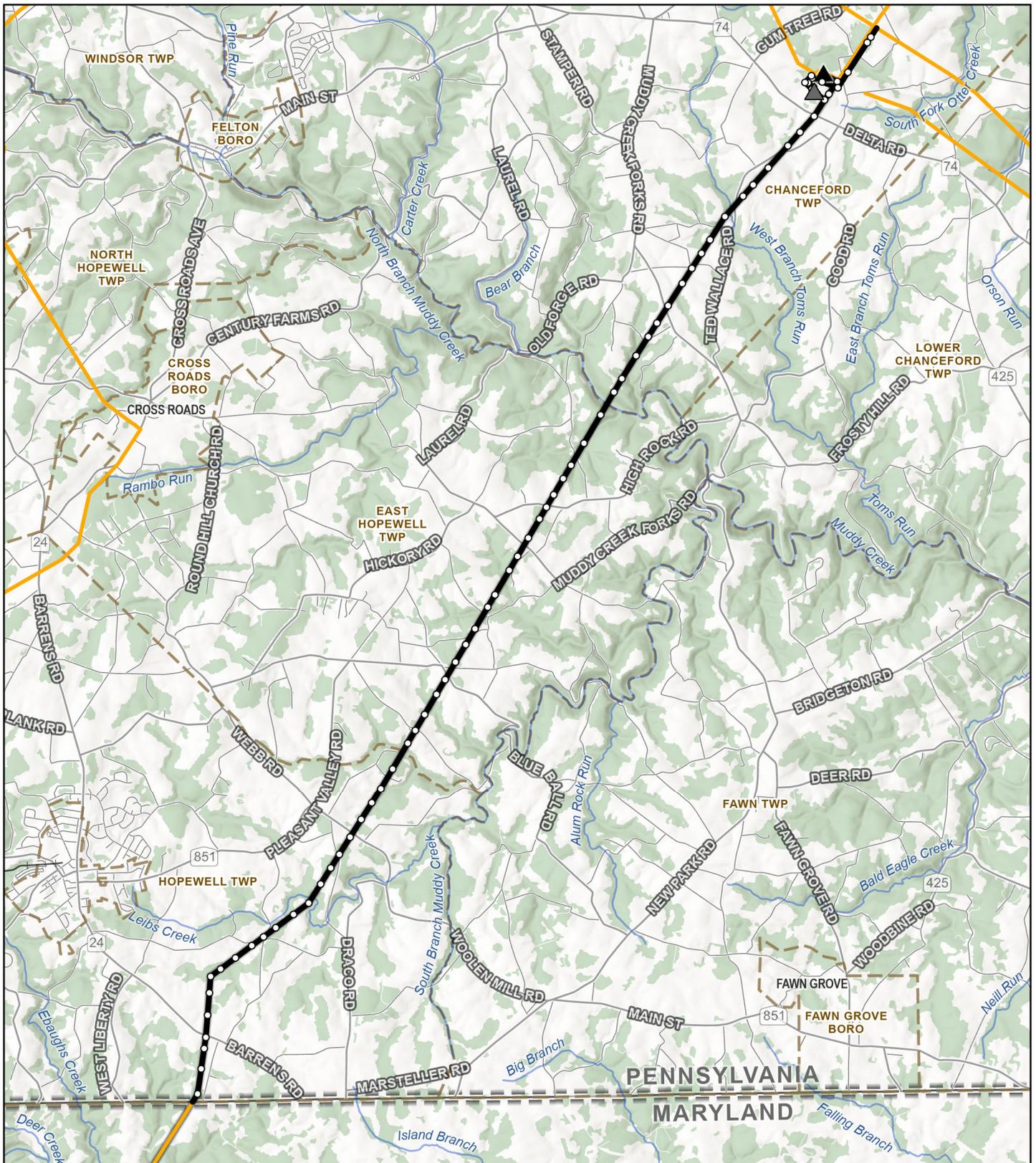


Figure 1-4: Proposed System Map



-  Proposed Switchyard
-  Existing Substation or Switchyard
-  Proposed Structure
-  Proposed Centerline
-  Existing Transmission Line
-  Municipality Boundary

Roads, Railroads,
Municipalities (PASDA 2022)
Rivers, Forest Cover
(USGS 2022)

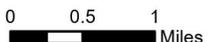
Coordinate System:
State Plane Pennsylvania South
Datum: North American 1983



Figure 1-4
Proposed System Map
Chanceford 500 kV
Transmission Rebuild Project




0 0.5 1
Miles





Attachment 2

CHANCEFORD 500 KV REBUILD PROJECT

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1.0 INTRODUCTION

As explained in **Attachment 1**, PPL Electric Utilities Corporation (“PPL Electric”) is requesting Pennsylvania Public Utility Commission (“PUC” or the “Commission”) approval to:

- (1) construct a new double circuit 500 kilovolt (“kV”) transmission line (the “Three Mile Island – Chanceford 500 kV Transmission Line” and the “Chanceford – Peach Bottom 500 kV Transmission Line”) for approximately 1.4 miles from the existing Three Mile Island – Peach Bottom 500 kV Transmission Line¹ in Chanceford Township, York County to a proposed PPL Electric-owned 500 kV switchyard (“Chanceford Switchyard”), and
- (2) rebuild approximately 12 miles of the existing single circuit Otter Creek – Conastone 230 kV Transmission Line² for future double circuit 500 kV capacity (the rebuilt “Chanceford – Doubs 500 kV Transmission Line” and the rebuilt “Otter Creek – Conastone 500/230 kV³ Transmission Line,” also referred to jointly as the “Chanceford – Doubs 500 kV Rebuilt Line”)⁴.

Collectively, the new and rebuilt double circuit transmission lines and the Chanceford Switchyard are referred to as the “Chanceford 500 kV Rebuild Project” or the “Project.” The Project is required to resolve reliability issues on the 500 kV and 230 kV transmission systems operated by PJM Interconnection, LLC (“PJM”).

¹ Three Mile Island Substation is owned and operated by Mid-Atlantic Interstate Transmission (“MAIT”), a subsidiary of FirstEnergy. Peach Bottom Substation is owned and operated by PECO Energy Company (“PECO”), an Exelon Company.

² The Otter Creek 230 kV Substation (the “Otter Creek Substation”) is owned and operated by PPL Electric. Conastone Substation is owned and operated by Baltimore Gas and Electronic Company (“BGE”), an Exelon Company.

³ The rebuilt Otter Creek – Conastone 500/230 kV Transmission Line will initially continue to operate as the Otter Creek – Conastone 230 kV Transmission Line until load increases and the line is re-terminated into the proposed Chanceford Switchyard. Prior to the system conversion the line will retain its current name (Otter Creek – Conastone 230 kV Transmission Line) and after the conversion it will be re-named to its final designation of Chanceford – Conastone 500 kV Transmission Line).

⁴ PPL will be installing an electrical jumper connection between the Otter Creek – Conastone 230 kV Transmission Line and the future Chanceford – Doubs 500 kV Transmission Line. This jumper connection will be installed within the Pennsylvania section of transmission line and remain in place until the Chanceford – Doubs 500 kV circuit is ultimately ready for energization at its remote end (Doubs Substation in Maryland). The purpose of the jumper will be to operate and monitor both circuits of the transmission line (as the Otter Creek – Conastone 230 kV line segment), in an interim configuration, until ultimately forming the Chanceford – Doubs 500 kV Rebuilt Line at a later date.

The proposed transmission line will be designed according to, and generally exceed, all National Electrical Safety Code (“NESC”) standards. Design specifications and safety rules adhered to by PPL Electric are included as **Attachment 4**.

2.0 DESCRIPTION OF THE PROPOSED 500 kV LINE AND STRUCTURES

The Project involves Mid-Atlantic Interstate Transmission (“MAIT”) breaking the existing Three Mile Island – Peach Bottom 500 kV Transmission Line and PPL Electric terminating the resulting ends of the 500 kV transmission lines into the proposed Chanceford Switchyard. The existing Otter Creek – Conastone 230 kV Transmission Line extends approximately 12 miles from the existing Otter Creek Substation to the Pennsylvania-Maryland border (“Demarcation Point”), where the existing 230 kV line becomes a BGE (an Exelon Company) asset. The line south of the Demarcation Point continues to the BGE-Owned Conastone Substation. As part of the Project, the rebuilt Chanceford – Doubs 500 kV Transmission Line (the western circuit) will operate at 500 kV, while the rebuilt Otter Creek – Conastone 500/230 kV Transmission Line (the eastern circuit) will be designed for future 500 kV operation, but initially operate at 230 kV as the Otter Creek – Conastone 230 kV Transmission Line.⁵ Once load growth in the area makes it appropriate to increase the operating voltage, the northern terminus of the Otter Creek – Conastone 230 kV Transmission Line will be re-terminated into the Chanceford Switchyard (at which time the line will be re-named its final designation of Chanceford – Conastone 500 kV Transmission Line) and a 0.4-mile segment of existing Otter Creek – Conastone 230 kV Transmission Line, between Otter Creek Substation and proposed Structure 2, will be removed (see **Page 1 of Figure 3-1 in Attachment 3**). The new and rebuilt double circuit 500 and 500/230 kV transmission lines will be constructed with new steel monopoles, high capacity conductors, and two optical ground wires, as detailed in **Table 2-1**.

Section	Section Length	Conductor	Wire Type
Three Mile Island – Chanceford and Chanceford – Peach Bottom 500 kV Transmission Lines	1.4 miles	Triple bundle 1590 kcmil 54/19 “Falcon” ACSR ⁶	Two 19#9 Alumoweld overhead ground wires (“OHGW”)

⁵ See fn. 3, *supra*.

⁶ “ACSR” stands for aluminum conductor steel reinforced.

Table 2-1. New Transmission Line Structure Design Criteria			
Section	Section Length	Conductor	Wire Type
Chanceford – Doubs 500 kV and Otter Creek – Conastone 500/230 kV	12 miles	Triple bundle 1590 kcmil 54/19 “Falcon” ACSR	Two 0.752”48-Fiber optical ground wires (“OPGW”)

Three Mile Island – Chanceford and Chanceford – Peach Bottom 500 kV Transmission Lines

The configuration of conductor and overhead ground wire (“OHGW”) varies along the circuits due to audible noise constraints and the varying fiber path taken along each circuit. PPL Electric will construct the double circuit Three Mile Island – Chanceford and Chanceford – Peach Bottom 500 kV transmission lines from the existing Three Mile Island – Peach Bottom 500 kV Transmission Line to the proposed Chanceford Switchyard. MAIT will be responsible for breaking the existing 500 kV transmission line so the PPL-constructed transmission lines could be tied into the 500 kV grid. PPL Electric believes the existing 500 kV transmission line consists of double bundle 2493 ACAR with dual alumoweld OHGW. From the interconnection point, PPL Electric will be using triple bundle 1590 ACSR and dual 19-#9 Alumoweld shield wires. The new double circuit 500 kV transmission lines will continue south for 1.4 miles from the interconnection point to the proposed Chanceford Switchyard.

To build the double circuit Three Mile Island – Chanceford and Chanceford – Peach Bottom 500 kV Transmission Lines, PPL Electric will install four (4) two pole angle structures each carrying one circuit and three (3) single pole double circuit structures (see **Figure 3-1 in Attachment 3**).

Rebuilt Chanceford – Doubs 500 kV and Otter Creek – Conastone 500/230 kV Transmission Lines

As mentioned previously, the existing Otter Creek – Conastone 230 kV Transmission Line will remain the same operating voltage of 230 kV but will be designed and rebuilt for future 500 kV capacity. From the existing Otter Creek Substation, PPL Electric will run single bundle 1590 ACSR for several spans until it reaches the proposed Structure 2, where it will transfer to triple bundle 1590 ACSR conductor. This section will also carry a de-commissioned dual 48 count OPGW, acting as a shield wire. The OPGW traffic previously carried on this section will then be

routed through the Chanceford Switchyard and then into the existing Otter Creek Substation on different cables.

The rebuilt Chanceford – Doubs 500 kV Transmission Line will utilize triple bundle 1590 ACSR and dual 48 count OPGW. This will be on shared structures with the rebuilt Otter Creek – Conastone 500/230 kV Transmission Line from the Chanceford Switchyard to the Pennsylvania-Maryland border.

The existing Otter Creek – Conastone 230 kV Transmission Line currently utilizes a total of 62 structures (shown in **Figure 3-1** in **Attachment 3**) comprised of the following:

- 60 custom steel poles on foundations with an average height of 145 feet.
- 2 two pole angle structures with an average height of 145 feet.

As shown in **Figure 3-1** in **Attachment 3**, to complete the rebuilt Otter Creek – Conastone 500/230 kV Transmission Line, PPL Electric will complete the following:

- Replace 57 existing steel monopole structures with 57 new steel monopole structures.
- Replace one existing two pole structure with a three pole structure 230 kV single circuit.
- Replace one existing steel monopole structure with a three pole structure 230 kV single circuit.
- Install two new double circuit custom poles on the Chanceford Switchyard parcel.

In total, PPL Electric will install 60 new foundation structures and remove 62 existing foundation structures. The existing structures were originally designed for double circuit 230 kV operation, while the new structures are designed for double circuit 500 kV operation. All new structures will be weathering steel monopoles and will be installed on concrete foundations. All structures will comply with NESC and PPL Electrical clearance requirements. In addition:

- All new rebuilt structures will be located entirely within the existing right-of-way and within a reasonable distance from the existing structures, typically less than 50 feet away from the existing structures. One new structure was required to assure that clearance requirements between the transmission line and grain bin could be achieved.

- All new structures (i.e., new structure locations that are not within the existing ROW) will be located entirely on PPL Electric-owned properties for the Chanceford Switchyard and Otter Creek Substation.

The rebuilt 500 kV transmission line will not substantially alter the right of way for the following reasons:

1. With the exception of approximately 2.7 acres (0.1 mile) of newly acquired ROW, the Chanceford – Doubs 500 kV Rebuilt Line can be built entirely within the existing 230 kV ROW. As stated in Attachment 1, PPL Electric is seeking to acquire additional voluntary ROW (25 feet on each side of the existing 150-foot-wide ROW) to enhance electric reliability, prevent potential impacts from danger trees, and reduce the number of structures by creating longer spans, where possible. If PPL Electric is unable to acquire the additional voluntary ROW in these areas then PPL Electric will design and construct the line to fit within the width of the existing ROW and maintain all necessary clearances. The new transmission line will be constructed entirely within the existing or newly acquired ROW corridor.
2. The proposed structures will be placed in the same general location as the existing structures (with one exception where there is an encroachment within the PPL ROW).
3. Although the proposed structures will include an additional circuit, the proposed structures will only be approximately 20% taller than the existing structures (the average height of the proposed structures is approximately 175 feet while the average height of the existing structures is approximately 145 feet).

The rebuilt Chanceford – Doubs and Otter Creek – Conastone 500/230 kV Transmission Lines will be designed to meet, and generally exceed, NESC minimum standards. Design specifications and safety rules practiced by PPL Electric are included in **Attachment 4**. The designed minimum conductor clearances and conductor thermal ratings are set forth in **Table 2-2**, **Table 2-3**, and **Table 2-4** below.

Table 2-2: Design Minimum Conductor Clearances	
Condition	Design Clearance-to-Ground
Normal load; average weather (16°C ambient temperature)	66.5 feet
Predicted extreme thermal load (125°C conductor temperature)	54.8 feet
Predicted extreme wind load (90 mph, 16°C)	74.0 feet
Predicted extreme weather conditions (1.0" Ice, 0 mph, 32°C)	64.2 feet
*Clearances based on a maximum tension of 22,340 pounds at .5 inch ice, 0° F, 4# wind and a ruling span of 1,055 feet (Span from STR. 3-4 to STR. 3-5).	

*Based on 1590 kcmil 54/19 stranding ACSR "Falcon"

Table 2-3: ACSR Conductor Thermal Rating*			
Condition	Ambient Temperature °C	Wind Speed ft/sec	Rating (Amps)
Summer Normal	35	0	5014
Winter Normal	10	0	5774
Summer Emergency	35	2.533	6190
Winter Emergency	10	2.533	6969

*Based on triple bundle 1590 kcmil 54/19 stranding ACSR "Falcon" (257°F) 125°C Maximum Conductor

3.0 MAGNETIC FIELD MANAGEMENT

PPL Electric’s Magnetic Field Management Program is applied to new and reconstructed transmission line projects. The Company does not believe that current scientific evidence demonstrates that magnetic fields cause any adverse health effects or pose a health or safety danger to the public. Nevertheless, PPL Electric has determined, as a matter of policy, to design its new and rebuilt transmission lines to reduce magnetic fields when consistent with functional requirements. The program generally prescribes the use of a line design with ground clearance that exceeds NESC standards by a minimum of 5 feet and reverse phasing of new double-circuit lines when feasible and can be implemented at low or no additional cost.

The Project will be designed with structures that have a ground clearance that is 20 feet higher than NESC standards to minimize electro-magnetic fields at ground level and audible noise. In addition, the rebuilt 500 kV transmission line will be double circuit configuration and will use phasing specifically designed to minimize electro-magnetic fields at ground level as well as at the right-of-way edge.

Figure 2-1. Typical Double-Circuit Suspension

	7-010-001	Revision: 00
	500kV Double Circuit Tangent Suspension Vertical Framing (0°-1° Line Angle)	Effective Date: 4/15/2018
		Sheet 1 of 1

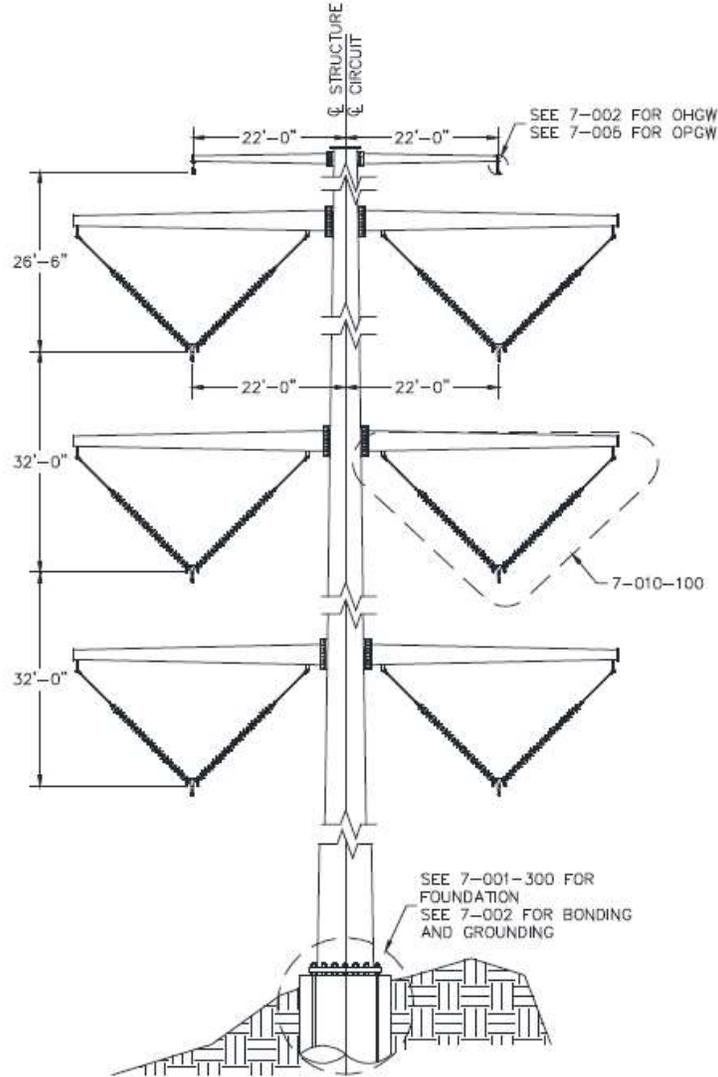


Figure 2-2. Typical Double Circuit Dead-End on Arms

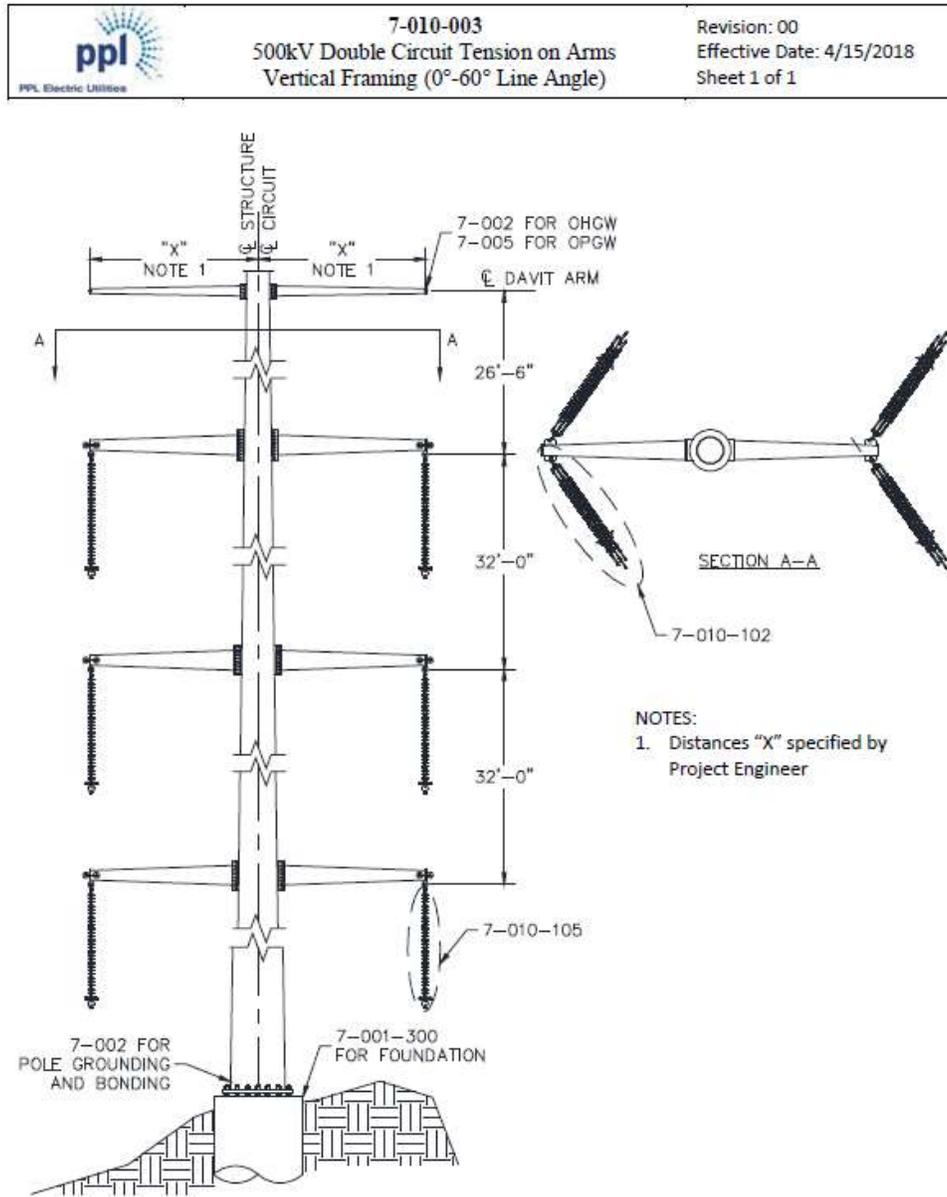
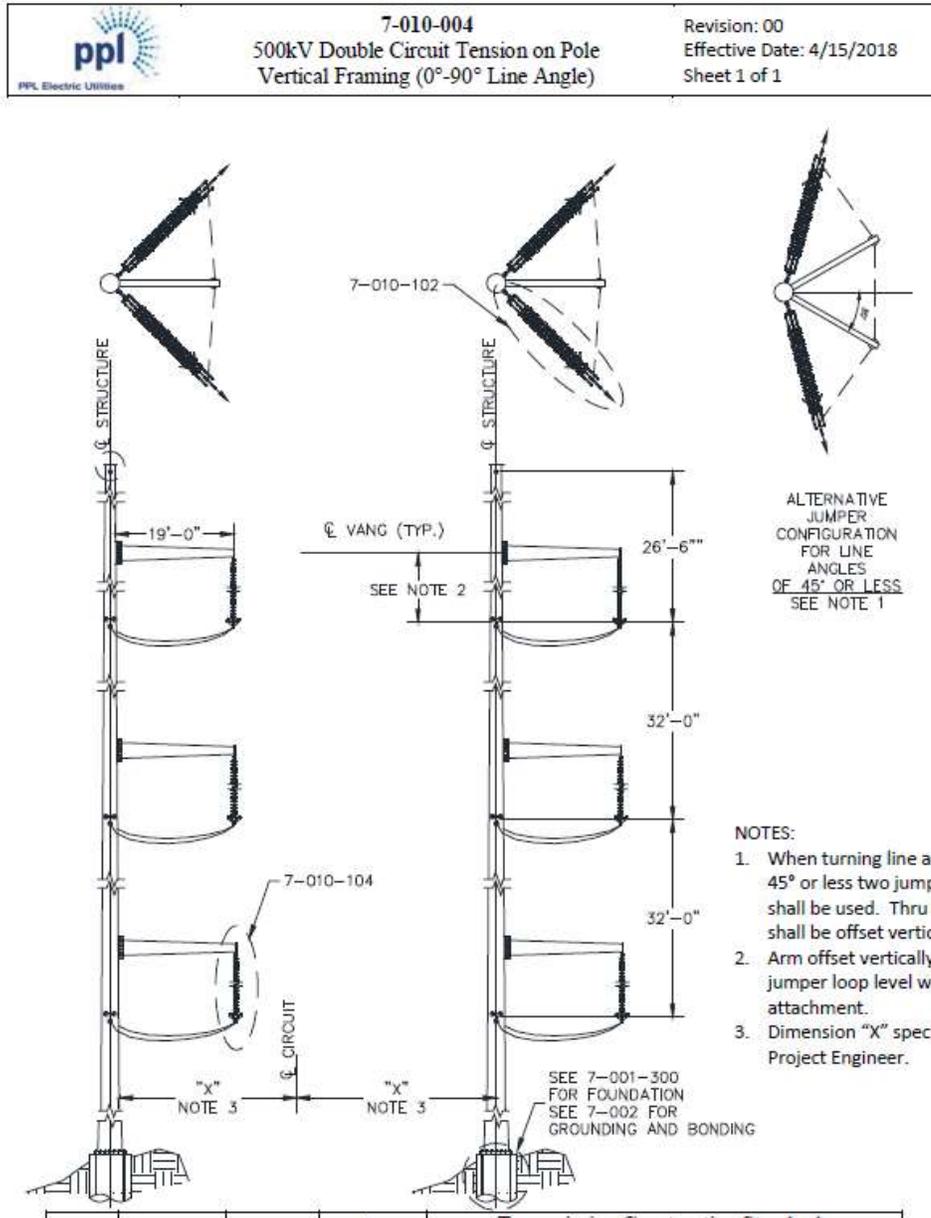


Figure 2-3. Typical Double-Circuit 2-Pole Dead-End



Attachment 3

CHANCEFORD 500 KV REBUILD PROJECT

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1.0 DESCRIPTION OF PROJECT AREA

As explained in **Attachment 1**, PPL Electric Utilities Corporation (“PPL Electric”) is requesting Pennsylvania Public Utility Commission (“PUC” or the “Commission”) approval to:

- (1) construct approximately 1.4 miles of new double circuit 500 kilovolt (“kV”) transmission line (the “Three Mile Island – Chanceford 500 kV Transmission Line” and the “Chanceford – Peach Bottom 500 kV Transmission Line”) between the existing Three Mile Island – Peach Bottom 500 kV Transmission Line¹ to the proposed PPL Electric-owned 500 kV switchyard (“Chanceford Switchyard”), and
- (2) rebuild approximately 12 miles of the existing single circuit Otter Creek – Conastone 230 kV Transmission Line² to a future double circuit 500 kV capacity (the “Chanceford – Doubs 500 kV Transmission Line” and the “Otter Creek – Conastone 500/230 kV³ Transmission Line,” jointly referred to as the “Chanceford – Doubs 500 kV Rebuilt Line”)⁴.

Collectively, the new and rebuilt double circuit transmission lines and the Chanceford Switchyard are referred to as the “Chanceford 500 kV Rebuild Project” or the “Project.” The Project is located between the existing Peach Bottom – Three Mile Island 500 kV Transmission Line and the Pennsylvania-Maryland border through Chanceford, East Hopewell, and Hopewell Townships in York County, Pennsylvania.

¹ Three Mile Island Substation is owned and operated by Mid-Atlantic Interstate Transmission (“MAIT”), a subsidiary of FirstEnergy. Peach Bottom Substation is owned and operated by PECO Energy Company (“PECO”), an Exelon Company.

² The Otter Creek 230 kV Substation (“Otter Creek Substation”) is owned and operated by PPL Electric. Conastone Substation is owned and operated by Baltimore Gas and Electronic Company (“BGE”), an Exelon Company.

³ The rebuilt Otter Creek – Conastone 500/230 kV transmission line will initially continue to operate as the Otter Creek – Conastone 230 kV transmission line until load increases and the line is re-terminated into the proposed Chanceford 500 kV switchyard. Prior to the system conversion the line will maintain its current name (Otter Creek – Conastone 230 kV transmission line) and after the conversion it will be re-named to its final designation of Chanceford – Conastone 500 kV transmission line).

⁴ PPL Electric will be installing an electrical jumper connection between the Otter Creek – Conastone 230 kV Transmission Line and the future Chanceford – Doubs 500 kV Transmission Line. This jumper connection will be installed within the Pennsylvania section of transmission line and remain in place until the Chanceford – Doubs 500 kV circuit is ultimately ready for energization at its remote end (Doubs Substation in Maryland). The purpose of the jumper will be to operate and monitor both circuits of the transmission line (as the Otter Creek – Conastone 230 kV line segment), in an interim configuration, until ultimately forming the Chanceford – Doubs 500 kV Rebuilt Line at a later date.

As part of its competitive FERC Order 1000 Transmission Solicitation window in 2022, PJM solicited solutions to address the contingency loss of key 500 kV transmission lines. Seventy-two proposals, including 50 greenfield solutions comprising new transmission lines, were submitted and reviewed by PJM. PJM’s review of the proposals included whether the proposed project utilized existing facilities/ROW, scoring the use of existing facilities/ROW as a benefit over new facilities/ROW. PPL Electric’s proposal for the project was selected as the most appropriate solution partly because it primarily utilized existing facilities and ROW, limiting new impacts.

PPL Electric investigated potential alternative routes as part of the Otter Creek – Conastone Transmission Line Rebuild Project in 2011 (Docket A-2011-2228595). The goal of the alternative siting analysis was to determine whether an alternative route for this transmission line could be identified which provided fewer social, environmental, engineering, and economic impacts. The alternative siting analysis involved a comprehensive review of Geographic Information Systems (“GIS”) data sets and aerial photography; conducting field reviews; and subsequently identifying and evaluating potential alternative routes. Results of the alternative analysis determined that there were no feasible alternative routes that would cause fewer social, environmental, engineering, and economic impacts than the existing route.

As part of the current project, PPL Electric also engaged with local stakeholders to obtain their input and ensure that potential concerns were addressed during this phase of the project. This included hosting community meetings and gathering feedback from residents and local government officials. Through these engagements, PPL was able to better understand the specific impacts on the local community and environment. Utilizing the results of the previous siting analysis as the baseline, the additional evaluation completed as part of this project, and considering the current scope of work, which includes widening the ROW, PPL Electric confirmed that the results of the previous siting evaluation are still accurate and there are no feasible alternative routes that would cause fewer social, environmental, engineering, and economic impacts than the existing route.

Additionally, PPL conducted a comprehensive siting evaluation to determine the appropriate location for the proposed switchyard. This analysis was based on the review of nationwide or state-wide GIS datasets, a windshield survey of the sites, a desktop review of aerial photography, publicly accessible data, and the Siting Team’s experience planning, permitting, and constructing substations and transmission lines. Residents within the evaluation area were invited to a public open house to learn

about the project and provide input into the siting process. PPL Electric also held an open house for the project. As part of the site selection process, the Siting Team assumed the desired switchyard parcel size to be approximately 50 acres or less, subject to allowable conditions. Initial siting activities identified eight potential sites that met the search criteria. A detailed matrix comparing the advantages and disadvantages of each of the sites was prepared. The results of the switchyard siting analysis yielded a ranked list of sites with similar costs and impacts. Since the site impacts and relative site costs were similar, PPL Electric systematically worked through the list of ranked sites, starting with the highest-ranked site and working its way down the list until landowners willing to sell their land were identified. It is PPL Electric’s philosophy to work with willing landowners where it can be accomplished without condemnation as long as Project costs are comparable. This systematic approach ensured that the final site selected not only met all technical requirements but also minimized disruption to the surrounding area. PPL Electric remains committed to maintaining transparency throughout the process and will continue to update the community as the project progresses.

The Project will be constructed entirely within the existing right of way (“ROW”), within newly acquired ROW, or on PPL Electric’s Otter Creek Substation and Chanceford Switchyard properties. PPL Electric is seeking voluntary rights to the expand the existing 150-foot-wide ROW to 200 feet in width (25 feet on each side of the existing Otter Creek – Conastone 230 kV Transmission Line ROW). In any areas where PPL Electric is unable to acquire additional ROW voluntarily from the applicable landowners, the transmission line will be designed to fit entirely within the existing ROW. A network of existing access roads or temporary roads will be utilized during construction of the new and rebuilt transmission lines. A detailed map of the proposed Chanceford 500 kV Rebuild Project and associated structures is provided in **Figure 3-1**.

From the existing Mid-Atlantic Interstate Transmission (“MAIT”) Peach Bottom – Three Mile Island 500 kV Transmission Line to the proposed Chanceford Switchyard, the Project travels southwest and adjacent to existing transmission facilities through agricultural properties, characterized by cultivated cropland and fragmented woodlots. From the proposed Chanceford Switchyard, the Project travels in a southwesterly direction, primarily through agricultural fields and forested lands, until it terminates at the Pennsylvania-Maryland border as shown in **Figure 3-1**. As part of the Project, PPL Electric evaluated Township Zoning Ordinances and Plans and confirmed the Project is generally consistent with applicable requirements.

The ROW for the Project is further described below:

- From the existing MAIT Peach Bottom – Three Mile Island 500 kV Transmission Line, the Project proposes constructing 1.4 miles of new double circuit 500 kV transmission lines to the southwest through agricultural cropland and woodlots to interconnect the proposed Chanceford Switchyard, using 11 new (4 two pole angle structures and 3 single pole structures) structures (pages 1 to 3 in **Figure 3-1**). The 11 new structures will be located entirely within PPL Electric’s switchyard property or fee owned property. The newly acquired, varying width, ROW is located adjacent to PPL Electric’s existing Manor – Otter Creek 230 kV Transmission Line ROW.
- Between the existing Otter Creek Substation and the proposed Chanceford Switchyard, two (2) three pole structures will be installed within the existing Otter Creek – Conastone 230 kV Transmission Line ROW. This portion of the rebuild will be removed once the double circuit 500 kV transmission line is fully operational and re-named its final designation of Chanceford – Conastone 500 kV Transmission Line.
- From the proposed Chanceford Switchyard, the rebuilt double circuit 500 kV transmission line traverses approximately 650 feet to the southeast across PPL Electric property and into the existing 150-foot-wide ROW (pages 2 and 3 in **Figure 3-1**) with the installation of three new double circuit 500 kV (2 two pole angle and one custom steel pole) structures.
- At proposed Structure 2, the rebuilt double circuit 500 kV transmission line turns sharply to continue southwestward within existing ROW and through cultivated cropland for 0.2 mile, crossing Delta Road and Ted Wallace Road. PPL Electric is attempting to negotiate with applicable landowners to acquire, where practical, additional ROW to expand the existing ROW to 200 feet. These negotiations are voluntary and will continue with owners of property crossed by the 150-wide ROW. As shown on pages 2 and 4 in **Figure 3-1**, this portion requires installing six double circuit 500 kV structures (Structure 1-5 to Structure 2-3) in close proximity to the existing structures.
- From here, the rebuilt double circuit 500 kV transmission line continues southwest within existing ROW for 0.2 mile, crossing Ted Wallace Road and Sechrist Road (Pages 5 and 6 in **Figure 3-1**). This portion requires replacing seven structures (Structure 2-3 to Structure 3-5) in close proximity to the existing structures and will span West Branch Toms Run as well as two unnamed tributaries (“UNTs”) of West Branch Toms Run. Land use within and adjacent

to the existing and possibly voluntarily acquired ROW (up to 25 feet on each side of the existing ROW) is primarily cultivated cropland. Forested agricultural woodlots and riparian areas are also present within and adjacent to the existing ROW.

- After crossing Muddy Creek Forks Road and Guinston Road, the rebuilt double circuit 500 kV transmission line continues southwest through existing and possibly voluntarily acquired ROW (up to 25 feet on each side of the existing ROW), for approximately 2 miles (pages 6 to 9 in **Figure 3-1**). This portion of the existing ROW crosses North Branch Muddy Creek and two UNTs of North Branch Muddy Creek. Land use adjacent to the existing ROW is primarily undeveloped forest (riparian corridors) or cultivated cropland. Nine monopole structures (Structure 4-1 to Structure 5-4) will be constructed in proximity to the existing structures in order to span the identified waterways.
- For the next 3.7 miles, the rebuilt double circuit 500 kV transmission line continues southwest within the existing 150-foot-wide ROW and possibly voluntarily acquired ROW (up to 25 feet on each side of the existing ROW), which is primarily surrounded by cultivated cropland and low-density residential areas along High Rock Road, Laurel Road, Muddy Creek Forks Road, and Lutz Road (Structure 6-1 to Structure 9-4; Pages 9 to 13 in **Figure 3-1**). The 17 replacement monopole structures will be installed in proximity to existing structures in order to reduce vegetation clearing requirements and span four UNTs to South Branch Muddy Creek. The existing ROW is primarily surrounded by agricultural properties, such as cultivated cropland and woodlots, in addition to undeveloped forest within riparian corridors of the UNTs to South Branch Muddy Creek.
- Just after crossing Woolen Mill Road, the rebuilt double circuit 500 kV transmission line continues southwest for approximately 2 miles by replacing 11 existing structures within existing ROW (Structure 9-5 to Structure 11-5; pages 14 to 16 in **Figure 3-1**). This portion of the Project spans Leibs Creek and one UNT of Leibs Creek and is primarily surrounded by cultivated cropland. Undeveloped forest cover in proximity to the existing ROW and possibly voluntarily acquired ROW (up to 25 feet on each side of the existing ROW) is present within fragmented woodlots and riparian corridors.
- At the proposed two-pole replacement structure (Structure 11-6A and 11-6B), the rebuilt double circuit 500 kV transmission line turns sharply south, continuing within existing ROW and possibly voluntarily acquired ROW (up to 25 feet on each side of the existing ROW) an

additional 1 mile to cross Barrens Road and terminates at the Pennsylvania-Maryland state border through agricultural properties.

2.0 LAND USE

PPL Electric evaluated the existing land uses on the PPL Electric-owned properties and within 0.25 mile (1,320 feet) of the new 500 kV and existing 230 kV transmission lines. This broader area was reviewed to provide a sense of the landscape in which the Project is located. Land uses were determined based on the United States Geological Survey (“USGS”) 2021 National Land Cover Database (“NLCD”).

Assessment of the data shows that agricultural areas are the dominant land use, accounting for approximately two-thirds (66 percent) of the review area, with the primary component being cultivated crops. Forested area bordering the Project ROW accounts for approximately 25 percent of the review area. Low to moderate density development and associated open space is noted across approximately 9 percent of the review area.

Impacts to land use are anticipated to be minimal because the Project will be constructed entirely within existing or newly acquired rights-of-way and on PPL Electric’s property for the proposed Chanceford Switchyard and existing Otter Creek Substation. The Project will be accessed by using the surrounding state and secondary roads at locations where they intersect the ROW. A few temporary access roads will be necessary outside the ROW to reach several structure locations. Where temporary access roads outside the ROW are necessary, PPL will obtain additional land rights from the property owners, as needed. PPL Electric will use and update previously established access roads within the ROW for construction to the extent practical to further reduce interference with existing land uses.

State and Conserved Lands

During evaluation for State-owned lands, none were identified along the Project ROW. As shown on Figure 3-1, the majority of the Project crosses York County agricultural conservation easements (“ACEs”) and agricultural security areas (“ASAs”). Specifically, the existing Otter Creek – Conastone 230 kV Transmission Line ROW crosses 18 ACEs and 33 ASAs. The Project proposes installing new structures near existing structures within the existing Otter Creek – Conastone 230 kV Transmission Line; therefore, minimal impacts to the York County ACEs and ASAs are anticipated.

The proposed Chanceford Switchyard crosses one ACE and two ASAs. Of these, the ACE and one of the ASAs are currently crossed by the existing Otter Creek – Conastone Transmission Line. The proposed Three Mile Island – Chanceford 500 kV and Chanceford – Peach Bottom 500 kV

transmission lines cross two ACEs and four ASAs. PPL Electric is coordinating with the York County Conservation District to minimize impacts for the Project.

Airports

One registered Federal Aviation Administration (“FAA”) private airstrip, the Draco airport, is located approximately 0.5 mile east of the Project near the intersection of Draco Road and Woolen Mill Road. Draco Airport is a turf airstrip that is permitted for use of ultra-light aircraft. Additionally, the Baublitz Airport is located approximately 0.8 miles west of the Project on Muddy Creek Forks Road. The Baublitz Airport is classified as a public commercial airport by the FAA. The closest major commercial airport, the Lancaster Airport, is located approximately 19 miles northeast of the Project.

PPL Electric does not anticipate any interference with airport operations since the Project consists of electrical facilities of similar height as the existing facilities. However, PPL Electric will comply with any applicable requirements of the FAA.

3.0 PUBLIC OUTREACH

The public outreach approach for the Project included early stakeholder engagement; public notification, including landowner notifications and news releases; and in-person public open house meetings.

Outreach Media

Prior to the first public open house meeting, PPL Electric met with the Project area municipalities to inform them about the Project. The information presented to these stakeholders included an explanation of the overall PJM Interconnection, LLC (“PJM”) transmission planning process, such as identifying criteria violations and project need as well as reviewing and selecting proposed solutions, followed by a detailed explanation of the Chanceford 500 kV Project⁵, such as the conceptual scope and schedule, as well as engineering and ROW requirements.

To ensure that adequate notification of the open house was given to the affected community, as well as key stakeholders, PPL Electric’s consultant (WSP) first mailed postcards on December 20, 2023, to all residents and landowners located within 500 feet of the existing 230 kV transmission line and the proposed 500 kV switchyard. A total of 111 postcards were sent, which notified the recipients of an upcoming information session and access to the Project’s website address.⁶

Those same 111 recipients were updated again on January 3 and May 3, 2024, via an invitation and information for the Project’s open houses (on January 25 and May 29, 2024, respectively), including a Project fact sheet and FAQs. In addition, PPL Electric placed an advertisement in a local newspaper, *York Daily Record*, on Monday, January 15 and May 17, 2024, to provide information on each public open house meeting. An advertisement was also placed with a local vendor, Star Printing, on May 16, 2024, to notify the public of the second open house meeting. PPL Electric also notified local officials within York County and Chanceford, East Hopewell, and Hopewell townships prior to each open house meeting.

Public Open Houses

PPL Electric hosted two separate public open house meetings to provide information on the Project on January 25 and May 29, 2024. The January 25, 2024 public open house meeting was held between

⁵ At the time of early stakeholder and public notification, the Project was identified as the “Collinsville 500 kV Project.” As of February 8, 2024, PJM has requested that the Project is identified as the “Chanceford 500 kV Project” since there are two other existing Collinsville substations in the PJM footprint.

⁶ www.pplelectric.com/collinsvilleproject

6 p.m. and 8 p.m. at the Chanceford Township Building, located at 33 Muddy Creek Forks Road, Brogue, PA 17309. The May 29, 2024 public open house meeting was held between 6 p.m. and 8 p.m. at the New Bridgeville Fire Company, located at 2870 Furnace Road, Red Lion, PA 17356.

Each public meeting provided eight open house stations with display boards presenting text, figures, graphics, and/or photos. Upon entering the open house meeting, property owners were greeted at the “Welcome” table and asked to sign in. Twenty-six residents attended the January 25 public meeting and 19 residents attended the May 29 public meeting.

During both public open house meetings, property owners were encouraged to fill out comment cards with any questions, comments, or concerns they may have regarding the Project. Eight comment cards were completed during the January 25 open house meeting and two comment cards were completed during the May 29 open house meeting. Comments received from property owners at the first public open house meeting included responses that expressed opposition regarding the proposed location of the proposed 500 kV switchyard and associated loss of agricultural land. Additionally, one attendee expressed concern about tree clearing along their property line and another attendee expressed concern about static noise and potential interference with radio signals. Comments received as a result of the second public open house meeting included concerns with construction debris and post-construction remediation. Following the open houses, PPL Electric thoroughly reviewed the information obtained during the public meetings, along with the comments received. As a result, PPL took the information received into consideration to address landowner concerns and make modifications to the project plan, where practical.

4.0 CULTURAL RESOURCES

No known archaeological resources are located within 0.5 mile of the Project. Two previously recorded historic districts and 12 previously recorded architectural sites were identified within 0.5 mile of the Project, as shown below in **Table 3-1**. The table identifies those resources within 0.5 mile of the Project that are either eligible, unevaluated, or listed for the National Historic Register of Places (“NRHP”). Ineligible or demolished resources are not included in the table.

Table 3-1. Historic Architectural Sites and Districts within 0.5 mile of the Project		
Resource Number	Name	NRHP Status
2019RE09041	Charles and Pauline Trout Property	Undetermined
2019RE27422	Chilcoat, Harry property	Undetermined
2013RE00721	Conastone-Otter Creek Transmission Line ⁷	Undetermined
2019RE16188	Dwight E. and Gladys J. Taylor Property	Undetermined
1974RE00069	Guinston United Presbyterian Church	Listed
2015RE00128	Mason-Dixon Line Boundary Markers, Pennsylvania-Maryland	Undetermined
2019RE27423	Neeper, Heather property	Undetermined
2019RE13916	Sparks, Loring property	Undetermined
2010RE01318	Stewartstown Railroad	Eligible
1995RE32181	Unnamed	Undetermined
1995RE46424	Unnamed	Undetermined
1995RE32186	Unnamed	Undetermined
1995RE37672	Yost, Alan & Kathy, Property	Undetermined
1995RE51952	Zion Church Cemetery	Undetermined

The Guinston United Presbyterian Church, located at 14130 Guinston Road, is approximately 0.5 mile west of the existing Otter Creek – Conastone 230 kV Transmission Line. The Stewartstown Railroad, a historic district, is located adjacent south of Barrens Road between Structure 12-2 and Structure 12-3 (see Page 1 of 16 in Figure 3-1).

The Project proposes upgrading the existing Otter Creek – Conastone 230 kV Transmission Line by replacing current structures to double circuit 500 kV capacity. The new structures will generally look

⁷ This previously recorded resource is a component of the Project that connects to the existing Otter Creek Substation.

similar to the existing towers but will be approximately 20 to 30 feet taller and include an additional circuit. In addition, PPL Electric is seeking to acquire additional voluntary ROW (25 feet on both sides of the current 150-foot-wide ROW) to enhance electric reliability, prevent potential impacts from danger trees, and reduce the number of structures by creating longer spans, where possible. Therefore, no significant impacts are anticipated for the only NRHP-listed resources or any other known architectural resources identified for the Project.

PPL Electric is in the initial stage of coordination with the Pennsylvania State Historic Preservation Office (“SHPO”) of the Pennsylvania Historical and Museum Commission (“PHMC”) for the construction of the double circuit 500 kV line rebuild. This coordination is required as part of the approval process necessary to construct the Project and will be completed in the near future. Based upon the response provided by PHMC, PPL Electric will perform any reviews and field survey/sampling work required to avoid, minimize, and mitigate impacts to archaeological or historic architectural resources that may be located within the Project area.

5.0 NATURAL FEATURES

Environmental factors reviewed for the Project included unique natural features, soils, waterways, wetlands, 100-year floodplains, vegetation, and threatened and endangered species.

Unique Natural Features

Core habitat for the North Branch Muddy Creek Natural Heritage Area (NHA) was identified for the Project area, which is explained in further detail below. No additional unique geological, scenic, or natural areas are located within the Project review area.

Soils

Erosion and sedimentation control plans will be developed and implemented for the Project that will minimize the displacement of soils. These plans will require prior approval from the York County Conservation District. National Pollutant Discharge Elimination System (“NPDES”) permits will be obtained from the Pennsylvania Department of Environmental Protection (“PADEP”), as needed. Any conditions of the NPDES permit will be adhered to as part of the construction process. As such, impacts to local soil resources are anticipated to be minimal.

Waterways

The existing Otter Creek – Conastone 230 kV Transmission Line spans 14 mapped waterways as it extends from the Otter Creek substation in the northeast to the Pennsylvania-Maryland state border in the southwest. In addition, the new Three Mile Island – Chanceford 500 kV and Chanceford – Peach Bottom 500 kV transmission lines will cross one (1) mapped waterway. These mapped waterways include South Fork Otter Creek, Leibs Creek, North Branch Muddy Creek, West Branch Toms Run, as well as two UNTs of Leibs Creek, two UNTs of North Branch Muddy Creek, four UNTs of South Branch Muddy Creek, three UNTs of West Branch Toms Run. **Table 3-2** summarizes the PADEP Chapter 93 designated use classifications and special PFBC designations of the streams identified within the Project area along with their locations on **Figure 3-1**.

Table 3-1. Streams within the Project Area

Stream Name	PADEP Chapter 93 Designated Use Classification	Special PFBC Designation	Location on Figure 3-1
South Fork Otter Creek	WWF	-	Pages 1 - 3
UNT to West Branch Toms Run	TSF, MF	-	Page 4
West Branch Toms Run	TSF, MF	-	Page 5
UNT to West Branch Toms Run	TSF, MF	-	Page 5
UNT to West Branch Toms Run	TSF, MF	-	Page 6
UNT to North Branch Muddy Creek	CWF, MF	-	Pages 6 - 8
North Branch Muddy Creek	CWF, MF	Approved Trout Streams (stocked); Wild Trout (Natural Reproduction)	Page 8
UNT to North Branch Muddy Creek	CWF, MF	-	Pages 8 and 9
UNT to South Branch Muddy Creek	HQ-CWF, MF	-	Page 10
UNT to South Branch Muddy Creek	HQ-CWF, MF	-	Pages 10 and 11
UNT to South Branch Muddy Creek	HQ-CWF, MF	-	Page 12
UNT to South Branch Muddy Creek	HQ-CWF, MF	-	Pages 12 and 13
Leibs Creek	HQ-CWF, MF	Wild Trout (Natural Reproduction)	Pages 14 and 15
UNT to Leibs Creek	HQ-CWF, MF	-	Pages 15 and 16
UNT to Leibs Creek	HQ-CWF, MF	-	Pages 15 and 16

South Branch Otter Creek has a PADEP-designated use classification of Warm Water Fishes (“WWF”). North Branch Creek and UNTs to North Branch Creek have a PADEP-designated use classification of Cold Water Fishes (“CWF”). West Branch Toms Run and UNTs to West Branch Toms Run have a PADEP-designated use classification of Trout Stocked Fishes (“TSF”).

Leibs Creek, UNTs to Leibs Creek, and UNTs to South Branch Muddy Creek have a PADEP-designated use classification of High Quality-Cold Water Fishes (“HQ-CWF”), which is an anti-

degradation special protection classification for surface waters having quality which exceeds levels necessary to support propagation of fish, shellfish, and wildlife. All fourteen streams also have a PADEP-designated classification of Migratory Fisheries (“MF”), which is an anti-degradation special protection classification for surface waters which provide habitat for the passage, maintenance and propagation of anadromous and catadromous fishes and other fishes which move to or from flowing waters to complete their life cycles in other waters.

Two streams spanned by the Project have special PFBC designations. Leibs Creek and North Branch Muddy Creek are also classified as Wild Trout (Natural Reproduction) Streams, which are flowing waters in Pennsylvania that support naturally reproducing populations of trout. Additionally, North Branch Muddy Creek is an Approved Trout Stream (stocked).

These streams currently are spanned by the existing Otter Creek – Conastone 230 kV Transmission Line and will be spanned by the Project. Additionally, the proposed Three Mile Island – Chanceford 500 kV and Chanceford – Peach Bottom 500 kV transmission lines will span South Fork Otter Creek. No permanent impacts to these streams are anticipated since no new culverts or bridges will be required. Construction activities will be conducted using an approved erosion and sedimentation control plan to minimize the effects of stormwater runoff. PPL Electric will obtain all approvals and permits necessary for the construction of the Project and will comply with any conditions placed on those permits.

Wetlands

Based on review of the U.S. Fish and Wildlife Service (“USFWS”) National Wetlands Inventory (“NWI”), the existing Otter Creek – Conastone 230 kV Transmission Line ROW crosses two Palustrine, Emergent, Persistent, Temporarily Flooded (PEM1A) wetlands; one Palustrine, Emergent, Phragmites australis/Forested, Broad-Leaved Deciduous, Temporarily Flooded (PEM5/FO1A) wetland; four Palustrine, Emergent, Phragmites australis, Temporarily Flooded (PEM5A) wetlands; seven Palustrine, Forested, Broad-Leaved Deciduous, Temporarily Flooded (PFO1A) wetlands; and two Palustrine, Unconsolidated Bottom, Permanently Flooded, Diked/Impounded (PUBHh) wetlands. The proposed Three Mile Island – Chanceford 500 kV and Chanceford – Peach Bottom 500 kV transmission lines cross one PFO1A wetland.

The NWI only provides a general overview of the potential wetlands that may be located within an area. For federal and state permitting purposes, the wetlands and waterways within the Project area have been delineated, surveyed, and illustrated according to regulatory standards.

Per PADEP Chapter 105 (Dam Safety and Waterway Management) regulations, wetlands located in or along the floodplain of a wild trout stream or waters listed as Exceptional Value (“EV”) and the floodplain of streams tributary thereto, are to be considered EV wetlands (25 Pa. Code § 105.17 1(iii)). PPL Electric will avoid impacts to wetlands and streams where possible by aerially spanning these features. PPL Electric will obtain all necessary permits from the PADEP and the United States Army Corps of Engineers and will comply with all of the terms and conditions placed on those permits.

100-year Floodplains

The National Flood Hazard Layer (“NFHL”) for Pennsylvania was obtained through the Pennsylvania Spatial Data Access (“PASDA”) database and analyzed for 100-year floodplains within the Project area and surrounding landscape. The NFHL data incorporates all Flood Insurance Rate Map (“FIRM”) databases published by the Federal Emergency Management Agency (“FEMA”), and any Letters of Map Revision (“LOMRs”) that have been issued against those databases since their publication date.

The existing Otter Creek – Conastone 230 kV Transmission Line spans the 100-year floodplains associated with several streams along the alignment. Minimal impacts to floodplain areas or floodways are anticipated by the proposed Project activities, since the existing and proposed structures are located entirely outside 100-year floodplain areas. PPL Electric will coordinate with local agencies for regulated floodplain activities.

Vegetation

Vegetative cover bordering the majority of the Project’s ROW has been influenced by agricultural and rural residential development. Large areas of the natural vegetative cover in these sections have been removed for conversion to farms and pastures. Woodlands are also predominant, with larger, more contiguous areas located in proximity to major waterways that incise the landscape such as Leibs Creek, North Branch Muddy Creek, and West Branch Toms Run. Smaller areas of forested cover are present as fragmented woodlots, which provide screening between residential and agricultural properties.

Additional vegetation management will be required to modify the existing single-circuit Otter Creek – Conastone 230 kV ROW for double-circuit 500/230 kV operation. The existing ROW is currently maintained in accordance with PPL Electric’s Vegetation Management Program. Only minimal vegetation removal is anticipated because the majority of the Project is being completed within the existing PPL Electric 150-foot-wide ROW, which is currently cleared of trees for safety and maintenance reasons. PPL Electric will seek to acquire an additional 25 feet of ROW along both sides of the existing transmission line corridor on a voluntary basis only. In areas where vegetation management is required, PPL Electric will apply its “*Specifications for Transmission Vegetation Management LA-79827*” to minimize any potential impacts.

Natural Areas Inventory

The Natural Areas Inventory for York County, prepared by the Pennsylvania Natural Heritage Program (“PNHP”), identified one (1) State ranked site within the Project area. The North Branch Muddy Creek Natural Heritage Area (NHA) is a large site located between Delta Road (State Route 74) and High Rock Road, which includes floodplains and adjacent areas of North Branch Muddy Creek drainage system. The species of concern inhabiting these shallow wetlands require specific plant communities within a matrix of open canopied habitats.

Project-related construction activities will occur within the boundary of the North Branch Muddy Creek NHA, as it bisects a 0.5-mile radius of the existing Otter Creek – Conastone 230 kV Transmission Line between Structure 1-6 and Structure 5-4. The Pennsylvania Department of Conservation and Natural Resources (“DCNR”) recommends that the floodplain is maintained as a wetland complex composed of multiple types of wetlands with both open and closed canopies.

6.0 THREATENED AND ENDANGERED SPECIES

Review of the threatened and endangered species that may be encountered within and along the Project includes evaluation of the natural areas identified in the Project area, as well as the Project-related Pennsylvania Natural Diversity Inventory (“PNDI”) responses provided by federal and state agencies that have protective jurisdiction over the surrounding animals, plants, and ecological communities.

A Project Environmental Review of the PNDI database was conducted for both the existing Otter Creek – Conastone 230 kV Transmission Line ROW (PNDI-806386) as well as the proposed Chanceford Switchyard and the new Three Mile Island – Chanceford 500 kV and Chanceford – Peach Bottom 500 kV transmission lines (PNDI-812318). The combined PNDI results indicated Potential Impacts with the Pennsylvania Game Commission (“PGC”), Pennsylvania DCNR, Pennsylvania Fish and Boat Commission (“PFBC”), and the USFWS. As such, PPL Electric initiated additional coordination with the state and federal agencies.

Based on the nature of the Project, the immediate location, and their detailed resource information, the PGC indicated that no impact is likely to species or resources of concern as a result of the Project. Therefore, no additional coordination with the PGC is required for the Project.

The PFBC noted that except for occasional transient species, any rare, candidate, threatened or endangered species under their jurisdiction are not known to exist in the vicinity of the Project area. Therefore, no additional coordination with the PFBC is required for the Project.

Based on a detailed PNDI review, the DCNR determined potential impacts to the following state listed species: umbrella magnolia (*Magnolia tripetala*), a state threatened species; lobed spleenwort (*Asplenium pinnatifidum*), a state rare species; plain ragwort (*Packera anonyma*), a state rare species; nodding trillium (*Trillium cernuum*), a proposed state threatened species; and Lion’s foot (*Nabalus serpentaria*), a proposed state threatened species. The DCNR requested that botanical surveys be performed by a qualified surveyor for the above-listed species during their appropriate survey window (May to October). If preferred habitat does not exist on site, a survey may not be necessary. The DCNR also requested a habitat assessment report for the Project, which describes the current land cover, habitat types, and species found on-site. Currently, PPL Electric is conducting botanical studies, reporting, and administrative activities for the Project area between Hight Rock Road and Muddy Creek Forks Road, per detailed consultation with the DCNR. PPL Electric will provide copies of the DCNR clearance once the survey window is complete in October.

In 2011, PPL Electric previously conducted a Phase I Bog Turtle Survey for the Conastone – Otter Creek 230 kV transmission line rebuild project per USFWS guidance. The survey report, which covered areas within 300 feet of the existing 150-foot ROW, was provided to USFWS on January 15, 2013. In their response, dated February 14, 2013, the USFWS determined that the effects of the Conastone – Otter Creek 230 kV transmission line rebuild project on the bog turtle are insignificant or discountable. As a result of the updated PNDI obtained for the Chanceford 500 kV Rebuild Project, PPL Electric reinitiated coordination with USFWS on March 5, 2024. The updated USFWS response indicated that no changes were noted for the transmission line rebuild portion of the Chanceford 500 kV Rebuild Project since their previous correspondence in February 2013. Additionally, PPL is currently performing a Phase II Bog Turtle Survey for the proposed Otter Creek Switchyard and will provide updated correspondence from USFWS for this portion of the Project once complete.

PPL Electric will continue to consult with the applicable jurisdictional agencies regarding potential impacts to protected species. PPL Electric will obtain all approvals and permits necessary for the construction of the Project and will comply with any conditions placed on those permits.

Figure 3-1. Aerial Exhibit



- ▲ Substation or Switchyard
- Proposed Structure
- Existing Structure
- ▤ Proposed Chanceford Switchyard Fenceline
- Proposed Centerline
- ▭ Proposed ROW
- Existing Transmission Line
- - - Existing ROW
- ▭ Parcel Boundary
- ▭ PPL-Owned Parcel
- ▭ Historic Property
- ▭ Delineated Stream
- ▭ Delineated Wetland
- NHD Stream/River
- ▭ Agricultural Conservation Easement
- ▭ Agricultural Security Area

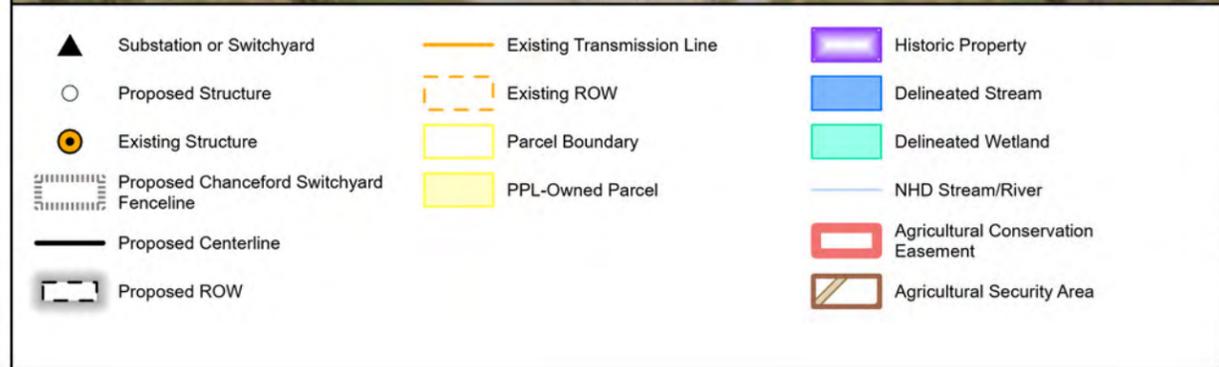
Imagery (PEMA 2018)
 Parcels (York Co. 2023)
 Floodplains (FEMA 2022)
 Delineated Features (WSP 2024)
 Roads/Railroads/Parks (PASDA 2022)
 Historic Resources (PHMC 2024)

Coordinate System:
 State Plane Pennsylvania South
 Datum: North American 1983



Figure 3-1
Aerial Map
Chanceford 500 kV
Transmission Rebuild Project





Imagery (PEMA 2018)
 Parcels (York Co. 2023)
 Floodplains (FEMA 2022)
 Delineated Features (WSP 2024)
 Roads/Railroads/Parks (PASDA 2022)
 Historic Resources (PHMC 2024)

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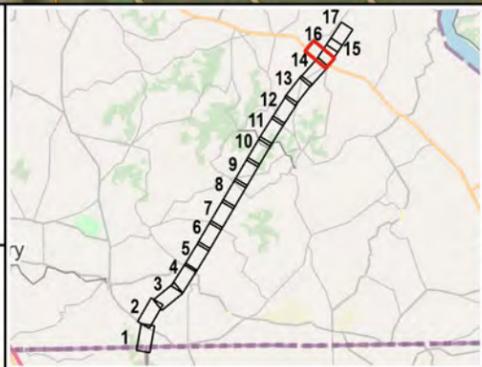


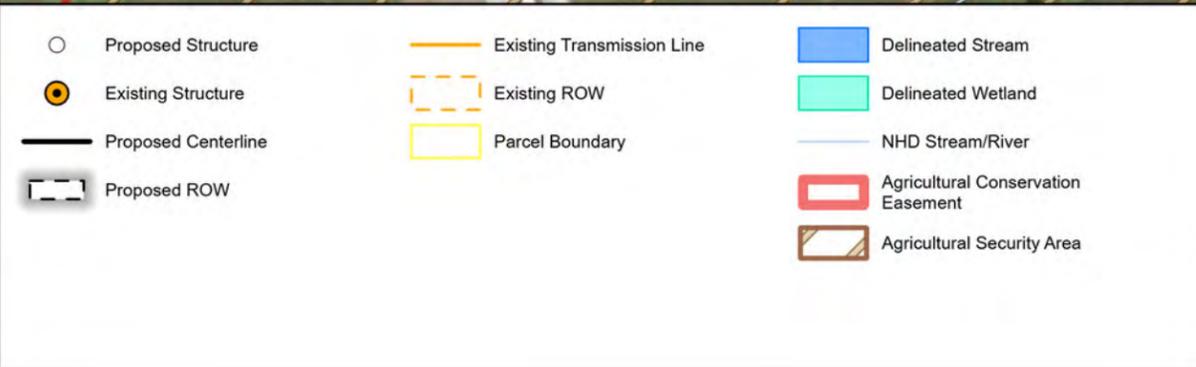
Figure 3-1
Aerial Map
Chanceford 500 kV
Transmission Rebuild Project

ppl **wsp**

0 300 600 Feet

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Page 3 of 17



Imagery (PEMA 2018)
 Parcels (York Co. 2023)
 Floodplains (FEMA 2022)
 Delineated Features (WSP 2024)
 Roads/Railroads/Parks (PASDA 2022)
 Historic Resources (PHMC 2024)

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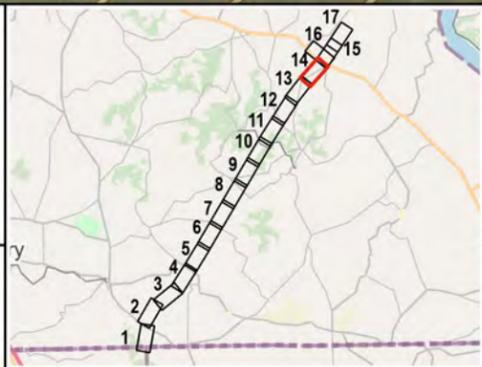


Figure 3-1
Aerial Map
 Chanceford 500 kV
 Transmission Rebuild Project

ppl **wsp**





- Proposed Structure
- Existing Structure
- Proposed Centerline
- ▭ Proposed ROW
- Existing Transmission Line
- - - Existing ROW
- ▭ Parcel Boundary
- ▭ Delineated Stream
- ▭ Delineated Pond
- NHD Stream/River
- ▭ Agricultural Conservation Easement
- ▭ Agricultural Security Area

Imagery (PEMA 2018)
 Parcels (York Co. 2023)
 Floodplains (FEMA 2022)
 Delineated Features (WSP 2024)
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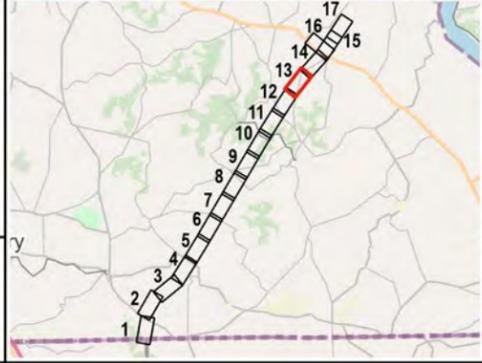


Figure 3-1
Aerial Map
 Chanceford 500 kV
 Transmission Rebuild Project





- Proposed Structure
- Existing Structure
- Proposed Centerline
- ▭ Proposed ROW
- Existing Transmission Line
- - - Existing ROW
- ▭ Parcel Boundary
- ▭ Delineated Stream
- ▭ Delineated Wetland
- ▭ Delineated Pond
- NHD Stream/River
- ▭ Agricultural Conservation Easement
- ▭ Agricultural Security Area

Imagery (PEMA 2018)
 Parcels (York Co. 2023)
 Floodplains (FEMA 2022)
 Delineated Features (WSP 2024)
 Roads/Railroads/Parks (PASDA 2022)
 Historic Resources (PHMC 2024)

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 Datum: North American 1983

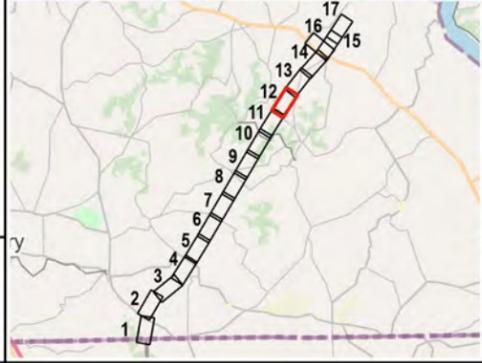
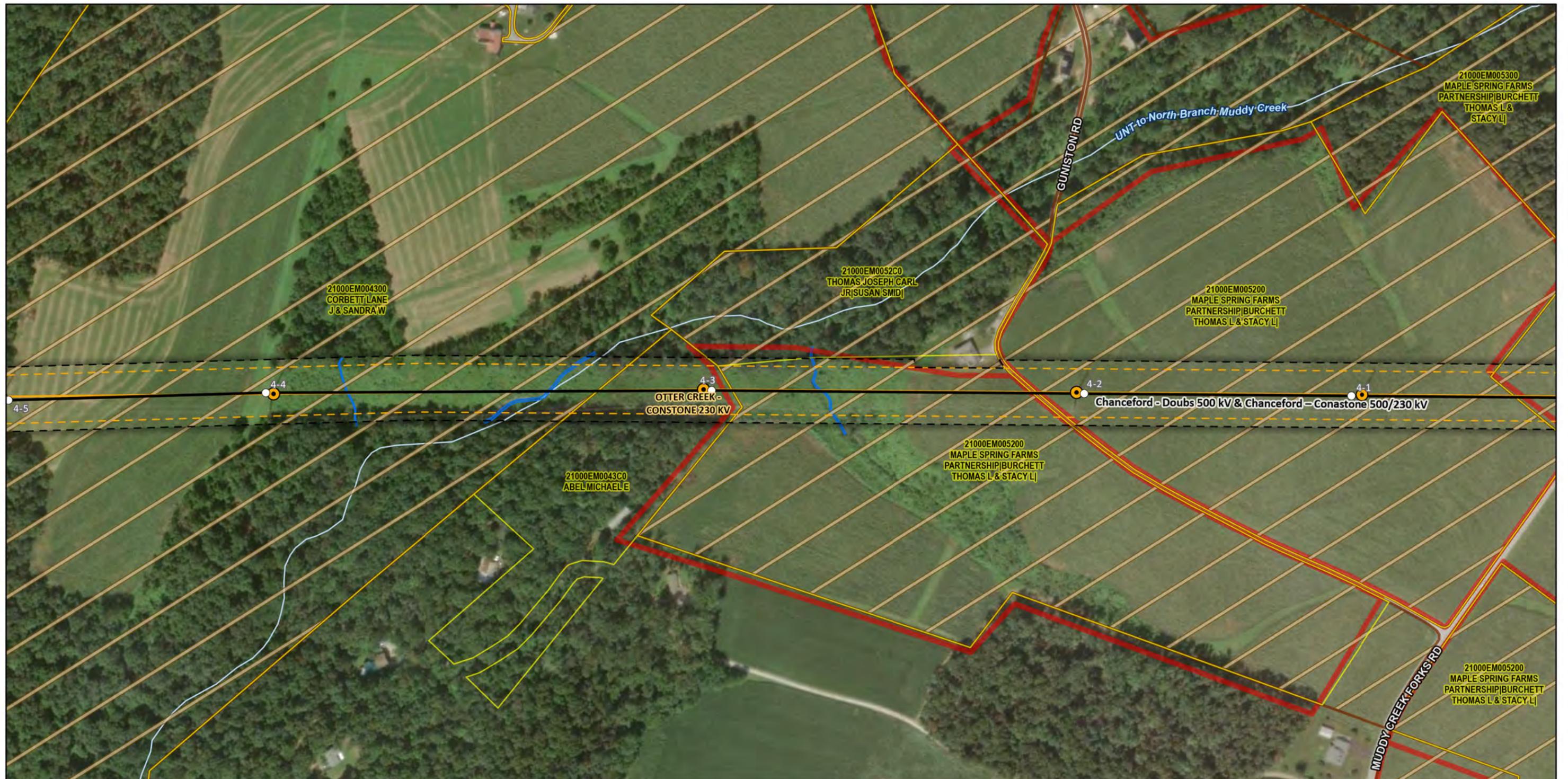


Figure 3-1
Aerial Map
 Chanceford 500 kV
 Transmission Rebuild Project





○ Proposed Structure	— Existing Transmission Line	■ Delineated Stream
● Existing Structure	- - - Existing ROW	— NHD Stream/River
— Proposed Centerline	□ Parcel Boundary	■ Agricultural Conservation Easement
▭ Proposed ROW		■ Agricultural Security Area

Imagery (PEMA 2018)
 Parcels (York Co. 2023)
 Floodplains (FEMA 2022)
 Delineated Features (WSP 2024)
 Roads/Railroads/Parks (PASDA 2022)
 Historic Resources (PHMC 2024)

Coordinate System:
 State Plane Pennsylvania South
 Datum: North American 1983

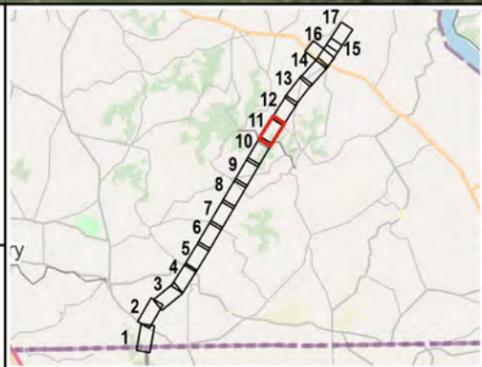
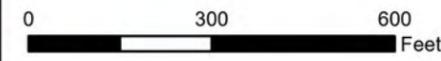
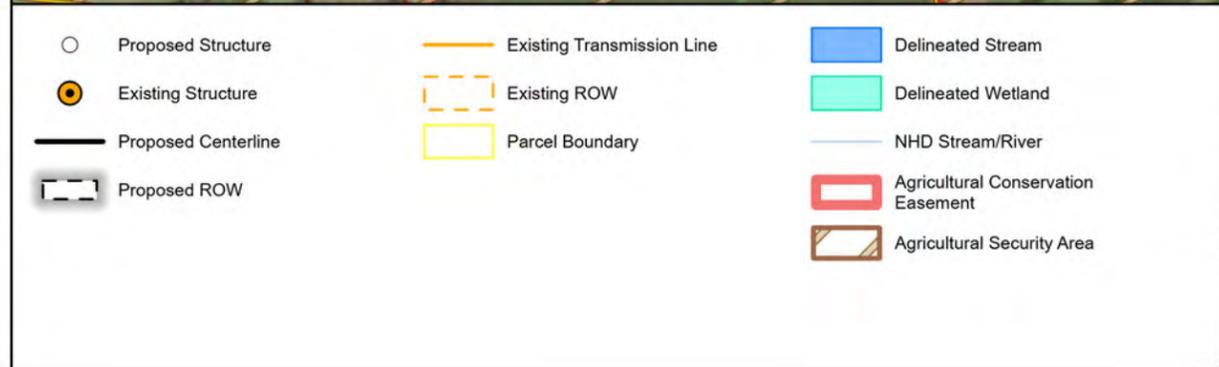


Figure 3-1
Aerial Map
 Chanceford 500 kV
 Transmission Rebuild Project

ppl **wsp**







Imagery (PEMA 2018)
 Parcels (York Co. 2023)
 Floodplains (FEMA 2022)
 Delineated Features (WSP 2024)
 Roads/Railroads/Parks (PASDA 2022)
 Historic Resources (PHMC 2024)

Coordinate System:
 State Plane Pennsylvania South
 Datum: North American 1983

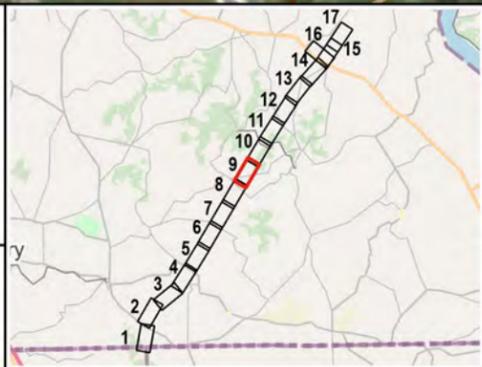


Figure 3-1
Aerial Map
 Chanceford 500 kV
 Transmission Rebuild Project



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- Proposed Structure
- Existing Structure
- Proposed Centerline
- Proposed ROW
- Existing Transmission Line
- Existing ROW
- Parcel Boundary
- Delineated Stream
- NHD Stream/River
- Agricultural Conservation Easement
- Agricultural Security Area

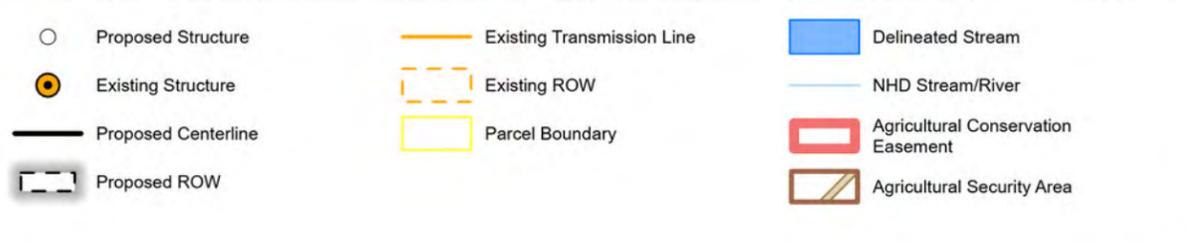
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 Historic Resources (PHMC 2024)

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Figure 3-1
Aerial Map
 Chanceford 500 kV
 Transmission Rebuild Project





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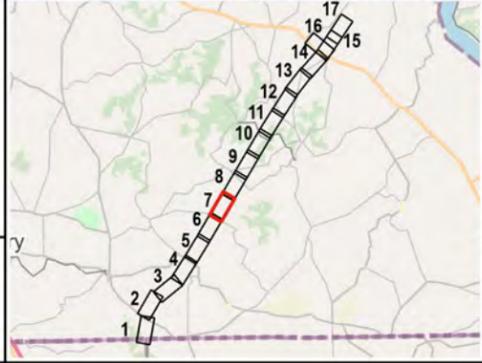


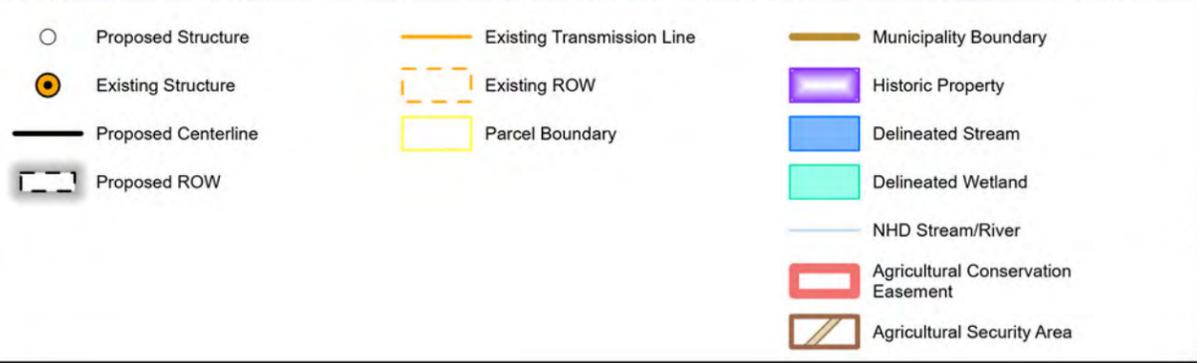
Figure 3-1
Aerial Map
Chanceford 500 kV
Transmission Rebuild Project

ppl **wsp**

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1:3,600



Imagery (PEMA 2018)
 Parcels (York Co. 2023)
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 Delineated Features (WSP 2024)
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 State Plane Pennsylvania South
 Datum: North American 1983

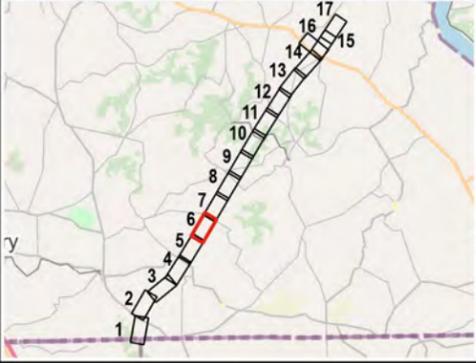
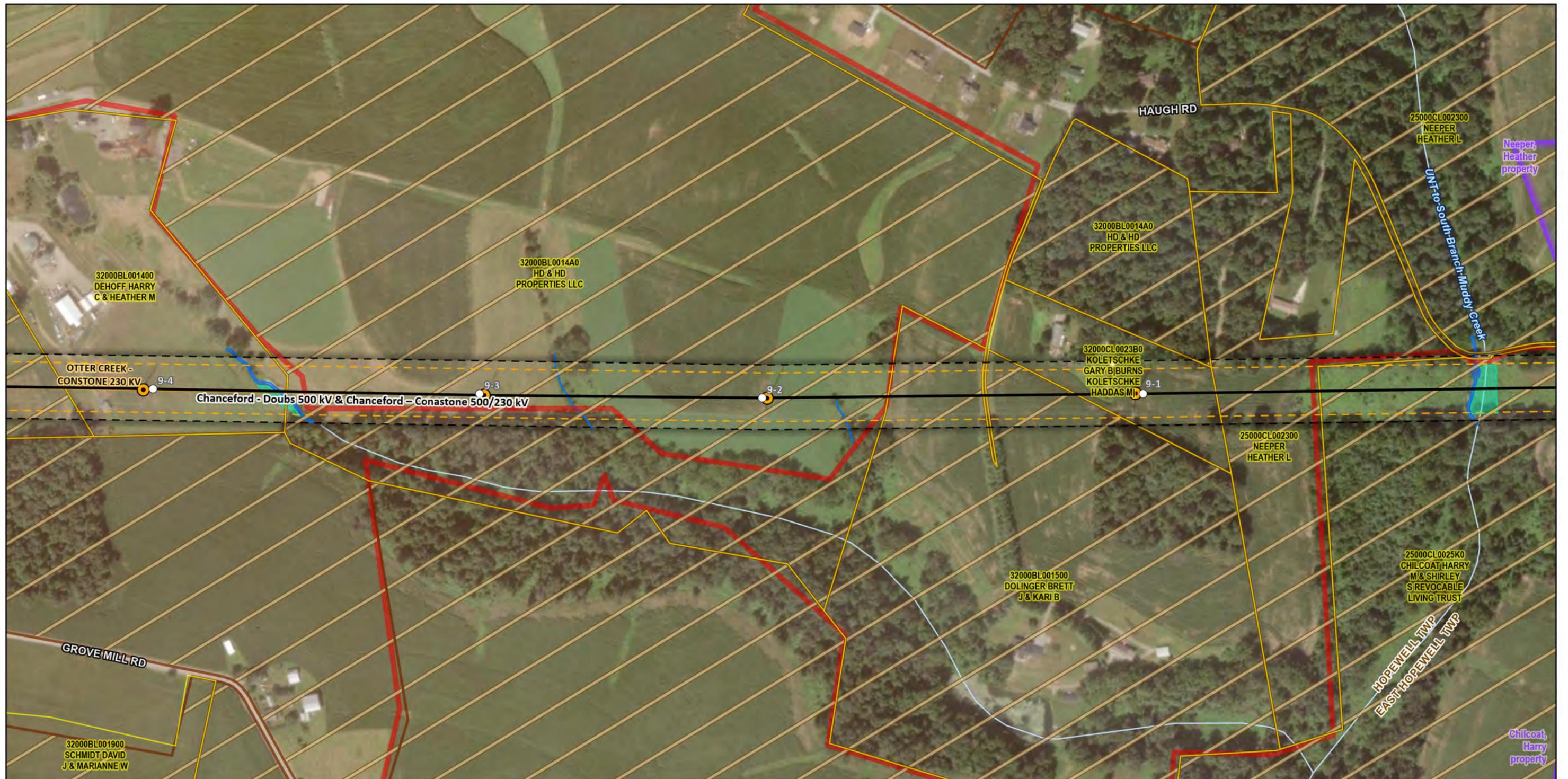


Figure 3-1
Aerial Map
 Chanceford 500 kV
 Transmission Rebuild Project

ppl **wsp**

0 300 600 Feet



	Proposed Structure		Existing Transmission Line		Municipality Boundary
	Existing Structure		Existing ROW		Historic Property
	Proposed Centerline		Parcel Boundary		Delineated Stream
	Proposed ROW				Delineated Wetland
					NHD Stream/River
					Agricultural Conservation Easement
					Agricultural Security Area

Imagery (PEMA 2018)
 Parcels (York Co. 2023)
 Floodplains (FEMA 2022)
 Delineated Features (WSP 2024)
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 Historic Resources (PHMC 2024)

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 State Plane Pennsylvania South
 Datum: North American 1983

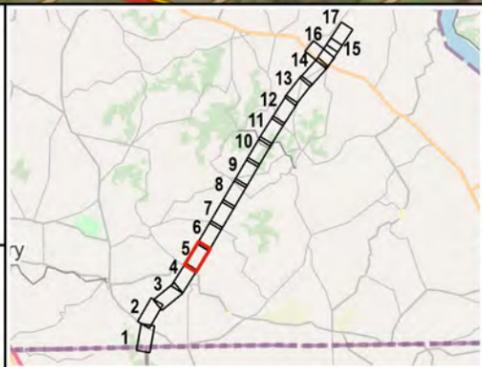
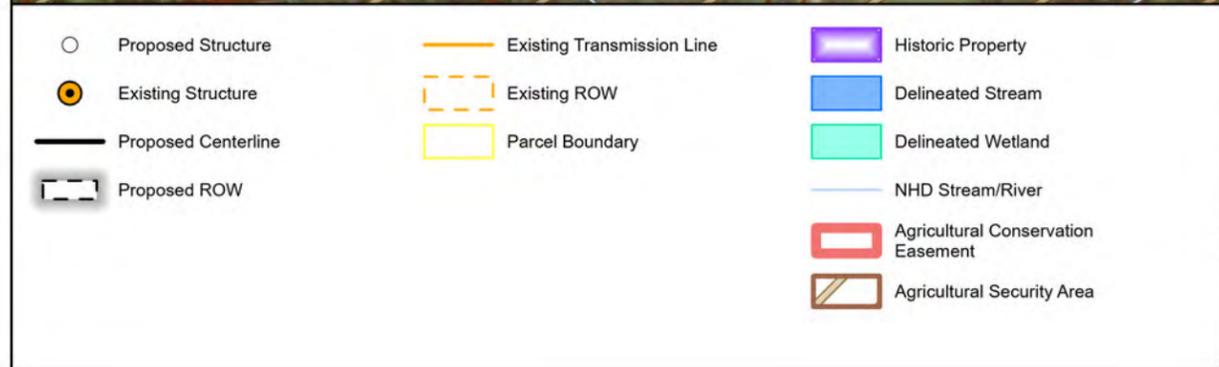


Figure 3-1
Aerial Map
 Chanceford 500 kV
 Transmission Rebuild Project





Imagery (PEMA 2018)
 Parcels (York Co. 2023)
 Floodplains (FEMA 2022)
 Delineated Features (WSP 2024)
 Roads/Railroads/Parks (PASDA 2022)
 Historic Resources (PHMC 2024)

Coordinate System:
 State Plane Pennsylvania South
 Datum: North American 1983

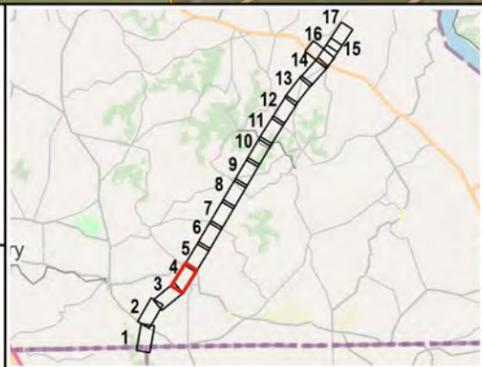
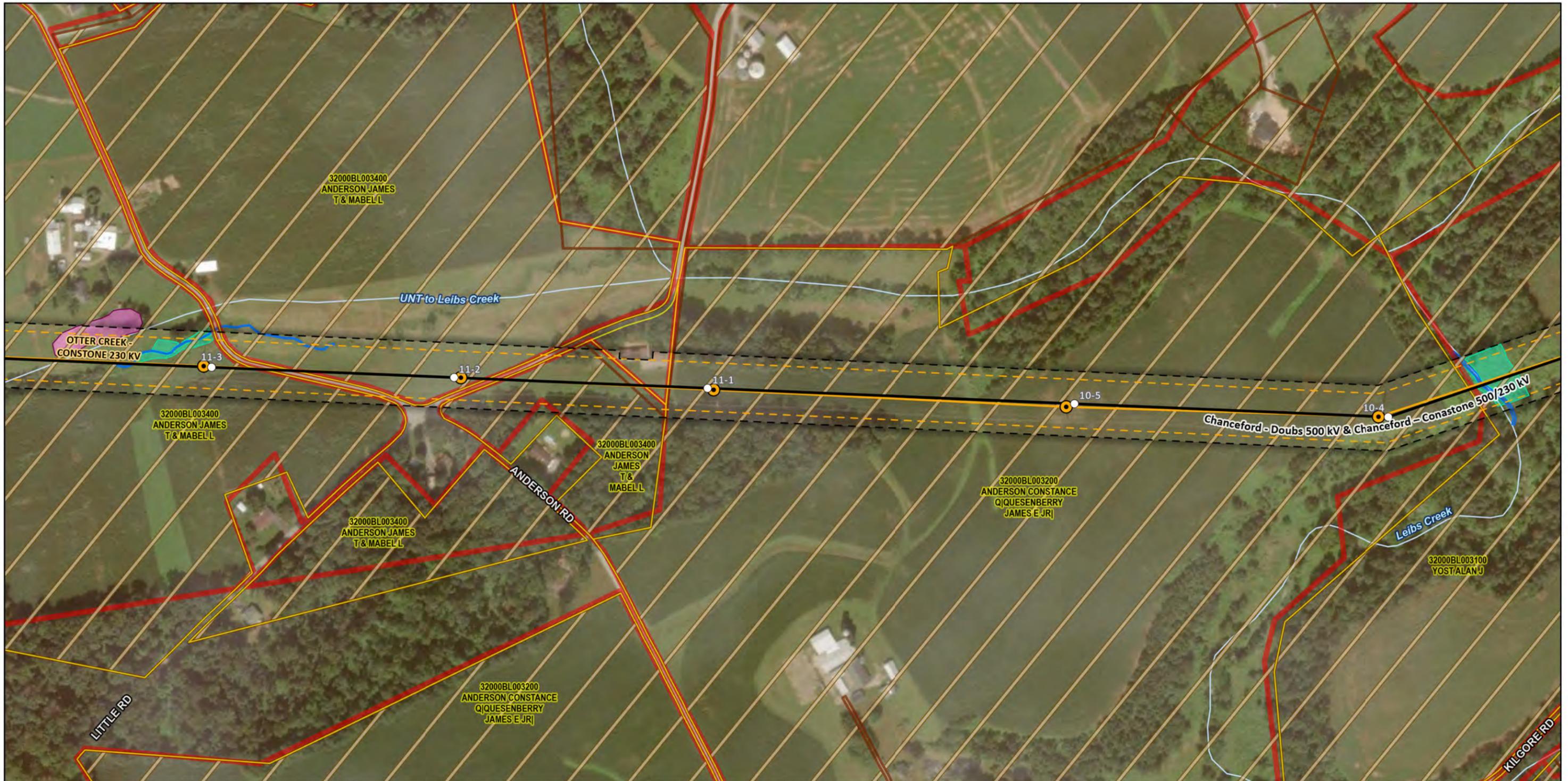


Figure 3-1
Aerial Map
 Chanceford 500 kV
 Transmission Rebuild Project





○ Proposed Structure	— Existing Transmission Line	▬ Delineated Stream
● Existing Structure	- - - Existing ROW	▬ Delineated Wetland
— Proposed Centerline	▭ Parcel Boundary	▭ Delineated Pond
▭ Proposed ROW		— NHD Stream/River
		▭ Agricultural Conservation Easement
		▭ Agricultural Security Area

Imagery (PEMA 2018)
 Parcels (York Co. 2023)
 Floodplains (FEMA 2022)
 Delineated Features (WSP 2024)
 Roads/Railroads/Parks (PASDA 2022)
 Historic Resources (PHMC 2024)

Coordinate System:
 State Plane Pennsylvania South
 Datum: North American 1983

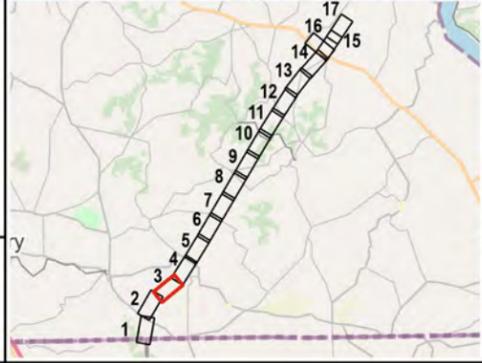


Figure 3-1
Aerial Map
 Chanceford 500 kV
 Transmission Rebuild Project

ppl **wsp**





- Proposed Structure
- Existing Structure
- Proposed Centerline
- ▭ Proposed ROW

- Existing Transmission Line
- - - Existing ROW
- ▭ Parcel Boundary

- ▭ Delineated Stream
- ▭ Delineated Wetland
- ▭ Delineated Pond
- NHD Stream/River
- ▭ Agricultural Conservation Easement
- ▭ Agricultural Security Area

Imagery (PEMA 2018)
 Parcels (York Co. 2023)
 Floodplains (FEMA 2022)
 Delineated Features (WSP 2024)
 Roads/Railroads/Parks (PASDA 2022)
 Historic Resources (PHMC 2024)

Coordinate System:
 State Plane Pennsylvania South
 Datum: North American 1983



Figure 3-1
Aerial Map
 Chanceford 500 kV
 Transmission Rebuild Project





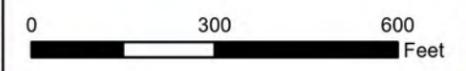
- Proposed Structure
- Existing Structure
- Proposed Centerline
- ▭ Proposed ROW
- Existing Transmission Line
- - - Existing ROW
- ▭ Parcel Boundary
- Municipality Boundary
- ▨ Historic District
- NHD Stream/River
- ▭ Agricultural Conservation Easement
- ▭ Agricultural Security Area

Imagery (PEMA 2018)
 Parcels (York Co. 2023)
 Floodplains (FEMA 2022)
 Delineated Features (WSP 2024)
 Roads/Railroads/Parks (PASDA 2022)
 Historic Resources (PHMC 2024)

Coordinate System:
 State Plane Pennsylvania South
 Datum: North American 1983



Figure 3-1
Aerial Map
 Chanceford 500 kV
 Transmission Rebuild Project



Attachment 4

CHANCEFORD 500 KV REBUILD PROJECT

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1.0 DESIGN CONSIDERATIONS

PPL Electric Utilities Corporation’s (“PPL Electric”) new and rebuilt transmission lines will be designed according to, and generally exceed, all National Electric Safety Code (“NESC”) minimum standards. The NESC standards are developed to safeguard utility workers and the public during the installation, operation, and maintenance of electric power lines. Although not intended as a design specification, its provisions establish minimum design requirements. The NESC is a safety code that includes loading requirements and clearances for the design, construction, and operation of power lines. Loading requirements are the loads on the conductors and structures that are anticipated assuming certain ice and wind conditions. Loading requirements always contain “safety factors” to allow for unknown or unanticipated contingencies. The clearances and loading requirements contained in the NESC are designed to maintain public safety. PPL Electric’s transmission line design standards meet or surpass the NESC clearances and loading requirements.

For example, the NESC specifies strength and loading rules based on three different “grades of construction” for conductors and supporting structures:

- Grade B – This grade of construction provides the highest margin of safety and is required when the pole supports spans that cross limited access highways, railroads, and waterways.
- Grade C – This grade of construction is most common and provides a basic margin of safety. It is often utilized for the typical power and joint-use distribution pole.
- Grade N – This is the lowest grade of construction and is most often used for emergency and temporary construction.

PPL Electric designs all of its transmission lines for Grade B construction. The use of Grade B design and construction translates to higher levels of structural reliability and safety to withstand the environmental conditions of ice and/or wind loading.

Another example is the design parameters utilized during project engineering to account for ice and wind loadings on the wires and structures since structure dimensions and conductor sag and tension are dependent on these loads. PPL Electric’s transmission lines are designed to exceed NESC requirements by accounting for additional ice and wind loading conditions not contemplated under the NESC. This means that PPL Electric’s lines are designed to operate safely and reliably during

extreme inclement weather. In addition, where practicable, PPL Electric’s transmission lines are designed with more clearance to the ground than required by the NESC. The tables below compare PPL Electric’s general conductor to ground design criteria and the NESC minimum ground clearances for lines of various voltages.

Table 4-1: 69 kV Vertical Clearance to Ground		
Surface Underneath Conductors	NESC Standard Clearance	PPL Conductor Clearances
Roads, streets, alleys	19.2 Ft.	30 Ft.
Other land traversed by vehicles (such as cultivated field, forest, etc.)	19.2 Ft.	30 Ft.
Spaces accessible to pedestrians only	15.2 Ft.	30 Ft.
Railroad tracks	27.2 Ft.	31.5 Ft.

Table 4-2. 138 kV Vertical Clearance to Ground		
Surface Underneath Conductors	NESC Standard Clearance	PPL Conductor Clearances
Roads, streets, alleys	20.6 Ft.	31 Ft.
Other land traversed by vehicles (such as cultivated field, forest, etc.)	20.6 Ft.	31 Ft.
Spaces accessible to pedestrians only	16.6 Ft.	31 Ft.
Railroad tracks	28.6 Ft.	35 Ft.

Table 4-3: 230 kV Vertical Clearance to Ground		
Surface Underneath Conductors	NESC Standard Clearance	PPL Conductor Clearances
Roads, streets, alleys	22.4 Ft.	33 Ft.
Other land traversed by vehicles (such as cultivated field, forest, etc.)	22.4 Ft.	33 Ft.
Spaces accessible to pedestrians only	18.4 Ft.	33 Ft.
Railroad tracks	30.4 Ft.	35 Ft.

Table 4-4: 500 kV Vertical Clearance to Ground		
Surface Underneath Conductors	NESC Standard Clearance	PPL Conductor Clearances
Roads, streets, alleys	28.4 Ft.	40 Ft.
Other land traversed by vehicles (such as cultivated field, forest, etc.)	28.4 Ft.	40 Ft.
Spaces accessible to pedestrians only	24.4 Ft.	40 Ft.
Railroad tracks	36.4 Ft.	53 Ft.

PPL Electric also uses a relay protection system to protect the public safety, as well as the equipment on the transmission system. Relay protection is installed for all transmission lines and is designed to automatically de-energize a line in the unlikely event that the line or supporting structure fails and the line contacts the ground.

2.0 PERIODIC MAINTENANCE PROGRAM ON ALL TRANSMISSION LINES

To ensure continued public safety and integrity of service, PPL Electric has implemented a periodic maintenance and inspection program for every transmission line. The program is administered using helicopter patrols, with supplemental foot patrols, as needed. Helicopter patrols are performed on all lines on a predetermined frequency, depending on voltage level. The two-man helicopter crew flies parallel and above the line so that the observer can look for signs of line damage or deterioration and observe clearances between vegetation and conductors. The observations are included in a report that is forwarded to the appropriate department for corrective action.

3.0 PERSONNEL SAFETY RULES

PPL Electric designs and constructs its projects with a high appreciation for the safety of the public and its employees and meets or exceeds all applicable codes and requirements. The following are examples of the PPL Electric safety rules that illustrate the Company's dedication to employee and contractor safety:

- Work procedures have been developed to facilitate the safe performance of work on energized facilities. Any time lines or equipment is removed from service for repair or maintenance, an Energy Control Process system is applied. This system requires that a red tag be physically placed on the control handle of all de-energized equipment.
- The red tag may be removed only after proper authorization to re-energize the equipment has been received.
- Various other tags are used for limited operations and informational purposes.
- Only authorized employees and contractors can apply or remove a tag or change the status of tagged equipment.
- Temporary safety grounds are used on de-energized facilities to promote employee safety during maintenance, construction, or reconstruction work. Safety grounds are wires that connect a de-energized facility to an electrical ground. If the facility should be unintentionally energized, the safety grounds will reduce the likelihood of personal injury but diverting the current directly to ground.
- Lines are tested to confirm de-energization before applying safety grounds using a voltage testing device to assure reliability.
- Poles and structures are inspected and examined for structural integrity before climbing. If there is any reason to believe that a pole is unsafe, it is stabilized before any work is performed. Appropriate safety gear in the form of body belts, safety straps, hard hats, gloves, etc., is always worn by linemen during line work activity.

4.0 MAGNETIC FIELD MANAGEMENT PLAN

PPL Electric’s Magnetic Field Management Program is applied to new and reconstructed transmission line projects. The Company does not believe that current scientific evidence demonstrates that magnetic fields cause any adverse health effects or pose a health or safety danger to the public. Nevertheless, PPL Electric has determined, as a matter of policy, to design its new and rebuilt transmission lines to reduce magnetic fields when consistent with functional requirements. The program generally prescribes the use of a line design with ground clearance that exceeds NESC standards by a minimum of 5 feet and reverse phasing of new double-circuit lines where feasible and can be implemented at low or no additional cost.

Attachment 5

CHANCEFORD 500 KV REBUILD PROJECT

State Agencies

Pennsylvania Bureau of Investigation and Enforcement
Pennsylvania Public Utility Commission
Commonwealth Keystone Building 400 North Street
2nd Floor, Room-N201 Harrisburg, Pennsylvania 17120
Attn: Alison Kaster

Pennsylvania Department of Environmental Protection
400 Market Street
10th Floor Rachel Carson State Office Building
Harrisburg, Pennsylvania 17101
Attn: Regional Permit Coordination Office

Pennsylvania Department of Transportation
Commonwealth Keystone Building
400 North Street, Fifth Floor
Harrisburg, Pennsylvania 17120
Attn: Donald J. Smith, Acting Chief Counsel

Pennsylvania Historical and Museum Commission
Bureau for Historic Preservation
Commonwealth Keystone Building, Second Floor 400
North Street Harrisburg, Pennsylvania 17120-0053
Attn: Mr. Douglas C. McLearn, Chief

Pennsylvania Department of Conservation and Natural Resources
Rachel Carson State Office Building
400 Market Street Harrisburg, Pennsylvania 17105-8767
Attn: Rebecca Bowen, Ecological Services Section Chief

Pennsylvania Game Commission
2001 Elmerton Avenue
Harrisburg, Pennsylvania 17110-9797
Attn: David J. Gustafson, Director, Bureau of Wildlife Habitat Management

Pennsylvania Fish and Boat Commission
Center Region Office
595 East Rolling Ridge Drive
Bellefonte, Pennsylvania 16823-9620
Attn: Christopher A. Urban, Chief, Natural Diversity Section

Pennsylvania Office of Consumer Advocate
555 Walnut Street
5th Floor Forum Place
Harrisburg, Pennsylvania 17101-1923
Attn: Patrick Cicero, Consumer Advocate

Pennsylvania Office of Small Business Advocate
555 Walnut Street
1st Floor Forum Place
Harrisburg, Pennsylvania 17101
Attn: NazAarah Sabree, Small Business Advocate

Federal Agencies

U.S. Army Corps of Engineers
Baltimore District Corporate Communication Office
2 Hopkins Plaza
Baltimore, Maryland 21201
Attn: Planning Division

U.S. Fish and Wildlife Service
Pennsylvania Field Office
110 Radnor Road, Suite 101
State College, Pennsylvania 16801
Attn: Lesa Lindsay

County Agencies

York County Conservation District
2401 Pleasant Valley Rd Suite #101 Room #139
York, PA 17402
Attn: Jeff Hill, District Manager

York County Planning Commission
28 E Market Street, 3rd Floor
York, PA 17401
Attn: Felicia Dell, Director

York County Commissioners
28 E Market Street
York, PA 17401
Attn: Julie Wheeler, President

Municipalities

Chanceford Township Supervisors
33 Muddy Creek Forks Road
Brogue, PA 17309
Attn: Kent Heffner, Chairman

Chanceford Township Planning Commission
33 Muddy Creek Forks Road
Brogue, PA 17309
Attn: John Shanbarger, Chairman

East Hopewell Township Supervisors
8916 Hickory Road
Felton, PA 17322
Attn: Dean Miller, Chairman

East Hopewell Township Planning Commission
8916 Hickory Road
Felton, PA 17322
Attn: Melissa Hiller, Secretary

Hopewell Township Supervisors
3336 Bridgeview Road, PO Box 429
Stewartstown, PA 17363
Attn: Aaron R. Manifold, Chairman

Hopewell Township Planning Commission
3336 Bridgeview Road, PO Box 429
Stewartstown, PA 17363
Attn: Ann Yost, Chair

Public Utility Other Than Applicant

President of Metropolitan Edison Company
C/O Tori L. Giesler, Esq.
FirstEnergy Service Company
2800 Pottsville Pike
P.O. Box 16001
Reading, PA 19612-6001

President of Mid-Atlantic Interstate Transmission LLC
C/O Tori L. Giesler, Esq.
FirstEnergy Service Company
2800 Pottsville Pike
P.O. Box 16001
Reading, PA 19612-6001

Landowners

Michael E Abel
137 Rag Ln
Airville, PA 17302

Constance Q Anderson
6544 Anderson Rd
Stewartstown, PA 17363

Ralph E & Beverly Ann Anderson
15483 Little Rd
Stewartstown, PA 17363

Janet C Archer
5300 Onion Rd
Pylesville, MD 21132

Eleanor Kathryn Barley
13750 Ted Wallace Rd
Brogue, PA 17309

John R & Carol J Best
17092 Fairfield Rd
Stewartstown, PA 17363

Jeremy Burnell
17405 Lutz Rd
Stewartstown, PA 17363

Michael S & Brenda L Chalk
10159 Blue Ball Rd
Stewartstown, PA 17363

Collinsville Fish & Game Assoc
533 Muddy Creek Forks Rd
Brogue, PA 17309

Julie Crouse & Todd W Lanius
14210 Kilgore Rd
Stewartstown, PA 17363

P David & Patsy S Curran
2719 Delta Rd
Brogue, PA 17309

Christopher A & Bonnie A Abremski
2210 Freysville Rd
Red Lion, PA 17356

James T & Mabel L Anderson
6208 Anderson Rd
Stewartstown, PA 17363

Rodney E & Koren E Anderson
13702 Ted Wallace Rd
Brogue, PA 17309

Timothy W & Barbara A Baker
14755 Kilgore Rd
Stewartstown, PA 17363

Barley Farms LP
175 Chestnut Grove Rd
Conestoga, PA 17516

Robert J & Seneka C Brubaker
16488 Gun Club Rd
New Park, PA 17352

Todd A Canter
17163 Fairfield Rd
Stewartstown, PA 17363

Harry M & Shirley S Chilcoat Revocable
Living Trust
17792 Lutz Rd
Stewartstown, PA 17363

Lane J & Sandra W Corbett
80 Corbett Ln
Airville, PA 17302

Daniel T Curran
13114 Collinsville Rd
Brogue, PA 17309

Dean R & Judy A Daugherty
12368 Collinsville Rd
Brogue, PA 17309

Landowners

Glen A & Susan E Daugherty
4087 Leiphart Rd
Brogue, PA 17309

Ralph E & Robert L Daugherty
12480 Game Club Rd
Brogue, PA 17309

Harry C & Heather M Dehoff
1553 Woolen Mill Rd
Stewartstown, PA 17363

Brett J & Kari B Dolinger
7615 Setting Sun Ln
Stewartstown, PA 17363

Wendy Ebersole
2521 Oak Knoll Ln
York, PA 17403

Larry J & Isabelle J Eddinger
9766 Blue Ball Rd
Stewartstown, PA 17363

David R & Jennifer L Ellis
14585 Kilgore Road
Stewartstown, PA 17363

Clyde E & Kay E & Wesley R Flaharty
9426 High Rock Rd
New Park, PA 17352

Kay E & Clyde E Flaharty et al
9872 High Rock Rd
Airville, PA 17302

Michael S & Sharon J Flaharty
3517 Flaharty Rd
Airville, PA 17302

Michael A & Rebecca S Garland
121 Rag Ln
Airville, PA 17302

Scott E & Christine J Garvey
10251 Manifold School Rd
New Park, PA 17352

Rosanna Gemmill
2420 Lime Spring Way
Lancaster, PA 17603

Phyllis L Germroth
14224 Ted Wallace Rd
Brogue, PA 17309

Doris R & R Bentley Gracey
10662 Guinston Rd
Felton, PA 17322

Patricia Ann & Steven E Grove
9078 Muddy Creek Forks Rd
New Park, PA 17352

Glenn W & Linda M Hake
2256 Delta Rd
Brogue, PA 17309

Rachel J Hall et al
487 Probart St
Brevard, NC 28712

Jonathan R Hash
1790 New Park Rd
New Park, PA 17352

HD & HD Properties LLC
1553 Woolen Mill Rd
Stewartstown, PA 17363

Roy E & Pamela L Hiller
9939 Manifold Rd
New Park, PA 17352

Stanley R & Audrey J Hoke
1420 Brittany Dr
York, PA 17404

Landowners

James M & Vickie L Hook
17457 Lutz Rd
Stewartstown, PA 17363

Guidetta Alice Kneavel
14200 Collins School Rd
Airville, PA 17302

Gary B Koletschke
7583 Setting Sun Ln
Stewartstown, PA 17363

Robert Kulp
20664 Barrens Rd S
Stewartstown, PA 17363

Richard L & Jody A Leighty
14785 Little Rd
Stewartstown, PA 17363

Dillon F & Heidi L Little
15339 Little Rd
Stewartstown, PA 17363

Patricia A Magness
735 Cherry Hill Rd
Street, MD 21154

Lydia M Manifold
15743 Veach Rd
Airville, PA 17302

Jeromey W Marsteller & John W Marsteller
Sr
10029 Blue Ball Rd
Stewartstown, PA 17363

John W & Mary E Marsteller
16410 Round Hill Church Rd
Stewartstown, PA 17363

Scott A & Jennifer E McDermott
14212 Ted Wallace Rd
Brogue, PA 17309

George E & Elizabeth C Jordon
16291 Gun Club Rd
New Park, PA 17352

Robert L & Margaret Ann Knox
13790 Ted Wallace Rd
Brogue, PA 17309

Ronald A & Kathleen M Krick
13930 Ted Wallace Rd
Brogue, PA 17309

Leacock Property Management LLC
3774 E Newport Rd
Gordonville, PA 17529

Donald W & Suzanne Linebaugh
9836 Blue Ball Rd
Stewartstown, PA 17363

Richard E & Kay M Little
15586 Little Rd
Stewartstown, PA 17363

Harry E & Barbara J Malle
5691 Maverick Ln
Stewartstown, PA 17363

Maple Spring Farms Partnership
284 Frosty Hill Rd
Airville, PA 17302

John W Marsteller Jr
16410 Round Hill Church Rd
Stewartstown, PA 17363

Adam P & Sherry A Mathias
17510 Lutz Rd
Stewartstown, PA 17363

J Ross McGinnis Trustee
41 W Main St
Fawn Grove, PA 17321

Landowners

Alvin R & Joyce A Measley
10107 Blue Ball Rd
Stewartstown, PA 17363

Elizabeth A & Todd R Morris
358 N Market St
Fawn Grove, PA 17321

Andrew I Mychalus
10046 Manifold School Rd
New Park, PA 17352

Bernard E & Diane K Nimeth
9378 Muddy Creek Forks Rd
New Park, PA 17352

Charlotte E Onion
1501 S Marshview Rd
Stewartstown, PA 17363

David J Placek Jr
20740 Barrens Rd S
Stewartstown, PA 17363

James E & Marlene S Quesenberry
6544 Anderson Rd
Stewartstown, PA 17363

Jeffrey W Rexroth
3175 Rexroth Rd
Airville, PA 17302

Mark T & Selina A Robinson
6479 Anderson Rd
Stewartstown, PA 17363

David J & Marianne W Schmidt
1416 Woolen Mill Rd
Stewartstown, PA 17363

John Shinsky
9897 Wheat Rd
New Park, PA 17352

James Mink
733 Muddy Creek Forks Rd
Airville, PA 17302

Curtis L & Jane Moser
9314 Muddy Creek Forks Rd
New Park, PA 17352

Heather L Neeper
19838 Haugh Rd
Stewartstown, PA 17363

Jean L O'Brien
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New Park, PA 17352

Larry W Parlett
10310 High Rock Rd
Airville, PA 17302

John R & Angela K Preston
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Pylesville, MD 21132

Jordi R Ragland
17529 Lutz Rd
Stewartstown, PA 17363

Delbert C & Eva Rena Ritchey
17612 Lutz Rd
Stewartstown, PA 17363

Donald Willis & Diana L Rohrbaugh
19693 Haugh Rd
Stewartstown, PA 17363

George D & Dorothy I Sherwood
154 Forest Trl
Delta, PA 17314

Bryan A & Sharon J Shue
2715 Delta Rd
Brogue, PA 17309

Landowners

John S & Lewanna Shue
Po Box 35
Brogue, PA 17309

Gerard E Simpson
13770 Ted Wallace Rd
Brogue, PA 17309

Craig S & Megan E Slack
14376 Guinston Rd
Airville, PA 17302

Kenneth D & Melissa A Smeltzer
4024 Leiphart Rd
Brogue, PA 17309

Wayne E & Deborah A Smith
4044 Leiphart Rd
Brogue, PA 17309

Braden Ray Snyder
737 Muddy Creek Forks Rd
Airville, PA 17302

C Alan & Judith A Syvertsen
9893 Manifold Rd
New Park, PA 17352

Joseph Carl Jr Thomas
14476 Guinston Rd
Airville, PA 17302

Elisabeth A Thompson
10003 Wheat Rd
New Park, PA 17352

Peter S & Cynthia L Urey
13996 Ted Wallace Rd
Brogue, PA 17309

Frederick W & Patricia A Valentin
17630 Lutz Rd
Stewartstown, PA 17363

Blaine L Vollrath
2756 Delta Rd
Brogue, PA 17309

Eddie L Wagaman
2761 Delta Rd
Brogue, PA 17309

Jon Edward Wall
13728 Ted Wallace Rd
Brogue, PA 17309

Lisa M Warner
9014 High Rock Rd
New Park, PA 17352

Todd E Warner II
15917 Hopewell Center Rd
New Park, PA 17352

Erin West
17658 Lutz Rd
Stewartstown, PA 17363

Robert Brian & Cindy Marie Wiles
16835 Edgar Woods Rd
New Park, PA 17352

Brian L & Sandy J Witman
16797 Edgar Woods Rd
New Park, PA 17352

Roy D & Patricia A Wolfe
17466 Lutz Rd
Stewartstown, PA 17363

Patsy M & Lori A Wolford
3447 Sechrist Rd
Brogue, PA 17309

Alan J Yost
16154 Little Rd
Stewartstown, PA 17363

Landowners

Zeus Construction
241 N Sherman St
York, PA 17403

Attachment 6

Chris Bishop
Lead Right of Way Agent

PPL Electric Utilities
5000 Tilghman Street, Suite 157
Allentown, PA 18104
Tel. 570-231-5141



[REDACTED]

[REDACTED]

RE: Collinsville 500 kV Switchyard
Parcel #: [REDACTED]

Dear [REDACTED],

PPL Electric Utilities Corporation (PPL) is planning to construct the Collinsville 500 kV switchyard to accommodate the associated transmission lines in your area. I am notifying you of this proposed project as required by the Pennsylvania Public Utility Commission since we would like to place the switchyard on your property.

Enclosed are notices required by the Pennsylvania Public Utility Commission that provide important information regarding eminent domain, right-of-way maintenance practices, and land agent conduct. Also enclosed is PPL's Internal Practices for Dealing with the Public on Power Line Projects. The Pennsylvania Public Utility Commission's regulations require that PPL provide you with this information at least 15 days in advance of our discussions. For your convenience, I have also enclosed information on electromagnetic fields and a brochure on vegetation management, as well as a glossary of real estate terms.

If you have any questions or concerns, please feel free to contact me at 205-454-4552 or email: Chris.bishop@contractlandstaff.com.

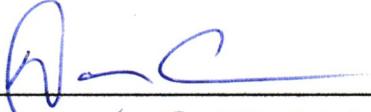
I kindly request that you sign, in the space provided, on the following page to indicate that you have received this information.

Sincerely,

A handwritten signature in blue ink that reads "Chris Bishop". The signature is written in a cursive, flowing style.

Chris Bishop
Lead Right of Way Agent
Representing PPL Electric Utilities

I acknowledge receiving the information referred to in the letter above and understand that it does not obligate me in any way.



Date 1-23-24

Phone _____

Attachments: Disclosure of Eminent Domain Power
 Notification of Right-of-Way Maintenance Practices
 Internal Practices for Dealing with the Public on Power Line Project
 Notification Regarding Land Agent Practices
 Information on Electromagnetic Fields
 Brochure on Vegetation Management
 Glossary of Real Estate Terms

Chris Bishop
Lead Right of Way Agent

PPL Electric Utilities
5000 Tilghman Street, Suite 157
Allentown, PA 18104
Tel. 570-231-5141



[Redacted]

[Redacted]

[Redacted] - Located at [Redacted]

RE: Survey Permission

In order for PPL Electric Utilities Corporation [PPL] to develop conceptual and/or final design for its switchyard build project, various surveys may need to be performed first. This survey work can include but are not limited to, property boundary location surveys, topographic survey, utility easement locating, environmental and archeological surveys, core borings, soil resistivity testing, infiltration testing, etc. All PPL employees and contractors will be able to provide their company identification upon request.

Please sign in the space provided below to indicate the granting of your permission for PPL or its agents or contractors to perform surveys on your property.

Sincerely,

A handwritten signature in blue ink that reads "Chris Bishop".

Chris Bishop
Right of Way Agent
Representing PPL Electric Utilities Corporation

I hereby grant PPL or its agents or contractors permission to enter onto my property for the purpose of performing the above various surveys.

Signed: _____

Print Name: _____

Date: _____

Title: _____

Phone: _____

DISCLOSURE of EMINENT DOMAIN POWER

The Pennsylvania Public Utility Commission requires PPL Electric Utilities Corporation to give you the following information:

PPL Electric Utilities Corporation (PPL) is planning to build the Collinsville 500 kV switchyard to accommodate the associated transmission lines. Since a field survey and detailed engineering have not been completed, the physical dimensions of the proposed lines and the type and height of supporting structures to be used cannot be precisely determined at this time. However, based on past experience it is expected that the structures will average 170 to 190 feet in height. There may be isolated physical conditions that would require either higher or lower structures than those mentioned above. At this time, we do not know the number of structures to be placed on any properties. PPL currently plans to construct a 500 kV switchyard to accommodate the associated transmission lines.

Since the route could affect your property, a representative of the utility will contact you in the near future to discuss the utility's plans as they may affect your property. In order to better prepare you for these discussions and to avoid possible misunderstandings, we want to take this opportunity to inform you of your legal rights and the legal rights of PPL Electric Utilities Corporation with regard to this project. You have the right to have legal counsel represent you in these negotiations. You do not have to sign any agreement without the advice of counsel. If you do not know an attorney, you may contact your local bar association.

MUST YOU ACCEPT AN OFFER MADE BY THE UTILITY FOR YOUR PROPERTY?

No. You may refuse to accept it. However, the utility has the power to take property by eminent domain, subject to the approval of the Public Utility Commission, for the construction of substations if the utility is unable to negotiate an agreement to buy a property for a substation. If your property is condemned, you must be paid "just compensation". "Just compensation" has been defined by the courts in Pennsylvania as the difference between the fair market value of your property before condemnation, unaffected by the condemnation, and the fair market value of your remaining property after condemnation, as affected by the condemnation.

CAN THE UTILITY CONDEMN YOUR HOUSE?

The company cannot condemn your house or a reasonable "curtilage" around your house. Generally, "curtilage" includes the land or buildings within 100 meters of your house which are used for your domestic purposes. However, the 100 meters limit does not automatically extend beyond the homeowner's property line.

DO YOU HAVE A RIGHT TO A PUBLIC HEARING WHEN THE UTILITY SEEKS TO CONDEMN YOUR PROPERTY?

Yes. When an electric utility seeks to have your property condemned, the utility must first apply to the Pennsylvania Public Utility Commission for a certificate finding the condemnation to be necessary or proper for the service, accommodation, convenience, or safety of the public. The Commission will then hold a public hearing. As the landowner whose property may be condemned, you are a party to the proceeding and may retain counsel, present evidence, and/or testify yourself in opposition to the application for a certificate. If you wish to testify at the public hearing, you should make your intention known by letter to Secretary, Pennsylvania Public Utility Commission, P.O. Box 3265, Harrisburg, PA 17120.

If the Commission approves the utility's application for a certificate finding the condemnation in the public interest, then the utility may proceed before the local Court of Common Pleas to condemn your land. If the Commission denies the utility's application, the utility cannot condemn your land. If you retain an attorney to represent you before the Commission, you must do so at your own expense.

The Commission will not decide how much money you should receive if your land is condemned. The only issue the Commission will decide is whether the condemnation serves the public interest. If the Commission approves the utility's application for condemnation, the amount of money to which you are entitled will be determined by a local Board of View of the Court of Common Pleas. However, you may at any time make an agreement with the utility as to the amount of damages you are to be paid.

NOTIFICATION of RIGHT-OF-WAY MAINTENANCE PRACTICES

The Pennsylvania Public Utility Commission requires that PPL Electric Utilities Corporation give you the following information on the right of way maintenance practices for the switchyard and associated transmission lines:

The methods currently used by PPL Electric Utilities Corporation are set forth in PPL Electric Utilities Corporation "Program for Vegetation Management", which will be made available to you for your inspection upon request. If you wish further information concerning right of way maintenance methods, you may contact the person named on the cover letter. You may discuss with this person, either before or during negotiation of the right of way agreement, these methods and any other questions you may have about right of way maintenance.

Once a utility has constructed an electric transmission line on a right of way across your land, the utility must maintain the right of way free of tall growing trees and brush which might impair the reliability of electric service, the safety of the line, and access to the line or its towers. The utility or its contractors may remove and control tall growing trees and brush by several methods: hand cutting of trees, limbs and brush; mechanical cutting with chain saws or motorized cutting machines or application of herbicides. The utility must confine its maintenance activities to the approved right of way across your land, except where tall growing trees or brush or their root systems grow into the right of way from adjoining land and constitute a threat to the electric transmission line and its structures.

If you believe that the maintenance method(s) used by the company would raise problems with your use of your land adjacent to the right of way, it is your responsibility as the landowner to bring this to the attention of the utility before you sign the right of way agreement.

The utility company has the responsibility to maintain its right of way, and regular maintenance must occur. Although you as the landowner cannot determine whether or not maintenance will occur, your right of way agreement may specify certain conditions on the performance of the maintenance program which are important to you. These conditions can be part of the negotiations between you and the utility company for your land, since a right of way agreement is a legal contract between a landowner and a utility company. It is important for you to understand also that the maintenance methods used by the utility company may change over time as the costs of maintenance or the methods of performing maintenance change. You may want to specify in your right of way agreement that the utility company inform you of changes in its maintenance methods or in the maintenance schedule for your land.

The provisions of the right of way agreement are enforceable in the local Court of Common Pleas. The right of way agreement cannot be enforced by the Pennsylvania Public Utility Commission. Any claims for damages resulting from improper maintenance of the right of way must be settled with the utility, its contractors, or in the local Court of Common Pleas at your own expense. The Commission cannot award damages for violations of the right of way agreement.

**INTERNAL PRACTICES
for
DEALING WITH THE PUBLIC ON POWER LINE PROJECT**

PPL Corporation has a long-standing commitment to conducting business in an honest and ethical manner. Consistent with expectations for our employees and representatives laid out in the PPL Standards of Conduct and Integrity, and the Standards of Conduct and Integrity for Suppliers, PPL Electric Utilities Corporation's employees, contractors and agents who interact with members of the public (including landowners along proposed rights of way) in activities such as planning, real estate and right-of-way transactions, siting, and construction of power lines and other facilities will:

- Act with integrity at all times.
- Treat people courteously and in a professional manner.
- Be forthright and honest in all actions and communications.
- Comply with applicable laws and regulations.
- Seek to avoid conflicts of interest.
- Accept responsibility for actions and decisions.
- Be responsible stewards of the environment.
- Place a high priority on the safety of the public and our representatives and employees.

**NOTIFICATION REGARDING
LAND AGENT PRACTICES**

PPL Electric Utilities Corporation is planning to construct the Collinsville 500 kV switchyard to accommodate the associated transmission lines in your area. Since the route could affect your property, a representative from PPL Electric Utilities Corporation will contact you in the near future to discuss the utility's plans as they may affect your property.

The Pennsylvania Public Utility Commission requires PPL Electric Utilities Corporation to provide you the following contact information for concerns regarding the practices of the land agents acting on behalf of PPL Electric Utilities Corporation in connection with the construction of the 500 kV switchyard and the associated transmission lines:

Law Bureau
Pennsylvania Public Utility Commission
400 North Street, 3rd Floor, 4 North
Harrisburg, PA 17120
717-787-5000

Pennsylvania Office of Consumer Advocate
555 Walnut Street
5th Floor Forum Place
Harrisburg, PA 17101-1923
Phone: 717-783-5048 or toll free 800-684-6560 (PA
only) Fax: 717-783-7152
Email: consumer@paoca.org

GLOSSARY of REAL ESTATE TERMS

ABSTRACT OF TITLE: The condensed history of ownership to a particular parcel of real estate, consisting of a summary of ownership from a given time to the present owner.

ACRE: A measure of land equal to 43,560 square feet.

APPRAISAL: An estimate of the value of property; the process through which conclusions of property value are reached.

APPRECIATION: An increase in the worth or value of a property.

CHAIN OF TITLE: A history of ownership of a particular property (see abstract of title).

CONDEMNATION: A judicial or administrative proceeding to exercise the power of eminent domain through which private property is taken for public use.

CONDUCTOR: The wire which carries electric energy.

CONVEYANCE: A transfer of property ownership.

DEED: A written document that, when executed and delivered, conveys title to or an interest in real estate.

DEED RESTRICTIONS: Clauses in a deed limiting the use of the property.

DEPRECIATION: A loss of value in property.

EASEMENT: A right to use the land of another for a specific purpose (e.g., as a right of way for utilities.)

EGRESS: The right to exit a tract of land.

EMINENT DOMAIN: The right of a government, municipal body or public utility to acquire property for public use. (See condemnation)

ENCROACHMENT: An intrusion, such as a house, sign, wall or fence, that intrudes on another's property or right of way.

FAIR MARKET VALUE: The highest price which a willing buyer would pay and the lowest price a willing seller would accept.

FEE OR FEE SIMPLE: The complete and absolute ownership of real estate.

GRANT: The transfer of property rights through a legal document.

GRANTEE: One who acquires property or any property rights from another person.

GRANTOR: One who transfers property or any property rights to another person.

INGRESS: The right to enter a tract of land.

KV: Kilovolt or 1000 volts (138 kV = 138 x 1000)

LIEN: A claim against real or personal property for satisfaction of a debt.

METES-AND-BOUNDS DESCRIPTION: The legal description of a parcel of land that begins at a well-marked point and follows the boundaries, using directions and distances.

MONUMENT: A fixed natural or artificial object used to establish real estate boundaries.

OPTION: The right to purchase a certain property at stated terms, price and time.

RECORDING: The act of entering documents in the Recorder of Deeds office established in each county.

RIGHT OF WAY: Used interchangeably with the word easement. (See easement)

SURVEY: A process of scientifically measuring the quantity and location of a parcel of land.

TAX MAP: Maps used by the county Tax Assessment office showing the locations of properties.

TITLE: Evidence of ownership of land.

ZONING: Regulations pertaining to the use of land and/or buildings.

EMF and Health Information

FACT SHEET

What is EMF?

"EMF" is an abbreviation for "electric and magnetic fields" and "electromagnetic fields." Power lines, appliances, and home wiring all produce electric and magnetic fields. "EMF" is also often used by people as shorthand for just "magnetic fields," which some people are concerned about, so that is what "EMF" refers to here.

Is EMF "radiation" like medical X-rays or ultraviolet sunlight?

No. Radiation from medical X-rays and from the ultraviolet part of sunlight is strong enough to damage DNA. EMF from power lines, appliances, and home wiring is not.

What are the EMF levels from common sources? (in milligauss)

Examples of EMF Sources*	
Coffee makers	7
Electricity distribution line -- upper level of typical average	20
Dishwashers	20
500 kV electricity transmission line -- typical average at end of right of way	30
Electricity distribution line -- typical maximum above underground line	40
Florescent lights	40
Electricity distribution line -- typical maximum under overhead line	70
Blenders	70
500 kV electricity transmission line -- typical average under line	87
Toasters	100
Hair dryers	300
Can openers	600

* People typically change activities and locations during a day, so we are exposed to a variety of sources of EMF and a wide range of field levels. In the table above, field levels are taken from the U.S. National Institute of Environmental Health Sciences (NIEHS) EMF Questions & Answers, pages 33-35 (median level at 6 inches from appliances), page 36 (distribution lines), and page 37 (transmission lines). As noted by NIEHS, field levels of transmission lines can approximately double during peak loads, which occur about 1% of the time.

What conclusions have public health authorities reached about whether EMF causes health effects?

The EMF health research has been examined by governmental public health authorities and public health organizations in over 160 reports. The World Health Organization has examined the reports on the research and says on its website:

"Based on a recent in-depth review of the scientific literature, the World Health Organization concluded that current evidence does not confirm the existence of any health consequences from exposure to low level electromagnetic fields."

(<http://www.who.int/peh-emf/about/WhatisEMF/en/index1.html>, section 2, "Conclusions from scientific research.")

Q. Are there any exposure limits for EMF in Pennsylvania?

A. Pennsylvania has not adopted any electric or magnetic field exposure limits.

Q. What is PPL Electric Utilities doing about EMF?

- A. PPL Electric Utilities has a magnetic field management program to design and build new lines when practicable in ways that reduce magnetic fields at low or no cost to our customers. For example, the options we will consider for new lines include:
- Reversing the phases of new overhead double-circuit transmission lines, which can result in some cancellation of magnetic fields from the line and lowers the magnetic fields at the edge of the right of way.
 - Building new transmission and distribution lines higher than previous designs because the level of magnetic fields at ground level will be lower.

Magnetic field management is considered in the process we use to site new facilities, balancing cost and function with land use and environmental concerns.

Q. Where can I get additional information on EMF?

A. This guide contains detailed information on EMF. More information is also available at the PPL Electric Utilities website at www.PPLElectric.com/EMF. If you would like to speak with someone at PPL Electric Utilities about EMF, please call 1-800-DIAL-PPL (1-800-342-5775).



PPL Electric Utilities

Vegetation management is critical to electric reliability

Millions of people served by PPL Electric Utilities depend on having reliable power for their homes and businesses. Effective vegetation management along high voltage transmission lines is a critical part of maintaining that reliability.

PPL Electric Utilities operates thousands of miles of high voltage transmission lines. Our vegetation management program is designed to promote the safe and reliable operation of the electric grid while making sure that we are sensitive to the concerns of property owners and our obligations to electric customers.



PPL Electric Utilities' right to do this work

The vegetation management work we do will depend on the specific rights we have for each property. We will be happy to discuss these rights with you in advance of any work.

To schedule a meeting with a PPL Electric Utilities representative, email us at PPLVegetationManagement@pplweb.com.

For further information, visit ppllectric.com/vegetation.



An award-winning program

PPL Electric Utilities is a proud recipient of the Tree Line USA award from the Arbor Day Foundation and the National Association of State Foresters.

The groups seek to promote proper utility arboriculture and public education through annual worker training, quality tree care, tree planting and public education on energy conservation and collaboration with community groups. For information about planting the right tree in the right place, visit arborday.org.

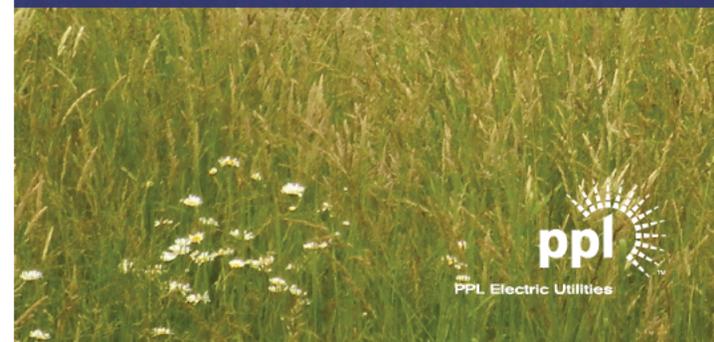
PPL Electric Utilities works with state and local conservation and management and environmental groups to advance common goals of electric reliability and environmental stewardship.



PPL Electric Utilities
ppllectric.com/vegetation

Transmission Line Vegetation Management

Keeping your electric service reliable





Transmission Line Vegetation Management

Trees on other vegetation must be kept away from power lines. They are the top cause of storm-related power outages.

If trees get too close to power lines, the result can be a serious power outage. There is also the potential of a serious safety risk to you and to our employees.

We have an obligation to keep the grid safe and reliable and oversight is provided at both the state and federal levels.

Events like the Northeast Blackout of 2003 and the Halloween 2011 snowstorm involved prolonged outages caused by trees. Our vegetation management program is aimed at limiting the effects of trees on the grid.

We take a proactive approach to vegetation management

PPL Trans and Centers Transmissions on the rights of way in a much more comprehensive way than in the past. Coupled with investments in new poles, wires, equipment and technology we've been able to substantially improve reliability for customers.

Our pledge to you

We maintain our transmission rights of way according to a schedule that allows us to cover our entire system over a period of several years.

We know removing and trimming trees is not a way popular but it's the right thing to do on behalf of everyone who depends on the grid.

- We pledge to communicate with property owners well in advance of scheduled work.
- We pledge to work in a professional manner and to work within the limits of the rights we have to perform this work on each property.
- We pledge to treat all property with care.
- We pledge to strike a careful balance between landowner concerns and the need to keep the grid safe and reliable.



Details of the work we will do

Reducing tree-related power outages is important everywhere, especially along transmission lines which carry high voltage electricity over long distances.

When it comes to transmission line vegetation management we view the rights of way in two main sections. The area directly under the wires plus an additional 10 feet is called the wire zone. The rest of the right of way is called the border zone. What kind of vegetation is allowed in the rights of way depends on the voltage of the line but in all cases it must be compatible with PPL's job to reduce the threat from trees and other vegetation.

Hazard trees – Sometimes trees near the right of way fail into poor condition because of disease, storms or other factors. In order to prevent these trees from falling onto our lines we remove them at no cost to the property owner. Those who decide the removal of a hazard tree could be liable for the cost of repairs to the power line due to faults damaged by the hazard tree.

Benefits to birds – Managing transmission line rights of way creates openings and edges that provide opportunities for native plants to grow and attract birds. According to the National Audubon Society there are many birds that favor shrublands and thrive on edge habitats.

Compatible species* –

SMALL TREES	LARGE SHRUBS	SMALL SHRUBS
Flowering Dogwood	Alder	Mourning Dove
Redbud	White-haze	American Yew
Hawhorn	Spicebush	Sweetgum
American Hornbeam	Common Chokecherry	Honeysuckle
Shadbush (Juneberry, Serviceberry)	Edgerberry	Huckleberries
Eastern Red Cedar	Rhododendron	Buckberries
Northern White Cedar	Viburnum	Viburnum
Dwarf Willow	Dogwood	Meadowsweet
Deciduous Holly (Winterberry)	Smooth (Dwarf) Sumac	Wintergreen
	Sagebrush Sumac	Trailing Arbutus
	Chokeberry	Buckberry
		Raspberry
		Hazelnut
		Scrub Oak

All native grasses, ferns and non-woody plants

*This list is not all inclusive and is meant as a guide. Mature specimens of any species may be removed for operational, safety or reliability reasons.

VERIFICATION

I, JOSEPH B. LOOKUP, being the Vice President – Transmission & Distribution Planning and Asset Management at PPL Services Corporation, hereby state that the facts above set forth are true and correct to the best of my knowledge, information and belief and that I expect PPL Electric Utilities Corporation to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 relating to unsworn falsification to authorities.

Date: 09/12/2024


Joseph Lookup (Sep 12, 2024 17:20 EDT)
Joseph B. Lookup

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Application Of PPL Electric Utilities :
Corporation, Filed Pursuant To 52 Pa. :
Code Chapter 57 Subchapter G, For : Docket No. A-2024-_____
Approval To (1) Construct The New :
Three Mile Island – Chanceford 500 kV :
Transmission Line And Chanceford – :
Peach Bottom 500 kV Transmission Line :
And (2) Rebuild the Existing Otter Creek :
– Conastone 230 kV Transmission Line :
For Future Double Circuit 500 kV :
Operations As The Rebuilt Chanceford – :
Doubts 500 kV Transmission Line And :
The Rebuilt Otter Creek – Conastone :
500/230 kV Transmission Line, Located :
In Chanceford, East Hopewell, And :
Hopewell Townships In York County, :
Pennsylvania :

PPL ELECTRIC UTILITIES CORPORATION

STATEMENT NO. 1

DIRECT TESTIMONY OF JOSEPH B. LOOKUP

**TOPICS ADDRESSED: GENERAL DESCRIPTION OF PROJECT
NEED FOR PROJECT**

DATE: SEPTEMBER 13, 2024

1 **I. INTRODUCTION**

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

3 A. My name is Joseph B. Lookup. My business address is 827 Hausman Road, Allentown,
4 Pennsylvania 18104.

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

7 A. I am employed by PPL Services Corporation as Vice President – Transmission and
8 Distribution Planning and Asset Management and provide services to PPL Electric Utilities
9 Corporation (“PPL Electric” or the “Company”).

10

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

12 A. I oversee the Transmission Planning, Asset Strategy, Portfolio Management, Project
13 Development, Real Estate, Project Management and Construction Management Groups.
14 This includes responsibility for Transmission system reliability, investment strategy and
15 project execution.

16

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

18 A. I received a Bachelors of Engineering in Architectural Engineering – Electrical, from The
19 Pennsylvania State University.

20

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

22 A. Prior to working at PPL Electric, I worked as a consultant providing engineering, project
23 management, construction management services for utility, industrial, commercial, and
24 educational clients. At PPL Electric I have worked in Engineering, Project and

1 Construction Management, and Asset Management in various engineering and project
2 leadership, and management roles.

3
4 **Q. What is the purpose of your testimony?**

5 A. The purpose of my testimony is to generally explain the Application requesting the
6 Pennsylvania Public Utility Commission’s (“Commission”) approval to (1) construct
7 approximately 1.4 miles of new double circuit 500 kilovolt (“kV”) transmission line (the
8 “Three Mile Island – Chanceford 500 kV Transmission Line” and the “Chanceford – Peach
9 Bottom 500 kV Transmission Line”) between the existing Three Mile Island – Peach
10 Bottom 500 kV Transmission Line to the proposed PPL Electric-owned 500 kV switchyard
11 (“Chanceford Switchyard”), and (2) rebuild approximately 12 miles of the existing single
12 circuit Otter Creek – Conastone 230 kV Transmission Line to a future double circuit 500
13 kV capacity (the “Chanceford – Doubs 500 kV Transmission Line” and the “Otter Creek
14 – Conastone 500/230 kV Transmission Line”). Collectively, the new and rebuilt double
15 circuit transmission lines and the Chanceford Switchyard are referred to as the “Chanceford
16 500 kV Rebuild Project” or the “Project.” I will explain why the Project is necessary or
17 proper for the service, accommodation, convenience, or safety of the public. More
18 specifically, I will summarize the information detailed in the above-captioned Application
19 and associated Attachment 1 – Necessity Statement, and Attachment 4 – Design and Safety
20 Practices.

1 **Q. Are you responsible for the preparation of any of the Attachments filed with the**
2 **above-captioned Application?**

3 A. Yes. The above-mentioned Attachments to the Application were prepared by me or under
4 my supervision. In addition, I verified the contents of the Application filed by the
5 Company at the above-captioned docket.

6

7 **II. NEED FOR THE PROJECT**

8 **Q. Please describe the existing system relevant to this Project.**

9 A. PJM Interconnection, LLC (“PJM”) operates and coordinates an extensive 500 kV and 230
10 kV Bulk Electric System (“BES”) that is owned by multiple utilities through all or parts of
11 Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina,
12 Ohio, Pennsylvania, Tennessee, Virginia, West Virginia, and the District of Columbia. The
13 BES allows for regional transfer of power to supply load throughout the PJM Area.

14 A one line diagram of the existing 500 kV and 230 kV system around the project
15 area is provided as **Figure 1-1** to Attachment 1 – Necessity Statement. A map of the
16 existing system alignment is provided as **Figure 1-2** to Attachment 1 – Necessity
17 Statement.

18

19 **Q. Why is the Project needed?**

20 A. The Project is required to resolve reliability issues on the 500 kV and 230 kV transmission
21 systems operated by PJM, as fully explained in Attachment 1 – Necessity Statement. The
22 Project, as approved by PJM, involves MAIT breaking the existing Three Mile Island –
23 Peach Bottom 500 kV Transmission Line and extending both ends into the proposed 500
24 kV switchyard in Chanceford Township, York County.

1 The proposed Chanceford Switchyard will consist of two 500 kV bays built for
2 breaker-and-a-half operation that will initially operate in a three-breaker ring configuration.
3 This configuration will create the new Three Mile Island – Chanceford 500 kV and
4 Chanceford – Peach Bottom 500 kV Transmission Lines.

5 In February 2023, PJM opened a Proposal Window to solicit proposals to address
6 transmission reliability issues associated with data center load growth in the APS and
7 Dominion service territories. PJM identified numerous transmission line and transformer
8 overloads, voltage deficiencies, and non-convergent contingencies.

9 PJM was seeking proposals that develop robust, holistic and expandable solutions
10 that address the 2027-28 baseline violations associated with:

- 11 1. Local constraints as a result of directly serving the data center
12 loads in APS and Dominion zones through the respective 500
13 kV networks and into the points of delivery.
- 14 2. Regional constraints resulting from imports into load center
15 areas to serve data center loads. These primarily cover the
16 following 500 kV transmission paths (together with their
17 paralleling 500 kV circuits):
 - 18 • Doubs – Goose Creek
 - 19 • Front Royal – Morrisville – Vint Hill – Loudoun/Mosby
 - 20 • Meadow Brook – Loudoun/Mosby
 - 21 • Morrisville – Bristers – Ox
 - 22 • Peach Bottom – Conastone – Brighton – Doubs

1 3. Needed reactive power reinforcements, both static and dynamic, as deemed
2 necessary, to address the reactive power needs of the system for the 2027 to
3 2028 baseline scenario.

4 PJM received 72 proposals specifically to address the reliability concerns in the APS and
5 Dominion service territories. PJM separated the proposals into three clusters (East, West,
6 and Southern). PJM then created scenarios consisting of multiple proposals to be evaluated
7 based on performance, scalability, impact, validated cost, risks, and efficiencies. After
8 evaluation and review with stakeholders, to address needs for the East cluster, PJM selected
9 proposal 374 by PPL Electric (i.e., the Project)¹, proposal 344/660 by Exelon, proposal 637
10 by PSEG, and proposal 837 by FirstEnergy. On December 11th, 2023, the PJM Board
11 approved proposal 374 (i.e., the Project) as a Baseline Upgrade with number B3800.1,
12 B3800.3, and B3800.53.²

13 After the evaluation and review with stakeholders, in April 2024 PJM selected the
14 “PJM Combination – 500 kV Scenario” as the preferred solution, which included the
15 Project. This scenario provided the needed reliability reinforcements with the least amount
16 of infrastructure development as compared to alternatives and provided a much higher
17 reliability margin as compared to alternatives. Importantly, this scenario is lower cost and
18 involves developing fewer facilities than other alternatives that would resolve the reliability
19 issues.

¹ At this stage the proposed solution was a double circuit 230/500 kV rebuild but has since changed (See Section 5.0 of this Attachment).

² The PJM 2022 RTEP Window 3 Reliability Analysis Report can be found at:
<https://pjm.com/-/media/committees-groups/committees/teac/2023/20231205/20231205-2022-rtep-window-3-reliability-analysis-report.ashx>

1 Indeed, the PJM Combination – 500 kV Scenario offers full utilization of existing
2 ROWS, alleviating limitations in the historically constrained Peach Bottom – Conastone
3 500 kV Transmission Line corridor. The PJM Combination – 500 kV Scenario proposal
4 also addresses the load deliverability needs into the BGE system which is further
5 exacerbated by the deactivation of key power plant(s) in the BGE zone.

6
7 **Q. Are there any other aspects of the need for the Project that you will comment upon?**

8 A. Yes. While the Otter Creek – Conastone 230 kV Transmission line will be designed for
9 future 500 kV operations as a part of its rebuild, in anticipation of the need to increase its
10 voltage to 500 kV at a later time, it will initially be operated at 230 kV. PPL Electric is not
11 seeking the Commission’s pre-approval to increase the voltage of this line to 500 kV at this
12 time. PPL Electric will file an appropriate letter of notification pursuant to 52 Pa. Code §
13 52.72(d)(1)(iv) prior to increasing the voltage from 230 kV to 500 kV.

14
15 **III. OVERVIEW OF THE PROJECT**

16 **Q. Please summarize the proposed Project.**

17 A. The Project involves MAIT breaking the existing Three Mile Island – Peach Bottom 500
18 kV Transmission Line and PPL Electric terminating the resulting ends of the 500 kV
19 transmission lines into the proposed Chanceford Switchyard. The existing Otter Creek –
20 Conastone 230 kV Transmission Line extends approximately 12 miles from the existing
21 Otter Creek Substation Otter Creek Substation to the Pennsylvania-Maryland border
22 (“Demarcation Point”), where the existing 230 kV line becomes a BGE (an Exelon
23 Company) asset. The line south of the Demarcation Point continues to the BGE-Owned
24 Conastone Substation. As part of the Project, the rebuilt Chanceford – Doubs 500 kV

1 Transmission Line (the western circuit) will operate at 500 kV, while the rebuilt Otter
2 Creek – Conastone 500/230 kV Transmission Line (the eastern circuit) will be designed
3 for future 500 kV operation, but initially operate at 230 kV as the Otter Creek – Conastone
4 230 kV Transmission Line. Once load growth in the area makes it appropriate to increase
5 the operating voltage, the northern terminus of the Otter Creek – Conastone 230 kV
6 Transmission Line will be re-terminated into the Chanceford Switchyard (at which time
7 the line will be re-named its final designation of Chanceford – Conastone 500 kV
8 Transmission Line) and a 0.4-mile segment of existing Otter Creek – Conastone 230 kV
9 Transmission Line, between Otter Creek Substation and proposed Structure 2, will be
10 removed (see Page 1 of Figure 3-1 in Attachment 3). The new and rebuilt double circuit
11 500 and 500/230 kV transmission lines will be constructed with new steel monopoles, high
12 capacity conductors, and two optical ground wires. A full engineering description of the
13 proposed Project is provided in Attachment 2 – Design and Engineering Description, to the
14 Chanceford 500 kV Transmission Line Rebuild Project Application.

15
16 **Q. What is the estimated cost of the Project?**

17 A. The total estimated cost of the proposed Project is \$148.14 million. The cost will be
18 allocated to Dominion (74.28%), APS (a FirstEnergy Company) (13.16%), PEPCO (an
19 Exelon Company) (10.59%), BGE (0.71%), PECO (an Exelon Company) (0.68%), DPL
20 (an Exelon Company) (0.36%), and PPL Electric Utilities (0.22%).

21
22 **Q. How does this cost compare to the estimated cost of the Project as submitted to PJM?**

1 A. The estimated cost of the Project is higher than the original cost estimate submitted to PJM
2 due to changes to the Project. On December 11th, 2023, the PJM Board approved proposal
3 374 (i.e., the Project) as a Baseline Upgrade. However, in March 2024, PJM requested that
4 PPL Electric modify the portion of the Otter Creek-Conastone line. The transmission
5 solution as originally proposed by PPL Electric consisted of rebuilding the existing 230 kV
6 line to a double-circuit 230 kV and 500 kV line. The change requested by PJM upgrades the
7 230 kV line design voltage to a 500 kV line design. Although the new 500 kV line will be
8 initially operated at 230 kV, the Otter Creek-Conastone line corridor will now consist of a
9 line capable of double-circuit 500 kV operation. This scalable solution ensures that near-
10 term reliability needs are met while also providing for future expansion without additional
11 impact on landowners or the environment.

12 Also, in March 2024, PJM awarded PPL Electric construction of double-circuit 500
13 kV tap lines between the switchyard and the TMI-Peach Bottom right-of-way as a scope
14 change. The upgrade was originally assigned to another entity and was reassigned to PPL
15 to utilize the existing brownfield right-of-way, lowering the cost and footprint of the tap
16 lines.

17

18 **Q. When is construction of the Project scheduled to begin?**

19 A. Construction of the Project is anticipated to begin in July of 2025, subject to the
20 Commission's approval.

21

22 **Q. What is the in-service date for the proposed Project?**

23 A. The anticipated in-service date is June 2027.

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IV. DESIGN DESCRIPTION AND SAFETY PRACTICES

Q. Please describe the design of the proposed construction of the Project.

A. As I noted previously, the Project is needed to resolve reliability issues on the 500 kV and 230 kV transmission systems operated by PJM. The Project involves MAIT breaking the existing Three Mile Island – Peach Bottom 500 kV Transmission Line and PPL Electric terminating the resulting ends of the 500 kV transmission lines into the proposed Chanceford Switchyard. The existing Otter Creek – Conastone 230 kV Transmission Line extends approximately 12 miles from the existing Otter Creek Substation Otter Creek Substation to the Pennsylvania-Maryland border (“Demarcation Point”), where the existing 230 kV line becomes a BGE (an Exelon Company) asset. The line south of the Demarcation Point continues to the BGE-Owned Conastone Substation. As part of the Project, the rebuilt Chanceford – Doubs 500 kV Transmission Line (the western circuit) will operate at 500 kV, while the rebuilt Otter Creek – Conastone 500/230 kV Transmission Line (the eastern circuit) will be designed for future 500 kV operation, but initially operate at 230 kV as the Otter Creek – Conastone 230 kV Transmission Line. Once load growth in the area makes it appropriate to increase the operating voltage, the northern terminus of the Otter Creek – Conastone 230 kV Transmission Line will be re-terminated into the Chanceford Switchyard (at which time the line will be re-named its final designation of Chanceford – Conastone 500 kV Transmission Line) and a 0.4-mile segment of existing Otter Creek – Conastone 230 kV Transmission Line, between Otter Creek Substation and proposed Structure 2, will be removed. The new and rebuilt double circuit 500 and 500/230 kV transmission lines will be constructed with new steel monopoles, high capacity conductors, and two optical ground wires.

1 In total, PPL Electric will install 60 new foundation structures and remove 62
2 existing foundation structures. The existing structures were originally designed for double
3 circuit 230 kV operation, while the new structures are designed for double circuit 500 kV
4 operation. All new structures will be weathering steel monopoles and will be installed on
5 concrete foundations. All structures will comply with NESC and PPL Electrical clearance
6 requirements.

7 A detailed engineering description is provided in Attachment 2 – Design and
8 Engineering Description.

9
10 **Q. Will the proposed Project create any unreasonable risk of danger to the public health
11 or safety?**

12 A. No. The proposed lines will be designed, constructed, operated, and maintained in a
13 manner that meets or surpasses all applicable National Electrical Safety Code (“NESC”)
14 minimum standards and all applicable legal requirements. Descriptions of the NESC
15 standards, PPL Electric’s design criteria, and PPL Electric’s safety practices are provided
16 in Attachment 4 - PPL Electric Design Criteria and Safety Practices.

17
18 **Q. Does the Application explain how PPL Electric managements magnetic fields?**

19 A. Yes. Attachment 4 – PPL Electric Design Criteria and Safety Practices explains PPL
20 Electric’s standards for Magnetic Field Management. Ground clearances for the proposed
21 Project will be at least 5 feet higher than those required by the NESC standard in order to
22 reduce the magnetic field exposure.

23

1 V. **CONCLUSION**

2 Q. **Does this conclude your Direct Testimony at this time?**

3 A. Yes. I reserve the right to supplement my testimony as additional issues arise during the
4 course of this proceeding.

VERIFICATION

I, JOSEPH B. LOOKUP, being the Vice President – Transmission & Distribution Planning and Asset Management at PPL Services Corporation, hereby state that the facts above set forth are true and correct to the best of my knowledge, information and belief and that I expect PPL Electric Utilities Corporation to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 relating to unsworn falsification to authorities.

Date: 09/12/2024


Joseph Lookup (Sep 12, 2024 17:20 EDT)
Joseph B. Lookup

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Application Of PPL Electric Utilities :
Corporation, Filed Pursuant To 52 Pa. :
Code Chapter 57 Subchapter G, For : Docket No. A-2024-_____

Approval To (1) Construct The New :
Three Mile Island – Chanceford 500 kV :
Transmission Line And Chanceford – :
Peach Bottom 500 kV Transmission Line :
And (2) Rebuild the Existing Otter Creek :
– Conastone 230 kV Transmission Line :
For Future Double Circuit 500 kV :
Operations As The Rebuilt Chanceford – :
Doubts 500 kV Transmission Line And :
The Rebuilt Otter Creek – Conastone :
500/230 kV Transmission Line, Located :
In Chanceford, East Hopewell, And :
Hopewell Townships In York County, :
Pennsylvania :

PPL ELECTRIC UTILITIES CORPORATION

STATEMENT NO. 2

DIRECT TESTIMONY OF KYLE SWARTZENTRUBER

TOPICS ADDRESSED: ENGINEERING AND DESIGN CRITERIA

SAFETY CONSIDERATIONS

DATE: SEPTEMBER 13, 2024

1 **I. INTRODUCTION**

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

3 A. My name is Kyle Swartzentruber. My business address is 827 Hausman Rd
4 Allentown, PA 18104.

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

7 A. I am employed by PPL Services Corporation as a Lead Responsible Engineer and
8 provide services to PPL Electric Utilities Corporation (“PPL Electric” or
9 “Company”).

10

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

12 A. I assist with and oversee the design of transmission line projects, including the
13 Chanceford project. This includes specifying and ordering materials, pole
14 placement and spotting, and the design of the transmission voltage facilities.

15

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

17 A. I have a Bachelors of Science Degree in Mechanical Engineering Technology from
18 The Pennsylvania State University.

19

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

21 A. I have been employed with PPL since 2011 and performed Transmission Line
22 Design the entire time. Prior to that I was a Test Engineer for Mack Trucks Inc, a
23 draftsman for East Penn Manufacturing, and a design Engineer for Zeks Air
24 Drawing Systems.

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

A. The purpose of my testimony is to summarize and detail the engineering and design criteria utilized for the Company’s proposal to: (1) construct approximately 1.4 miles of new double circuit 500 kilovolt (“kV”) transmission line (the “Three Mile Island – Chanceford 500 kV Transmission Line” and the “Chanceford – Peach Bottom 500 kV Transmission Line”) between the existing Three Mile Island – Peach Bottom 500 kV Transmission Line to the proposed PPL Electric-owned 500 kV switchyard (“Chanceford Switchyard”), and (2) rebuild approximately 12 miles of the existing single circuit Otter Creek – Conastone 230 kV Transmission Line to a future double circuit 500 kV capacity (the “Chanceford – Doubs 500 kV Transmission Line” and the “Otter Creek – Conastone 500/230 kV Transmission Line”). Collectively, I will refer to the new and rebuilt double circuit transmission lines and the Chanceford Switchyard as the “Chanceford 500 kV Rebuild Project” or the “Project.” I will also discuss the safety considerations for the Project.

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

A. I am responsible for describing the engineering and design criteria, as well as safety considerations, for the Project. Specific to the Application, I am responsible or partly responsible for Attachment 2 – Design and Engineering Description and Attachment 4 – the Design Criteria and Safety for the Project.

1 **II. OVERVIEW OF ENGINEERING AND DESIGN CONSIDERATIONS**

2 **Q. Could you provide a brief explanation of the engineering and design**
3 **considerations for the Project?**

4 A. Yes. The Project is designed to address the concerns raised by the PJM
5 Interconnection, LLC (“PJM”) as described in further detail by Mr. Joseph B.
6 Lookup in PPL Electric Statement No. 1, as well as the various items addressed in
7 Attachment 1 to the Application – the Necessity Statement.

8 PPL Electric’s new and rebuilt transmission lines as part of the Project will
9 be designed according to, and generally exceed, all National Electric Safety Code
10 (“NESC”) minimum standards. The NESC standards are developed to safeguard
11 utility workers and the public during the installation, operation, and maintenance
12 of electric power lines. Although not intended as a design specification, its
13 provisions establish minimum design requirements. The NESC is a safety code
14 that includes loading requirements and clearances for the design, construction, and
15 operation of power lines. Loading requirements are the loads on the conductors
16 and structures that are anticipated assuming certain ice and wind conditions.
17 Loading requirements always contain “safety factors” to allow for unknown or
18 unanticipated contingencies. The clearances and loading requirements contained
19 in the NESC are designed to maintain public safety. PPL Electric’s transmission
20 line design standards meet or surpass the NESC clearances and loading
21 requirements.

22 For example, the NESC specifies strength and loading rules based on three
23 different “grades of construction” for conductors and supporting structures:

1 **Grade B** – This grade of construction provides the highest margin of safety
2 and is required when the pole supports spans that cross limited access
3 highways, railroads, and waterways.

4 **Grade C** – This grade of construction is most common and provides a basic
5 margin of safety. It is often utilized for the typical power and joint-use
6 distribution pole.

7 **Grade N** – This is the lowest grade of construction and is most often used
8 for emergency and temporary construction.

9 PPL Electric designs all of its transmission lines for Grade B construction. The use
10 of Grade B design and construction translates to higher levels of structural
11 reliability and safety to withstand the environmental conditions of ice and/or wind
12 loading.

13 PPL Electric’s transmission lines are designed to exceed NESC
14 requirements by accounting for additional ice and wind loading conditions not
15 contemplated under the NESC. This means that PPL Electric’s lines are designed
16 to operate safely and reliably during extreme inclement weather. In addition, where
17 practicable, PPL Electric’s transmission lines are designed with more clearance to
18 the ground than required by the NESC.

19 PPL Electric also uses a relay protection system to protect the public safety,
20 as well as the equipment on the transmission system. Relay protection is installed
21 for all transmission lines and is designed to automatically de-energize a line in the
22 unlikely event that the line or supporting structure fails and the line contacts the
23 ground.

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Q. Could you provide further detail as to the Project?

A. Yes. The Project involves Mid-Atlantic Interstate Transmission, LLC (“MAIT”) breaking the existing Three Mile Island – Peach Bottom 500 kV Transmission Line and PPL Electric terminating the resulting ends of the 500 kV transmission lines into the proposed Chanceford Switchyard. The existing Otter Creek – Conastone 230 kV Transmission Line extends approximately 12 miles from the existing Otter Creek Substation to the Pennsylvania-Maryland border (“Demarcation Point”), where the existing 230 kV line becomes a BGE (an Exelon Company) asset. The line south of the Demarcation Point continues to the BGE-Owned Conastone Substation. As part of the Project, the rebuilt Chanceford – Doubs 500 kV Transmission Line (the western circuit) will operate at 500 kV, while the rebuilt Otter Creek – Conastone 500/230 kV Transmission Line (the eastern circuit) will be designed for future 500 kV operation, but initially operate at 230 kV as the Otter Creek – Conastone 230 kV Transmission Line. Once load growth in the area makes it appropriate to increase the operating voltage, the northern terminus of the Otter Creek – Conastone 230 kV Transmission Line will be re-terminated into the Chanceford Switchyard (at which time the line will be re-named its final designation of Chanceford – Conastone 500 kV Transmission Line) and a 0.4-mile segment of existing Otter Creek – Conastone 230 kV Transmission Line, between Otter Creek Substation and proposed Structure 2, will be removed (see **Page 1 of Figure 3-1 in Attachment 3**). The new and rebuilt double circuit 500

1 and 500/230 kV transmission lines will be constructed with new steel monopoles,
2 high capacity conductors, and two optical ground wires.

3 The configuration of conductor and overhead ground wire (“OHGW”)
4 varies along the circuits due to audible noise constraints and the varying fiber path
5 taken along each circuit. PPL Electric will construct the double circuit Three Mile
6 Island – Chanceford and Chanceford – Peach Bottom 500 kV transmission lines
7 from the existing Three Mile Island – Peach Bottom 500 kV Transmission Line to
8 the proposed Chanceford Switchyard. MAIT will be responsible for breaking the
9 existing 500 kV transmission line so the PPL-constructed transmission lines could
10 be tied into the 500 kV grid. PPL Electric believes the existing 500 kV transmission
11 line consists of double bundle 2493 ACAR with dual alumoweld OHGW. From
12 the interconnection point, PPL Electric will be using triple bundle 1590 ACSR and
13 dual 19-#9 Alumoweld shield wires. The new double circuit 500 kV transmission
14 lines will continue south for 1.4 miles from the interconnection point to the
15 proposed Chanceford Switchyard.

16 To build the double circuit Three Mile Island – Chanceford and Chanceford
17 – Peach Bottom 500 kV Transmission Lines PPL Electric will install four (4) two
18 pole angle structures each carrying one circuit and three (3) single pole double
19 circuit structures (see **Figure 3-1 in Attachment 3**).

20 The existing Otter Creek – Conastone 500/230 kV Transmission Line will
21 remain the same operating voltage of 230 kV but will be rebuilt for future 500 kV
22 capacity. From the existing Otter Creek Substation, PPL Electric will run single
23 bundle 1590 ACSR for several spans until it reaches the proposed Structure 2,

1 where it will transfer to triple bundle 1590 ACSR conductor. This section will also
2 carry a de-commissioned dual 48 count OPGW, acting as a shield wire. The OPGW
3 traffic previously carried on this section will then be routed through the Chanceford
4 Switchyard and then into the existing Otter Creek Substation on different cables.

5 The rebuilt Chanceford – Doubs 500 kV Transmission Line will utilize
6 triple bundle 1590 ACSR and dual 48 count OPGW. This will be on shared
7 structures with the rebuilt Otter Creek – Conastone 500/230 kV Transmission Line
8 from the Chanceford Switchyard to the Pennsylvania-Maryland border.

9 The existing Otter Creek – Conastone 230 kV Transmission Line currently
10 utilizes a total of 62 structures (shown in **Figure 3-1** in **Attachment 3**) comprised
11 of the following:

- 12 • 60 custom steel poles on foundations with an average height of 145 feet.
- 13 • 2 two-pole angle structures with an average height of 145 feet.

14 As shown in **Figure 3-1** in **Attachment 3**, to complete the rebuilt Otter
15 Creek – Conastone 500/230 kV Transmission Line, PPL Electric will complete the
16 following:

- 17 • Replace 57 existing steel monopole structures with 57 new steel
18 monopole structures.
- 19 • Replace one existing two pole structure with a three pole structure 230
20 kV single circuit.
- 21 • Replace one existing steel monopole structure with a three pole structure
22 230 kV single circuit.
- 23 • Install two new double circuit custom poles on the Chanceford
24 Switchyard parcel.

1 In total, PPL Electric will install 60 new foundation structures and remove
2 62 existing foundation structures. The existing structures were originally designed
3 for double circuit 230 kV operation, while the new structures are designed for
4 double circuit 500 kV operation. All new structures will be weathering steel
5 monopoles and will be installed on concrete foundations. All structures will
6 comply with NESC and PPL Electrical clearance requirements. In addition:

- 7 • All new rebuilt structures will be located entirely within the existing
8 right-of-way and within a reasonable distance from the existing
9 structures, typically less than 50 feet away from the existing structures.

10 One new structure was required to assure that clearance requirements
11 between the transmission line and grain bin could be achieved.

- 12 • All new structures (i.e., new structure locations that are not within the
13 existing ROW) will be located entirely on PPL Electric-owned
14 properties for the Chanceford Switchyard and Otter Creek Substation.

15 A more detailed engineering description is provided in **Attachment 2 –**
16 **Engineering Description.**

17

18 **Q. Could you generally describe the periodic maintenance PPL Electric employs**
19 **for all of its Transmission Lines, including the new and/or rebuilt**
20 **Transmission Lines for the subject Project?**

21 A. Yes. To ensure continued public safety and integrity of service, PPL Electric has
22 implemented a periodic maintenance and inspection program for every
23 transmission line. The program is administered using helicopter patrols, with

1 supplemental foot patrols, as needed. Helicopter patrols are performed on all lines
2 on a predetermined frequency, depending on voltage level. The two-man helicopter
3 crew flies parallel and above the line so that the observer can look for signs of line
4 damage or deterioration and observe clearances between vegetation and
5 conductors. The observations are included in a report that is forwarded to the
6 appropriate department for corrective action.

7

8 **III. SAFETY CONSIDERATIONS**

9 **Q. Please provide an overview of PPL Electric's safety considerations for the**
10 **Project.**

11 A. PPL Electric designs and constructs its projects with a high appreciation for the
12 safety of the public and its employees and meets or exceeds all applicable codes
13 and requirements. The following are examples of the PPL Electric safety rules that
14 illustrate the Company's dedication to employee and contractor safety:

- 15 • Work procedures have been developed to facilitate the safe performance
16 of work on energized facilities. Any time lines or equipment is removed
17 from service for repair or maintenance, an Energy Control Process
18 system is applied. This system requires that a red tag be physically
19 placed on the control handle of all de-energized equipment.
- 20 • The red tag may be removed only after proper authorization to re-
21 energize the equipment has been received.
- 22 • Various other tags are used for limited operations and informational
23 purposes.

- 1 • Only authorized employees and contractors can apply or remove a tag
2 or change the status of tagged equipment.
- 3 • Temporary safety grounds are used on de-energized facilities to
4 promote employee safety during maintenance, construction, or
5 reconstruction work. Safety grounds are wires that connect a de-
6 energized facility to an electrical ground. If the facility should be
7 unintentionally energized, the safety grounds will reduce the likelihood
8 of personal injury but diverting the current directly to ground.
- 9 • Lines are tested to confirm de-energization before applying safety grounds
10 using a voltage testing device to assure reliability.
- 11 • Poles and structures are inspected and examined for structural integrity before
12 climbing. If there is any reason to believe that a pole is unsafe, it is stabilized
13 before any work is performed. Appropriate safety gear in the form of body
14 belts, safety straps, hard hats, gloves, etc., is always worn by linemen during
15 line work activity.

16
17 **Q. Did PPL Electric consider Magnetic Fields as part of the review of the Project?**

18 A. Yes. PPL Electric's Magnetic Field Management Program is applied to new and
19 reconstructed transmission line projects. The Company does not believe that
20 current scientific evidence demonstrates that magnetic fields cause any adverse
21 health effects or pose a health or safety danger to the public. Nevertheless, PPL
22 Electric has determined, as a matter of policy, to design its new and rebuilt
23 transmission lines to reduce magnetic fields when consistent with functional

1 requirements. The program generally prescribes the use of a line design with
2 ground clearance that exceeds NESC standards by a minimum of 5 feet and reverse
3 phasing of new double-circuit lines where feasible and can be implemented at low
4 or no additional cost.

5

6 **IV. CONCLUSION**

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

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

VERIFICATION

I, KYLE SWARTZENTRUBER, being the Principal Engineer at PPL Services Corporation, hereby state that the facts above set forth are true and correct to the best of my knowledge, information and belief and that I expect PPL Electric Utilities Corporation to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 relating to unsworn falsification to authorities.

Date: 09/12/2024

Kyle Swartzentruber
Kyle Swartzentruber (Sep 12, 2024 16:19 EDT)

Kyle Swartzentruber

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Application Of PPL Electric Utilities :
Corporation, Filed Pursuant To 52 Pa. Code :
Chapter 57 Subchapter G, For Approval To : Docket No. A-2024-_____

(1) Construct The New Three Mile Island – :
Chanceford 500 kV Transmission Line And :
Chanceford – Peach Bottom 500 kV :
Transmission Line And (2) Rebuild the :
Existing Otter Creek – Conastone 230 kV :
Transmission Line For Future Double :
Circuit 500 kV Operations As The Rebuilt :
Chanceford – Doubs 500 kV Transmission :
Line And The Rebuilt Otter Creek – :
Conastone 500/230 kV Transmission Line, :
Located In Chanceford, East Hopewell, And :
Hopewell Townships In York County, :
Pennsylvania :

PPL ELECTRIC UTILITIES CORPORATION

STATEMENT NO. 3

DIRECT TESTIMONY OF PETER SPARHAWK

**TOPICS ADDRESSED: PROPOSED ROUTE
 ENVIRONMENTAL ASSESSMENT AND MITIGATION**

DATE: SEPTEMBER 13, 2024

1 **I. INTRODUCTION**

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

3 A. My name is Peter Sparhawk. My business address is 350 Eagleview Boulevard, Suite 250,
4 Exton, PA 19341.

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

7 A. I am employed by WSP USA (“WSP”) as Senior Vice President, T&D Market Sector Lead,
8 Earth & Environment.

9
10 **Q. What are your principal responsibilities in this position?**

11 A. My responsibilities include managing, coordinating, conducting, and reviewing a variety
12 of environmental assessment and compliance projects and tasks for electric transmission
13 projects. These projects include leading and participating in siting and routing studies,
14 feasibility studies, compliance with state and federal regulatory processes, state filings
15 before public utility commissions, environmental permitting projects, and similar
16 environmental and planning assignments.

17
18 **Q. Please provide a summary of your education and professional work experience.**

19 A. I graduated from Cornell University in Ithaca, New York in 1985 with a Bachelor of Arts
20 degree in History. I also completed a Certificate Program for the Environmental Manager
21 in 1996 at the University of Washington. I have 33 years of experience in preparing,
22 coordinating, and managing environmental, infrastructure, and energy projects, including
23 federal and state environmental impact statements and assessments, environmental
24 compliance and permitting efforts, and state certification applications for transmission line

1 projects. My experience with energy projects includes licensing and permitting for electric
2 transmission lines, gas-fired generation, wind power, and hydroelectric facilities. I have
3 conducted and overseen numerous environmental analyses and coordinated license
4 applications to state energy agencies and siting boards for power facilities and
5 infrastructure in various states throughout the United States, including many in
6 Pennsylvania. Specifically, my electric transmission line experience includes routing and
7 siting, licensing, public outreach, permitting, consultation with resource agencies, expert
8 witness testimony before the Pennsylvania Public Utility Commission (“PUC” or
9 “Commission”) and the New Jersey Board of Public Utilities, and everyday coordination
10 with WSP utility clients and programs. I have been responsible for helping PPL Electric
11 Utilities Corporation’s (“PPL Electric”) prepare various attachments and analyses for
12 inclusion in full siting applications or letters of notification to the PUC for more than 30
13 electric transmission line projects since 2008.

14
15 **Q. What is the purpose of your direct testimony in this proceeding?**

16 A. My testimony provides a summary of the proposed route for construction of approximately
17 1.4 miles of new double circuit 500 kilovolt (“kV”) transmission line (the “Three Mile
18 Island – Chanceford 500 kV Transmission Line” and the “Chanceford – Peach Bottom
19 500 kV Transmission Line”) between the existing Three Mile Island – Peach Bottom
20 500 kV Transmission Line and the proposed PPL Electric-owned 500 kV switchyard
21 (“Chanceford Switchyard”), and the rebuild of approximately 12 miles of the existing
22 single circuit Otter Creek – Conastone 230 kV Transmission Line to a future double circuit
23 500 kV capacity (the “Chanceford – Doubs 500 kV Transmission Line” and the “Otter

1 Creek – Conastone 500/230 kV Transmission Line”). Collectively, I will refer to the new
2 and rebuilt double circuit transmission lines and the Chanceford Switchyard as the
3 “Chanceford 500 kV Rebuild Project” or the “Project.” The environmental study activities
4 described in the Attachment 3 – Project Area Description were performed by WSP, under
5 my supervision, in coordination with PPL Electric.

6
7 **Q. Were any portions of the siting study prepared by you or under your supervision?**

8 A. Yes. I am sponsoring certain attachments to PPL Electric’s Application. Specifically, I
9 am responsible for the following attachment to the Application:

- 10 • Attachment 3 – Project Area Description

11 I was involved in preparing these attachments to the Siting Application or otherwise
12 provided oversight to WSP technical staff who prepared them. I also provided review for
13 the complete Siting Application prior to assembly and submission to the Commission.

14
15 **Q. Please provide an overview of the Project.**

16 A. As explained in the written direct testimony of Company witness Mr. Joseph B. Lookup
17 (PPL Electric Statement No. 1), and Mr. Kyle Swartzentruber (PPL Electric Statement No.
18 2), the preferred solution for addressing the PJM-identified issues involves MAIT breaking
19 the existing Three Mile Island – Peach Bottom 500 kV Transmission Line and PPL Electric
20 terminating the resulting ends of the 500 kV transmission lines into the proposed
21 Chanceford Switchyard. The existing Otter Creek – Conastone 230 kV Transmission Line
22 extends approximately 12 miles from the existing Otter Creek Substation Otter Creek
23 Substation to the Pennsylvania-Maryland border (“Demarcation Point”), where the existing
24 230 kV line becomes a BGE (an Exelon Company) asset. The line south of the

1 Demarcation Point continues to the BGE-Owned Conastone Substation. As part of the
2 Project, the rebuilt Chanceford – Doubs 500 kV Transmission Line (the western circuit)
3 will operate at 500 kV, while the rebuilt Otter Creek – Conastone 500/230 kV Transmission
4 Line (the eastern circuit) will be designed for future 500 kV operation, but initially operate
5 at 230 kV as the Otter Creek – Conastone 230 kV Transmission Line. Once load growth
6 in the area makes it appropriate to increase the operating voltage, the northern terminus of
7 the Otter Creek – Conastone 230 kV Transmission Line will be re-terminated into the
8 Chanceford Switchyard (at which time the line will be re-named its final designation of
9 Chanceford – Conastone 500 kV Transmission Line) and a 0.4-mile segment of existing
10 Otter Creek – Conastone 230 kV Transmission Line, between Otter Creek Substation and
11 proposed Structure 2, will be removed. The new and rebuilt double circuit 500 and
12 500/230 kV transmission lines will be constructed with new steel monopoles, high capacity
13 conductors, and two optical ground wires.

14
15 **II. OVERVIEW OF THE PROPOSED ROUTE FOR THE PROJECT**

16 **Q. Please provide an overview of the siting process and explain how the study area was**
17 **determined and the potential and alternative routes were developed.**

18 A. Unlike many full siting applications before the Commission, the Project involves (1)
19 constructing a new HV transmission line within existing ROW and (2) rebuilding an
20 existing line within existing ROW. As explained in Attachment 3 – Project Area
21 Description, each aspect of the Project will take place predominantly within existing
22 transmission line ROW and/or upon PPL Electric-owned parcels of land.

23

1 **Q. Why is this distinction important?**

2 A. As explained in Attachment 3 – Project Area Description, any feasible alternative route for
3 the Project that would address the needs identified in the manner required to comply with
4 the PJM Combination – 500 kV Scenario would require the location of HV transmission
5 facilities where none presently exist and ultimately result in greater environmental impacts
6 than the route proposed for the Project.

7 Importantly, as part of its competitive FERC Order 1000 Transmission Solicitation
8 window in 2022, PJM solicited solutions to address the contingency loss of key 500 kV
9 transmission lines. Seventy-two proposals, including 50 greenfield solutions comprising
10 new transmission lines, were submitted and reviewed by PJM. PJM’s review of the
11 proposals included whether the proposed project utilized existing facilities/ROW, scoring
12 the use of existing facilities/ROW as a benefit over new facilities/ROW. PPL Electric’s
13 proposal for the Project was selected as the most appropriate solution partly because it
14 primarily utilized existing facilities and ROW, limiting new impacts.

15 It is reasonable to conclude that any other alternative route that may have feasibly
16 addressed the needs that are the subject of the Project would have been less reasonable than
17 the route proposed, and that a formal siting and routing analysis would be unnecessary in
18 this specific case.

19

20 **Q. Are there any other reasons why it is important to recognize that the Project utilizes**
21 **existing ROW?**

22 A. Yes. I am aware that the Project in part involves rebuilding existing HV transmission lines
23 for which PPL Electric conducted a siting and routing analysis (i.e., the Otter Creek –

1 Conastone 230 kV Transmission Line). PPL Electric investigated potential alternative
2 routes related to the Otter Creek – Conastone 230 kV Transmission in 2011 at Docket No.
3 A-2011-2228595.

4
5 **Q. Have you reviewed the prior siting and routing analysis conducted with respect to the**
6 **Otter Creek – Conastone 230 kV Transmission Line?**

7 A. Yes.

8
9 **Q. What was the goal of that analysis?**

10 A. The goal of the alternative siting analysis was to determine whether an alternative route for
11 this transmission line could be identified which provided fewer social, environmental,
12 engineering, and economic impacts than the existing route. The alternative siting analysis
13 involved a comprehensive review of Geographic Information Systems (“GIS”) data sets
14 and aerial photography; conducting field reviews; and subsequently identifying and
15 evaluating potential alternative routes. Results of the alternative analysis determined that
16 there were no feasible alternative routes that would cause fewer social, environmental,
17 engineering, and economic impacts than the existing route.

18
19 **Q. Having reviewed the prior analysis, and also having reviewed the route proposed for**
20 **the Project, what do you conclude?**

21 A. It is my conclusion that the same analysis holds true today. My conclusion is based upon
22 both PPL Electric’s engagement with local stakeholders with respect to the Project in this

1 proceeding, and my review and analysis of the project area conducted as a part of this
2 Application.

3
4 **Q. Even though PPL Electric has not prepared a formal siting and routing study in this**
5 **proceeding, did it analyze the Project and consider whether the subject HV**
6 **transmission lines (1) are in compliance with applicable statutes and regulations**
7 **providing for the protection of the natural resources of this Commonwealth, and (2)**
8 **will have minimum adverse environmental impact, considering the electric power**
9 **needs of the public, the state of available technology and the available alternatives?**

10 A. Yes. Attachment 3 – Project Area Description describes the review conducted by PPL
11 Electric to ensure that the HV transmission lines that are the subject of the Project are (1)
12 are in compliance with applicable statutes and regulations providing for the protection of
13 the natural resources of this Commonwealth, and (2) will have minimum adverse
14 environmental impact, considering the electric power needs of the public, the state of
15 available technology and the available alternatives. I will discuss how each of these criteria
16 was satisfied by PPL Electric below.

17
18 **Q. Even though PPL Electric has not prepared a formal siting and routing study in this**
19 **proceeding, was public outreach part of the process for establishing the route**
20 **proposed?**

21 A. Yes. Agency and public outreach is an important component of the siting and construction
22 process. PPL Electric conducted public outreach, including regulatory agency consultation,
23 public notification and two open house meetings, and meetings with property owners. PPL

1 Electric's public outreach efforts for this Project are summarized by Mr. Weseloh in PPL
2 Electric Statement No. 4 and also described in Attachment 3 – Project Area Description.
3 PPL Electric consulted with various federal, state, and local agencies to inform them of the
4 Project and request data used in the route planning process. Feedback received during the
5 public outreach process has been reviewed and incorporated into the Project where feasible
6 and reasonable.

7
8 **Q. Did PPL Electric consider local comprehensive plans and zoning in selecting the**
9 **proposed route for the Project?**

10 A. Yes. As required by the PUC's guidelines found at 52 Pa. Code, § 69.1101 (2)(3) and §
11 69.3104 (1), local zoning ordinances and comprehensive land use plans were reviewed by
12 PPL Electric to evaluate the impact of the proposed Project. PPL Electric evaluated the
13 Project's consistency with the zoning ordinances and comprehensive plans of the
14 government entities through which the Proposed Route would pass. PPL Electric has
15 reviewed the Project with regulators and other key stakeholders. I am aware that one
16 Zoning Petition will be filed contemporaneously with the Application.

17
18 **Q. Have you considered whether the Chanceford Switchyard is consistent with**
19 **Chanceford Township's Zoning Ordinance and Comprehensive Plan?**

20 A. Yes, and the Chanceford Switchyard is consistent with Chanceford Township's Zoning
21 Ordinance and Comprehensive Plan. I have reviewed the Township's Zoning Ordinance,
22 and the Chanceford Switchyard will be located in the A – Agricultural Zone District ("A
23 District"). Public Utility and Similar Building/Facilities is a permitted use by special

1 except in the Agricultural Zone. There are no specific requirements listed in Section 431
2 of the Zoning Ordinance pertaining to Public Utility and Similar Building/Facilities
3 use. However, there are existing transmission line facilities on this property, and locating
4 the Chanceford Switchyard at this location enables the use of the existing ROW corridor
5 for the Project which will minimize the impact of the Project on other properties.

6
7 **III. COMPLIANCE WITH POTENTIAL PERMIT AND MITIGATION**
8 **REQUIREMENTS**

9 **Q. Please summarize PPL Electric’s efforts to minimize the anticipated impacts and**
10 **potential permit and mitigation requirements of the Project.**

11 A. Efforts were made during the transmission line siting process to minimize impacts on
12 existing and future land uses, as well as avoid sensitive natural resources such as wetlands
13 and streams. Where impacts are unavoidable, best management practices will be employed
14 and PPL Electric will obtain and comply with any necessary permits.

15 As part of the permitting process, any required waterway or floodplain
16 encroachment permits will be obtained from the Pennsylvania Department of
17 Environmental Protection (“PADEP”) and United States Army Corps of Engineers
18 (“USACE”) prior to construction and PPL Electric will comply with all conditions placed
19 on the permits. In addition, PPL Electric will comply with the regulations of the National
20 Pollutant Discharge Elimination System (“NPDES”) permit program, obtain the required
21 soil erosion and sedimentation control approvals and permits, and follow the specified
22 conditions required for the permit.

23 A detailed discussion of the Company’s efforts to minimize the anticipated impacts
24 and potential permit and mitigation requirements of the proposed Project is provided in

1 Attachment 3 to the Application, including potential impacts to land use; natural features;
2 rare, threatened, and endangered species; cultural resources; and community features and
3 conserved lands. Anticipated agency requirements and permits are also provided in
4 Attachment 3.

5
6 **IV. THE PROPOSED HV TRANSMISSION LINE WILL HAVE MINIMUM**
7 **ADVERSE ENVIRONMENTAL IMPACTS**

8 **Q. Please summarize PPL Electric’s review of the Project Area.**

9 A. From the existing Mid-Atlantic Interstate Transmission (“MAIT”) Peach Bottom – Three
10 Mile Island 500 kV Transmission Line to the proposed Chanceford Switchyard, the Project
11 travels southwest and adjacent to existing transmission facilities through agricultural
12 properties, characterized by cultivated cropland and fragmented woodlots. From the
13 proposed Chanceford Switchyard, the Project travels in a southwesterly direction,
14 primarily through agricultural fields and forested lands, until it terminates at the
15 Pennsylvania-Maryland border as shown in Attachment 3.

16
17 **Q. Please describe the existing land uses in areas traversed by the Project.**

18 A. PPL Electric evaluated the existing land uses on the PPL Electric-owned properties and
19 within 0.25 mile (1,320 feet) of the new 500 kV and existing 230 kV transmission lines.
20 This broader area was reviewed to provide a sense of the landscape in which the Project is
21 located. Land uses were determined based on the United States Geological Survey
22 (“USGS”) 2021 National Land Cover Database (“NLCD”). Aerial photography was also
23 an important data source for the study.

1 Assessment of the data shows that agricultural areas are the dominant land use,
2 accounting for approximately two-thirds (66 percent) of the review area, with the primary
3 component being cultivated crops. Forested area bordering the Project ROW accounts for
4 approximately 25 percent of the review area. Low to moderate density development and
5 associated open space is noted across approximately 9 percent of the review area.

6
7 **Q. Does the Project traverse any State-owned and/or conserved lands?**

8 A. During evaluation for State-owned lands, none were identified along the Project ROW. As
9 shown on Figure 3-1, the majority of the Project crosses York County agricultural
10 conservation easements (“ACEs”) and agricultural security areas (“ASAs”). Specifically,
11 the existing Otter Creek – Conastone 230 kV Transmission Line ROW crosses 18 ACEs
12 and 33 ASAs. The Project proposes installing new structures near existing structures within
13 the existing Otter Creek – Conastone 230 kV Transmission Line; therefore, minimal
14 impacts to the York County ACEs and ASAs are anticipated.

15 The proposed Chanceford Switchyard crosses one ACE and two ASAs. Of these,
16 the ACE and one of the ASAs are currently crossed by the existing Otter Creek – Conastone
17 Transmission Line. The proposed Three Mile Island – Chanceford 500 kV and Chanceford
18 – Peach Bottom 500 kV transmission lines cross two ACEs and four ASAs. PPL Electric
19 will coordinate with the York County Conservation District to minimize impacts for the
20 Project.

1 **Q. Are there any airports located near the Project?**

2 A. One registered Federal Aviation Administration (“FAA”) private airstrip, the Draco
3 airport, is located approximately 0.5 mile east of the Project near the intersection of Draco
4 Road and Woolen Mill Road. Draco Airport is a turf airstrip that is permitted for use of
5 ultra-light aircraft. Additionally, the Baublitz Airport is located approximately 0.8 mile
6 west of the Project on Muddy Creek Forks Road. The Baublitz Airport is classified as a
7 public commercial airport by the FAA. The closest major commercial airport, the Lancaster
8 Airport, is located approximately 19 miles northeast of the Project.

9

10 **Q. Please describe the cultural resources that are located within the Project Area.**

11 A. No known archaeological resources are located within 0.5 mile of the Project. Two
12 previously recorded historic districts and 12 previously recorded architectural sites were
13 identified within 0.5 mile of the Project, as shown in Attachment 3. The table identifies
14 those resources within 0.5 mile of the Project that are either eligible, unevaluated, or listed
15 for the National Historic Register of Places (“NRHP”). Ineligible or demolished resources
16 are not included in the table.

17 The Guinston United Presbyterian Church, located at 14130 Guinston Road, is
18 approximately 0.5 mile west of the existing Otter Creek – Conastone 230 kV Transmission
19 Line. The Stewartstown Railroad, a historic district, is located adjacent to and south of
20 Barrens Road between Structure 12-2 and Structure 12-3 (see Page 1 of 16 in Figure 3-1
21 of Attachment 3).

22 The Project proposes upgrading the existing Otter Creek – Conastone 230 kV
23 Transmission Line by replacing current structures to double circuit 500 kV capacity. The

1 new structures will generally look similar to the existing towers but will be approximately
2 20 to 30 feet taller and include an additional circuit. In addition, PPL Electric is seeking
3 to acquire additional voluntary ROW (25 feet on both sides of the current 150-foot-wide
4 ROW) to enhance electric reliability, prevent potential impacts from danger trees, and
5 reduce the number of structures by creating larger spans, where possible. Therefore, no
6 significant impacts are anticipated for the only NRHP-listed resource or any other known
7 architectural resources identified for the Project.

8
9 **Q. Please describe the natural features located within the Project Area.**

10 A. Environmental factors reviewed for the Project included unique natural features, soils,
11 waterways, wetlands, 100-year floodplains, vegetation, and threatened and endangered
12 species.

13 Core habitat for the North Branch Muddy Creek Natural Heritage Area (NHA) was
14 identified for the Project area, which is explained in further detail below. No additional
15 unique geological, scenic, or natural areas are located within the Project review area.

16 The existing Otter Creek – Conastone 230 kV Transmission Line spans 14 mapped
17 waterways as it extends from the Otter Creek substation in the northeast to the
18 Pennsylvania-Maryland state border in the southwest. In addition, the new Three Mile
19 Island – Chanceford 500 kV and Chanceford – Peach Bottom 500 kV transmission lines
20 will cross one (1) mapped waterway. These mapped waterways include South Fork Otter
21 Creek, Leibs Creek, North Branch Muddy Creek, West Branch Toms Run, as well as two
22 UNTs of Leibs Creek, two UNTs of North Branch Muddy Creek, four UNTs of South
23 Branch Muddy Creek, three UNTs of West Branch Toms Run.

1 Based on review of the U.S. Fish and Wildlife Service (“USFWS”) National
2 Wetlands Inventory (“NWI”), the existing Otter Creek – Conastone 230 kV Transmission
3 Line ROW crosses two Palustrine, Emergent, Persistent, Temporarily Flooded (PEM1A)
4 wetlands; one Palustrine, Emergent, Phragmites australis/Forested, Broad-Leaved
5 Deciduous, Temporarily Flooded (PEM5/FO1A) wetland; four Palustrine, Emergent,
6 Phragmites australis, Temporarily Flooded (PEM5A) wetlands; seven Palustrine, Forested,
7 Broad-Leaved Deciduous, Temporarily Flooded (PFO1A) wetlands; and two Palustrine,
8 Unconsolidated Bottom, Permanently Flooded, Diked/Impounded (PUBHh) wetlands. The
9 proposed Three Mile Island – Chanceford 500 kV and Chanceford – Peach Bottom 500 kV
10 transmission lines cross one PFO1A wetland.

11 The existing Otter Creek – Conastone 230 kV Transmission Line spans the 100-
12 year floodplains associated with several streams along the alignment. Minimal impacts to
13 floodplain areas or floodways are anticipated by the proposed Project activities, since the
14 existing and proposed structures are located entirely outside 100-year floodplain areas. PPL
15 Electric will coordinate with local agencies for regulated floodplain activities.

16 Vegetative cover bordering the majority of the Project’s ROW has been influenced
17 by agricultural and rural residential development. Large areas of the natural vegetative
18 cover in these sections have been removed for conversion to farms and pastures.
19 Woodlands are also predominant, with larger, more contiguous areas located in proximity
20 to major waterways that incise the landscape such as Leibs Creek, North Branch Muddy
21 Creek, and West Branch Toms Run. Smaller areas of forested cover are present as
22 fragmented woodlots, which provide screening between residential and agricultural
23 properties.

1 The Natural Areas Inventory for York County, prepared by the Pennsylvania
2 Natural Heritage Program (“PNHP”), identified one (1) State ranked site within the Project
3 area. The North Branch Muddy Creek Natural Heritage Area (NHA) is a large site located
4 between Delta Road (State Route 74) and High Rock Road, which includes floodplains and
5 adjacent areas of North Branch Muddy Creek drainage system. The species of concern
6 inhabiting these shallow wetlands require specific plant communities within a matrix of
7 open canopied habitats.

8
9 **Q. Are there any threatened and/or endangered species that may be encountered within**
10 **and along the Project Area?**

11 A. Review of the threatened and endangered species that may be encountered within and along
12 the Project includes evaluation of the natural areas identified in the Project area, as well as
13 the Project-related Pennsylvania Natural Diversity Inventory (“PNDI”) responses provided
14 by federal and state agencies that have protective jurisdiction over the surrounding animals,
15 plants, and ecological communities.

16 A Project Environmental Review of the PNDI database was conducted for both the
17 existing Otter Creek – Conastone 230 kV Transmission Line ROW (PNDI-806386) as well
18 as the proposed Chanceford Switchyard and the new Three Mile Island – Chanceford
19 500 kV and Chanceford – Peach Bottom 500 kV transmission lines (PNDI-812318). The
20 combined PNDI results indicated Potential Impacts with the Pennsylvania Game
21 Commission (“PGC”), Pennsylvania DCNR, Pennsylvania Fish and Boat Commission
22 (“PFBC”), and the USFWS. As such, PPL Electric initiated additional coordination with
23 the state and federal agencies.

1 Based on the nature of the Project, the immediate location, and their detailed
2 resource information, the PGC indicated that no impact is likely to species or resources of
3 concern as a result of the Project. Therefore, no additional coordination with the PGC is
4 required for the Project.

5 The PFBC noted that except for occasional transient species, any rare, candidate,
6 threatened or endangered species under their jurisdiction are not known to exist in the
7 vicinity of the Project area. Therefore, no additional coordination with the PFBC is required
8 for the Project.

9 Based on a detailed PNDI review, the DCNR determined potential impacts to the
10 following state listed species: umbrella magnolia (*Magnolia tripetala*), a state threatened
11 species; lobed spleenwort (*Asplenium pinnatifidum*), a state rare species; plain ragwort
12 (*Packera anonyma*), a state rare species; nodding trillium (*Trillium cernuum*), a proposed
13 state threatened species; and Lion's foot (*Nabalus serpentaria*), a proposed state threatened
14 species. The DCNR requested that botanical surveys be performed by a qualified surveyor
15 for the above-listed species during their appropriate survey window (May to October). If
16 preferred habitat does not exist on site, a survey may not be necessary. The DCNR also
17 requested a habitat assessment report for the Project, which describes the current land
18 cover, habitat types, and species found on-site. Currently, PPL Electric is conducting
19 botanical studies, reporting, and administrative activities for the Project area between Hight
20 Rock Road and Muddy Creek Forks Road, per detailed consultation with the DCNR. PPL
21 Electric will provide copies of the DCNR clearance once the survey window is complete
22 in October.

1 In 2011, PPL Electric previously conducted a Phase I Bog Turtle Survey for the
2 Conastone – Otter Creek 230 kV transmission line rebuild project per USFWS guidance.
3 The survey report, which covered areas within 300 feet of the existing 150-foot ROW, was
4 provided to USFWS on January 15, 2013. In their response, dated February 14, 2013, the
5 USFWS determined that the effects of the Conastone – Otter Creek 230 kV transmission
6 line rebuild project on the bog turtle are insignificant or discountable. As a result of the
7 updated PNDI obtained for the Chanceford 500 kV Rebuild Project, PPL Electric
8 reinitiated coordination with USFWS on March 5, 2024. The updated USFWS response
9 indicated that no changes were noted for the transmission line rebuild portion of the
10 Chanceford 500 kV Rebuild Project since their previous correspondence in February 2013.
11 Additionally, PPL is currently performing a Phase II Bog Turtle Survey for the proposed
12 Otter Creek Switchyard and will provide updated correspondence from USFWS for this
13 portion of the Project once complete.

14 **Q. Given your analysis and review of these features, the fact that the Project utilizes**
15 **predominantly existing HV transmission line ROW, and the fact that PPL Electric**
16 **has committed to obtaining all necessary permits and implementing appropriate**
17 **mitigation where needed, what do you conclude regarding the environmental impacts**
18 **of the Project?**

19 A. The Project will have minimal adverse environmental impacts when compared to any
20 alternative that would require building new transmission lines where none presently exist.
21 Efforts were made during the transmission line siting process to minimize impacts on
22 existing and future land uses, as well as avoid sensitive natural resources such as wetlands
23 and streams. Where impacts are unavoidable, best management practices will be employed

1 and PPL Electric will obtain and comply with any necessary permits. The Siting Team
2 ultimately decided that the cumulative environmental, engineering and constructability,
3 and social and financial impacts associated with constructing the HV lines proposed here
4 are more favorable when compared to building new transmission lines not presently
5 existing.

6
7 **V. CONCLUSION**

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

9 A. Yes, it does. I reserve the right to supplement my testimony as additional issues arise
10 during the course of this proceeding.

VERIFICATION

I, PETER SPARHAWK, being the Senior Vice President, T&D Market Sector Lead, Earth & Environment at WSP USA, hereby state that the facts above set forth are true and correct to the best of my knowledge, information and belief and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 relating to unsworn falsification to authorities.

Date: 09/12/2024


Peter Sparhawk (Sep 12, 2024 14:55 PDT)

Peter Sparhawk

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Application Of PPL Electric Utilities :
Corporation, Filed Pursuant To 52 Pa. Code :
Chapter 57 Subchapter G, For Approval To : Docket No. A-2024-_____
(1) Construct The New Three Mile Island – :
Chanceford 500 kV Transmission Line And :
Chanceford – Peach Bottom 500 kV :
Transmission Line And (2) Rebuild the :
Existing Otter Creek – Conastone 230 kV :
Transmission Line For Future Double :
Circuit 500 kV Operations As The Rebuilt :
Chanceford – Doubs 500 kV Transmission :
Line And The Rebuilt Otter Creek – :
Conastone 500/230 kV Transmission Line, :
Located In Chanceford, East Hopewell, And :
Hopewell Townships In York County, :
Pennsylvania :

PPL ELECTRIC UTILITIES CORPORATION

STATEMENT NO. 4

DIRECT TESTIMONY OF AUSTIN K. WESELOH

TOPICS ADDRESSED: RIGHT-OF-WAY AND EASEMENT RIGHTS

DATE: SEPTEMBER 13, 2024

1 **I. INTRODUCTION**

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

3 A. My name is Austin K. Weseloh. My business address is 827 Hausman Road, Allentown,
4 Pennsylvania 18104.

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

7 A. I am employed by PPL Services Corporation as Transmission Right of Way and Real Estate
8 Supervisor. In this position, my primary responsibility is to supervise all Transmission
9 Right of Way (“ROW”) and Real Estate assets for PPL Service Corporation in service to
10 PPL Electric Utilities Corporation (“PPL Electric” or the “Company”).

11
12 **Q. What is your educational background?**

13 A. I attended for 3 years at University of Pittsburgh majoring in Economics.

14
15 **Q. Are you a member of any professional organizations?**

16 A. Yes. I am currently a member of the International Right of Way Association (“IRWA”)
17 where I am taking classes to attain the Senior Right of Way Agent (“SR/WA”) certification
18 which is the highest-level industry designation. The certification requires course work
19 consisting of both core courses and elective courses. The certification requires satisfactory
20 completion of the certification test administered by the IRWA.

21

1 **Q. Please describe your background and employment history.**

2 A. I have been employed by PPL Electric in my current position as Transmission Right of
3 Way and Real Estate Supervisor for approximately seven years. Prior to that, I was a Senior
4 Right of Way Specialist at PPL Electric for three and a half years.

5 • From 2012 through 2013 I worked as a Right of Way Agent for Doyle Land
6 Services negotiating the acquisition of ROW grants, access roads, property
7 damages and real estate contracts to add a 60-mile pipe adjacent to an existing
8 ROW in Pennsylvania.

9 • From 2011 through 2012 I worked as a Right of Way Agent for Meridian Land
10 Group negotiating the acquisition of ROW grants, access roads and property
11 damages for 75 miles of new pipeline ROW to connect 69 new natural gas wells in
12 Northeast Pennsylvania.

13 • From 2010 through 2011 I worked as a Right of Way Agent for Miller Land
14 Professionals reviewing title for potential natural gas leases and ROWs in Bradford
15 and Susquehanna Counties, Pennsylvania.

16 From 2004 through 2010 I worked for LTS Builders and Realty Company purchasing land
17 for new home construction. My duties included negotiating for individual lots as well as
18 large tracts to be subdivided into developments.

19 Nothing additional

20

21 **Q. What are your responsibilities in connection with the proposed Project?**

22 A. As explained by Joseph B. Lookup in PPL Electric Statement No. 1, the Project involves:
23 (1) new construction of the Three Mile Island – Chanceford 500 kV Transmission Line and

1 the Chanceford – Peach Bottom 500 kV Transmission line between the existing Three Mile
2 Island – Peach Bottom 500 kV Transmission Line to the proposed Chanceford Switchyard;
3 and (2) the rebuilding of approximately 12 miles of the existing single circuit Otter Creek
4 – Conastone 230 kV Transmission Line to the Chanceford – Doubs 500 kV Transmission
5 Line and the Otter Creek – Conastone 500/230 kV Transmission Line. My colleagues and
6 I are responsible for identifying all property owners along the route selected for the shared-
7 ROW.

8 For new ROWs and easements, the Company attempts to negotiate with the
9 property owners for the required land rights. We also provide the landowners along the
10 selected route with literature regarding electromagnetic fields, compatible ROW uses,
11 pictures of typical transmission line structures, and other information to help them fully
12 understand the project. The ROW Agent will meet with property owners as necessary to
13 answer questions, address concerns, and/or to resolve issues. The ROW Agent provides
14 the property owner with information on how he/she can be contacted at any time, to answer
15 questions or to address issues or concerns, should any arise. The ROW Agent is the direct
16 link for the property owner to communicate with PPL Electric.

17
18 **Q. What are the subjects of your testimony?**

19 A. First, I will identify the portions of the above-captioned Application that I am sponsoring.
20 Second, I will summarize our process for identifying new ROW required for the Project
21 and the property owners that would be affected. Third, I will explain the process we
22 employed to attempt to acquire rights of way and easements for the Three Mile Island –
23 Chanceford 500 kV Transmission Line and the Chanceford – Peach Bottom 500 kV

1 Transmission Line Project. Fourth, I will explain the Company's policy regarding the
2 property owner's use of the ROW area and will provide examples of measures the
3 Company employs to mitigate the impacts of the Transmission Lines on property owners'
4 present and future uses of their properties. Fifth, I will explain the status of our efforts to
5 acquire the rights-of-way and easements needed for the Project.

6
7 **Q. Please describe the portions of the Siting Application that you are sponsoring.**

8 A. I am responsible for assisting in the identification of landowners crossed by the proposed
9 project and the ROW acquisition process.

10
11 **II. RIGHT-OF-WAY IDENTIFICATION AND ACQUISITION**

12 **Q. Please describe the Company's process for identifying the owners of property that
13 will be traversed by Project facilities.**

14 A. Starting in 2023, Company personnel and contractors researched the Project routes for
15 property owner names, property records, and mapping. ROW agents then collected
16 boundary and physical evidence from the field to determine or confirm property
17 boundaries. My colleagues then prepared mapping for the contract ROW agents to meet
18 with the property owners to show them where the proposed ROW would be located.

19
20 **Q. Please explain the Company's policy regarding dealing with owners of property to be
21 traversed by Project facilities.**

22 A. The Company's policy regarding dealing with property owners is described in the
23 informational packet provided to property owners along the Proposed Route, which is
24 provided as Attachment 6 – Code of Conduct and Landowner Notices. Included in this

1 informational packet, described in more detail below, this packet provides that PPL Electric
2 representatives are to: act with integrity at all times; treat everyone courteously and in a
3 professional manner; be forthright and honest in all actions and communications; comply
4 with all laws and regulations; avoid any conflicts of interest; accept responsibility for any
5 actions or decisions; be good stewards of the environment; and place a high priority on
6 safety for the public, as well as Company employees and representatives. In addition, it is
7 PPL Electric's practice to accommodate the landowner's use of their property by shifting
8 the location of the ROW on a landowner's property when it can be reasonably
9 accomplished without incurring significant costs or challenges.

10
11 **Q. Did the Company provide information to owners of land that may be subject to a**
12 **ROW or easement for the Project?**

13 A. Yes. As mentioned above, prior to contacting property owners to negotiate ROW
14 agreements, the Company provided informational packets to notify property owners of the
15 Company's plans to negotiate to acquire rights of way and easements across their land.
16 This packet discloses to the property owner information including the name, purpose, and
17 general location of the Project; PPL Electric's standards of employee and agent conduct;
18 notices of eminent domain power and ROW management practices; and includes a
19 permission form for landowners to grant PPL Electric access to their property.

20 This packet also contains the notices required by the Pennsylvania Public Utility
21 Commission in its regulations at 52 Pa. Code § 57.91. The first notice discusses the
22 Company's power of eminent domain with respect to the Project, and the associated rights

1 of the property owner. The second notice provides information regarding the ROW
2 maintenance practices for the Project facilities.

3 Additionally, as discussed in PPL Electric Statement No. 3, the direct testimony of
4 Peter Sparhawk, the Company held public meetings on January 25, 2024, at the Chanceford
5 Township Building located at 33 Muddy Creek Forks Road, Brogue, PA 17309, and on
6 May 29, 2024, at the New Bridgeville Fire Company, located at 2870 Furnace Road, Red
7 Lion, PA 17356. At these meetings, Company representatives delivered informational
8 presentations about the Project need, potential routes, design, and operational
9 characteristics; answered questions from attendees; and provided informational literature
10 regarding property owner rights, and eminent domain.

11
12 **Q. What does the Company do after providing the information and notices to property**
13 **owners?**

14 A. Pursuant to 52 Pa. Code § 57.91, the Company waits at least 15 days following landowner's
15 receipt of the informational packet. We then contact the property owner(s) via telephone
16 or in person to schedule a convenient time to meet so that we can explain the details of the
17 Project and answer any questions they may have. At such meetings, we usually make a
18 monetary offer to the property owner(s) for the ROW sought. The amount of the offer is
19 based on the fair market value of the property that would be occupied by the ROW the
20 Company wishes to acquire.

1 **Q. Please explain the Company’s policy regarding the property owner’s use of the ROW**
2 **area.**

3 A. Following the Company’s acquisition of a ROW and easement, the property owner can
4 continue to use the ROW area, so long as such use is compatible with the safe and reliable
5 operation and maintenance of Company facilities. Compatible uses that require no prior
6 review or approval from the Company include farming and gardening. The Company also
7 allows compatible development within the ROW area, provided that the design and work
8 in the area does not interfere with the safe and reliable operation and maintenance of
9 Company facilities. Such uses include grading, installation of roadways or parking lots,
10 and installation of underground infrastructure (such as utilities).

11
12 **Q. Please identify methods and/or examples where the Company has worked with**
13 **property owners along the Proposed Route to mitigate effects of the Project on their**
14 **present and future land uses.**

15 A. The Company sought feedback from landowners at the open houses and subsequent
16 individual meetings to minimize the impact to properties where possible. Given that the
17 Project utilizes an existing ROW corridor there are only minimal additional impacts to
18 landowners.

19
20 **Q. Please explain the status of the Company’s efforts to acquire ROW and easements for**
21 **the Project.**

22 A. There is a total of 64 deeded properties along the Proposed Route, owned by a total of 54
23 distinct property owners. The Company has obtained all required easements for this

1 Project. Additionally, PPL Electric has contemporaneously filed one (1) Condemnation
2 Application pursuant to 15 Pa. C.S. § 1511(c) for a finding and determination by the
3 Commission, to the extent that any such finding and determination may be required, that
4 the service to be furnished by PPL Electric through the exercise of the power of eminent
5 domain for the Chanceford 500 kV Rebuild Project is necessary or proper for the service,
6 accommodation, convenience or safety of the public.

7 The only parcel where all needed rights have not been acquired is owned by Daniel
8 T. Curran. Despite having a valid easement to construct, operate and maintain, and from
9 time to time to reconstruct its electric lines within the ROW traversing this property, PPL
10 Electric needs to acquire additional fee simple rights on the property of Daniel T. Curran
11 in order to construct the Chanceford Switchyard that is contemplated by the Project. While
12 PPL Electric has reached an agreement with Mr. Curran to acquire approximately 4 acres
13 of land for \$100,000 and to acquire approximately 13.3 acres of easement rights to subject
14 portions of the Project, this parcel owned by Daniel T. Curran is within an Agricultural
15 Security Area (“ASA”) established pursuant to Pennsylvania’s Agricultural Area Security
16 Law (“ASL”), 3 P.S. § 901 et seq., and is subject to an Agricultural Conservation Easement
17 in favor of the Commonwealth of Pennsylvania and York County. The deed of easement
18 is dated May 14, 1992, and is recorded in the Office of Recorder of Deeds of York County
19 at Book 0384, page 1011. A copy of the same is provided in this proceeding in PPL Electric
20 Exhibit AKW-5 (Curran).

21 There is no statutory authority for releasing the Curran property from the
22 agricultural easement except by condemnation. Because the Curran property is located

1 within an ASA, the exercise of the power of eminent domain by PPL Electric is required
2 to comply with the provisions of Section 13 of the ASL.

3

4 **III. CONCLUSION**

5 **Q. Does this conclude your Direct Testimony?**

6 A. Yes. I reserve the right to supplement my testimony as additional issues arise during the
7 course of this proceeding.

VERIFICATION

I, AUSTIN K. WESELOH, being the Transmission ROW & Real Estate Supervisor, at PPL Services Corporation, hereby state that the facts above set forth are true and correct to the best of my knowledge, information and belief and that I expect PPL Electric Utilities Corporation to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 relating to unsworn falsification to authorities.

Date: 09/12/2024


Austin Weseloh (Sep 12, 2024 16:46 EDT)

Austin K. Weseloh