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 An Approximately 0.64-Mile Segment Of The Existing Single-Circuit Brunner Island – Yorkana 230kV Transmission Line Between The Brunner Island 230kV Switchyard And The Demarcation Point Where Ownership Of The Transmission Line Transfers To Mid-Atlantic Interstate Transmission, LLC Located In East Manchester Township, York County, Pennsylvania	:	Docket No. A-2026-_____

LETTER OF NOTIFICATION

TO THE PENNSYLVANIA PUBLIC UTILITY COMMISSION:

PPL Electric Utilities Corporation ("PPL Electric") hereby files this Letter of Notification pursuant to Sections 57.72(d)(1)(v) and (vi) of the Pennsylvania Public Utility Commission's ("Commission") regulations, 52 Pa. Code §§ 57.72(d)(1)(v) and (vi), to rebuild an approximately 0.64-mile segment of the existing single-circuit Brunner Island – Yorkana 230 kV Transmission Line in East Manchester Township, York County, Pennsylvania ("BI-Yorkana Line Segment") between the Brunner Island 230 kV Switchyard ("Brunner Island Switchyard") and the demarcation point where ownership of the transmission line transfers to Mid-Atlantic Interstate Transmission, LLC ("MAIT") (the "Project"). The BI-Yorkana Line Segment connects the Brunner Island Switchyard to MAIT's Yorkana 230-115 kV Switchyard in East Manchester Township, York County, Pennsylvania ("MAIT Yorkana Switchyard"). The Project involves the removal and replacement of three existing steel lattice structures with three new steel monopoles

within the existing 150-foot-wide right-of-way ("ROW"). The two existing structures located southeast of the Brunner Island Switchyard are owned by PPL Electric and the third existing structure is owned by MAIT. Once rebuilt, the BI-Yorkana Line Segment will be slightly offset from the existing structure alignment, but the Project will remain on the same properties crossed by the existing alignment. No new ROW is needed for the Project.

As explained in greater detail below, this Project is needed to address transmission reliability issues identified by PJM Interconnection, LLC ("PJM") and resolve a thermal overload violation on the BI-Yorkana Line Segment. After a thorough evaluation and review with stakeholders, PJM approved the Project as part of the proposal selected as the best solution to the transmission reliability issues it identified across multiple systems. The Construction Responsibility Letter agreed to by PPL Electric and PJM requires Project completion no later than June 1, 2027. As such, PPL Electric herein seeks Commission approval for rebuilding the approximately 0.64-mile BI-Yorkana Line Segment.

PPL Electric has provided information regarding this Project to all identified political subdivisions, and none of them have objected to the Project. Subject to the Commission's approval, construction will begin in August 2026 to support an in-service date of December 2026. The estimated cost of this Project is approximately $2.5 Million for PPL Electric and $1.8 Million for MAIT, and the cost for the Project will be allocated to PPL Electric Customers.[1] To meet the projected in-service dates, PPL Electric is seeking the Commission's decision by no later than the public meeting currently scheduled for July 16, 2026.

In support thereof, PPL Electric states as follows:

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

1. 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:

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PPL Electric's attorneys are authorized to receive all notices and communications regarding this Letter of Notification.

4. PPL Electric furnishes electric service to approximately 1.5 million customers throughout its certificated service territory, which includes all or portions of 29 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. This Letter of Notification includes the following accompanying Attachments, which are incorporated herein and made a part hereof by reference:

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

7. This Letter of Notification and accompanying Attachments contain all the information required by 52 Pa. Code § 57.72(d)(4).

2. THE PROJECT

3. NEED FOR THE PROJECT

8. 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 13 states and the District of Columbia, including Pennsylvania. *See PJM Interconnection, L.L.C.*, 101 FERC ¶ 61345, 62444-45 (2002). In order to ensure reliable transmission service, PJM prepares an annual Regional Transmission Expansion Plan ("RTEP") to identify system reinforcements that are required to, among other things, meet the North American Electric Reliability Corporation Reliability Standards, PJM reliability planning criteria, and Transmission Owner reliability criteria. *See PJM Interconnection L.L.C., Amended and Restated Operating Agreement of PJM Interconnection, L.L.C.*, Sched. 6 (2025).

9. When PJM's Reliability Analysis identifies a need to solve a reliability issue on electric transmission facilities, PJM opens a Proposal Window, to solicit the submittal of potential solutions (i.e., reliability projects) to address those needs. If approved by the PJM Board of Managers ("PJM Board"), such reliability projects are included in the RTEP as Baseline Projects. *See id.*

10. As explained in greater detail below and in **Attachment 1 – Necessity Statement**, PJM determined that the Project was part of the best solution to address the transmission reliability issues it identified, as opposed to the other alternatives considered by PJM. The Project was approved by the PJM Board on February 15, 2023 as a Baseline Upgrade with number B3774.

11. On May 23, 2023, PJM and PPL Electric agreed to a Construction Responsibility Letter for PPL Electric to rebuild the BI-Yorkana Line Segment under Baseline number B3774. Pursuant to Schedule 6 of PJM's Amended and Restated Operating Agreement, and as stated in the Construction Responsibility Letter, PPL Electric is required to complete the Project by June 1, 2027.

12. Further, 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.

13. PPL Electric, as a public utility, has a general right and obligation to serve customers in its service territory, subject to the terms and conditions of its certificate of public convenience. Specifically, under Section 1501 of the Public Utility Code, PPL Electric:

> shall furnish and maintain adequate, efficient, safe, and reasonable service and facilities, and shall make all such repairs, changes, alterations, substitutions, extensions, and improvements in or to such service and facilities as shall be necessary or proper for the accommodation, convenience, and safety of its patrons, employees, and the public.

66 Pa.C.S. § 1501 (emphasis added); *see also id.* § 1103(a). Section 2802(12) of the Public Utility Code further emphasizes that "[r]eliable electric service is of the utmost importance to the health, safety and welfare of the citizens of the Commonwealth. Electric industry restructuring should ensure the reliability of the interconnected electric system by maintaining the efficiency of the transmission and distribution system." *Id*. § 2802(12). Pennsylvania appellate courts and the Commission have further confirmed this obligation to serve. *See, e.g.*, *Pa. Gas Co. v. Pub. Serv. Comm'n*, 83 Pa. Super. 557, 565-66 (1924); *Philadelphia Transp. Co. v. Pa. PUC*, 37 A.2d 138, 147 (Pa. Super. 1944); *Application of Leatherstocking Gas Co., LLC, for Approval to Supply Natural Gas Serv. to the Pub. in N. Susquehanna Cnty., in the Twps. of Bridgewater, Forest Lake, Great Bend, Harmony, New Milford, and Oakland, and in the Boroughs of Great Bend, Hallstead, Lanesboro, Montrose, New Milford, Oakland and Susquehanna*, Docket No. A-2011-2275595, 2012 Pa. PUC LEXIS 1391, at *22 (Order entered Aug. 30, 2012).

14. Expedient provision of upgrades to adequate and reliable service to high-load customers on PPL Electric's system is critical for the Commonwealth's continued economic development. This interest is also addressed by the Project.

4. Existing System

15. The existing BI-Yorkana Line Segment travels generally north/northeast from the MAIT Yorkana Switchyard to PPL Electric's Brunner Island Switchyard in East Manchester Township, York County. It is part of the larger regional 230 kV system that supplies load in southeastern Pennsylvania, and which is owned predominantly by MAIT.

16. The conductor of the BI-Yorkana Line Segment is the limiting component of the transmission line.

17. A one-line diagram of the existing 230 kV system is provided as **Figure 1-3** and a map of the existing system alignment is provided as **Figure 1-1** in **Attachment 1 – Necessity Statement.**

5. Identification of Need

18. This Project is needed to resolve a thermal overload on the BI-Yorkana Line Segment, which PJM has determined is necessary to address transmission reliability issues in the Allegheny Power Systems ("APS", a FirstEnergy Company), Baltimore Gas & Electric Company ("BGE", an Exelon Company), Metropolitan Edison, now known as FirstEnergy Pennsylvania Electric Company ("Met-Ed", a FirstEnergy Company), and Philadelphia Electric Company ("PECO", an Exelon Company) systems.

19. In July 2022, PJM opened a Proposal Window to solicit proposals to address, among other things, those transmission reliability issues. PJM identified seven facilities with thermal overloads and four facilities with voltage violations. PJM received nine proposals specifically to address the identified reliability concerns and evaluated the proposals in three different combinations of projects (Options 1 through 3).

20. PJM conducted a do no harm ("DNH") analysis on each of the three options, which identified a thermal overload on the BI-Yorkana Line Segment for both Options 1 and 2. After evaluation and review with stakeholders, PJM selected Option 1, because the solution is the most cost effective, solves the reliability issues, and utilizes existing facilities.

21. The Project will resolve the thermal overload identified by PJM and address the transmission reliability issues on various systems to ensure continued and reliable electric service to Pennsylvania's electric customers.

6. THE PROPOSED PROJECT

22. The Project involves the removal of three existing steel lattice structures (two of which are owned by PPL Electric with the third owned by MAIT) and replacing them with three new steel monopoles within the existing ROW.

23. The existing 1590 aluminum conductor steel reinforced ("ACSR") conductor will also be replaced with double bundle 1590 ACSR conductor to increase the line rating.

24. The existing and proposed replacement structures are summarized and depicted in **Table 2-1** and **Figure 3-1** in **Attachment 3 – Description of Project Area**.

25. 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 – Design Criteria.**

26. The estimated cost of this Project is approximately $2.5 Million for PPL Electric and $1.8 Million for MAIT, and the cost for the Project will be allocated to PPL Electric Customers.

7. HEALTH AND SAFETY

27. The BI-Yorkana Line Segment rebuild will not create any unreasonable risk of danger to public health or safety. It will be designed, constructed, operated, and maintained in a manner that meets or surpasses all applicable legal requirements. Descriptions of the NESC standards, PPL Electric's design criteria, and PPL Electric's periodic maintenance program and safety practices are provided in **Attachment 4 – Design Criteria**.

28. **Attachment 4 – Design Criteria** also explains PPL Electric's Magnetic Field Management Program, which will be applied to the Project. 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.

8. DESCRIPTION OF THE RIGHT-OF-WAY AND EVALUATION OF POTENTIAL IMPACTS

29. The proposed structures will be constructed in generally the same location as the existing structures. The Project will not impact any new properties and is designed to fit entirely within the existing ROW. A network of existing access roads or temporary roads will be utilized during construction for the rebuild of the BI-Yorkana Line Segment.

30. The Project is the least impactful option to landowners and the local community because it does not affect any new properties or expand the existing ROW, and it is anticipated that it will have minimal impacts on land use, cultural resources, natural features and protected species in the area for the same reason.

31. A detailed aerial exhibit of the Project alignment is provided as **Figure 3-1** in **Attachment 3 – Description of Project Area**. Additionally, a one-line diagram of the existing 230 kV system is provided as **Figure 1-3** and a map of the existing system alignment is provided as **Figure 1-1** in **Attachment 1 – Necessity Statement.**

32. A 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**.

33. A detailed description of the route and land use and environmental evaluation of the Project can be found in **Attachment 3 – Project Area Description**.

34. PPL Electric's ongoing coordination with state and federal agencies regarding various land use, cultural resources, natural features and protected species that are potentially

impacted by the Project, and obtaining any necessary permits, are likewise detailed in **Attachment 3 – Project Area Description**.

9. NOTICE

35. PPL Electric has provided information regarding the Project to representatives of East Manchester Township, York County Commissioners, York County Conservation District, and the York 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**.

10. LETTER OF NOTIFICATION

36. 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)(v) and (vi).

37. The Project qualifies for a Letter of Notification because it consists of an HV line to be rebuilt without altering the ROW. *See* 52 Pa. Code § 57.72(d)(1)(v).

38. The Project also qualifies for a Letter of Notification because it consists of an HV line to be rebuilt that is less than two miles. *See* 52 Pa. Code § 57.72(d)(1)(vi).

39. This Letter of Notification is filed as of 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 need for the formal application process set forth at 52 Pa. Code §§ 57.71, *et seq*.

11. CONCLUSION

WHEREFORE, PPL Electric Utilities Corporation respectfully requests that the Pennsylvania Public Utility Commission approve the proposed rebuilding of an approximately 0.64-mile segment of the existing single-circuit Brunner Island – Yorkana 230 kV Transmission Line located in East Manchester Township, York County, Pennsylvania, as explained above and in the Attachments hereto, by no later than the public meeting currently scheduled for July 16, 2026.

Respectfully submitted,

/s/ Courtney L. Schultz

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Date: June 2, 2026

Counsel for PPL Electric Utilities Corporation

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: June 2, 2026

Joseph B. Lookup

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 An Approximately 0.64-Mile Segment Of The Existing Single-Circuit Brunner Island – Yorkana 230kV Transmission Line Between The Brunner Island 230kV Switchyard And The Demarcation Point Where Ownership Of The Transmission Line Transfers To Mid-Atlantic Interstate Transmission, LLC Located In East Manchester Township, York County, Pennsylvania	:	Docket No. A-2026-_____

CERTIFICATE OF SERVICE

I hereby certify that I have this day served a true copy of the foregoing document upon the entities listed below in accordance with the requirements of 52 Pa. C.S. § 1.54 (relating to service by a participant) via email and *First Class Mail* this 2nd day of June, 2026:

State Agencies

Allison Kaster
Pennsylvania Bureau of Investigation and Enforcement
PA Public Utility Commission
Commonwealth Keystone Building
400 North Street
2nd Floor, Room-N201
Harrisburg, PA 17120
akaster@pa.gov

Steven C. Gray, Assistant Small Business Advocate
Office of Small Business Advocate
Suite 1102, Commerce Building
300 North Second Street
Harrisburg, PA 17101
sgray@pa.gov

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

Jeffrey Spotts, Chief Counsel
Pennsylvania Department of Transportation
Commonwealth Keystone Building
400 North Street, 5th Floor
Harrisburg, PA 17120

Darryl A. Lawrence
Pennsylvania Office of Consumer Advocate
555 Walnut Street
1st Floor Forum Place
Harrisburg, PA 17101
Lawrence, Darryl A.
dlawrence@paoca.org

Ms. Emma Diehl, Division Manager
Pennsylvania Historical and Museum
Commission Bureau for Preservation
Commonwealth Keystone Building,
2nd Floor
400 North Street
Harrisburg, PA 17120

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

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

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

Federal Agencies
U.S. Army Corps of Engineers
Baltimore District
2 Hopkins Plaza
Baltimore, MD 21201
Attn: Public Affairs Office

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

County Agencies
Mike Pritchard, Director
York County Planning Commission
28 E Market Street, 3rd Floor
York, PA 17401

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

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

Municipalities
East Manchester Township
5080 North Sherman Street Extended
Mount Wolf, PA 17347

Landowners
Alvin Hendrich
5544 Board Road
Mount Wolf, PA 17347

Talen Generation LLC
600 Hamilton Street, Suite #600
Allentown, PA 18101

/s/ Courtney L. Schultz
Courtney L. Schultz, Esq.
Devan McCarrie, Esq.
Saul Ewing LLP
Counsel for PPL Electric Utilities Corporation

EXHIBIT 1

BRUNNER ISLAND – YORKANA 230 KV TRANSMISSION LINE REBUILD PROJECT

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1.0 INTRODUCTION

PPL Electric Utilities ("PPL Electric") is requesting Pennsylvania Public Utility Commission ("PUC" or "the Commission") approval to rebuild an approximately 0.64-mile segment of the existing single-circuit Brunner Island – Yorkana 230 kV Transmission Line (the "BI-Yorkana Line Segment") between the Brunner Island 230 kV Switchyard ("Brunner Island Switchyard") and the demarcation point where ownership of the transmission line transfers to Mid-Atlantic Interstate Transmission, LLC ("MAIT") (the "Project"). The BI-Yorkana Line Segment connects the Brunner Island Switchyard to MAIT's Yorkana 230-115 kV Switchyard in East Manchester Township, York County, Pennsylvania (the "MAIT Yorkana Switchyard"). The Project involves the removal and replacement of three existing steel lattice structures with three new steel monopoles within the existing 150-foot-wide right-of-way ("ROW"). Specifically, two of the three existing structures located southeast of the Brunner Island Switchyard are owned by PPL Electric and the third existing structure (Structure #1055-1 on **Figure 3-1 of Attachment 3**) is owned by MAIT. The existing system configuration and the proposed system configuration are presented below on **Figures 1-1** and **1-2**, respectively.

The Project, as approved by PJM Interconnection, LLC ("PJM"), involves replacing the 1590 aluminum conductor steel reinforced ("ACSR") conductor with double bundle 1590 ACSR conductor to increase the line rating. The Project is required to resolve a thermal overload violation on PPL Electric's section of the BI-Yorkana Line Segment.

Subject to the Commission's approval, construction will begin in August 2026 to support an in-service date of December 2026. The estimated cost of this Project is approximately $2.5 Million for PPL Electric and approximately $1.8 Million for MAIT, as described below, and those costs will be allocated to PPL Electric Customers.[1]

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

2.0 TRANSMISSION SYSTEM PLANNING PROCESS

The nation's interconnected transmission grid serves as the backbone for the safe and reliable delivery of large amounts of electricity from generating stations over substantial distances to customers served by transmission and local distribution systems. It is critically important that this interconnected transmission system (*i.e.*, the "Transmission Grid") be planned and designed to ensure that reliable electric service can be provided under all loading conditions, including when certain elements of the Transmission Grid are out of service (system contingencies) due to planned or unplanned outages.

Robust transmission planning assures that the transmission system can supply electricity to all customer loads in a manner that is reliable and economical. This system planning process ensures that both the Bulk Electric System ("BES")[2] and non-Bulk Electric System (non-BES)[3] are planned and constructed so that:

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

PJM is a Federal Energy Regulatory Commission ("FERC")-approved Regional Transmission Organization ("RTO") charged with ensuring the reliability of the electric transmission system under its functional control (100 kV and above) and coordinating the movement of electricity in all or parts of 13 states and the District of Columbia, including Pennsylvania. In order to ensure reliable transmission service, PJM prepares an annual Regional Transmission Expansion Plan ("RTEP")[4] to identify system

[2] Bulk Electric System (BES) – Includes transmission facilities operated at voltages of 100kV or higher.

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

[4] 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

reinforcements that are required to, among other things, meet the NERC Reliability Standards, PJM reliability planning criteria, and Transmission Owner reliability criteria.

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

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

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

approval process for the RTEP, the obligation of transmission owners to build transmission upgrades included in the RTEP, and the process by which interregional transmission upgrades will be developed.

3.0 THE NEED FOR THE PROJECT

3.1 Existing System

The existing BI-Yorkana Line Segment travels generally north/northeast from the MAIT Yorkana Switchyard to the Brunner Island Switchyard in East Manchester Township, York County. While MAIT owns the majority of the existing line, PPL Electric owns the last 0.64-mile section of line between the Brunner Island Switchyard and the demarcation point with MAIT (see Structure 1055-1 on **Figure 3-1** in **Attachment 3**). The BI-Yorkana Line Segment is part of the larger regional 230 kV system that supplies load in southeastern Pennsylvania. The conductor of the PPL Electric section of the BI-Yorkana Line Segment is the limiting component of the transmission line.

A one-line diagram of the existing 230 kV system is provided as **Figure 1-3**. A map of the existing system alignment is provided as **Figure 1-1**.

3.2 Project Need

In July 2022, PJM opened a Proposal Window to solicit proposals to address, among other things, transmission reliability issues in the Allegheny Power Systems ("APS", a FirstEnergy Company), Baltimore Gas & Electric Company ("BGE", an Exelon Company), Metropolitan Edison, now known as FirstEnergy Pennsylvania Electric Company, ("Met-Ed", a FirstEnergy Company), and Philadelphia Electric Company ("PECO", an Exelon Company) systems. PJM identified seven facilities with thermal overloads and four facilities with voltage violations. PJM received nine proposals specifically to address the identified reliability concerns. PJM evaluated the proposals in three different combinations of projects (Options 1 through 3). PJM conducted a do no harm ("DNH") analysis on each of the three options. In the DNH analysis, a thermal overload was identified on the BI-Yorkana Line Segment for both Options 1 and 2. After evaluation and review with stakeholders, PJM selected Option 1, because the solution is the most cost effective, solves the reliability issues, and utilizes existing facilities. On February 15, 2023, the PJM Board approved the Project as a Baseline Upgrade with number B3774. MAIT's scope of the Project was assigned Baseline Upgrade number B3774.2, and is anticipated to receive PJM Board approval in July 2026.

4.0 ALTERNATIVES

Because this overload was identified in the DNH analysis of the Proposal Window, PPL Electric had not submitted a formal proposal to PJM. Instead, PJM identified the overload and inquired from PPL Electric the scope and cost to address the overload violation. PPL Electric proposed to rebuild the BI-Yorkana Line Segment that it owned to address the thermal overload violations. The PPL Electric-owned section of the BI-Yorkana Line Segment had already been reconductored in 2017. PPL Electric also proposed to rebuild their owned section to double bundle conductor per phase to substantially raise the conductor rating and resolve any future needs.

To resolve the transmission reliability issues in the APS, BGE, Met-Ed and PECO systems, PJM evaluated a combination of nine proposals (including PPL Electric's above proposal) in three different options:

- Option 1 – All upgrades to existing facilities (i.e., the Proposed Solution).
- Option 2 – Upgrades to existing facilities and one new 230kV circuit using existing ROW.
- Option 3 – Upgrades to existing facilities and greenfield (including new substations and lines).

PJM selected Option 1 as the Proposed Solution, as the combination resolved all identified violations, was the least cost, and involved exclusively upgrades to existing facilities. **Table 2-1** provides the PJM summary of all the proposals received in Option 1. **Table 2-2** provides the PJM summary of all the proposals received in Option 2. **Table 2-3** provides the PJM summary of all the proposals received in Option 3.

Table 2-1. PJM RTEP 2022 Window 1 Cluster 2 Option 1 Alternative Analysis

APS, BGE, MetEd, PECO and PPL Transmission Zone: Baseline Cluster #2 Proposals Evaluation

2022 RTEP Window 1 Cluster 2 - Second Read

Option #1			
Proposing Entity	**Project Discription**	**TO Zone**	**Cost Estimate (M)**
PECO	Replace 4 meters and bus work inside Peach Bottom substation. (b3728.2)	PECO	3.8
BGE	Increase Ratings of breaker bushings for the two breakers on 500kV line 5012 at Conastone Substation. (b3728.1)	BGE	2
APS	Reconductor 27.3 miles of the Messick Road - Morgan 138 kV Line from 556 ACSR to 954 ACSR At Messick Road Substation: -Replace 138 kV wavetrap, circuit breaker, CT's, disconnect switch, and substation conductor. - Upgrade relaying At Morgan Substation: - Upgrade Relaying	APS	49.23
MATLIT (#209)	Rebuild/Reconductor the Germantown - Lincoln 115 kV Line. Approximately 7.6 miles. Upgrade limiting terminal equipment at Lincoln, Germantown and Straban.	MetEd	17.36
MATLIT (#880)	Install second 500/230kV Transformer with additional 500 and 230 bus expansions.	MetEd	30.19
BGE (#94)	Reconductor two (2) 230 kV circuits from Conastone to Northwest #2.	BGE	37.76
BGE (#912)	Rebuild 1.4 miles of existing single circuit 230 kV tower line between BGE's Graceton substation to the PPL tie-line at the MD/PA state line to double circuit steel pole line with one (1) circuit installed to uprate 2303 circuit.	BGE	8.4
APS	At McConnellsburg 138 kV Substation: Install a 138 kV Breaker, Install 33 MVAR switched capacitor and Upgrade relaying	APS	3.05
Sub-total			**151.79**
Additional Upgrades due to DNH study			
PPL	Reconductor/rebuild 0.64 miles of the PPL side of the Brunner Island - Yorkana 230 kV	PPL	2.5
Total cost			**154.29**

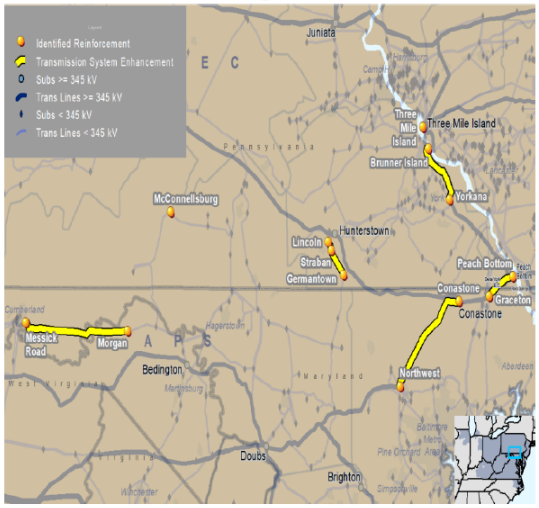

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Table 2-2. PJM RTEP 2022 Window 1 Cluster 2 Option 2 Alternative Analysis

APS, BGE, MetEd, PECO and PPL Transmission Zone: Baseline Cluster #2 Proposals Evaluation

2022 RTEP Window 1 Cluster 2 - Second Read

Option #2			
Proposing Entity	**Project Description**	**TO Zone**	**Cost Estimate (M)**
PECO	Replace 4 meters and bus work inside Peach Bottom substation. (b3728.2)	PECO	3.8
BGE	Increase Ratings of breaker bushings for the two breakers on 500kV line 5012 at Conastone Substation. (b3728.1)	BGE	2
APS	Reconductor 27.3 miles of the Messick Road - Morgan 138 kV Line from 556 ACSR to 954 ACSR At Messick Road Substation: -Replace 138 kV wavetrap, circuit breaker, CT's, disconnect switch, and substation conductor. - Upgrade relaying At Morgan Substation: - Upgrade Relaying	APS	49.23
MATLIT (#476)	Rebuild the Hunterstown – Carroll 115/138 kV Corridor as Double Circuit using 230kV construction standards. New circuit will be operated at 230kV. Existing circuit to remain at 115/138kV. Construct a new 230 kV Ring Bus at Carroll (PE) and add a new 230 kV Breaker to the Hunterstown 230 kV Substation	APS MetEd	148.83
MATLIT (#880)	Install second 500/230kV Transformer with additional 500 and 230 bus expansions.	MetEd	30.19
BGE (#94)	Reconductor two (2) 230 kV circuits from Conastone to Northwest #2.	BGE	37.76
BGE (#912)	Rebuild 1.4 miles of existing single circuit 230 kV tower line between BGE's Graceton substation to the PPL tie-line at the MD/PA state line to double circuit steel pole line with one (1) circuit installed to uprate 2303 circuit.	BGE	8.4
APS	At McConnellsburg 138 kV Susbtation: Install a 138 kV Breaker, Install 33 MVAR switched capacitor and Upgrade relaying	APS	3.05
Sub-total			**283.26**
Additional Upgrades due to DNH study			
PPL	Reconductor/rebuild 0.64 miles of the PPL side of the Brunner Island - Yorkana 230 kV	PPL	2.5
MetEd	Rebuild the 14.1-mile line section of the Jackson – TMI 230 kV line	MetEd	47.09
Total			**332.85**

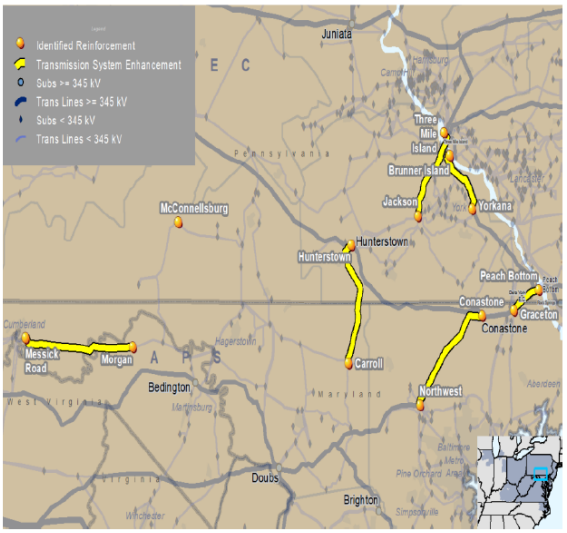

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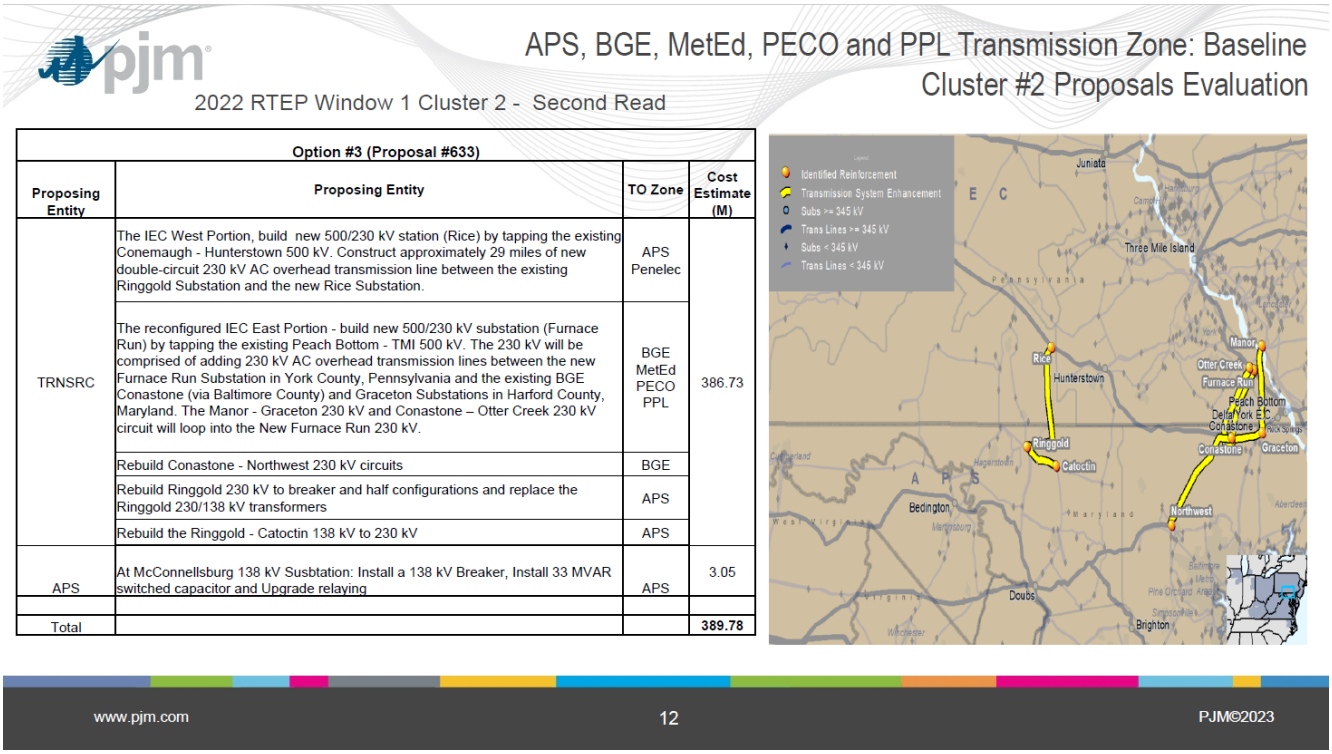
Table 2-3. PJM RTEP 2022 Window 1 Cluster 2 Option 3 Alternative Analysis



Option #3 (Proposal #633)			
Proposing Entity	**Proposing Entity**	**TO Zone**	**Cost Estimate (M)**
TRNSRC	The IEC West Portion, build new 500/230 kV station (Rice) by tapping the existing Conemaugh - Hunterstown 500 kV. Construct approximately 29 miles of new double-circuit 230 kV AC overhead transmission line between the existing Ringgold Substation and the new Rice Substation.	APS Penelec	386.73
	The reconfigured IEC East Portion - build new 500/230 kV substation (Furnace Run) by tapping the existing Peach Bottom - TMI 500 kV. The 230 kV will be comprised of adding 230 kV AC overhead transmission lines between the new Furnace Run Substation in York County, Pennsylvania and the existing BGE Conastone (via Baltimore County) and Graceton Substations in Harford County, Maryland. The Manor - Graceton 230 kV and Conastone – Otter Creek 230 kV circuit will loop into the New Furnace Run 230 kV.	BGE MetEd PECO PPL	
	Rebuild Conastone - Northwest 230 kV circuits	BGE	
	Rebuild Ringgold 230 kV to breaker and half configurations and replace the Ringgold 230/138 kV transformers	APS	
	Rebuild the Ringgold - Catoctin 138 kV to 230 kV	APS	
APS	At McConnellsburg 138 kV Susbtation: Install a 138 kV Breaker, Install 33 MVAR switched capacitor and Upgrade relaying	APS	3.05
Total			**389.78**

5.0 PROPOSED SOLUTION

After evaluation and review with stakeholders, PJM selected the Project as part of Option 1 to resolve the thermal overloads identified on the BI-Yorkana Line Segment and otherwise address the transmission reliability issues on numerous systems. The Proposed Solution includes rebuilding the approximately 0.64 miles of the PPL Electric-owned segment of the BI-Yorkana Line Segment with double bundle 1590 ACSR conductor. This will increase the capacity of PPL Electric's section of the BI-Yorkana Line Segment and resolve the thermal overloads identified by PJM.

On May 23, 2023, PJM and PPL Electric agreed to a Construction Responsibility Letter for PPL Electric to rebuild the BI-Yorkana Line Segment under Baseline number B3774. Pursuant to Schedule 6 of PJM's Amended and Restated Operating Agreement, and as stated in the Construction Responsibility Letter, PPL Electric is required to complete the Project by June 1, 2027. A one-line diagram of the proposed 230 kV system is provided as **Figure 1-4**. A map of the proposed 230 kV alignment is provided as **Figure 1-2**.

Figure 1-1: Existing System Configuration

Existing 230 kV Structure
Existing 230 kV Transmission Line
Parcel Boundary

Roads (PASDA 2022)
Parcels (York County 2024)
Imagery (Nearmap 2024)

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

Figure 1-1
Existing System Configuration
Brunner Island - Yorkana 230 kV Rebuild Project

0 250 500 Feet

Figure 1-2: Proposed System Configuration

- Existing Structure to Remain
- Existing Structure to Remove
- Proposed Structure
- Proposed 230 kV Centerline
- Existing 230 kV Transmission Line
- Railroad
- Parcel Boundary

Roads (PASDA 2022)
Parcels (York County 2024)
Imagery (Nearmap 2024)

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

Figure 1-2
Proposed System Configuration
Brunner Island - Yorkana 230 kV Rebuild Project

ppl wsp

0 250 500 Feet

N

Figure 1-3: Existing 230 kV One Line Diagram

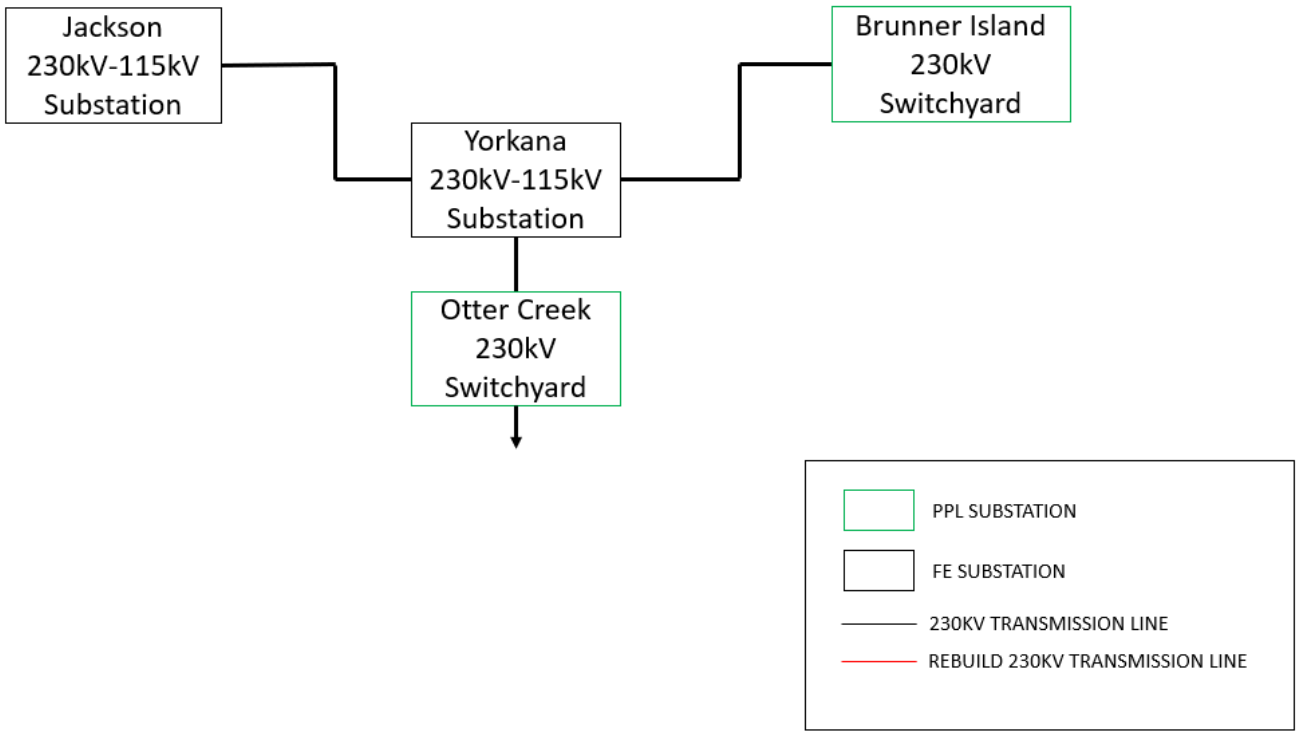


Figure 1-4: Proposed 230 kV One Line Diagram

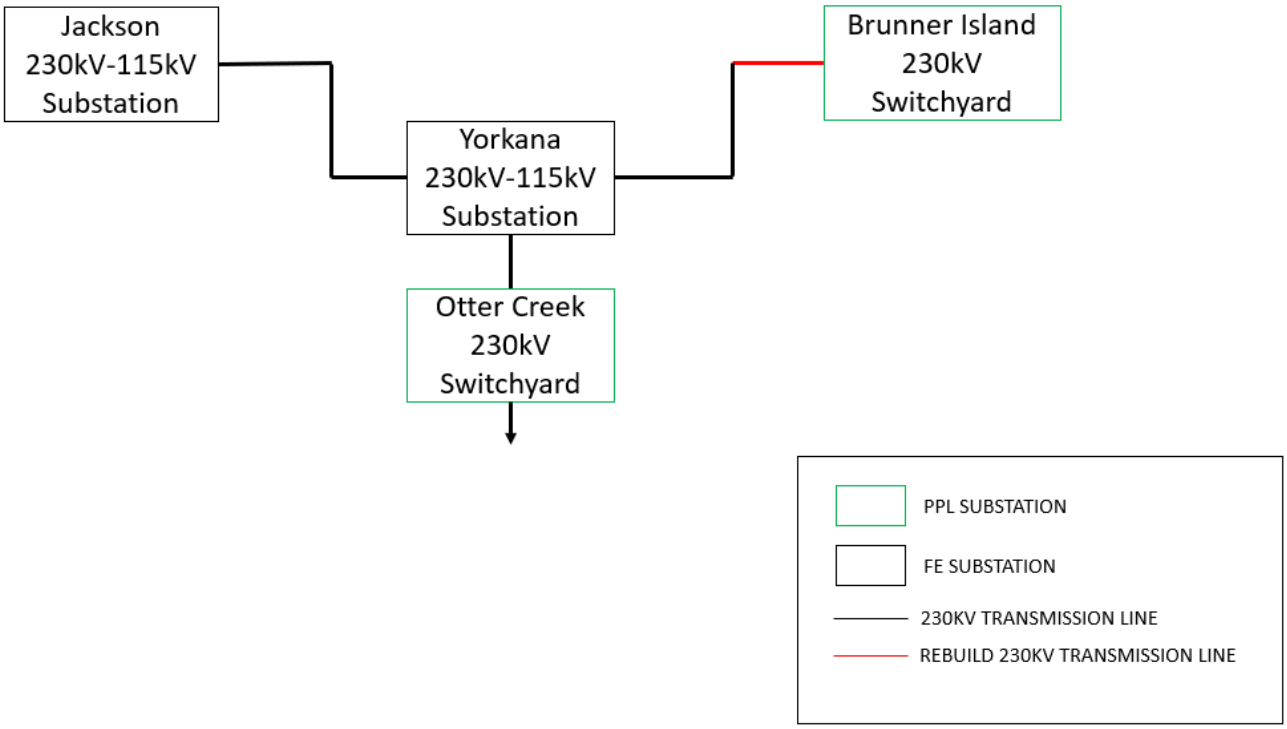


EXHIBIT 2

BRUNNER ISLAND–YORKANA 230 KV TRANSMISSION LINE REBUILD PROJECT

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1.0 INTRODUCTION

As explained in **Attachment 1**, PPL Electric Utilities Corporation ("PPL Electric") is requesting Pennsylvania Public Utility Commission ("PUC" or the "Commission") approval to rebuild an approximately 0.64-mile segment of the existing single-circuit Brunner Island – Yorkana 230 kV Transmission Line ("BI-Yorkana Line Segment") between the Brunner Island 230 kV Switchyard ("Brunner Island Switchyard") and the demarcation point where ownership of the transmission line transfers to Mid-Atlantic Interstate Transmission, LLC ("MAIT"), located in East Manchester Township, York County, Pennsylvania (the "Project"). The Project involves the removal and replacement of three existing steel lattice structures with three new steel monopoles within the existing 150-foot-wide right-of-way ("ROW"). Specifically, two of the three existing structures located southeast of the Brunner Island Switchyard are owned by PPL Electric and the third existing structure (Structure #1055-1 on **Figure 3-1 of Attachment 3**) is owned by MAIT.

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

Existing conductor for the 230 kV transmission line utilizes three 1590 kcmil[1], 45/7 stranding, "Lapwing" ACSR.[2] These conductors and ground wires are supported by a series of transmission line structures that include three single-circuit lattice towers. The arrangement also includes optical ground wire ("OPGW").

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

The existing structure heights range between 92 and 220 feet, with an average height of 156 feet. The proposed monopole structures will range in height from between approximately 135 and 222 feet with an average height of approximately 179 feet. **Table 2-1** provides a summary of the number and heights of the existing and proposed structures. **Figure 2-1** depicts the typical PPL

[1] 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.
[2] ACSR stands for aluminum conductor steel reinforced.

Electric structure type for the two proposed PPL Electric structures (Structures 3 and 4 on **Figure 3-1** in **Attachment 3**) nearest to the Brunner Island Switchyard. **Figure 2-2** depicts the typical MAIT structure type that will be used for the one MAIT-owned structure (Structure 1055-1 on **Figure 3-1** in **Attachment 3**). Collectively, all three structures will be utilized for the rebuilt BI-Yorkana Line Segment in connection with the Project.

Table 2-1. Existing and New Transmission Line Structures

Transmission Line	No. of Existing Structures to be Replaced	Existing Structure Height Range (feet)	Proposed No. of New Structures	Proposed Structure Height Range (feet)	Applicable Framing/ Specifications
Brunner Island – Yorkana 230 kV	3	92 to 220	3	135 to 222	PPL Electric Standard Framing 7-009-04 MAIT Standard Framing TR-230375
Total	**3**		**3**		

The proposed monopole structures for the BI-Yorkana Line Segment rebuild will be constructed in generally the same location as the existing structures. No structures will be placed on properties that currently do not have an existing structure. PPL Electric and MAIT have designed the proposed transmission line system so that it fits entirely within the existing right-of-way ("ROW").

The rebuilt 230 kV transmission lines are designed for future double-circuit capability but will initially operate as single-circuit. The lines will utilize three 1590 kcmil, 54/19 stranding "Falcon" ACSR. The fiber optic ground wire will be dual 144 count 0.791-inch diameter OPGW. The minimum conductor-to-ground clearance will be approximately 35 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 **Table 2-2** and **Table 2-3**.

Table 2-2. Design for Minimum Conductor Clearances for Selected Conductor[3]	
Condition	**Transmission Double-Circuit Design Clearance-to-Ground**
Heavy Ice (1" Ice at 0°C ambient temperature)	35 feet
Predicted extreme thermal load (125°C conductor temperature)	35 feet
Predicted blowout (6 psf, 16°C ambient temperature)	35 feet

Table 2-3. Conductor Thermal Rating 1590 kcmil 54/19 Stranding Falcon ACSR 125°C Normal Maximum Conductor			
Condition	**Ambient Temperature (°C)**	**Wind Speed (Ft./sec)**	**Ampacity (Amps)**
Summer Normal	35	0	3,252
Winter Normal	10	0	3,745
Summer Emergency	35	2.533	4,027
Winter Emergency	10	2.533	4,533

[3] 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. PPL Electric's Typical Double-Circuit 230 kV Steel 0° To 90° Angle Tension on Arm Structure

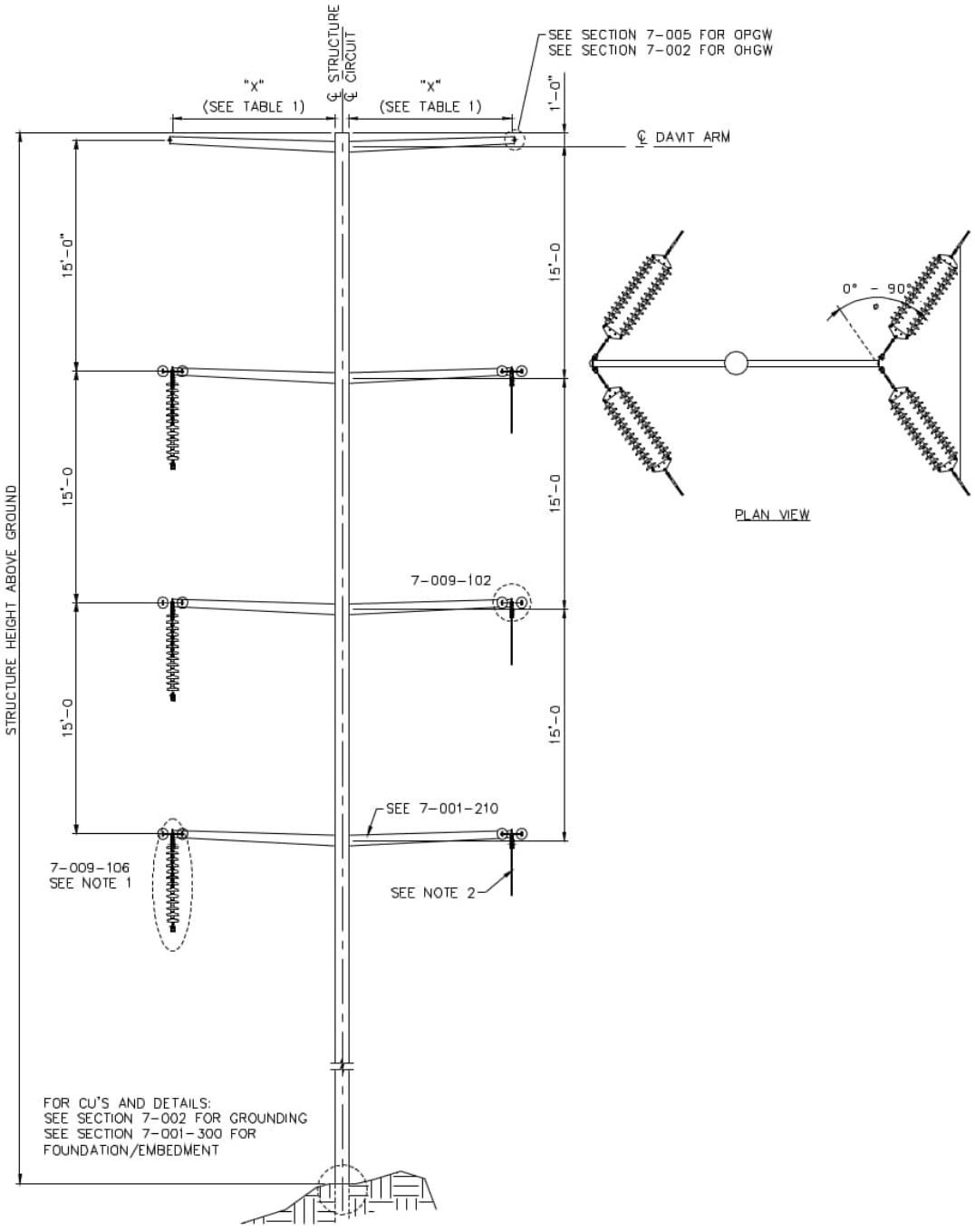

Figure 2-2. MAIT's Typical Double-Circuit Steel Dead-End Structure

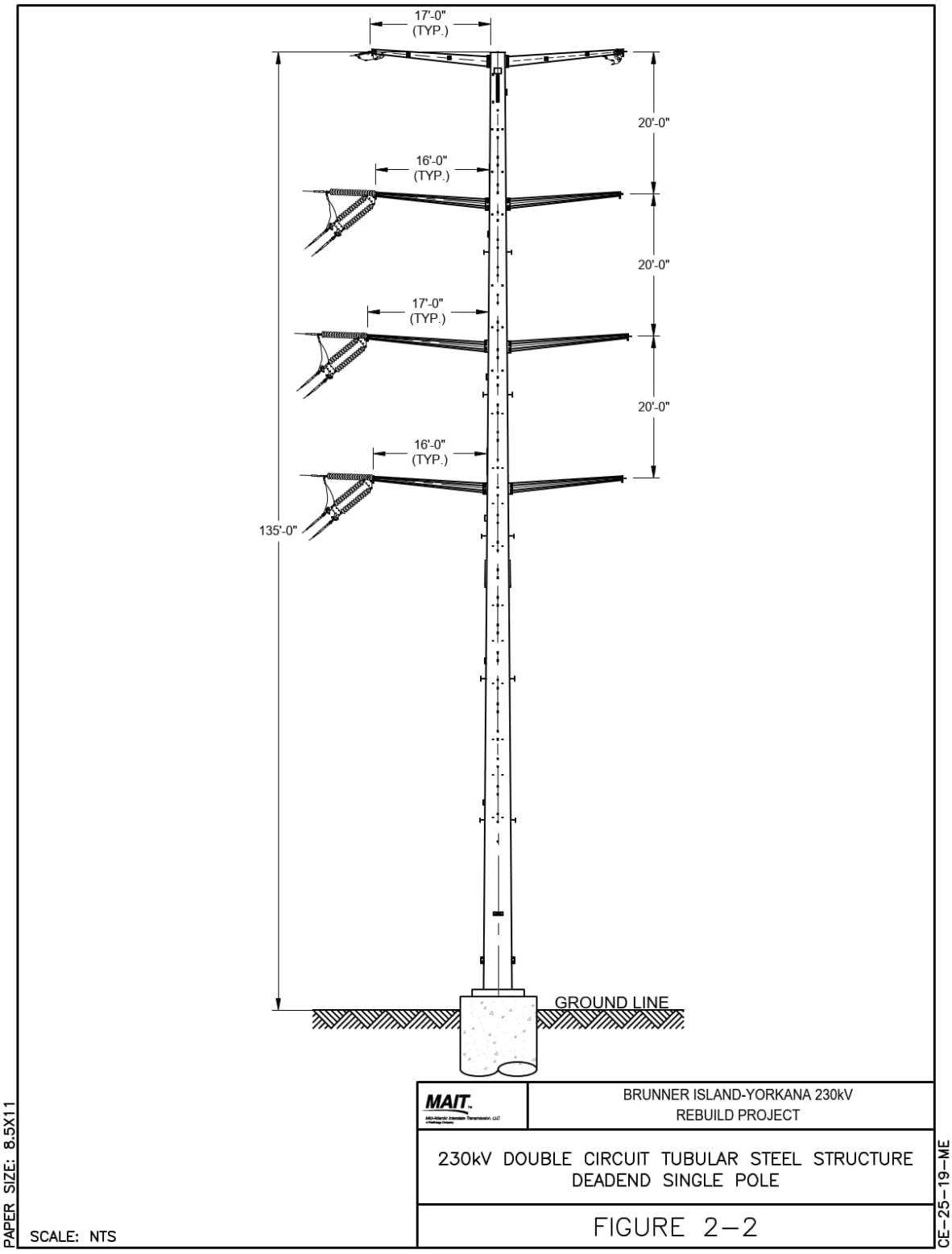

EXHIBIT 3

BRUNNER ISLAND–YORKANA 230 KV TRANSMISSION LINE REBUILD PROJECT

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1.0 INTRODUCTION

As explained in **Attachment 1**, PPL Electric Utilities Corporation ("PPL Electric") is requesting Pennsylvania Public Utility Commission ("PUC" or the "Commission") approval to rebuild an approximately 0.64-mile segment of the existing single-circuit Brunner Island – Yorkana 230 kV Transmission Line (the "BI-Yorkana Line Segment") between the Brunner Island 230 kV Switchyard ("Brunner Island Switchyard") and the demarcation point where ownership of the transmission line transfers to Mid-Atlantic Interstate Transmission, LLC ("MAIT"), located in East Manchester Township, York County, Pennsylvania (the "Project").

The rebuilt BI-Yorkana Line Segment will be slightly offset from the existing structure alignment but will remain on the same properties crossed by the existing alignment and entirely within the existing right-of-way ("ROW"). The existing ROW varies in width from 150 to 225 feet wide. As part of the Project, three existing structures will be replaced with three new structures, which will remain on the same properties. Specifically, two of the three existing structures located southeast of Brunner Island Switchyard are owned by PPL Electric and the remaining structure (Structure #1055-1 on **Figure 3-1**) is owned by MAIT. No new ROW is needed to support the Project. A network of existing access roads or temporary roads will be utilized during construction of the rebuilt transmission line. Detailed maps of the proposed rebuilt BI-Yorkana Line Segment and associated structures are provided in **Figure 3-1**.

Beginning from the east at the Brunner Island Switchyard, the existing transmission line crosses power station facilities and parking lots, before crossing the coal stockpiles located on the Brunner Island Steam Electric Station property. After crossing the coal stockpiles, the transmission line crosses two rail yards separated by a grassy median and State Route 1019 (Wago Road). After crossing another small grassy median, the transmission line crosses a mainline railroad with two tracks and vacant land before reaching the existing MAIT steel lattice structure at MAIT's Yorkana 230-115 kV Switchyard in East Manchester Township, York County, Pennsylvania (the "MAIT Yorkana Switchyard").

2.0 LAND USE

PPL Electric and MAIT evaluated the existing land uses within the existing ROW (the "Project Area"). The Project Area is generally bounded to the north and the west by Conewago Creek and the State Route 181 corridor; to the east by the Susquehanna River; and to the south by residential properties and the Royal Manchester Golf Links golf courses. Land uses immediately surrounding the Brunner Island Switchyard predominantly consist of industrial land and forested land, interspersed with some cultivated cropland.

The closest communications tower is located approximately 0.8 miles southwest of the Project Area. Several Norfolk Southern-owned railways serving the Brunner Island Steam Electric Station and one main railway, the Port Road Branch Railroad, are located approximately 0.25 miles west of the Brunner Island Switchyard. No pipelines are crossed by the Project. The first 0.4 miles of the Project Area shares a 225-foot-wide ROW with PPL Electric's existing Brunner Island – West Shore and Brunner Island – Williams Grove 230 kV transmission lines between the existing Brunner Island Switchyard and MAIT's proposed Structure 1055-1.

The closest active airport relative to the Project Area is the Donegal Springs Airport, a privately owned facility, located approximately 7 miles east of the Project Area. Harrisburg International Airport is the nearest active, publicly-owned airport, located approximately 7.5 miles northwest of the Project Area. Additionally, one private heliport, the York Electro-Panel Heliport, is located approximately 4 miles southeast of the Project Area. PPL Electric does not anticipate any interference with airport or heliport operations since the Project consists of new electrical facilities that are of a similar height as the existing electrical facilities and within the existing ROW. *See* **Attachment 2, Table 2-1**. However, PPL Electric will file any required documentation with the Federal Aviation Administration.

The proposed Project will not affect any national parks, state parks, local parks, recreational areas, natural landmarks, or other conserved lands as the entire Project utilizes existing ROW, which is not located within or near any such areas.

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. Based on State Historic Preservation Office ("SHPO") data, two eligible districts – the Northern Central Railway and the Pennsylvania Railroad Enola Branch historic railroads – are crossed by the BI-Yorkana Line Segment in the Project Area. The historic railroads share an overlapping corridor approximately 0.4 miles west of the Brunner Island Switchyard. Both the Pennsylvania Railroad Enola Branch and the Northern Central Railway are listed as National Register of Historic Places ("NRHP")-eligible. No other eligible or listed architectural resources are crossed by the BI-Yorkana Line Segment in the Project Area. Eligible and listed structures and districts within one 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
Pennsylvania Railroad: Main Line (Philadelphia to Harrisburg)	District	Eligible	Runs in a general northwest – southeast direction along the eastern bank of the Susquehanna River in the Project Area
Pennsylvania Railroad: Enola Branch Low Grade Freight Line (Enola to Parkesburg)	District	Eligible	Runs in a general northwest – southeast direction and bisects the Project Area
Northern Central Railway	District	Eligible	Runs in a general northwest – southeast direction and bisects the Project Area
Unnamed Building	Building	Undetermined	107 Front Street
Saint Paul's Church	Building	Undetermined	127 York Street
Robert E. Ness Property	Building	Undetermined	York Haven Road
Unnamed Bridge	Bridge	Undetermined	Wago Road
Cassel's School	Building	Undetermined	Cassel Road
2365 River Road	Building	Undetermined	2365 River Road
2330 River Road	Building	Undetermined	2330 River Road

PPL Electric and MAIT are coordinating with the PHMC for the modifications being made to the BI-Yorkana Line Segment. 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 and MAIT 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 – including the historic railroads and any other NRHP-eligible resources – that may be located within the Project Area.

4.0 NATURAL FEATURES

Unique Natural Features

According to the Pennsylvania Department of Conservation and Natural Resources ("DCNR"), the Project Area crosses or passes near several unique geological, scenic or natural areas. A Natural Area Inventory ("NAI") has been prepared by The Nature Conservancy in collaboration with the Pennsylvania Natural Heritage Program ("PNHP") for York County (2008). The Brunner (Lows) Island NAI area is an exceptional-rated natural heritage area that also encompasses a significant portion of the Project Area. This area is characterized by "several large islands that retain most of their natural conditions. This portion of river has extensive bedrock outcrop. Shallow water habitats and adjacent forested shoreline support 8 animal & 2 plant species of concern." PPL Electric and MAIT will coordinate with East Manchester Township and DCNR to minimize any potential impacts to the Brunner (Lows) Island NAI area.

The Project does not cross any other natural areas with supporting habitat identified within the NAI and there are no other NAI areas are located within one mile of the Project Area. Additionally, the Project is not anticipated to result in any new impacts to the identified Brunner (Lows) Island NAI area, since the proposed structures will be replaced in proximity to existing structures within the existing and maintained ROW. The Project will not affect any other unique geological, scenic, or natural areas.

Soils

The Project Area is gently undulating, crossing mostly industrialized areas with sporadic agricultural and vegetative land. Topography within the Project Area ranges between

approximately 270 feet and approximately 390 feet above mean sea level ("msl"). Soils present within the Project Area predominantly consist of urban land and pits and quarries associated with the Brunner Island Steam Electric Station. Undeveloped portions of the Project Area primarily cross well-drained silty, sandy, or channery loam soils on shale and sandstone, with slopes ranging from 8 to 25 percent.

Erosion and Sedimentation ("E&S") control plans were developed and will be implemented for the Project to minimize the displacement of soils. These plans will require prior approval from the York County Conservation District. Coverage under a National Pollutant Discharge Elimination System ("NPDES") permit (PAG-02, Discharges of Stormwater Associated with Construction Activities) will also be required from the Pennsylvania Department of Environmental Protection ("PADEP") during construction. During construction, PPL Electric and MAIT will adhere to all conditions specified in the NPDES permit. Impacts to local soil resources are anticipated to be minimal.

Waterways and Wetlands

For federal and state permitting purposes, the wetlands and waterways within the Project Area have been delineated, surveyed, and illustrated according to regulatory standards (see **Figure 3-1**). MAIT retained an environmental consultant to identify and delineate all waterways and wetlands within an approximately 3.5-acre area surrounding the existing Structure 1055-1 and 16 feet on both sides of the approximately 0.8-mile existing access road off Board Road. MAIT's consultant identified one wetland, one watercourse, two ephemeral channels, and one stormwater conveyance. These delineated features are not anticipated to be impacted during construction. Access roads and work areas associated with replacement of Structure 1055-1 were included in MAIT's PAG-02 permit application, which was submitted to the PADEP and the York County Conservation District in November 2025.

PPL Electric conducted a wetland delineation within the Project Area and identified three ponds, six wetlands, one swale, one stormwater basin, and one unnamed watercourse. Of these features, the swale, one pond, and three wetlands are crossed by the BI-Yorkana Line Segment, including: two isolated freshwater emergent ("PEM") wetlands; one PEM wetland associated with a PEM/freshwater forested ("PFO") complex, and one unconsolidated bottom ("PUB") pond.

Additionally, one PFO wetland complex, two ponds, and an unnamed watercourse were delineated north of the existing Brunner Island – West Shore and Brunner Island – Williams Grove 230 kV transmission lines. These additional features are not crossed by the Project. PPL Electric will avoid impacts to wetlands and streams where possible by aerially spanning these features, and otherwise adhering to any conditions set forth in applicable environmental permits.

PPL Electric and MAIT will obtain all necessary permits from PADEP and the United States Army Corps of Engineers ("USACE") and will comply with all the terms and conditions placed on those permits. Applicable parties will continue consultation with the York County Conservation District and have prepared the required soil erosion and sedimentation control plans. PPL Electric and MAIT are obtaining NPDES permits as discussed above and will comply with any conditions placed on those permits.

100-Year Floodplains and Regulatory Floodway

The National Flood Hazard Layer for York 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 Project spans the FEMA 100-year floodplain associated with Conewago Creek, as it will be crossed by the wires, but the tower structures are located outside of the floodplain. The Project does not cross or span any FEMA regulatory floodway.

Minimal impacts to the floodplain area are anticipated by the proposed Project activities, since the proposed electric transmission structures will be constructed outside the 100-year floodplain in proximity to existing structures. Nonetheless, coordination with PADEP regarding this potential impact will be conducted during the permitting phase of the Project.

Vegetation

Vegetative cover in the Project Area primarily consists of maintained ROW or developed industrial land. The existing ROW areas for the transmission lines have previously been cleared of woody vegetation and no extensive tree clearing is anticipated as part of the Project. If any minimal vegetation clearing is necessary to maintain existing ROW, PPL Electric will adhere to 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 by PPL Electric for the Project on September 24, 2024 to assess the potential presence of threatened and endangered species and/or special concern species in the Project Area. Specific agencies reviewing the Project included the Pennsylvania Game Commission ("PGC"), Pennsylvania Fish & Boat Commission ("PFBC"), DCNR, and the United States Fish and Wildlife Service.

The PNDI search indicated that the Project is located within the range of the peregrine falcon (*Falco peregrinus*), which is a special concern species. Based on this review, PGC has requested further review of the Project. PPL Electric previously consulted with the PGC in November 2016 on the prior upgrade to this transmission line, and the PGC determined that no impact was likely due to the nature of the project, timing of the project, and immediate location of the species of concern. Because the nature, timing and location of this Project has not changed from the prior upgrade that PGC reviewed, PPL Electric will seek concurrence from PGC that there is no impact to the peregrine falcon, and will otherwise continue to coordinate with PGC.

The remaining agencies reported no known impacts to threatened and endangered species and/or special concern species and resources within the Project Area. Therefore, no further consultation with DCNR, PFBC, or USFWS is required for this Project.

A PNDI was also run by MAIT for the Project on February 12, 2026 to assess the potential presence of threatened and endangered species and/or special concern species. PGC and PFBC have identified Elkoe mussel, Triangle Floater mussel, and Green Floater mussel as potentially-impacted by the MAIT-portions of the Project. However, no in-stream work will be required for this Project and therefore no conservation measures will be needed for those species. DCNR and USFWS did not list any potential impacts to protected species.

PPL Electric and MAIT will continue to consult with the applicable agencies regarding potential impacts to protected species. PPL Electric and MAIT will obtain all approvals and permits

necessary for the construction of the Project and will comply with any conditions placed on those permits.

Figure 3-1. Aerial Map of the Project

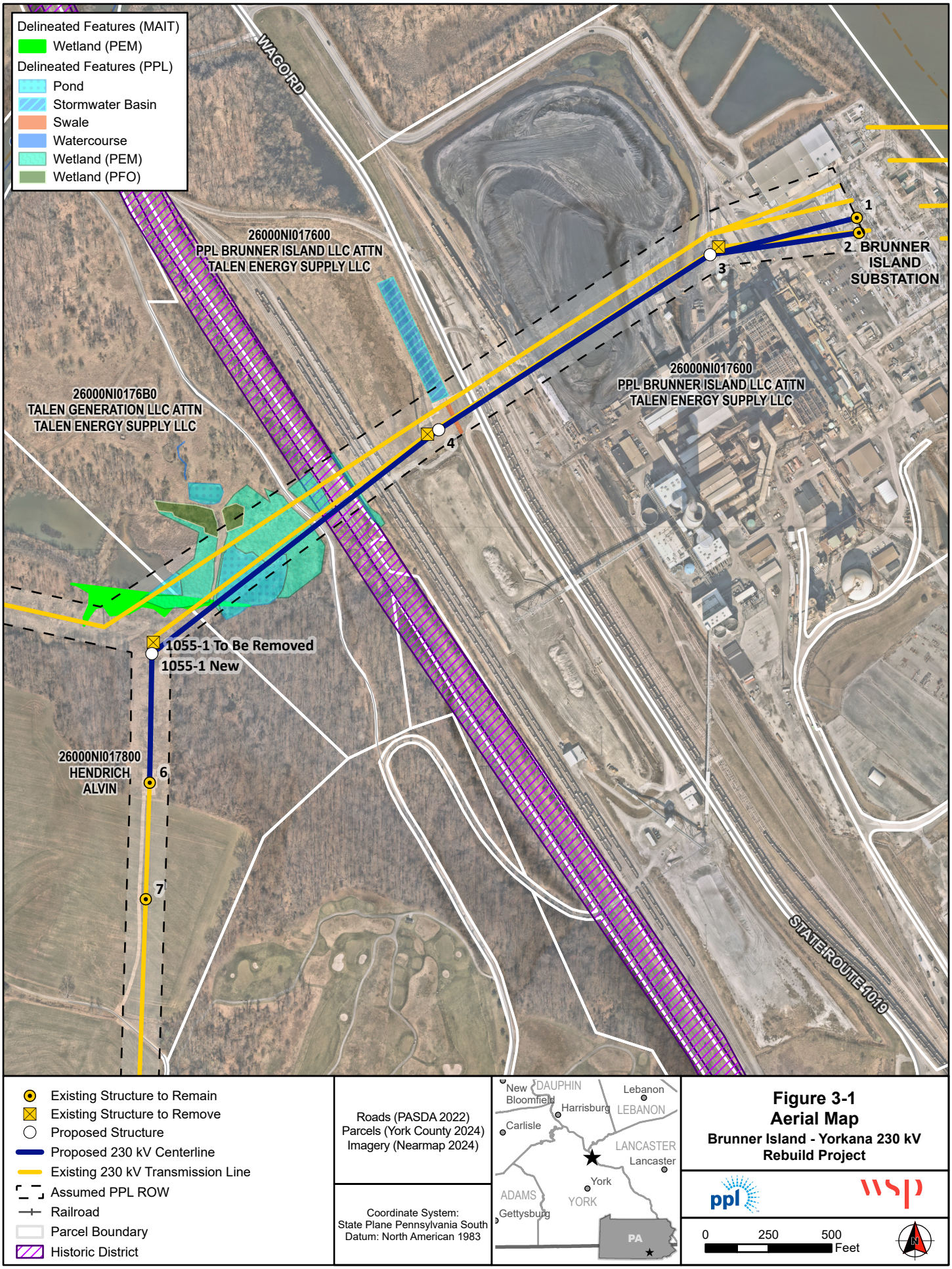

Figure 3-1
Aerial Map
Brunner Island - Yorkana 230 kV Rebuild Project

EXHIBIT 4

BRUNNER ISLAND – YORKANA 230 KV REBUILD PROJECT

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1.0. DESIGN CONSIDERATIONS

PPL Electric Utilities Corporation's ("PPL Electric") new and rebuilt transmission lines – including the lines proposed to be rebuilt for this Project – 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 – including this Project – 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, and which will be followed for this Project:

- 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 three feet higher than NESC standards.

EXHIBIT 5

BRUNNER ISLAND–YORKANA 230 KV TRANSMISSION LINE REBUILD PROJECT

Federal Agencies

U.S. Army Corps of Engineers
Baltimore District
2 Hopkins Plaza
Baltimore, Maryland 21201
Attn: Public Affairs Office

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

State Agencies

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

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

Pennsylvania Department of Transportation
Commonwealth Keystone Building
400 North Street, Fifth Floor
Harrisburg, Pennsylvania 17120
Attn: Jeffrey Spotts, Chief Counsel

Pennsylvania Historical and Museum
Commission Bureau for Historic Preservation Commonwealth
Keystone Building, Second Floor
400 North Street
Harrisburg, Pennsylvania 17120-0093
Attn: Ms. Emma Diehl, Division Manager

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: Darryl A. Lawrence, Consumer Advocate

Pennsylvania Office of Small Business Advocate
555 Walnut Street
1st Floor Forum Place
Harrisburg, Pennsylvania 17101
Attn: Steven C. Gray, Senior Supervising Assistant Small Business Advocate

County Agencies

York County Planning Commission
28 E Market Street, 3rd Floor
York, Pennsylvania 17401
Attn: Mike Pritchard, Director

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

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

Municipalities

East Manchester Township
5080 North Sherman Street Extended
Mount Wolf, Pennsylvania 17347

Landowners

Alvin Hendrich
5544 Board Road
Mount Wolf, Pennsylvania 17347

Talen Generation LLC
600 Hamilton Street, Suite #600
Allentown, Pennsylvania 18101