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File #: 204033

April 22, 2025

VIA ELECTRONIC FILING

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

Re: Letter Of Notification Of PPL Electric Utilities Corporation, Filed Pursuant To 52 Pa. Code Chapter 57 Subchapter G, For Approval To Rebuild Approximately 10.1 Miles Of Existing Single-Circuit 230 kV Transmission Line Between The Fox Hill 230 kV Substation And The Bushkill 230 kV Switchyard That Are Located In Monroe County, Pennsylvania
Docket No. A-2025-3054291

Dear Secretary Homsher:

Attached, on behalf of PPL Electric Utilities Corporation ("PPL Electric"), is information being supplied to the Pennsylvania Public Utility Commission's ("Commission") Bureau of Technical Utility Services ("TUS") in response to TUS Set I Data Requests regarding the above-captioned proceeding.

PPL Electric's responses to these data requests include the following **CONFIDENTIAL** and **PROPRIETARY** attachments.

CONFIDENTIAL Attachment TUS-I-1 Osmose Inspection Report

CONFIDENTIAL Attachment TUS-I-2 Third Party Inspection Report

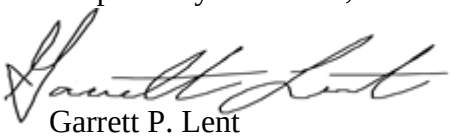
Each of these attachments contain **CONFIDENTIAL** and **PROPRIETARY** information and are being filed separately with the Commission via ShareFile.

REQUEST FOR CONFIDENTIAL TREATMENT OF PROPRIETY INFORMATION

Each of the enclosures are marked "**CONFIDENTIAL AND PROPRIETARY**" because they contain commercially sensitive information, including, but not limited to, details about the condition of existing PPL Electric transmission structures and analysis of the same. PPL Electric requests that the copies of the materials that have been labeled **"CONFIDENTIAL AND PROPRIETARY"** be given confidential treatment by the Commission, including its various offices and bureaus. That is, PPL Electric requests that the confidential materials be excluded from the Commission's public document folder and that the confidential copies not be disclosed to the public.

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

Respectfully submitted,



Garrett P. Lent

GPL/dmc
Enclosures

cc: Jordan Van Order (*via email*)

WITNESS: Joseph B. Lookup

PPL Electric Utilities Corporation
Response to the Data Request of the
Bureau of Technical Utility Services
Dated April 1, 2025
Docket No. A-2025-3054291

A-1	Reference the Letter of Notification, Paragraph 25. Please provide a copy of the Osmose inspection report.
PPL Response	See **CONFIDENTIAL** attachment "A-1 Osmose Inspection Report."

WITNESS: Joseph B. Lookup

PPL Electric Utilities Corporation
Response to the Data Request of the
Bureau of Technical Utility Services
Dated April 1, 2025
Docket No. A-2025-3054291

A-2	Reference the Letter of Notification, Paragraph 26. Please provide a copy of the third-party inspection report.
PPL Response	See **CONFIDENTIAL** attachment "A-2 Third Party Inspection Report."

WITNESS: Joseph B. Lookup

PPL Electric Utilities Corporation
Response to the Data Request of the
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Dated April 1, 2025
Docket No. A-2025-3054291

A-3	Reference the Letter of Notification, Paragraph 27. Please provide a 5-year history of maintenance expenses on the subject transmission lines.
PPL Response	See attachment “A-3 5 Year Maintenance History.”

Maintenance Work Type	Year					
	2020	2021	2022	2023	2024	Total Cost
Steel Structure Repairs	$ 50,914.15	$ 209,284.06	$ 174,174.69	$ 699,697.65	$ 330.09	$ 1,134,400.64
Insulator Replacements	$ 216,017.12	$ 90,994.39	$ 1,864.32	$ -	$ -	$ 308,875.83
C-TAG Replacements	$ 1,071,157.08	$ 51.66	$ -	$ 26,494.07	$ 0.31	$ 1,097,703.12
Total Cost	$ 1,338,088.35	$ 300,330.11	$ 176,039.01	$ 726,191.72	$ 330.40	$ 2,540,979.59

WITNESS: Joseph B. Lookup

PPL Electric Utilities Corporation
Response to the Data Request of the
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A-4 Reference the Letter of Notification, Paragraph 28. Please provide the specific IEEE reference.

PPL Response IEEE's *Galvanic Corrosion of High Temperature Low Sag Aluminum Conductor Composite Core and Conventional Aluminum Conductor Steel Reinforced Overhead High Voltage Conductors* states:

"Both the aluminum strands and the steel core in ACSR conductors are prone to corrosion, and the direct contact between the two materials means that it is inherently susceptive to galvanic corrosion"

WITNESS: Joseph B. Lookup

PPL Electric Utilities Corporation
Response to the Data Request of the
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Dated April 1, 2025
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A-5	Reference the Letter of Notification, Paragraph 35. Please provide the date(s) the proposed project was presented at the PJM TEAC meetings.
PPL Response	The proposed project was presented at the 1/7/2016 PJM TEAC Meeting.

WITNESS: Joseph B. Lookup

PPL Electric Utilities Corporation
Response to the Data Request of the
Bureau of Technical Utility Services
Dated April 1, 2025
Docket No. A-2025-3054291

A-6	Reference the Letter of Notification, Attachment 1, page 6. Please provide a detailed explanation as to why PPL Electric is replacing the six existing steel poles.
PPL Response	The planned conductor (1590 ACSS) and fiber (2-144ct OPGW) results in a heavier loading on the structures than the existing conductor and shieldwire. All eleven (11) existing steel poles were analyzed through PPL's modeling system to ensure the poles could withstand the new conductor and fiber. The five (5) steel poles set to remain are custom steel poles that passed when modeled with the new conductor and fiber attached. The remaining six (6) are light duty steel poles that structurally failed when the new loadings from the conductor and fiber were applied. Therefore, they must be replaced.

WITNESS: Joseph B. Lookup

PPL Electric Utilities Corporation
Response to the Data Request of the
Bureau of Technical Utility Services
Dated April 1, 2025
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A-7	Reference the Letter of Notification, Attachment 1, page 7. Please provide the approximate cost to apply protect coatings.
PPL Response	The cost to apply protective coatings is a base rate of $2,000 per structure, plus an assumed yearly inflation of 3%. Applying the coating at the recommended cadence of every 10 years to all structures would result in a total cost of $728,729 in the next 45 years. The protective coating costs would be in addition to other maintenance costs required to continue maintaining the structure during its life cycle. Additionally, structures cannot receive protective coating treatments indefinitely and at some point the condition of the steel will not allow for protective coating maintenance. Given the age of the Fox Hill-Shawnee structures it is uncertain how many additional protective coating treatments would be able to be performed.

WITNESS: Joseph B. Lookup

PPL Electric Utilities Corporation
Response to the Data Request of the
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Dated April 1, 2025
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A-8 Reference the Letter of Notification, Attachment 1, Section 5.0. Please explain whether advanced composite core conductors were considered as part of the solution. If not, please provide a detailed explanation as to why.

PPL Response

Composite core conductor has been evaluated on a wholistic basis, and overall does not offer substantial benefit over steel core conductors. Specifically, composite conductor sag performance is poor under ice conditions, particularly the 1" radial ice loading cases shared by all PPL OpCos, due to its low elastic modulus. The sag performance under ice negates the high temperature sag advantages. Composite core conductor is also more expensive than similar steel core options. In most cases, the overall most efficient conductor is ACSR, ACSS, or high strength ACSS, depending on specific project needs. Steel core conductors are also easier to install and utilize familiar hardware and installation/handling procedures. The primary benefit of composite core conductor in PPL's territory is its lower weight, and therefore may be advantageous for certain circumstances where mechanical/structural capacity is limited, but these projects are analyzed on a case-by-case basis

WITNESS: Joseph B. Lookup

PPL Electric Utilities Corporation
Response to the Data Request of the
Bureau of Technical Utility Services
Dated April 1, 2025
Docket No. A-2025-3054291

A-9	Reference the Letter of Notification, Attachment 1, Section 5.0. Please explain whether dynamic line rating was considered as part of the solution. If not, please provide a detailed explanation as to why.
PPL Response	The need for the project is based on asset condition and not line loading. Therefore, the addition of DLR would not impact the need to rebuild the line.

WITNESS: Joseph B. Lookup

PPL Electric Utilities Corporation
Response to the Data Request of the
Bureau of Technical Utility Services
Dated April 1, 2025
Docket No. A-2025-3054291

A-10	Reference the Letter of Notification, Attachment 2, page 2. Please explain whether the existing 795 kcmil, 54/7 stranding, "Condor" ACSR conductor will remain on spans that will not be replaced. If so, please explain whether this conductor will be the capacity limiting section of the rebuilt line.
PPL Response	The PPL owned section that will remain near Fox Hill Substation consists of 1590 45/7 ACSR. This section will become the limiting component of the PPL owned section of the Fox Hill – Shawnee 230kV line after the rebuild. The entire PPL owned section of the Shawnee – Bushkill 230kV line will be rebuilt with 1590 54/19 ACSS.

WITNESS: Joseph B. Lookup

PPL Electric Utilities Corporation
Response to the Data Request of the
Bureau of Technical Utility Services
Dated April 1, 2025
Docket No. A-2025-3054291

A-11 Reference the Letter of Notification, Attachment 2, page 2, Please explain whether the proposed project will increase the capacity of the Fox Hill – Shawnee and Shawnee – Bushkill 230 kV lines. If so, please provide the capacity before and after the proposed project.

PPL Response

The transmission conductor rating of the PPL section of Fox Hill – Shawnee 230 kV line before the proposed project:

Summer Normal: 499 MVA
Summer Emergency: 615 MVA
Winter Normal: 550 MVA
Winter Emergency: 668 MVA

The transmission conductor rating of the PPL section of Fox Hill – Shawnee 230 kV line after the proposed project:

Summer Normal: 647 MVA
Summer Emergency: 801 MVA
Winter Normal: 746 MVA
Winter Emergency: 903 MVA

The transmission conductor rating of the PPL section of Shawnee - Bushkill 230 kV line before the proposed project:

Summer Normal: 499 MVA
Summer Emergency: 615 MVA
Winter Normal: 550 MVA
Winter Emergency: 668 MVA

The transmission conductor rating of the PPL section of Shawnee - Bushkill 230 kV line after the proposed project:

Summer Normal: 933 MVA
Summer Emergency: 1079 MVA
Winter Normal: 998 MVA
Winter Emergency: 1143 MVA

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: April 21, 2025

Joseph B. Lookup