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File #: 206618

July 16, 2024

VIA ELECTRONIC FILING

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

Re: Letter Of Notification Of PPL Electric Utilities Corporation, Filed Pursuant To 52 Pa. Code Chapter 57 Subchapter G, For Approval To Rebuild Approximately 0.3 Miles of the Existing Juniata-Cumberland 230 kV and Williams Grove-Cumberland 230 kV Transmission Lines To Re-Terminate Each Existing Transmission Line Into the Expanded Cumberland Substation in Silver Spring Township, Cumberland County, Pennsylvania
Docket No. A-2024-_____

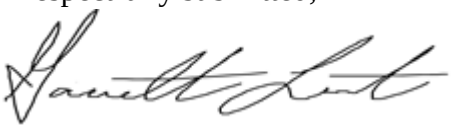
Dear Secretary Chiavetta:

Attached for filing is the Letter of Notification of PPL Electric Utilities Corporation ("PPL Electric") in the above-referenced proceeding. As indicated on the Certificate of Service, copies of the Letter of Notification are being served by certified mail, return receipt requested, upon the involved governmental agencies, municipalities and property owners. Construction of the Project will commence upon the Pennsylvania Public Utility Commission's ("Commission") approval of this filing, with an estimated construction start date of January 2025 with an anticipated in-service date of May 2026. Accordingly, PPL Electric is seeking the Commission's decision by no later than November 7, 2024.

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

If you have any questions concerning this matter, please contact me at the address or telephone numbers provided above.

Respectfully submitted,



Garrett P. Lent

GPL/kls
Enclosures

cc: Paul T. Diskin, Esquire
Jordan Van Order, Esquire
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 § 1.54 (relating to service by a participant).

VIA CERTIFIED MAIL: RETURN RECEIPT REQUESTED

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

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

Appalachian National Scenic Trail
P.O. Box 50
Harpers Ferry, WV 25425
Attn: Ed Clark, Superintendent

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

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

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

Pennsylvania State Historic Preservation Office
Bureau within the Pennsylvania Historical and Museum Commission
Commonwealth Keystone Building
400 North Street, Second Floor
Harrisburg, PA 17120-0053
Attn: Mr. Douglas C. McLearen, Chief

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

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

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

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

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

Cumberland County Board of Commissioners
1 Courthouse Square, 2nd Floor, Suite 200
Carlisle, PA 17013
Attn: Gary Eichelberger, Chairman

Cumberland County Planning Department
310 Allen Road, Suite 101
Carlisle, PA 17013
Attn: Heather Sweitzer, Chair

Cumberland County Conservation District
310 Allen Road, Suite 301
Carlisle, PA 17013
Attn: Carl Goshorn, District Manager

Cumberland County Agricultural Land Preservation Board
310 Allen Road, Suite 101
Carlisle, PA 17013
Attn: Stephanie Williams, Program Administrator

Silver Spring Township Board of Supervisors
8 Flowers Drive
Mechanicsburg, PA 17050
Attn: Carl R. Machamer, Chair

Date: July 16, 2024

Garrett P. Lent

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Letter Of Notification Of PPL Electric Utilities Corporation, Filed Pursuant To 52 Pa. Code Chapter 57 Subchapter G, For Approval To Rebuild Approximately 0.3 Miles Of The Existing Juniata-Cumberland 230 kV And Williams Grove-Cumberland 230 kV Transmission Lines To Re-Terminate Each Existing Transmission Line Into the Expanded Cumberland Substation in Silver Spring Township, Cumberland County, Pennsylvania	:	Docket No. A-2024-_____

LETTER OF NOTIFICATION

TO THE PENNSYLVANIA PUBLIC UTILITY COMMISSION:

PPL Electric Utilities Corporation ("PPL Electric") hereby files this Letter of Notification pursuant to Section 57.72(d)(1)(vi) of the Pennsylvania Public Utility Commission's ("Commission") regulations, 52 Pa. Code § 57.72(d)(1)(vi), to rebuild a total of approximately 0.6 miles of existing 230 kilovolt ("kV") transmission lines. Specifically, PPL Electric proposes to rebuild approximately 0.3 miles of the existing Juniata-Cumberland 230 kV and Williams Grove-Cumberland 230 kV Transmission Lines located near Silver Spring Township, Cumberland County, Pennsylvania to re-terminate each existing transmission line into the expanded Cumberland 230-69 kV Substation (the "Cumberland 230-69 kV Substation Expansion Project" or "Project"). PPL Electric herein seeks Commission approval for the re-termination of the 230

kV transmission lines necessary to interconnect the Expanded Cumberland Substation to the electric grid.[1]

The proposed Project will address outage risks and planning criteria violations that are being driven by the need to reconfigure the electrical arrangement of the Cumberland 230-69 kV Substation (the "Existing Cumberland Substation"). The Existing Cumberland Substation is currently configured as a single-bus design for both the 230 kV and 69 kV yards. This configuration, which was put into place in 1974, currently puts customers at risk for electrical outages and the 230-69 kV transformers at risk of thermal overload. The proposed Project will also address certain contingency and risk issues at the Existing Cumberland Substation and surrounding regions that violate North American Electric Reliability Council ("NERC") TPL-001-4 System Planning Requirements, as explained in Attachment 1 – Necessity Statement. To address these issues, PPL Electric plans to expand the 230 kV yard to the south and reconfigure it to breaker and a half arrangement (the "Expanded Cumberland 230 kV Substation"). The Expanded Cumberland 230 kV Substation will be located on the same PPL Electric-owned property, but will require PPL Electric to rebuild a portion of the existing Juniata-Cumberland 230 kV and Williams Grove-Cumberland 230 kV Transmissions to re-terminate these lines into new bay positions.

This Project will be constructed in Silver Spring Township, Cumberland County, Pennsylvania. PPL Electric has provided information regarding this Project to all identified political subdivisions, and none of them have objected to the Project. Construction of the Project will commence upon the Commission's approval of this filing, with an estimated construction start date of January 2025 and an anticipated in-service date of May 2026. The total estimated cost of

[1] Because Commission approval is not needed to relocate or construct overhead transmission lines with voltages below 100 kV, PPL Electric has excluded discussion regarding re-termination of six existing 69 kV transmission lines into the newly configured substation from this Letter of Notification.

this Project, as described below, is approximately $2.64 Million, and the cost for the Project will be paid by PPL Electric.[2] Accordingly, PPL Electric is seeking the Commission's decision by no later than November 7, 2024.

In support thereof, PPL Electric states as follows:

I. INTRODUCTION

1. This Letter of Notification 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
827 Hausman Road
Allentown, Pennsylvania 18104

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)
Nicholas A. Stobbe (I.D. # 329583)
Post & Schell, P.C.
17 North Second Street
12th Floor
Harrisburg, PA 17101-1601
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 Letter of Notification.

[2] The estimated cost was developed using averages of recent costs for similar projects and without an in-depth analysis of 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.

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.

5. PPL Electric owns approximately 5,000 miles of transmission lines operating at 69 kV 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. The Existing Cumberland Substation is one of the most heavily loaded substations owned by PPL Electric and serves more than 265 megawatts ("MW ")of load to approximately 50,000 customers in Cumberland County.

7. This Letter of Notification includes the following accompanying Attachments:

- Attachment 1 Necessity Statement.
- Attachment 2 Engineering Description.
- Attachment 3 Description of Project Area.
- Attachment 4 PPL Electric Design Criteria and Safety Practices.
- Attachment 5 Landowners And Agencies List.

8. This Letter of Notification and accompanying Attachments, which are incorporated herein by reference, contain all the information required by 52 Pa. Code § 57.72(d)(4).

II. THE PROJECT

A. NEED FOR THE PROJECT

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 is also required to comply with the Consolidated Transmission Owners Agreement ("CTOA") Rate Schedule - FERC No. 42, which requires transmission systems to "[b]e kept in place and maintained in good operating condition in accordance with Good Utility Practice and principles, guidelines and standards of the applicable Regional Reliability Council and [North American Electric Reliability Corporation] NERC."[3] The CTOA is an agreement among (1) individual Transmission Owners operating within the PJM Interconnection LLC ("PJM") Region and (2) between the Transmission Owners and PJM. The CTOA facilitates the planning and operation of the Transmission Grid within the PJM region and establishes the rights and responsibilities of each party to the CTOA.

11. The Project is necessary for PPL Electric to maintain its transmission assets in a safe and reliable manner and avoid violating its obligations under the CTOA to maintain its transmission facilities in good operating condition and avoid public safety concerns caused by failed assets. As explained in greater detail below and in Attachment 1 – Necessity Statement, this Project is necessary to address outage risks and planning criteria violations related to the Existing Cumberland Substation.

[3] *See* https://www.pjm.com/directory/merged-tariffs/toa42.pdf.

12. More specifically, PJM has minimum planning and design standards with respect to Substation Bus Configurations and Substation Design Recommendations.[4] The of three terminal lines and radial bus station configurations are discouraged in new Bulk Electric System substation construction because of the considerable potential for detrimental effects on transmission system reliability.[5] Acceptable standards for substations are noted as ring bus configurations or breaker and a half arrangements. Breaker and a half arrangements are the preferred design because of the balance of operational flexibility and cost. Indeed, PJM standards state that "two circuits that feed a common location should not be supplied from a common breaker and a half bay or a common bus such that a single stuck breaker operation would trip both circuits."[6] Since the Existing Cumberland Substation's 230 kV and 69 kV yards were originally constructed before the PJM minimum planning and standards were implemented, the existing layout does not adhere to these standards and needs to be redesigned to comply with this Good Utility Practice.

13. The Project as proposed addresses these concerns in a cost-efficient manner. Unlike the alternatives evaluated, the Project as proposed resolves all of the identified operational and reliability issues, and it is the lowest cost option. Therefore, and for the reasons more fully explained below, the Commission should approve the Project as proposed.

1. Existing System

14. The Existing Cumberland Substation was built in 1974 as a 230-69 kV substation with a single bus design for both the 230 kV and 69 kV yards. The 230 kV substation system consists of two transmission lines and three 230-69 kV step-down transformers which feed into the 69 kV yard. The 69 kV substation system then supplies six 69 kV transmission lines.

[4] PJM Substation Bus Configurations and Substation Design: https://www.pjm.com/~/media/planning/design-engineering/maac-standards/section-iii-sub-bus-config.ashx.

[5] *Id.*

[6] *Id.*

15. The Existing Cumberland Substation is connected to the electric grid by the Juniata-Cumberland 230 kV and the Williams Grove-Cumberland 230 kV Transmission Lines. Both the Juniata-Cumberland 230 kV and the Williams Grove-Cumberland 230 kV Transmission Lines have a 230-69 kV transformer tapped from the line at the Existing Cumberland Substation.

16. Beyond the need of supplying load, the Existing Cumberland Substation also provides a critical north-south tie in PPL Electric's transmission system, which allows the generation-intense areas in western Pennsylvania to provide power to the more load-intense areas of the Cumberland/York area.

17. A map of the existing system configuration is provided as Figure 1-1, in Attachment 1 – Necessity Statement.

2. Description of the Problem

18. PPL Electric is committed to operating a safe and reliable transmission system and must meet the NERC TPL-001-4 System Planning Requirements. Keeping the current 230 kV arrangement at the Existing Cumberland Substation will result in a thermal overload violation of the remaining in-service transformer due to a "P4" contingency on either of the two 230 kV breakers.[7] The transformer thermal overload was identified in the PJM RTEP 2026 Summer Peak base case.

19. A fault on the line, bus, or transformer coupled with a breaker failing to clear the fault (P4) results in the loss of two transformers. The loss of two transformers would then result in all the 69 kV load at the Existing Cumberland Substation being served from the remaining in-service transformer, which exceeds the emergency rating of transformer. Without this project, this overload would be identified in the PJM RTEP process.

[7] A P4 contingency is for a fault and a breaker failing to clear the fault. This results in the opening of additional breakers to isolate the fault and may result in multiple elements of the system being taken out of service.

20. Expanding and reconfiguring the 230 kV yard to breaker and a half configuration will resolve the NERC Standard TLP-001 P4 contingencies that result in transformer overloads. Section 4 of the PJM document describes functional criteria that lead PJM to the identification of the aforementioned transmission planning design Best Practices. Since the Existing Cumberland Substation 230 kV and 69 kV yards were originally constructed before the PJM minimum planning and standards were implemented, the layout does not adhere to them and needs to be rebuilt to comply with this Good Utility Practice.

21. The existing straight bus 230 kV arrangement at the Cumberland 230 kV yard has poor operational flexibility for taking maintenance outages on the 230 kV lines, buses, and transformers. For instance, during a 230 kV line outage, a fault with a stuck breaker would cause a loss of the entire Existing Cumberland Substation, resulting in an outage for approximately 50,000 customers. Furthermore, taking the existing 230 kV bus out of service would also break the north to south 230 kV power flow path. Breaking the north to south 230 kV power flow path can result in contingency overloads on other 230kV circuits. This restricts the time of year outages can be taken at the Existing Cumberland Substation.

22. The single 230 kV bus and line tapped transformers are an also an operational risk to the region and the customers served from the substation. The area around Existing Cumberland Substation is seeing load growth with PPL Electric recently receiving 20 MWs of distribution service requests. This load growth will increase loading on the Existing Cumberland Substation and further exacerbate the thermal overload of the remaining transformer during a P4 stuck breaker contingency.

23. Moreover, the Existing Cumberland Substation has three 230-69 kV transformers that step down voltage to supply a single sectionalized 69 kV operating bus, which includes six 69

kV feeds that leave the substation. These six 69 kV transmission lines feed approximately 50,000 customers, including nine critical customers: Holy Spirit Hospital, UPMC Pinnacle Hospital, Hampden Township Wastewater, Priority Healthcare Group, Cumberland City Public Safety, and the following nursing homes: Church of God, Alliance Home Carlisle, The Bridges, and United Church of Christ. Also connected to these lines are four 69 kV customers: IBM, Carlisle Barracks, Frog Switch, and Carlisle Syntec.

24. The Existing Cumberland Substation is part of PPL Electric's 230-69 kV system that serves Cumberland County along with the Juniata 230-69 kV Substation, Williams Grove 230-69 kV Substation and West Shore 230-69 kV Substation. There are ties between these substations to facilitate transfers for planned and unplanned outages. Although the load at the existing Cumberland Substation can be transferred away, it would require networking the 69 kV system between the previously-mentioned Juniata, Williams Grove, and West Shore substations. This would expose large numbers of customers to an outage on any of the 69 kV lines.

B. THE PROPOSED PROJECT

25. In order to resolve the above-described concerns, PPL Electric proposes to expand and reconfigure the 230 kV yard at the Existing Cumberland Substation (i.e., the Expanded Cumberland 230 kV Substation) to breaker and a half arrangement. The breaker and a half arrangement is the preferred solution to solve the operational and contingency issues at the Cumberland Substation. Though the double breaker – double bus arrangement in the current location would address the problem statement, the proximity to the Appalachian Trail made the required yard expansion for this arrangement infeasible. Relatedly, rebuilding the Williams Grove – Cumberland 230kV line to double circuit would resolve the P4 contingency violation but would not improve the operational flexibility of the single bus design.

26. The expanded 230 kV yard will be located on PPL Electric-owned property

adjacent to the Existing Cumberland Substation.

27. This proposal will require approximately 0.6 mile of rebuilt 230 kV transmission lines (i.e., 0.3 miles of the Juniata-Cumberland 230 kV Transmission Line and 0.3 miles of the Williams Grove-Cumberland 230 kV Transmission Line) to connect to the expanded substation to the existing 230 kV transmission lines.

28. The expanded substation will be constructed to current PPL Electric standards, with a breaker and a half arrangement for the 230 kV yard and a double breaker – double bay arrangement for the 69 kV yard, upgrading from the current single bus designs. The Expanded Cumberland Substation will provide a modern, well-designed final layout which resolves the thermal overload issues, complies with Good Utility Practice, PJM minimum planning and design standards, and provides greater reliability and operational flexibility.

29. The proposed Expanded Cumberland 230 kV Substation will be constructed on the same PPL Electric-owned parcel and adjacent to the existing substation on its south side. Building the expanded 230 kV yard will increase both local and regional reliability while reducing the risk of overloads or power outages. Building on the existing substation parcel is optimal since it will reduce impacts to adjacent landowners and 230 kV and 69 kV transmission lines already traverse the property, thus reducing the amount of transmission line construction necessary to connect the expanded 230 kV yard to the grid. Furthermore, cost savings will be achieved by utilizing the existing control cubicle, which was installed in the mid-2010s, as well as the existing 230-69 kV transformers, while keeping them in their current location.

30. This design will meet the minimum design standards set forth in the PJM reference listed above. The Expanded Cumberland 230 kV Substation will resolve all of the issues identified in this Letter of Notification and in Attachment 1 – Necessity Statement. The estimated cost of

the Project is $2.64 million, and the cost of the Project will be paid by PPL Electric.[8]

III. HEALTH AND SAFETY

31. The proposed lines will not create any unreasonable risk of danger to public health or safety. 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 to this Letter of Notification.

32. Attachment 4 accompanying this Letter of Notification also explains PPL Electric's standards for Magnetic Field Management. Ground clearances for the proposed Project will be at least three feet higher than those required by the NESC standard in order to reduce the magnetic field exposure. The proposed rebuild of the Juniata-Cumberland 230 kV and Williams Grove-Cumberland 230 kV Transmission Lines will continue to 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.

IV. DESCRIPTION OF THE PROJECT AREA

33. The PPL Electric Cumberland Substation property is located approximately 1.5 miles northeast of the U.S. Highway 11 (US-11) and Interstate 81 (I-81) interchange. As explained in Attachment 1 – Necessity Statement, PPL Electric plans to expand the Existing Cumberland 230 kV Substation immediately adjacent to and south of the current substation site. The proposed

[8] The estimated cost was developed using averages of recent costs for similar projects and without an in-depth analysis of 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.

expansion area will occupy approximately 5.8 acres of the combined total 59-acre Cumberland Substation property owned by PPL Electric.

34. The Existing Cumberland Substation is fed by the existing Juniata-Cumberland and Williams Grove-Cumberland 230 kV Transmission Lines. In the vicinity of the existing substation, the conductor and ground wires are supported by a series of transmission line structures that include one single-circuit lattice tower, two double-circuit lattice towers, one monopole structure[9], and two monopole angle structures. The re-termination of these 230 kV transmission lines will be required to expand the Existing Cumberland Substation as contemplated. The 230 kV yard will be expanded directly to the south of its current position. Therefore, the existing 230 kV transmission lines need to be shifted to the south and reconfigured to re-terminate at the expanded substation bay locations. A more detailed description of the transmission line structures that will be rebuilt as a part of the Project is set forth in Attachment 2 – Engineering Description.

35. The approximately 0.6 mile of rebuilt 230 kV transmission lines will be located entirely within PPL Electric fee-owned property or upon existing ROW. Since the transmission lines are contained to the Cumberland Substation property, no new ROW will be required. All but one structure will be on PPL Electric fee-owned property, and that structure will be located on existing transmission ROW.

36. A detailed aerial exhibit of the Project alignment is provided as Figure 3-1 in Attachment 3 – Project Area Description.

37. The heights of the existing 230 kV structures range from 145 to 165 feet, with an average height of 150 feet. The new proposed structures will be shorter and range in height from 121 to 136 feet, with an average height of approximately 128 feet. The proposed structure heights

[9] This structure carries both the Juniata – Cumberland 230 kV and Williams Grove – Cumberland 230 kV Transmission Lines.

are less than the existing structures because the existing transmission lines cross over existing 69 kV transmission lines, while the proposed alignment will not require any transmission line crossings.

38. Two aerial plot plans are provided at the end of Attachment 1 – Necessity Statement to this Letter of Notification. Figure 1-1 depicts the location of the existing transmission facilities associated with this Project. Figure 1-2 depicts the location of the proposed transmission facilities associated with this Project.

V. LAND USE AND ENVIRONMENTAL EVALUATION

39. The proposed Project will take place entirely within the existing ROW or within PPL Electric fee-owned property. Therefore, it is anticipated that the proposed rebuilt portion of the Transmission Lines will have minimal incremental impacts on land use in the area.

40. PPL Electric will use and update previously established access roads for construction to the extent practical to further reduce interference with existing uses and minimize land use impacts. A detailed description of the route of each individual component of the Project can be found in Attachment 3 – Project Area Description.

41. Land uses immediately surrounding the Cumberland Substation predominantly consist of agricultural land, recreational land (including sports fields and forested trails), mixed-use industrial/commercial properties, and developed residential land.

42. The Project Area is generally bounded to the north by the Appalachian Trail and its associated federal lands; to the east by Bernheisel Bridge Road and Stony Ridge Park; to the south by commercial and residential properties along US-11; and to the west by industrial properties.

43. The closest communications tower is located approximately 1.3 miles southwest of the Project. An active railroad (the Shippensburg Secondary line) operated by Norfolk Southern is located approximately 0.5 miles south of the Project. No pipelines are near the Project.

44. The closest active airport to the Project Area is Dietch Airport, a privately owned facility, located approximately 1.7 miles northeast of the Project. Additionally, a private heliport within a distribution center property is located approximately 0.8 mile southeast of the Project. PPL Electric does not anticipate any interference with airport or heliport operations since the Project consists of new electrical facilities that are shorter than the existing electrical facilities within existing ROW or PPL Electric fee-owned land. However, PPL Electric will file any required documentation with the Federal Aviation Administration.

45. The Appalachian National Scenic Trail (Appalachian Trail) and its associated adjacent federal land and a local park (Stony Ridge Park) are located adjacent north and east of the Cumberland Substation property, respectively. Because the proposed substation expansion is consistent with existing land uses and located on the south side of the existing substation, no significant impacts to these recreational areas are anticipated. The Project will not occur on federally owned property; however, PPL Electric will coordinate with the National Park Service prior to and during construction in the vicinity of the Appalachian Trail. No additional recreational areas or natural landmarks were identified within 1 mile of the Project.

46. PPL Electric conducted an online review of the Project Area and surrounding landscape through the Pennsylvania Historical and Museum Commission ("PHMC") State Historic and Archaeological Resource Exchange site. Two State Historic Preservation Office ("SHPO") eligible properties are located within 1 mile of the Project as set forth in Attachment 3 – Project Area Description. In addition, the entire Project, including the existing Cumberland

Substation, is located within the Appalachian Trail district. No other historic structures or districts are crossed or spanned by the Project.

47. PPL Electric is in the initial stage of coordination with the SHPO for the modifications being made to the transmission lines. This coordination will be required to receive permits to construct the Project and will be conducted in the near future. PPL Electric does not anticipate any impacts to SHPO eligible properties or any other PHMC related properties. However, PPL Electric will perform any reviews and field survey/sampling work required by the PHMC to avoid, minimize, and mitigate impacts to archaeological or historic architectural resources that may be located within the Project Area.

48. No unique geological, scenic, or natural areas are located within the Project Area, according to the Pennsylvania Department of Conservation and Natural Resources ("DCNR").

49. Erosion and Sedimentation ("E&S") control plans will be developed and implemented for the Project to minimize the displacement of soils. These plans will require prior approval from the Cumberland County Conservation District. National Pollutant Discharge Elimination System ("NPDES") permits will also be required from the Pennsylvania Department of Environmental Protection ("PADEP") as needed. During construction, PPL Electric will adhere to all conditions specified in the NPDES permit. Impacts to local soil resources are anticipated to be minimal.

50. PPL Electric retained an environmental consultant to identify and delineate all waterways and wetlands within the Project Area. No wetlands or streams were identified in the Project Area; therefore, no permits are required from PADEP and the United States Army Corps of Engineers ("USACE").

51. The National Flood Hazard Layer for Schuylkill County, Pennsylvania was obtained through the Federal Emergency Management Agency ("FEMA") Flood Map Service Center website and analyzed for 100-year floodplains and regulatory floodways within the Project Area and surrounding landscape. Based on review of this data, the northwestern portion of the Project crosses FEMA 100-year floodplain and regulatory floodway. No streams or rivers are crossed by the Project as indicated by the United States Geological Survey ("USGS") National Hydrology Dataset ("NHD"); however, the identified floodplain and floodway areas appear to be associated with an unnamed tributary ("UNT") of Conodoguinet Creek, located approximately 1.1 miles to the northeast.

52. Two proposed 230 kV structures are located within the 100-year floodplain area crossed by the Project. No proposed 230 kV structures are located within the regulatory floodway crossed by the Project; therefore, no impacts to regulatory floodway areas are anticipated. PPL Electric will coordinate with local agencies for regulated floodplain activities where required.

53. Vegetative cover in the Project Area primarily consists of maintained ROW or agricultural cropland. Minimal vegetation clearing is anticipated along the rebuilt Juniata-Cumberland and Williams Grove-Cumberland 230 kV Transmission Lines since they are located within or adjacent to existing ROW. PPL Electric will apply its "Specifications for Transmission Vegetation Management LA-79827" to minimize potential impacts.

54. A Pennsylvania Natural Diversity Inventory ("PNDI") was run for the Project on January 29, 2024 to assess the potential presence of threatened and endangered species and/or special concern species. The following agencies reviewed the Project: Pennsylvania Game Commission, Pennsylvania Fish and Boat Commission, DCNR, and United States Fish and Wildlife Service. None of the agencies reported the presence of any known threatened and

endangered species and/or special concern species and resources within the Project Area. PPL Electric will continue to consult with the jurisdictional agencies regarding potential impacts to protected species, complete all required surveys; obtain all necessary approvals and permits for Project construction; and comply with all conditions placed on those permits.

VI. NOTICE

55. PPL Electric has provided information regarding the Project to representatives of Silver Spring Township and the Cumberland County Planning Commission. These entities have not objected to the proposed Project. Copies of the Letter of Notification will be served upon all state agencies, federal agencies, county agencies, municipalities, and landowners in accordance with 52 Pa. Code § 57.72(d)(3). A list of the same impacted or potentially impacted by this project is provided in Attachment 5 – Agency and Landowner List.

VII. LETTER OF NOTIFICATION

56. PPL Electric is proceeding by means of a Letter of Notification, instead of a full Application, pursuant to the Commission's regulations at 52 Pa. Code § 57.72(d)(1)(vi).

57. The proposed Project qualifies for use of a Letter of Notification because it has a proposed route of two miles or less.

58. This Letter of Notification is filed on the date set forth below. As provided in 52 Pa. Code § 57.72(d)(5), the Commission will review and, by order, approve or disapprove this Letter of Notification. If the Commission approves this Letter of Notification, the proposed Project will be constructed as proposed herein without the formal application process set forth at 52 Pa. Code §§ 57.71, *et seq*.

VIII. CONCLUSION

WHEREFORE, PPL Electric Utilities Corporation respectfully requests that the Pennsylvania Public Utility Commission approve the proposed Cumberland 230-69 kV Substation Expansion Project located in Silver Spring Township, Cumberland County, Pennsylvania, that is explained above and in the Attachments hereto, by no later than November 7, 2024.

Respectfully submitted,

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Date: July 16, 2024

Attorneys for PPL Electric Utilities Corporation

CUMBERLAND 230-69 KV SUBSTATION EXPANSION PROJECT

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1.0 INTRODUCTION

PPL Electric Utilities Corporation ("PPL Electric") seeks approval from the Pennsylvania Public Utility Commission ("PUC" or "Commission") to rebuild approximately 0.6 miles of existing transmission lines in Silver Spring Township, Cumberland County, Pennsylvania to re-terminate them into the expanded Cumberland 230-69 kV Substation (the "Cumberland 230-69 kV Substation Expansion Project" or "Project"). Specifically, the Project requires rebuilding approximately 0.3 miles of the Juniata-Cumberland 230 kV Transmission Line and approximately 0.3 miles of the Williams Grove-Cumberland 230 kV Transmission Line. The Project will also include construction of 0.4 miles of string bus to interconnect the expanded portion of the 230 kV yard to the existing transformer bay locations. Although the string bus is partially situated outside of the substation fence area, it is a substation facility and is not part of this filing.

As explained below, the existing electrical arrangement of the Cumberland 230/69 kV Substation ("Existing Cumberland Substation") puts customers at risk for electrical outages and the 230-69 kV transformers at risk of thermal overload. As a result, PPL Electric proposes to expand and reconfigure the 230 kV yard of this substation (the "Expanded Cumberland Substation") adjacent to the existing 230 kV yard and on the same property. PPL Electric herein seeks Commission approval for the re-termination of the 230 kV transmission lines necessary to interconnect the Expanded Cumberland Substation to the electric grid.[1]

PPL Electric evaluated multiple alternatives to mitigate risks associated with the current electrical arrangement of the Existing Cumberland Substation. The proposed Project represents the most cost-effective solution which will address each of the identified issues at once and not require subsequent projects to achieve the same result.

[1] Because Commission approval is not needed to relocate or construct overhead transmission lines with voltages below 100 kV, PPL Electric has excluded discussion regarding re-termination of six existing 69 kV transmission lines into the newly configured substation from this Letter of Notification.

Subject to the Commission's approval, construction will begin in January 2025 to support an in-service date of May 2026. PPL Electric will continue to own, operate, and maintain the expanded Cumberland 230-69 kV substation and associated transmission lines. The total estimated cost of this Project, as described below, is approximately $2.64 Million, and the cost for the Project will be paid by PPL Electric.[2]

2.0 BACKGROUND

PPL Electric has a responsibility to provide transmission assets and maintain them in a manner that is adequate, efficient, safe, reliable, and reasonable to meet the needs of the electric system and the expectations of its customers. To meet this duty, PPL Electric applies its transmission asset management planning procedure as part of its system performance and condition assessment process. These performance and condition assessments identify system needs and form the basis to 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 service to its customers.

PPL Electric is a public utility that provides electric service to an estimated 1.4 million customers throughout 29 central and eastern Pennsylvania counties. The Cumberland Substation is one of the most heavily loaded substations owned by PPL Electric and serves more than 265 MW of load to approximately 50,000 customers in Cumberland County.

The Existing Cumberland Substation was built in 1974 as a 230-69 kV substation with a single bus design for both the 230 kV and 69 kV yards. The 230 kV substation system consists of two transmission lines and three 230-69 kV step-down transformers which feed into the 69 kV yard. The 69 kV substation system then supplies six 69 kV transmission lines. As explained in detail below, the current configuration does not meet PPL Electric's current requirements.

[2] The estimated cost was developed using averages of recent costs for similar projects and without an in-depth analysis of 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.

3.0 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 critical that the Transmission Grid be planned and designed to ensure reliable electric service is provided under all loading conditions or when certain elements of the Transmission Grid are out of service (system contingencies) due to planned or unplanned outages.

Robust Transmission Planning assures that the transmission system can supply electricity to all customer loads in a manner that is safe, reliable, and economical. This System Planning process ensures that both the Bulk Electric System ("BES")[3] and non-Bulk Electric System (non-BES)[4] 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 contingencies and disturbances with minimal customer service interruptions; and
- They are in conformance with NERC, PJM Interconnection, LLC ("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. In order to ensure reliable transmission service, PJM prepares an annual Regional Transmission Expansion

[3] Bulk Electric System (BES) – Includes transmission facilities operated at voltages of 100 kV or higher.
[4] Non-Bulk Electrical System (non-BES) – Includes transmission facilities operated at voltages less than 100 kV.

Plan ("RTEP")[5] 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.

PPL Electric's Transmission Asset Management Procedure involves identifying system needs and determining the best available solution to address those needs. This process includes asset evaluation, asset condition and system risk assessments, analysis of alternative solutions and project initiation and scheduling. System needs are identified based on the overarching goals of reducing outage frequency and duration, improving system reliability, decreasing system maintenance cost, and maintaining operational flexibility to ensure safe and reliable electric service of the transmission system and to our customers.

When transmission owning utilities (including PPL Electric) set up PJM as an RTO, they agreed to bind themselves to maintaining their existing transmission systems using Good Utility Practice. The Consolidated Transmission Owners Agreement ("CTOA") is an agreement among (1) individual Transmission Owners operating within the PJM Region and (2) between the Transmission Owners and PJM. The CTOA facilitates the planning and operation of the Transmission Grid within the PJM region and establishes the rights and responsibilities of each party to the CTOA. Section 4.6 of the CTOA requires that transmission systems "[b]e kept in place and maintained in good operating condition in accordance with Good Utility Practice and principles, guidelines and standards of the applicable Regional Reliability Council and NERC." This Project is required to fulfil PPL Electric's obligations under the CTOA.

In addition, PPL Electric must also comply with the following:

- NERC TPL-001 Transmission System Planning Performance Requirements, which establishes transmission system planning performance requirements within the planning

[5] 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.

horizon to develop a Bulk Electric System ("BES") that will operate reliably over a broad spectrum of System conditions and following a wide range of contingencies.

4.0 THE NEED FOR THE PROJECT

4.1 Existing System

The Existing Cumberland Substation is connected to the electric grid by the Juniata-Cumberland 230 kV and the Williams Grove-Cumberland 230 kV Transmission Lines. Both the Juniata-Cumberland 230 kV and the Williams Grove-Cumberland 230 kV Transmission Lines have a 230-69 kV transformer tapped from the line at the Cumberland Substation. Beyond the need of supplying load, the Cumberland Substation also provides a critical north-south tie in PPL Electric's transmission system, which allows the generation-intense areas in western Pennsylvania to provide power to the more load-intense areas of the Cumberland/York area.

As per the PJM minimum planning and design standards, section III refers to Substation Bus Configurations and Substation Design Recommendations[6]. In this document, three terminal lines and radial bus station configurations are both discouraged for use in new Bulk Electric System substation construction because of the considerable potential for detrimental effects on transmission system reliability. Acceptable standards for substations are noted as ring bus configurations, breaker and a half arrangements, and double breaker – double bus arrangements. Breaker and a half arrangements are the preferred design because of the balance of operational flexibility and cost.

The Existing Cumberland Substation has three 230-69 kV transformers that step down voltage to supply a single sectionalized 69 kV operating bus, which includes six 69 kV feeds that leave the substation. These six 69 kV transmission lines feed approximately 50,000 customers, including nine critical customers: Holy Spirit Hospital, UPMC Pinnacle Hospital, Hampden Township Wastewater, Priority Healthcare Group, Cumberland City Public Safety, and the following nursing

[6] PJM Substation Bus Configurations and Substation Design: https://www.pjm.com/~/media/planning/design-engineering/maac-standards/section-iii-sub-bus-config.ashx.

homes: Church of God, Alliance Home Carlisle, The Bridges, and United Church of Christ. Also connected to these lines are four 69 kV customers: IBM, Carlisle Barracks, Frog Switch, and Carlisle Syntec.

The Existing Cumberland Substation is part of PPL Electric's 230-69 kV system that serves Cumberland County along with the Juniata 230-69 kV Substation, Williams Grove 230-69 kV Substation and West Shore 230-69 kV Substation. There are ties between these substations to facilitate transfers for planned and unplanned outages. Although the load at the Existing Cumberland Substation can be transferred away it would require networking the 69 kV system between the previously-mentioned Juniata, Williams Grove, and West Shore substations. This would expose large numbers of customers to an outage on any of the 69 kV lines.

A listing of operational risks and contingencies is included in **Section 4.2**. A map of the existing system configuration is provided as **Figure 1-1**.

4.2 Project Need

PPL Electric is committed to operating a safe and reliable transmission system and must meet the NERC TPL-001-4 System Planning Requirements. Keeping the current 230 kV arrangement at the Existing Cumberland Substation will result in a thermal overload violation of the remaining in-service transformer due to a P4 contingency on either of the two 230 kV breakers.[7] Without this project a transformer thermal overload would have been identified starting in the PJM RTEP 2026 Summer Peak base case.

A fault on the line, bus, or transformer coupled with a breaker failing to clear the fault (P4) results in the loss of two transformers. The loss of two transformers would then result in all the 69kV load at the Existing Cumberland Substation being served from the remaining in-service transformer; which exceeds the emergency rating of transformer. Without this project, this overload would be identified in the PJM RTEP process.

[7] A P4 contingency is for a fault and a breaker failing to clear the fault. This results in the opening of additional breakers to isolate the fault and may result in multiple elements of the system being taken out of service.

Expanding and reconfiguring the 230 kV yard to breaker and a half configuration will resolve the TLP-001 P4 contingencies that result in transformer overloads. Section 4 of the PJM document describes functional criteria that lead PJM to the identification of the aforementioned transmission planning design Best Practices. Since the Existing Cumberland Substation 230 kV and 69 kV yards were originally constructed before the PJM minimum planning and standards were implemented, the layout does not adhere to them and needs to be rebuilt to comply with this Good Utility Practice.

The existing straight bus 230 kV arrangement at the Cumberland 230 kV yard has poor operational flexibility for taking maintenance outages on the 230 kV lines, buses, and transformers. During a 230 kV line outage, a fault with a stuck breaker would cause a loss of the entire Cumberland 230-69 kV Substation, resulting in an outage for approximately 50,000 customers. Taking the existing 230 kV bus out of service breaks the north to south 230 kV power flow path. Breaking the north to south 230 kV power flow path can result in contingency overloads on other 230kV circuits. This restricts the time of year outages can be taken at the Existing Cumberland Substation.

As mentioned above, the single 230 kV bus and line tapped transformers are an operational risk to the region and the customers served from the substation. The area around the Existing Cumberland Substation is seeing load growth with PPL Electric recently receiving 20 MWs of distribution service requests. This load growth will increase loading on the Existing Cumberland Substation and further exacerbate the thermal overload of the remaining transformer during a P4 stuck breaker contingency.

5.0 ALTERNATIVES

PPL Electric evaluated the following alternatives to address the TPL-001 contingency overload violation and the lack of operational flexibility due to the existing arrangement of the Cumberland 230-69 kV Substation. As the driver is steady state loading and operational arrangement, Grid Enhancing Technologies (GETs) are not applicable solutions. In addition to the proposed solution described in **Section 6.0**, the following alternatives were also considered and compared based on cost and abilities to resolve the overload violation:

1) Rebuild the existing Cumberland 230 kV yard to double breaker – double bus arrangement its current location. This option was not feasible due to the existing substation arrangement, property boundaries and constraints, and proximity to the Appalachian Trail.
2) Rebuild the Williams Grove-Cumberland 230 kV line to double circuit 230 kV operation, install 230 kV line terminal at Williams Grove, and install 230 kV breaker and line tap 230-69 kV Transformer #3 at the existing Cumberland Substation. This solution would not meet PPL Electric's current design standards and would result in the same poor level of operational flexibility of a single 230 kV bus at the existing Cumberland Substation.

6.0 PROPOSED SOLUTION

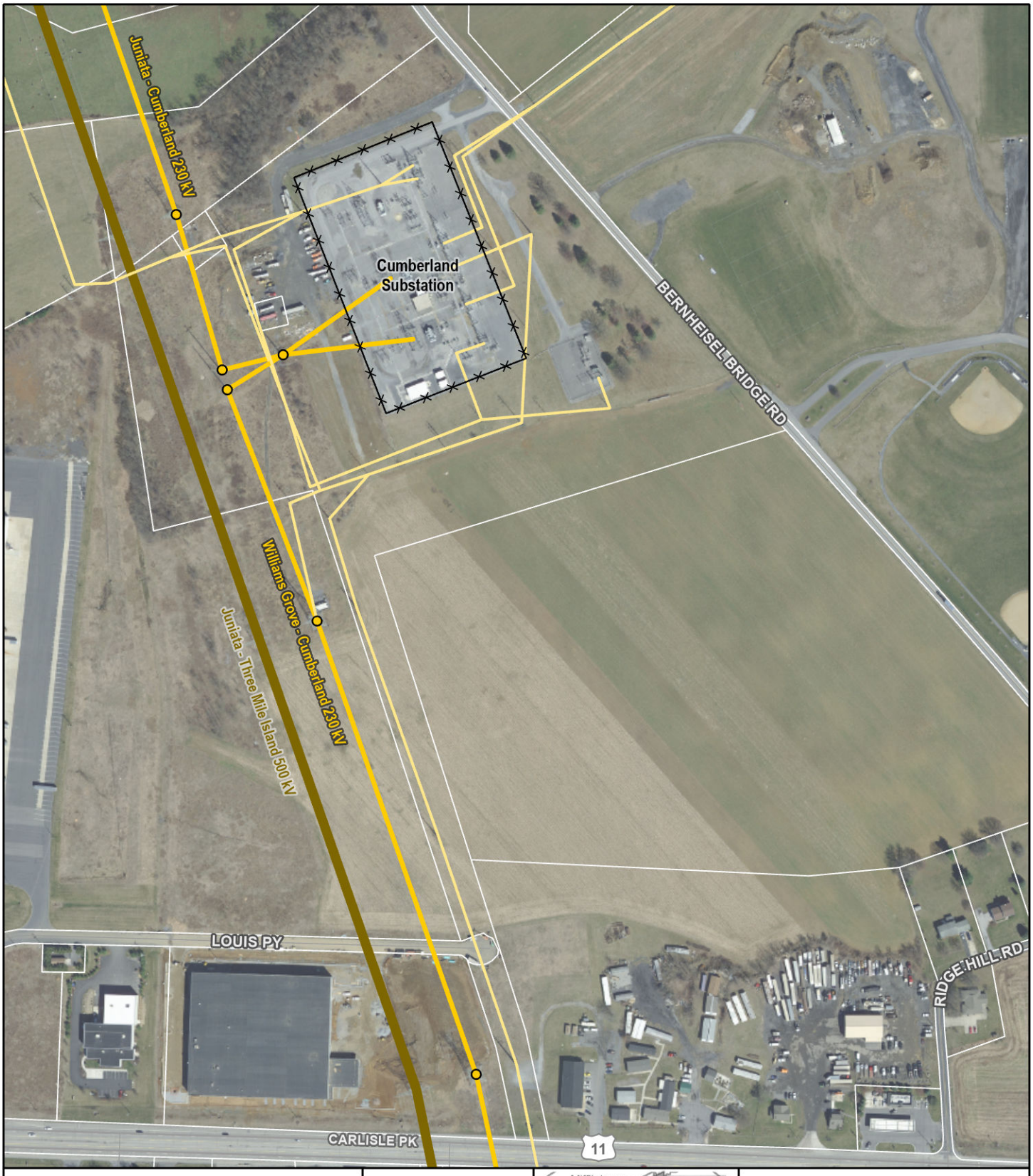
To resolve the operational flexibility and thermal overload issues as explained above, PPL Electric proposes to expand and reconfigure the 230 kV yard at the Existing Cumberland Substation to breaker and a half arrangement. The breaker and a half arrangement is the preferred solution to solve the operational and contingency issues at the Existing Cumberland Substation. Though the double bus double breaker arrangement in the current location would address the problem statement, the proximity to the Appalachian Trail made the required expansion of the yard for double breaker double bus arrangement infeasible. Rebuilding the Williams Grove – Cumberland 230kV line to double circuit would resolve the P4 contingency violation but would not improve the operational flexibility of the single bus design.

The proposed Expanded Cumberland 230 kV Substation will be constructed on the same PPL Electric-owned parcel and adjacent to the existing substation on its south side. Building the expanded 230 kV yard will increase both local and regional reliability while reducing the risk of overloads or power outages. Building on the existing substation parcel is optimal since it will reduce impacts to adjacent landowners and 230 kV and 69 kV transmission lines already traverse the property, thus reducing the amount of transmission line construction necessary to connect the expanded 230 kV yard to the grid. Furthermore, cost savings will be achieved by utilizing the existing control cubicle, which was installed in the mid-2010s, as well as the existing 230-69 kV transformers, while keeping them in their current location.

To connect the expanded and reconfigured Cumberland 230 kV yard, a section of the Juniata-Cumberland 230 kV and the Williams Grove-Cumberland 230 kV Transmission lines will be rebuilt to re-terminate the lines into the new bay positions. The expanded substation will be constructed to current PPL Electric standards, with a breaker and a half arrangement for the 230 kV yard and a double breaker – double bay arrangement for the 69 kV yard, upgrading from the current single bus designs. The Expanded Cumberland Substation will provide a modern, well-designed final layout which resolves the thermal overload issues, complies with Good Utility Practice, PJM minimum planning and design standards, supports area load growth, and provides greater reliability and operational flexibility.

This design will meet the minimum design standards set forth in the PJM reference listed in **Section 3.0**. This solution will also resolve all issues listed in **Section 4.2**. The estimated cost of the Project is $2.64 million.

A map of the proposed system alignment is provided as **Figure 1-2**. A one-line diagram of the existing Cumberland Substation is provided in **Figure 1-3**. A one-line diagram of the proposed Cumberland Substation is provided in **Figure 1-4**.



Existing 230 kV Structure
Existing 69 kV Transmission Line
Existing 230 kV Transmission Line
Existing 500 kV Transmission Line
Existing Substation Fenceline
Parcel Boundary

Roads (PASDA 2022)
Parcels (Cumberland Co. 2023)
Imagery (PEMA 2018)

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

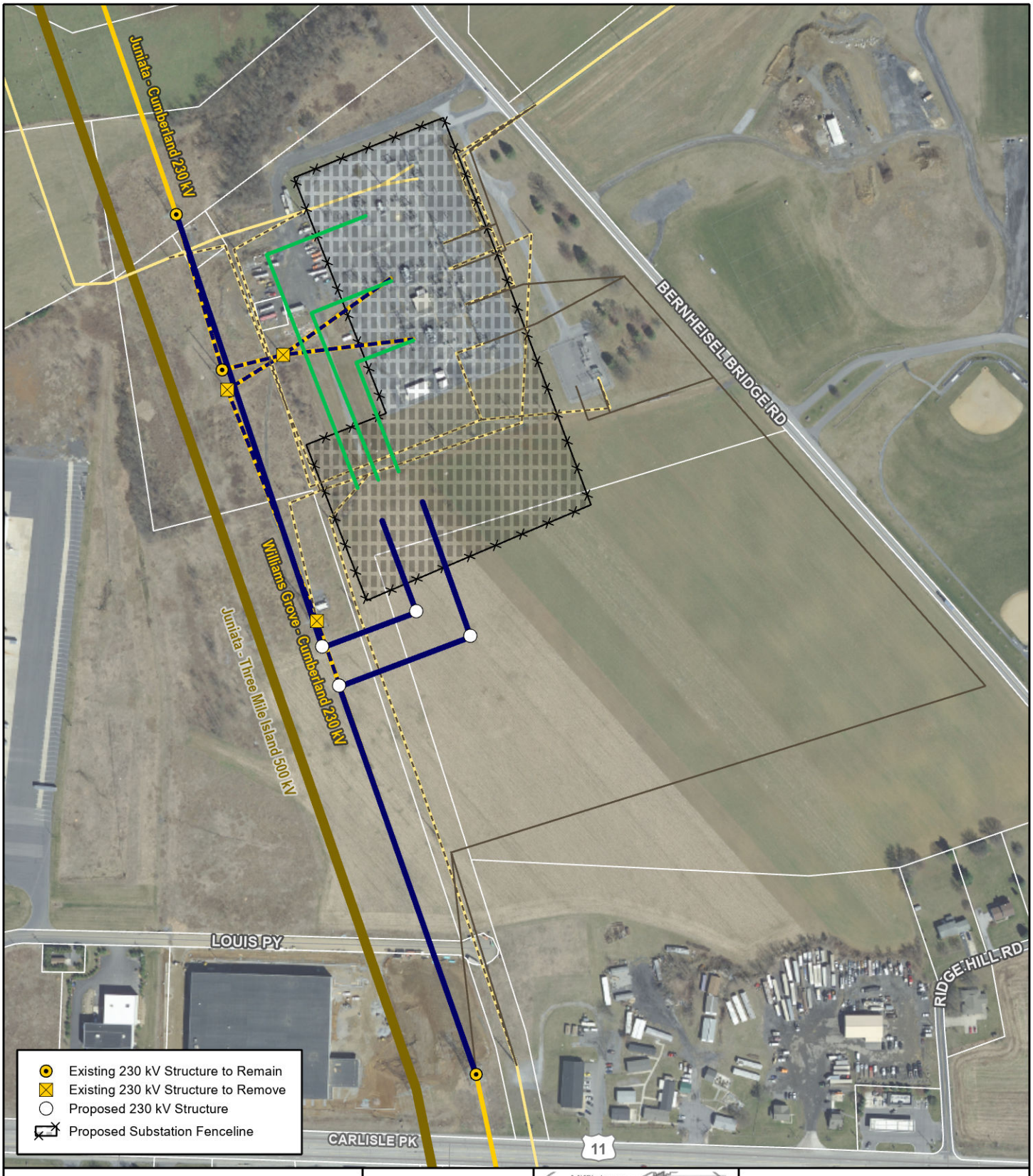
July 09, 2024

Figure 1-1
Existing System Configuration
Cumberland Substation Expansion Project

ppl wsp

0 200 400 Feet

N



Proposed 230 kV Centerline
Proposed 69 kV Centerline
230 kV Line To Be Removed
69 kV Line To Be Removed
Proposed String Buss
Existing 69 kV Transmission Line
Existing 230 kV Transmission Line
Existing 500 kV Transmission Line
Parcel Boundary

Roads (PASDA 2022)
Parcels
(Cumberland Co. 2023)
Imagery (PEMA 2018)

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

July 09, 2024

Figure 1-2
Proposed System Configuration
Cumberland Substation
Expansion Project

ppl

wsp

0 200 400 Feet

N

Figure 1-3. Existing Cumberland 230 kV Yard One-line

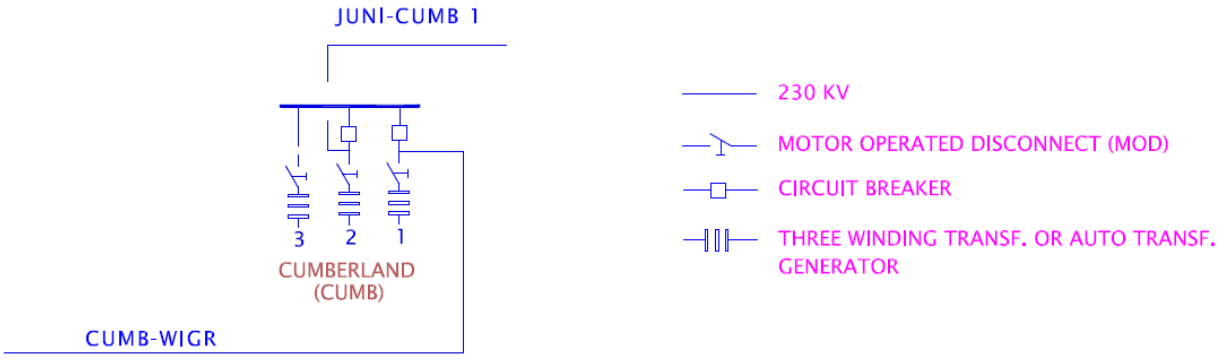
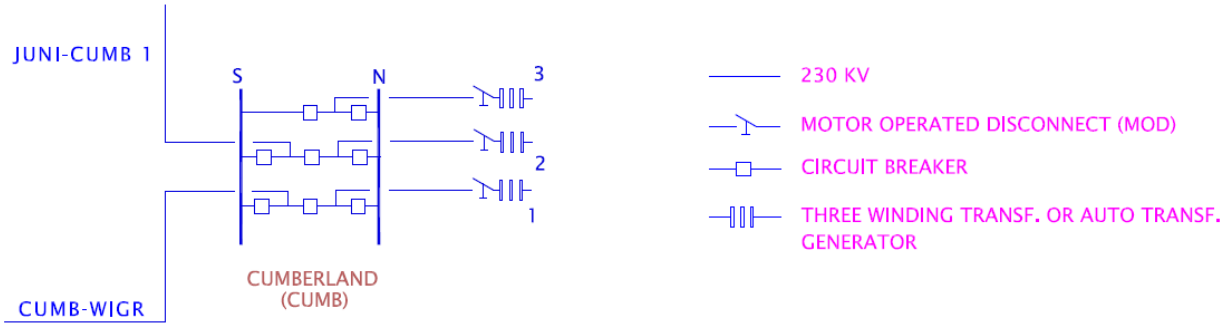


Figure 1-4. Proposed Cumberland 230 kV Yard One-line



CUMBERLAND 230-69 KV SUBSTATION EXPANSION PROJECT

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1.0 INTRODUCTION

PPL Electric Utilities Corporation ("PPL Electric") seeks approval from the Pennsylvania Public Utility Commission ("PUC" or "Commission") to rebuild approximately 0.6 miles of existing transmission lines in Silver Spring Township, Cumberland County, Pennsylvania to re-terminate them into the expanded Cumberland 230-69 kV Substation (the "Cumberland 230-69 kV Substation Expansion Project" or "Project"). Specifically, the Project requires rebuilding approximately 0.3 miles of the Juniata-Cumberland 230 kV Transmission Line and approximately 0.3 miles of the Williams Grove-Cumberland 230 kV Transmission Line. The Project will also include construction of 0.4 miles of string bus to interconnect the expanded portion of the 230 kV yard to the existing transformer bay locations. Although the string bus is partially situated outside of the substation fence area, it is a substation facility and is not part of this filing.

The proposed transmission line system 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 EXISTING AND PROPOSED 230 KV LINES AND STRUCTURES

The existing Cumberland Substation is fed by the existing Juniata-Cumberland and Williams Grove-Cumberland 230 kV Transmission Lines. In the vicinity of the existing substation, the conductor and ground wires are supported by a series of transmission line structures that include one single-circuit lattice tower, two double-circuit lattice towers, one monopole structure[1], and two monopole angle structures. The re-termination of these 230 kV transmission lines will be required to expand the Cumberland Substation as contemplated. The 230 kV yard will be expanded directly to the south of its current position. Therefore, the existing 230 kV transmission lines need to be shifted south and reconfigured to re-terminate at the expanded substation bay locations.

A detailed aerial exhibit of the Project alignment is provided as **Figure 3-1** in **Attachment 3**.

[1] This structure carries both the Juniata – Cumberland 230 kV and Williams Grove – Cumberland 230 kV Transmission Lines.

The heights of the existing 230 kV structures range from 145 to 165 feet, with an average height of 150 feet. The new proposed structures will be shorter and range in height from 121 to 136 feet, with an average height of approximately 128 feet. The proposed structure heights are less than the existing structures because the existing transmission lines cross over existing 69 kV transmission lines, while the proposed alignment will not require any transmission line crossings. **Table 2-1** provides a summary of the number and heights of the existing and proposed structures. **Figures 2-1** through **2-3** depict typical structure types that will be used for the Juniata-Cumberland and Williams Grove-Cumberland 230 kV Transmission Lines.

Table 2-1. Existing and New Transmission Line Structures

Transmission Line	No. of Existing Structures	Existing Structure Height (feet)	Proposed No. of New Structures	Proposed Structure Height Range (feet)	Applicable Framing/ Specifications
Juniata - Cumberland 230 kV	3[2]	146	2	121 to 136	7-009-005, 7-009-061, 0097-009-064
Williams Grove - Cumberland 230 kV	3	150	2	121	0097-009-064
Total	**6[3]**		**4**		

As part of the Project, three existing structures will be removed, and four new structures will be installed. The new structures will be comprised of double-circuit steel monopoles. As explained in **Attachment 3**, approximately 0.6 miles of rebuilt 230 kV transmission lines will be located within PPL Electric's existing right-of-way ("ROW") or on PPL Electric fee-owned property. No new ROW will be required to construct the relocated transmission lines. (see **Attachment 3**).

The existing conductor for the Juniata-Cumberland 230 kV Transmission Line is 1272 kcmil[4], 54/19 stranding, "Pheasant" ACSS[5]. Existing conductor for the Williams Grove-Cumberland

[2] The monopole structure west of the existing Cumberland Substation carries both the Juniata – Cumberland 230 kV and Williams Grove – Cumberland 230 kV Transmission Lines. This existing structure was only counted once as part of the Juniata – Cumberland 230 kV Transmission Line.
[3] Three of the six existing structures will be reused as part of the Project.
[4] A kcmil is a thousand circular mils. A circular mil is the cross-sectional area of a wire one mil in diameter, where 1 kcmil = 0.5067 mm^2.
[5] ACSS stands for aluminum conductor steel supported.

230 kV Transmission Line is 1033 kcmil, 54/7 stranding, "Curlew" ACSR[6]. The reconfiguration also includes overhead ground wires ("OHGW").

The rebuilt 230 kV transmission line circuits will utilize three power conductors, one fiber optic ground wire, and one overhead ground wire. The power conductors for Juniata-Cumberland and Williams Grove-Cumberland will be 1272 kcmil, 54/19 stranding, ACSS. The fiber optic ground wire will be 0.5-inch-diameter optical ground wires ("OPGW").

The proposed transmission lines will be designed according to, and generally exceed, all National Electrical Safety Code ("NESC") minimum standards. The minimum conductor-to-ground clearance will be approximately 25.5 feet, which occurs at a maximum conductor temperature of 125°C (482°F). The design minimum conductor clearances and conductor thermal ratings for the proposed 230 kV lines are shown in **Tables 2-2** through **2-3**. Design specifications and safety rules practiced by PPL Electric are included in **Attachment 4**.

Table 2-2. Design for Minimum Conductor Clearances for Selected Conductor[7]

Condition	Transmission Double-Circuit Design Clearance-to-Ground
Heavy Ice (1" Ice at 0°C ambient temperature)	25.5 feet
Predicted extreme thermal load (125°C conductor temperature)	25.5 feet
Predicted blowout (6 psf, 16°C ambient temperature)	25.5 feet

Table 2-3. Conductor Thermal Rating 1272 kcmil 54/19 Stranding Pheasant ACSS – 125°C Normal Maximum Conductor

Condition	Ambient Temperature (°C)	Wind Speed (Ft./sec)	Ampacity (Amps)
Summer Normal	35	0	1,997
Winter Normal	10	0	2,136
Summer Emergency	35	2.533	2,351
Winter Emergency	10	2.533	2,493

[6] ACSR stands for aluminum conductor steel reinforced.
[7] Clearances based on an initial maximum tension of 6,000-10,000 pounds at 0.5-inch ice, 0°F, 4# wind and maximum ruling span of 200-1,250 feet.

Figure 2-1. Long Span Double-Circuit 230 kV Tension Structure

PPL Electric Utilities

7-009-064
230kV Long Span Double Circuit Steel Pole
0° To 90° Angle Tension on Arm Structure

Revision: 0
Effective Date: 3/18/2016
Sheet **1** of **1**

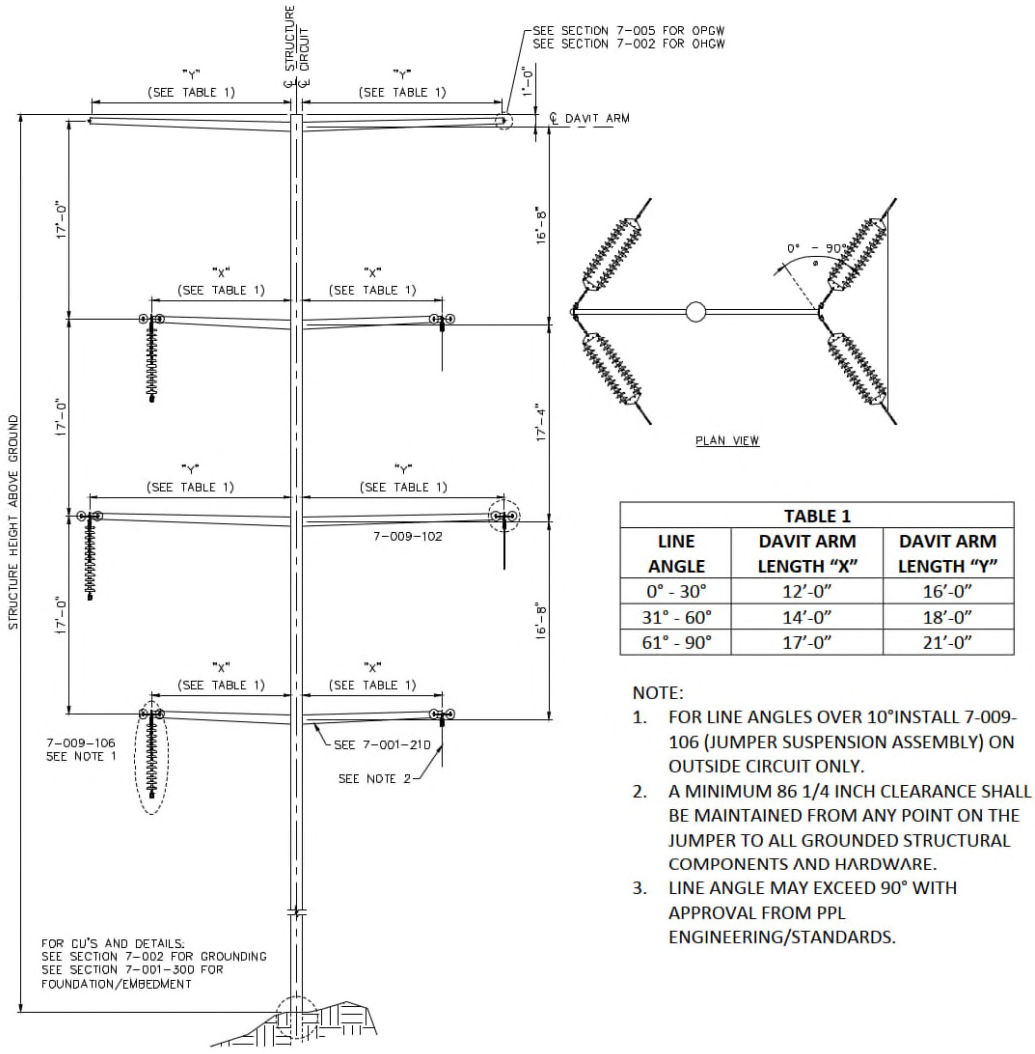


TABLE 1		
LINE ANGLE	**DAVIT ARM LENGTH "X"**	**DAVIT ARM LENGTH "Y"**
0° - 30°	12'-0"	16'-0"
31° - 60°	14'-0"	18'-0"
61° - 90°	17'-0"	21'-0"

NOTE:
1. FOR LINE ANGLES OVER 10°INSTALL 7-009-106 (JUMPER SUSPENSION ASSEMBLY) ON OUTSIDE CIRCUIT ONLY.
2. A MINIMUM 86 1/4 INCH CLEARANCE SHALL BE MAINTAINED FROM ANY POINT ON THE JUMPER TO ALL GROUNDED STRUCTURAL COMPONENTS AND HARDWARE.
3. LINE ANGLE MAY EXCEED 90° WITH APPROVAL FROM PPL ENGINEERING/STANDARDS.

REV	Date	Sponsor	Reviewer	Transmission Construction Standards PPL Electric Utilities Corporation
0	3/18/16	MSD	SDS	
				Approved T. P. Hinson Manager Standards

Approved: E154693 Hinson, Todd P

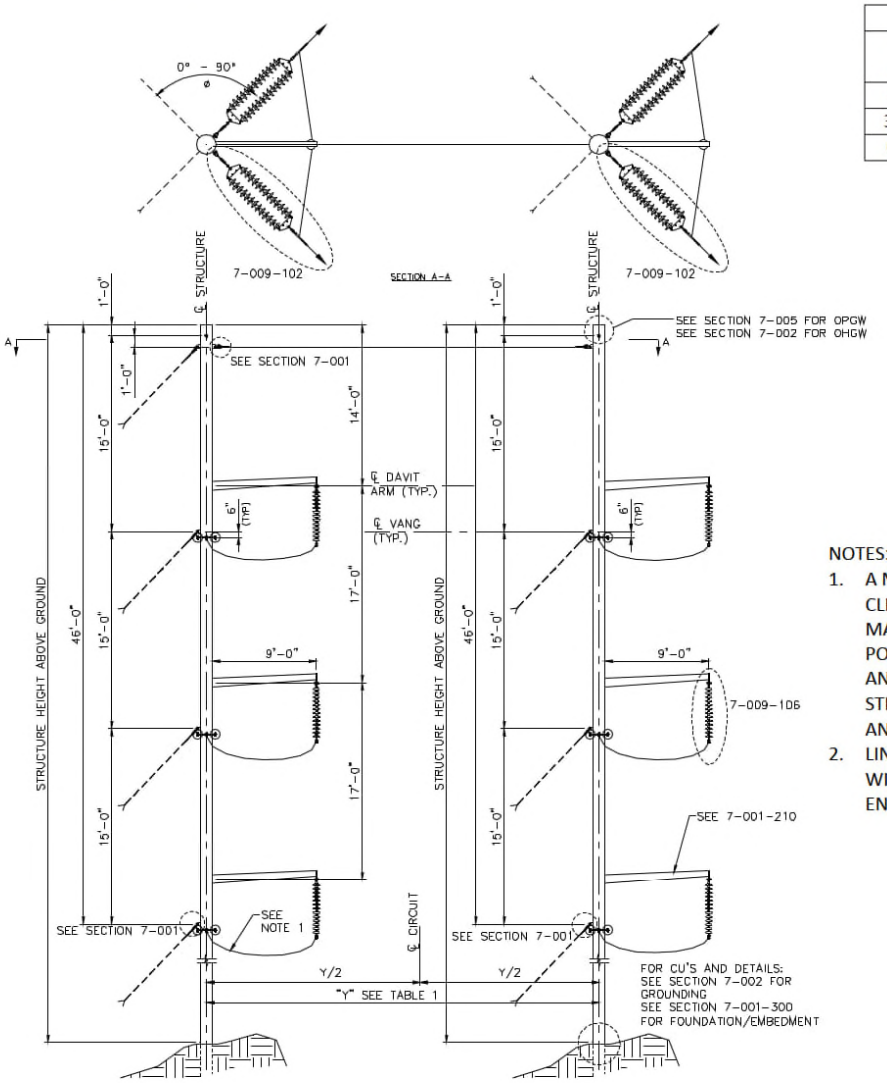
Figure 2-2. Double Circuit Steel Pole Angle Tension Structure

PPL Electric Utilities

7-009-005
230kV Double Circuit Steel Pole
0° to 90° Angle Tension on Pole Structure

Revision: 0
Effective Date: 3/18/2016
Sheet **1** of **1**

TABLE 1	
LINE ANGLE	POLE SPACING "Y"
0° - 30°	24'-0"
31° - 60°	28'-0"
61° -90°	34'-0"



NOTES:
1. A MINIMUM 74 3/4 INCH CLEARANCE SHALL BE MAINTAINED FROM ANY POINT ON THE JUMPER TO ANY GROUNDED STRUCTURAL COMPONENTS AND HARDWARE.
2. LINE ANGLE MAY EXCEED 90° WITH APPROVAL FROM PPL ENGINEERING/STANDARDS.

REV	Date	Sponsor	Reviewer	Transmission Construction Standards PPL Electric Utilities Corporation
0	3/18/16	MSD	SDS	
				Approved
				T. P. Hinson
				Manager Standards

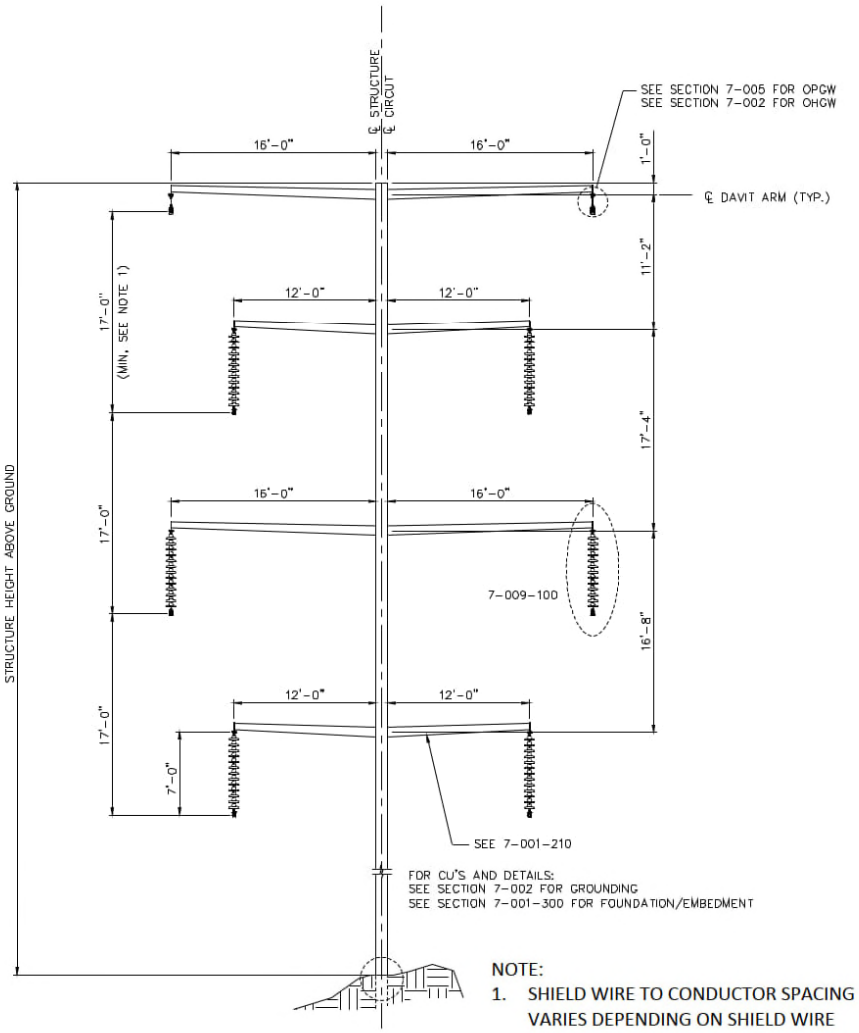
Approved: E154693 Hinson, Todd P

Figure 2-3. Long Span Double Circuit Steel Pole Suspension Structure

PPL Electric Utilities

7-009-061
230kV Long Span Double Circuit Steel Pole
0° to 1° Suspension Structure

Revision: 0
Effective Date: 3/18/2016
Sheet **1** of **1**



REV	Date	Sponsor	Reviewer	Transmission Construction Standards PPL Electric Utilities Corporation
0	3/18/16	MSD	SDS	
				Approved T. P. Hinson
				Manager Standards

Approved: E154693 Hinson, Todd P

CUMBERLAND 230-69 KV SUBSTATION EXPANSION PROJECT

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1.0 INTRODUCTION

PPL Electric Utilities Corporation ("PPL Electric") seeks approval from the Pennsylvania Public Utility Commission ("PUC" or "Commission") to rebuild approximately 0.6 miles of existing transmission lines in Silver Spring Township, Cumberland County, Pennsylvania to re-terminate them into the expanded Cumberland 230-69 kV Substation (the "Cumberland 230-69 kV Substation Expansion Project" or "Project"). Specifically, the Project requires rebuilding approximately 0.3 miles of the Juniata-Cumberland 230 kV Transmission Line and approximately 0.3 miles of the Williams Grove-Cumberland 230 kV Transmission Line. The Project will also include construction of 0.4 miles of string bus to interconnect the expanded portion of the 230 kV yard to the existing transformer bay locations. Although the string bus is partially situated outside of the substation fence area, it is a substation facility and is not part of this filing. PPL Electric has provided information about the proposed Project to representatives from Silver Spring Township and Cumberland County.

The PPL Electric Cumberland Substation property is located approximately 1.5 miles northeast of the U.S. Highway 11 (US-11) and Interstate 81 (I-81) interchange. As explained in **Attachment 1**, PPL Electric plans to expand the Cumberland 230 kV Substation immediately adjacent to and south of the current substation site. The proposed expansion area will occupy approximately 5.8 acres of the combined total 59-acre Cumberland Substation property owned by PPL Electric.

The rebuilt Juniata-Cumberland and Williams Grove-Cumberland 230 kV Transmission Lines will be reconfigured south of the newly expanded Cumberland 230 kV Substation, located entirely within existing right-of-way ("ROW") or on PPL Electric fee-owned property.

The Project requires reusing three existing structures, removing three existing structures, and installing four new structures. All new and re-used structures will be located entirely within existing ROW or on PPL Electric fee-owned properties. A network of existing access roads or temporary roads will be utilized during construction of the rebuilt transmission lines. Detailed maps of the proposed Expanded Cumberland Substation and rebuilt 230 kV transmission lines are provided in **Figure 3-1.**

2.0 LAND USE

The Project Area is generally bounded to the north by the Appalachian Trail and its associated federal lands; to the east by Bernheisel Bridge Road and Stony Ridge Park; to the south by commercial and residential properties along US-11; and to the west by industrial properties. Land uses immediately surrounding the PPL Electric Cumberland Substation predominantly consist of agricultural land, recreational land (including sports fields and forested trails), mixed-use industrial/commercial properties, and developed residential land.

The closest communications tower is located 1.3 miles southwest of the Project. An active railroad (the Shippensburg Secondary line) operated by Norfolk Southern is located approximately 0.5 miles south of the Project. No pipelines are near the Project.

The closest active airport to the Project Area is Dietch Airport, a privately owned facility, located approximately 1.7 miles northeast of the Project. Additionally, a private heliport within a distribution center property is located approximately 0.8 mile southeast of the Project. PPL Electric does not anticipate any interference with airport or heliport operations since the Project consists of new electrical facilities that are shorter than the existing electrical facilities within existing ROW or PPL Electric fee-owned land. However, PPL Electric will file any required documentation with the Federal Aviation Administration.

Conserved Lands

The Appalachian National Scenic Trail (Appalachian Trail) and its associated adjacent federal land and a local park (Stony Ridge Park) are located adjacent north and east of the Cumberland Substation property, respectively. Because the proposed substation expansion is consistent with existing land uses and located on the south side of the existing substation, no significant impacts to these recreational areas are anticipated. The Project will not occur on federally owned property; however PPL Electric will coordinate with the National Park Service prior to and during construction in the vicinity of the Appalachian Trail. No additional recreational areas or natural landmarks were identified within 1 mile of the Project.

3.0 CULTURAL RESOURCES

An online review of the Project Area and surrounding landscape was conducted through the Pennsylvania Historical and Museum Commission ("PHMC") State Historic and Archaeological Resource Exchange site. State Historic Preservation Office ("SHPO") eligible and listed structures and districts within 1 mile of the Project Area are listed in **Table 3-1** below.

Table 3-1. Cultural Resources Located in the Project Area

Resource Name	Resource Type	Eligibility	Location/Proximity
Appalachian Trail	District	Eligible	0.3-mile buffer area of the Appalachian Trail
Cumberland Valley Railroad	District	Eligible	~0.5-miles from the Norfolk Southern Shippensburg Secondary

The entire Project, including the existing Cumberland Substation, is located within the Appalachian Trail district. No other historic structures or districts are crossed or spanned by the Project. PPL Electric is in the initial stage of coordination with the SHPO for the modifications being made to the transmission lines. This coordination will be required to receive permits to construct the Project and will be conducted in the near future. PPL Electric does not anticipate any impacts to SHPO listed or eligible structures or districts. PPL Electric will perform any reviews and field survey/sampling work required by the SHPO to avoid, minimize, and mitigate impacts to archaeological or historic architectural resources that may be located within the Project Area.

4.0 NATURAL FEATURES

Unique Natural Features

No unique geological, scenic, or natural areas are located within the Project Area, according to the Pennsylvania Department of Conservation and Natural Resources ("DCNR").

Soils

The Project Area is located on predominantly flat land, primarily surrounded by developed land uses. Topography within the Project Area ranges between approximately 430 feet to approximately 450 feet above mean sea level ("msl"). Soils present within the Project Area predominantly consist of silt and clay loams, ranging between 0 and 15 percent slopes.

Erosion and Sedimentation ("E&S") control plans will be developed and implemented for the Project to minimize the displacement of soils. These plans will require prior approval from the Cumberland County Conservation District. National Pollutant Discharge Elimination System ("NPDES") permits will also be required from the Pennsylvania Department of Environmental Protection ("PADEP") as needed. During construction, PPL Electric will adhere to all conditions specified in the NPDES permit. Impacts to local soil resources are anticipated to be minimal.

Waterways and Wetlands

PPL Electric retained an environmental consultant to identify and delineate all waterways and wetlands within the Project Area. No wetlands or streams were identified in the Project Area; therefore, no permits are required from PADEP and the United States Army Corps of Engineers ("USACE").

100-Year Floodplains and Regulatory Floodway

The National Flood Hazard Layer for Schuylkill County, Pennsylvania was obtained through the Federal Emergency Management Agency ("FEMA") Flood Map Service Center website and analyzed for 100-year floodplains and regulatory floodway within the Project Area and surrounding landscape. Based on review of this data, the northwestern portion of the Project crosses FEMA 100-year floodplain and regulatory floodway. No streams or rivers are crossed by the Project as indicated by the United States Geological Survey (USGS) National Hydrology Dataset (NHD); however, the identified floodplain and floodway areas appear to be associated with an unnamed tributary (UNT) of Conodoguinet Creek, located approximately 1.1 miles to the northeast.

Two proposed 230 kV structures are located within the 100-year floodplain area crossed by the Project. No proposed 230 kV structures are located within the regulatory floodway crossed by the Project; therefore, no impacts to regulatory floodway areas are anticipated.

PPL Electric will coordinate with local agencies for regulated floodplain activities where required.

Vegetation

Vegetative cover in the Project Area primarily consists of maintained ROW or agricultural cropland. Minimal vegetation clearing is anticipated along the rebuilt Juniata-Cumberland and Williams Grove-Cumberland 230 kV Transmission Lines since they are located within or adjacent to existing ROW. PPL Electric will apply its "Specifications for Transmission Vegetation Management LA-79827" to minimize potential impacts.

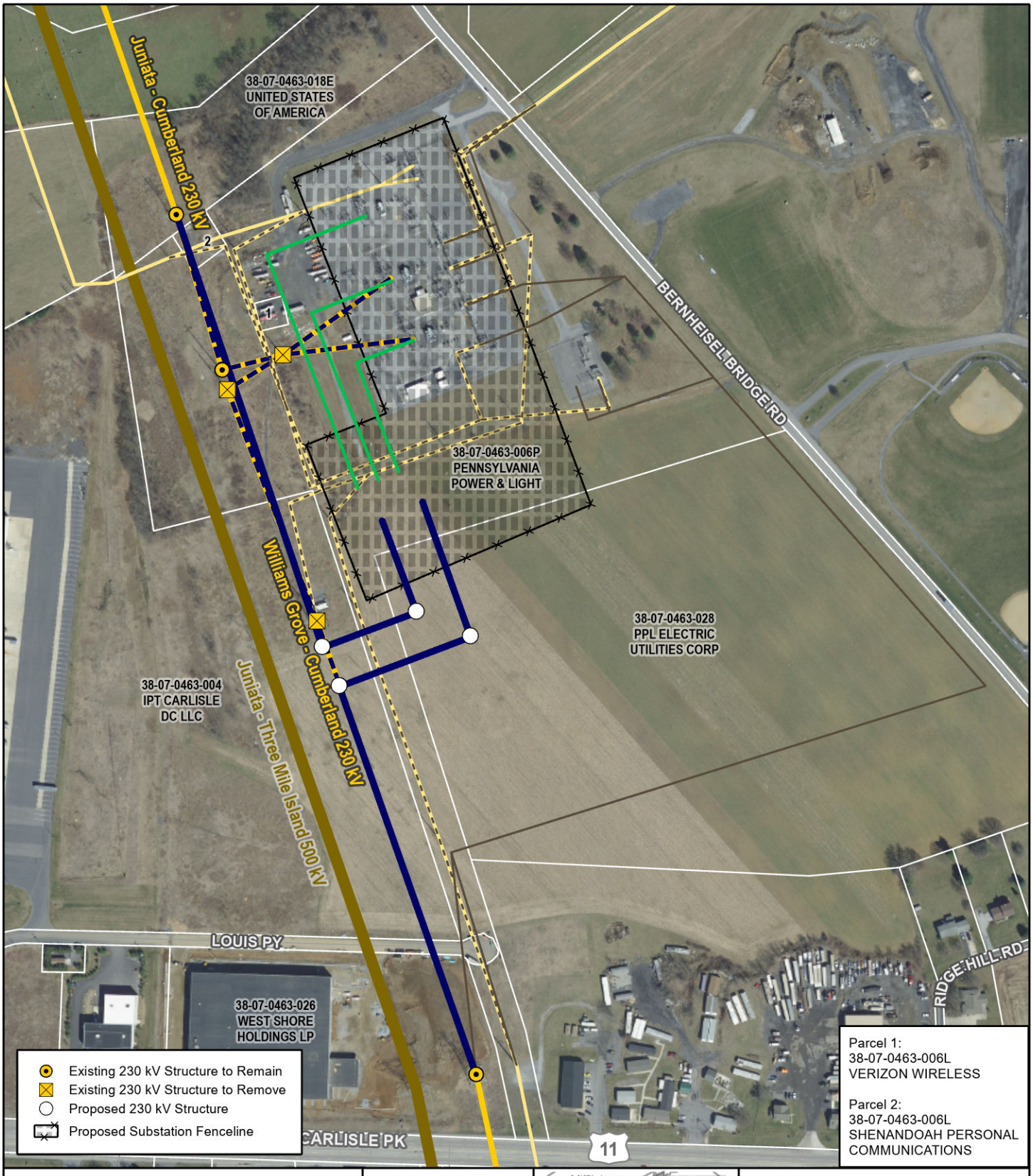
5.0 THREATENED AND ENDANGERED SPECIES

A Pennsylvania Natural Diversity Inventory (PNDI) was run for the Project on January 29, 2024 to assess the potential presence of threatened and endangered species and/or special concern species. Specific agencies reviewing the Project included the following:

- Pennsylvania Game Commission (PGC),
- Pennsylvania Fish and Boat Commission (PFBC),
- Pennsylvania Department of Conservation and Natural Resources (DCNR), and
- U.S. Fish and Wildlife Service (USFWS).

None of the agencies reported the presence of any known threatened and endangered species and/or special concern species and resources within the Project Area. PPL Electric will continue to consult with the jurisdictional agencies regarding potential impacts to protected species, complete all required surveys; obtain all necessary approvals and permits for Project construction; and comply with all conditions placed on those permits.

Figure 3-1. Aerial Map of the Project



Proposed 230 kV Centerline
Proposed 69 kV Centerline
230 kV Line To Be Removed
69 kV Line To Be Removed
Proposed String Buss
Existing 69 kV Transmission Line
Existing 230 kV Transmission Line
Existing 500 kV Transmission Line
Parcel Boundary

Roads, Railroads, Municipalities (PASDA 2022)
Local Parks (Schuylkill Co. 2022)
Rivers (USGS 2022)

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

July 09, 2024

Figure 3-1
Aerial Map
Cumberland Substation
Expansion Project

ppl wsp

0 200 400 Feet

CUMBERLAND 230-69 KV SUBSTATION EXPANSION PROJECT

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1.0 DESIGN CONSIDERATIONS

PPL Electric Utilities Corporation's ("PPL Electric") new and rebuilt transmission lines are designed according to, and generally exceed, all National Electric Safety Code ("NESC") minimum standards. The NESC is a set of rules guiding safety standards during the installation, operation, and maintenance of electric power lines. The NESC contains the basic provisions considered necessary for the safety of employees and the public. Although it is not intended as a design specification, its provisions establish minimum design requirements. PPL Electric has developed design specifications and safety rules which meet or surpass all requirements specified by the NESC.

The NESC includes loading requirements and clearances for the design, construction, and operation of power lines. The "loads" on conductors and supporting structures are the mechanical forces that develop from the weight of the conductors, the weight of ice on the conductors, plus wind pressure on the conductors and supporting structures. 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.

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 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.

PPL Electric's rigorous design standards are further incorporated into the parameters utilized to account for ice and wind loadings on the wires and structure. Structure loading and line designs must accommodate a variety of operating conditions as different ice and wind combinations can impact the conductor sags and tensions of the line. PPL Electric's transmission lines are designed to exceed NESC requirements by accounting for additional load cases due to various ice and wind loading conditions beyond what is required by NESC. This means that PPL Electric lines are designed to operate safely and reliably during extreme inclement weather. In addition, PPL Electric design standards include a clearance to ground buffer in excess of NESC required clearances to account for construction and design tolerances and the filling or grading of land within the right-of-way by property owners. This buffer also significantly reduces the risk of a property owner inadvertently contacting a transmission line. This has occurred on PPL Electric's system in the past and higher clearances minimize the likelihood of future occurrences.

Table 4-1. 69 kV Vertical Clearance to Ground

Surface Underneath Conductors	NESC Standard Clearance	PPL Electric Clearances
Roads, streets, and other areas subject to truck traffic	19.2 Ft.	22.2 Ft.
Other land traversed by vehicles such as cultivated grazing, forest, orchards, etc.	19.2 Ft.	22.2 Ft.
Spaces and ways subject to pedestrians or restricted traffic only	15.2 Ft.	22.2 Ft.
Track rails of railroads (except electrified railroads using overhead trolley conductors)	27.2 Ft.	30.2 Ft.

Table 4-2. 138 kV Vertical Clearance to Ground		
Surface Underneath Conductors	**NESC Standard Clearance**	**PPL Electric Clearances**
Roads, streets, and other areas subject to truck traffic	20.6 Ft.	23.6 Ft.
Other land traversed by vehicles such as cultivated grazing, forest, orchards, etc.	20.6 Ft.	23.6 Ft.
Spaces and ways subject to pedestrians or restricted traffic only	16.6 Ft.	23.6 Ft.
Track rails of railroads (except electrified railroads using overhead trolley conductors)	28.6 Ft.	31.6 Ft.

Table 4-3. 230 kV Vertical Clearance to Ground		
Surface Underneath Conductors	**NESC Standard Clearance**	**PPL Electric Clearances**
Roads, streets, and other areas subject to truck traffic	22.5 Ft.	25.5 Ft.
Other land traversed by vehicles such as cultivated grazing, forest, orchards, etc.	22.5 Ft.	25.5 Ft.
Spaces and ways subject to pedestrians or restricted traffic only	18.5 Ft.	25.5 Ft.
Track rails of railroads (except electrified railroads using overhead trolley conductors)	30.5 Ft.	33.5 Ft.

Table 4-4. 500 kV Vertical Clearance to Ground		
Surface Underneath Conductors	**NESC Standard Clearance**	**PPL Electric Clearances**
Roads, streets, and other areas subject to truck traffic	28.4 Ft.	31.4 Ft.
Other land traversed by vehicles such as cultivated grazing, forest, orchards, etc.	28.4 Ft.	31.4 Ft.
Spaces and ways subject to pedestrians or restricted traffic only	24.4 Ft.	31.4 Ft.
Track rails of railroads (except electrified railroads using overhead trolley conductors)	36.4 Ft.	39.4 Ft.

A relay protection system is also used on PPL Electric's transmission lines to protect public safety, as well as the equipment on the transmission system. The purpose of relay protection is to automatically de-energize the 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, a periodic maintenance and inspection program is implemented 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 to 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

Overall, PPL Electric designs and constructs projects with high regard to both public and employee safety and follows or exceeds all codes and requirements. The following are a few examples of PPL Electric's safety rules that demonstrate its dedication to employee and contractor safety:

- Procedures have been developed to allow work to be performed on energized facilities in a safe manner. When lines or apparatus are removed from service to be worked on, the Energy Control Process system is applied. This system provides that a red tag must be physically placed on the control handle of the de-energized equipment.
- The red tag may be removed only after proper authorization to energize the equipment has been received.
- Various other tags are used for limited operations and informational purposes.
- Employees or contractors will not apply or remove a tag or change the status of tagged equipment unless authorized.

- Temporary safety grounds are used on de-energized facilities for employee lineman safety during maintenance, construction, or reconstruction work. Safety grounds are wires connecting the de-energized facility to an electrical ground. If the facility should be energized, the safety grounds will divert the current directly to ground and reduce the likelihood of personal injury.
- Before applying grounds, a test is done to confirm that the line is de-energized. The voltage test device is checked before and after use to assure reliability.
- Poles or 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 work is performed. Appropriate safety gear in the form of body belts, safety straps, hard hats, gloves, etc., is 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. Although there is no current scientific evidence demonstrating that magnetic fields cause any adverse health effects or pose a health or safety threat to the public, PPL Electric has established a policy to design its new and rebuilt transmission lines to reduce magnetic fields. To lower magnetic field exposures, the program generally prescribes the use of a line design that provides ground clearances higher than the required minimum NESC ground clearance and reverse phasing of new double circuit lines where it is feasible to do so at low or no cost. The implementation of additional modifications to reduce magnetic field levels is considered, provided those modifications can be made at low or no cost and will not interfere with the operation of the line.

The program will be applied to this Project and the Project is designed with clearances that are at least 3 feet higher than NESC standards.

CUMBERLAND 230-69 KV SUBSTATION EXPANSION PROJECT

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

Appalachian National Scenic Trail
P.O. Box 50
Harpers Ferry, WV 25425
Attn: Ed Clark, Superintendent

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: Allison 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 State Historic Preservation Office
Bureau within the Pennsylvania Historical and Museum Commission
Commonwealth Keystone Building
400 North Street, Second Floor
Harrisburg, Pennsylvania 17120-0053
Attn: Mr. Douglas C. McLearen, 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
Centre 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

County Agencies

Cumberland County Board of Commissioners
1 Courthouse Square, 2nd Floor, Suite 200
Carlisle, Pennsylvania 17013
Attn: Gary Eichelberger, Chairman

Cumberland County Planning Department
310 Allen Road, Suite 101
Carlisle, Pennsylvania 17013
Attn: Heather Sweitzer, Chair

Cumberland County Conservation District
310 Allen Road, Suite 301
Carlisle, Pennsylvania 17013
Attn: Carl Goshorn, District Manager

Cumberland County Agricultural Land Preservation Board
310 Allen Road, Suite 101
Carlisle, Pennsylvania 17013
Attn: Stephanie Williams, Program Administrator

Municipalities

Silver Spring Township Board of Supervisors
8 Flowers Drive
Mechanicsburg, PA 17050
Attn: Carl R. Machamer, Chair

Landowner

PPL Electric Utilities Corporation
827 Hausman Road
Allentown, Pennsylvania 18104

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: 07/16/2024

Joseph Lookup (Jul 16, 2024 13:15 EDT)

Joseph B. Lookup