

**PENNSYLVANIA
PUBLIC UTILITY COMMISSION
Harrisburg, PA 17120**

Public Meeting held June 13, 2024

Commissioners Present:

Stephen M. DeFrank, Chairman
Kimberly Barrow, Vice Chair
Ralph V. Yanora
Kathryn L. Zerfuss
John F. Coleman Jr.

Letter of Notification of PPL Electric Utilities Corporation for approval to reconstruct the Harwood – East Palmerton 230 kV Transmission Line and Siegfried – East Palmerton 230 kV Transmission Line located in Jim Thorpe Borough and Banks, Franklin, Lehigh, Lower Towamensing, Packer, Penn Forest, and Towamensing Townships, Carbon County, Hazle Township, Luzerne County, and Allen and Lehigh Townships, Northampton County, Pennsylvania

Docket Number:
A-2024-3047924

ORDER

BY THE COMMISSION:

On March 26, 2024, PPL Electric Utilities Corporation (PPL Electric), Utility Code 110500, filed a Letter of Notification pursuant to 52 Pa. Code § 57.72(d)(1)(i) of the Pennsylvania Public Utility Commission's (Commission) transmission line siting regulation.

For the reasons expressed in this Order, the Letter of Notification is approved.

Copies of the Letter of Notification were served in accordance with Section 57.72(d)(3) and 57.74(b) & (c), 52 Pa. Code §§ 57.72(d)(3), 57.74(b) & (c), on the PA Department of Transportation, PA Department of Environmental Protection, PA Historical and Museum Commission, Carbon, Luzerne, and Northampton County Commissioners, Borough of Jim Thorpe and Allen, Banks, Franklin, Hazle, Lehigh, Lehigh, Lower Towamensing, Packer, Penn Forest, and Towamensing Townships, *et al.* No protests were filed. No hearings were held.

PPL Electric requests approval to reconstruct the Harwood – East Palmerton 230 kV Transmission Line and the Siegfried – East Palmerton 230 kV Transmission Line located in Jim Thorpe Borough and Banks, Franklin, Lehigh, Lower Towamensing, Packer, Penn Forest, and Towamensing Townships, Carbon County, Hazle Township, Luzerne County, and Allen and Lehigh Townships, Northampton County, Pennsylvania. The lines to be rebuilt connect the Harwood 230-69 kV Substation located in Luzerne County, the East Palmerton 230-69 kV Substation located in Carbon County, and the Siegfried 230-138-69 kV Substation located in Northampton County. Application page 1.

PPL Electric states that the reconstruction of the Harwood – East Palmerton and Siegfried – East Palmerton lines is necessary to resolve significant asset health condition concerns across the transmission lines associated with the presence of pack-out rust in the existing COR-TEN steel lattice towers. PPL Electric also states that the Harwood – East Palmerton and Siegfried – East Palmerton transmission lines were constructed in the early 1970s and include 221 weathering-steel COR-TEN steel lattice structures spanning approximately 40.2 miles. PPL Electric further states that COR-TEN lattice towers were commonly installed by the industry during this time because it was believed that the corrosion-resistant properties of weathering-steel would reduce future maintenance needs

and costs. Lastly, PPL Electric states that these towers had an expected service life of approximately 75 years at the time they were installed. Application ¶¶9, 20.

PPL Electric avers that independent field investigations and assessments were conducted in 2013 and 2019 on PPL Electric's 230 kV system and in 2023 and 2024 on the Harwood – East Palmerton and Siegfried – East Palmerton transmission lines. The investigations and assessments were conducted by separate third party entities and revealed that the aging COR-TEN structures on the 230 kV system including the Harwood – East Palmerton and Siegfried – East Palmerton transmission lines' facilities are showing signs of accelerated deterioration. PPL Electric also avers that based on the results of these assessments, the issue with COR-TEN lattice towers has accelerated the deterioration of these structures and has brought the assets to the end of their service life much sooner than would have been anticipated. PPL Electric further avers that at roughly 50 years of age, the COR-TEN lattice towers that comprise the Harwood – East Palmerton and Siegfried – East Palmerton lines have exceeded their useful life and can no longer be relied upon to safely operate as designed. Application ¶¶23, 26, & 28.

PPL Electric submits that the asset health concerns discovered by the 2013 Assessment were heightened by the discovery of pack-out rust in the section joints of the subject COR-TEN lattice towers. PPL Electric also submits that when the presence of pack-out rust becomes too severe, it can deform steel members and connecting hardware, it can also shear off bolts, cause loss of structural integrity, cause members to disconnect from the tower, and even result in tower failure. PPL Electric further submits that this now well-known inherent problem with COR-TEN steel is also being seen in other infrastructure where two pieces of COR-TEN steel overlap at joints, such as those present on lattice towers. Application ¶22.

PPL Electric states that the accelerated deterioration of the asset health of the

COR-TEN lattice towers has been further corroborated by a recent study prepared by RTR Energy Solutions, Inc. (RTR), in December 2023 and January 2024. PPL Electric states that RTR was contracted to perform a condition assessment on the Harwood – East Palmerton and Siegfried – East Palmerton transmission lines. The sample set for the assessment consisted of all 221 of the COR-TEN structures on these lines. PPL Electric states that of the structures evaluated on the Harwood – East Palmerton line, 86% were determined to have a condition rating of severe, which indicates that greater than 50% of the existing structure’s joints contain pack-out rust. Additionally, PPL Electric states that of the structures evaluated on the Siegfried – East Palmerton 71% were determined to have a condition rating of “severe”. PPL Electric further states that the majority of pack rust observed on each structure was found in the lower sections of the post leg where horizontal and diagonal members are bolted to the post leg. Application ¶¶27 and Attachment 1, pages. 13-14, PPL Electric Supplemental Data Request Response No. 1, and Application Corrections page 3 as filed June 6, 2024.

PPL Electric avers that in order to resolve the identified COR-TEN lattice tower health conditions, it proposes to rebuild the existing Harwood – East Palmerton and Siegfried – East Palmerton transmission lines. PPL Electric states that the reconstruction project consists of removing the existing COR-TEN transmission structures and existing conductor and rebuilding the Harwood – East Palmerton and Siegfried – East Palmerton lines as double-circuit 230 kV transmission lines. PPL Electric avers that it presented its plan to address COR-TEN needs on its 230 kV system at PJM’s October 2020, Transmission Expansion Advisory Committee. PPL Electric states that the presentation included the reconstruction of the Harwood – East Palmerton and Siegfried – East Palmerton lines and was subsequently assigned supplemental project number s2374. Application ¶¶36-37.

PPL Electric states that, in addition to rebuilding the Harwood – East Palmerton and

Siegfried – East Palmerton transmission lines, it considered two alternative solutions, structure replacement, and structure restoration. PPL Electric states that the estimated total cost of ownership over a 45-year period for the two alternative solutions is approximately \$599.9 million and \$598.1 million, respectively. Accordingly, PPL Electric submits that the two alternatives were rejected for a solution which addresses the aging infrastructure in a cost-effective manner. PPL Electric further states that the 45-year cost of the chosen solution is approximately \$568.7 million. Application Attachment 1, Section 5.0.

PPL Electric states that it will remove the 221 existing COR-TEN structures and 16 non-COR-TEN structures and install 232 new steel pole structures. The existing structures range from approximately 55 feet in height to 165 feet in height and the new steel structures will range from approximately 60 feet in height to 170 feet in height. The new transmission structures are anticipated to have a service life of approximately 75 years. Application ¶45 and Attachment 1, page 9 and PPL Electric Supplemental Data Request Response No. 1.

In its filing, PPL Electric states that the reconstruction project has been designed and will be built within the existing right-of-way of the Harwood – East Palmerton and Siegfried – East Palmerton. PPL Electric also states that the right-of-way generally varies from approximately 150 feet in width to approximately 300 feet in width with the exception of one section over the Lehigh River that is approximately 500 feet in width. PPL Electric also states that the new structures will be located near the existing structures and that in instances where the structures will be relocated, the proposed locations will be discussed with the property owners. Finally, PPL Electric states that the existing number of structures on each parcel will not change, and no new structures will be added to properties that do not currently have a structure. Application ¶¶43-44.

PPL Electric asserts that the reconstruction project will be designed, constructed, operated and maintained in a manner that meets or surpasses all applicable PPL Electric and

National Electrical Safety Code minimum standards and all applicable legal requirements. Application ¶41.

PPL Electric states that the total estimated cost for the Harwood – East Palmerton and Siegfried – East Palmerton reconstruction project is approximately \$184.6 million and will be paid for by PPL Electric. Construction of the project is anticipated to commence in June 2024 with a proposed in-service date of December 2028. Application, Attachment 1, page 2.

Section 57.72 authorizes the abbreviated Letter of Notification siting application process in lieu of an application for the following:

- (i) An HV line which is proposed to be located entirely on an existing transmission line right-of-way, so long as the size, character, design, or configuration of the proposed HV line does not substantially alter the right-of-way.
- (ii) An HV line which is proposed to be located entirely within a public road.
- (iii) An HV line which is proposed to be located entirely within applicant's existing transmission line right-of-way and the property of the sole customer to be served by the line, so long as the size, character, design, or configuration of the proposed HV line does not substantially alter the right-of-way.
- (iv) A line for which the voltage is proposed to be increased above its present levels so long as the size, character, design, or configuration of the proposed HV line does not substantially alter the right-of-way.

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

- (vi) An HV line having a proposed route of 2 miles or less.

52 Pa. Code § 57.72(d).

We agree with PPL Electric that the formal PPL Electric Letter of Notification and manner in which it was filed conforms to the requirements of 52 Pa. Code § 57.72(d)(1)(i) because the project reconstructs the Harwood – East Palmerton and Siegfried – East Palmerton 230 kV transmission lines in such a manner that it does not substantially alter the existing right-of-way. Moreover, the Commission has reviewed the filing and does not find it to be inconsistent with the applicable law or Commission policy regarding transmission line siting and, therefore, to be in the public interest.

We also note that our approval of the Letter of Notification does not address the issues of accounting treatment, and cost recovery; **THEREFORE,**

IT IS ORDERED:

1. That the Letter of Notification filed by PPL Electric Utilities Corporation for approval to reconstruct the Harwood – East Palmerton 230 kV Transmission Line and Siegfried – East Palmerton 230 kV Transmission Line located in Jim Thorpe Borough and Banks, Franklin, Lehigh, Lower Towamensing, Packer, Penn Forest, and Towamensing Townships, Carbon County, Hazle Township, Luzerne County, and Allen and Lehigh Townships, Northampton County Pennsylvania, is hereby approved.

2. That upon completion of the subject project, PPL Electric Utilities Corporation shall file the final project cost with the Commission.

3. That upon completion of Ordering Paragraph 2, this proceeding at Docket No. A-2024-3047924 be closed.

BY THE COMMISSION,

A handwritten signature in black ink, appearing to read "Rosemary Chiavetta". The signature is fluid and cursive, with the first letter of each word being significantly larger and more stylized.

Rosemary Chiavetta
Secretary

ORDER ADOPTED: June 13, 2024

ORDER ENTERED: June 13, 2024