

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

Public Meeting held March 10, 2022

Commissioners Present:

Gladys Brown Dutrieuille, Chairman
John F. Coleman, Jr., Vice Chairman
Ralph V. Yanora

Letter of Notification of PPL Electric Utilities Corporation for approval to reconstruct the Manor-Millwood 230 kV Transmission Line located in Conestoga, Manor, and Pequea Townships, Lancaster County, Pennsylvania

Docket Number:
A-2021-3029689

ORDER

BY THE COMMISSION:

On November 24, 2021, PPL Electric Utilities Corporation (PPL Electric), Utility Code 110500, filed a Letter of Notification (LON) 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 LON is approved.

Copies of the LON 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,

Lancaster County Commissioners, Conestoga, Manor, and Pequea Townships, *et al.* No protests were filed. No hearings were held.

PPL Electric requests approval to reconstruct the Manor-Millwood 230 kV Transmission Line (Manor-Millwood) located in Conestoga, Manor, and Pequea Townships, Lancaster County, Pennsylvania. The line to be rebuilt spans approximately 5.2 miles from the Manor 230-69 kV Substation to the Millwood 230-69 kV Substation.

PPL Electric states that the reconstruction of the Manor-Millwood line is necessary to resolve significant asset health condition concerns across the transmission line associated with the presence of pack-out rust in the existing COR-TEN steel lattice towers. PPL Electric states that the Manor-Millwood transmission line was constructed in the late 1960s and includes 28 weathering-steel COR-TEN steel lattice structures spanning approximately 5.2 miles of original construction. PPL Electric 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. PPL Electric further states that these towers had an expected service life of approximately 75 years at the time they were installed. Application ¶¶9, 14.

PPL Electric avers that independent field investigations and assessments were conducted in 2013 (2013 Assessment) and 2019 on PPL Electric's 230 kV system and in 2021 on the Manor-Millwood line. 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 Manor-Millwood transmission line 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 Manor-Millwood 230 kV line have exceeded their useful life and can no longer be relied upon to safely operate as designed.

Application ¶¶15, 17, & 20-21.

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 ¶16.

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 February 2021. PPL States that RTR was contracted to perform a condition assessment on the Manor-Millwood transmission line. The sample set for the assessment consisted of all 28 lattice structures on the line, which would represent a statistically significant sample set. PPL Electric states that of the structures evaluated, over 50% 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. 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 ¶20 and Attachment 1, pgs. 10-11.

PPL Electric avers that in order to resolve the identified COR-TEN lattice tower health conditions, it proposes to rebuild the existing Manor-Millwood transmission line.

PPL Electric states that the Manor-Millwood Project consists of removing the existing COR-TEN transmission structures and existing conductor and rebuilding the Manor-Millwood line. PPL Electric avers that it presented its plan to address COR-TEN needs on its 230 kV system at PJM Interconnection, LLC's October 2020, Transmission Expansion Advisory Committee. PPL Electric states that the presentation included the reconstruction of the Manor-Millwood line and was subsequently assigned supplemental project number s2365. Application ¶25.

PPL Electric states that, in addition to rebuilding the Manor-Millwood 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 \$49.0 million and \$46.8 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 \$42.6 million. Application Attachment 1, Section 5.0.

PPL Electric states that it will remove the 28 existing COR-TEN structures and install 28 new steel monopole structures. The existing structures range from approximately 115 feet in height to 160 feet in height and the new steel structures will range from approximately 115 feet in height to 165 feet in height. The new transmission structures are anticipated to have a service life of approximately 75 years. Application ¶33 and Attachment 1, page 7.

In its filing, PPL Electric states that the Manor-Millwood Project has been designed and will be built within the existing ROW of the Manor-Millwood transmission line and that the ROW varies from approximately 130 feet in width to 275 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 have been discussed with the property owners who did not object. Application ¶¶33-34.

PPL Electric asserts that the Manor-Millwood 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 ¶31.

PPL Electric states that the total estimated cost for the Manor-Millwood Project is approximately \$14.5 million and will be paid for by PPL Electric. Construction of the project is anticipated to commence in May 2023 with a proposed in-service date of December 2023. Application, Attachment 1, pg. 2.

Section 57.72 authorizes the abbreviated LON 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 Manor-Millwood Project reconstructs the Manor-Millwood transmission line in such a manner that it does not substantially alter the existing ROW. 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 Manor-Millwood 230 kV Transmission Line located in Conestoga, Manor, and Pequea Townships, Lancaster 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-2021-3029689 be closed.

BY THE COMMISSION,

A handwritten signature in black ink, appearing to read "Rosemary Chiavetta". The signature is written in a cursive, flowing style.

Rosemary Chiavetta
Secretary

ORDER ADOPTED: March 10, 2022

ORDER ENTERED: March 10, 2022