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VIA ELECTRONIC FILING

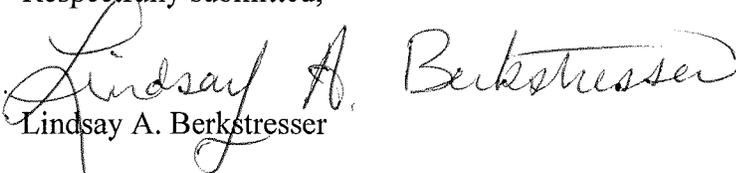
Rosemary Chiavetta, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street, 2nd Floor North
P.O. Box 3265
Harrisburg, PA 17105-3265

Re: Letter of Notification of PPL Electric Utilities Corporation, Filed Pursuant to 52 Pa. Code Chapter 57 Subchapter G, for Approval to Rebuild Approximately 6.4 Miles of Existing Double-Circuit 138 kV Transmission Line between the Gilbert 138-12 kV Substation and the Little Gap 69 kV Transmission Tap Located in Polk Township and Eldred Township, Monroe County, Pennsylvania
Docket No. A-2018-3001324

Dear Secretary Chiavetta:

Attached please find the responses of PPL Electric Utilities Corporation to the Bureau of Technical Utility Services Data Requests Nos. 1 through 4 in the above-referenced proceeding. Copies will be provided as indicated.

Respectfully submitted,


Lindsay A. Berkstresser

LAB/skr
Enclosures

cc: Kimberly Hafner
Jordan Van Order

**PPL Electric Utilities Corporation
Response to the Data Requests of
The Bureau of Technical Utility Services
Dated April 25, 2018
Docket No. A-2018-3001324**

- Q.1 Reference the Letter of Notification, Paragraph 11. Please describe the physical condition of the eight steel structures PPL Electric proposes to be replaced.
- A.1 The 8 steel poles are in good physical condition. However, the 8 steel structures cannot support the addition of the second optical ground wire. The existing transmission line has a single optical ground wire and PPL's current standard includes two optical ground wires. Re-use of these 8 steel poles would require extensive engineering, including the installation of additional mid-span structures where there presently are no structures.

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- Q.2 Reference the Letter of Notification, Attachment 1, Section D. Please describe the physical condition of the 70 wood poles which PPL Electric proposes to replace.
- A.2 Of the 70 wood poles being replaced, 61 have been identified as being cellon-treated wood poles. Cellon-treated poles are a high reliability risk to the transmission system, as they have higher risk of failure. The degradation of cellon-treated poles is more difficult to identify than wood poles with other treatments since the degradation is internal and not readily observable. The remaining 9 wood poles are Douglas Fir poles with varying treatments of the same vintage. These 9 wood poles are being replaced because they failed the engineering loading analysis for adding the dual overhead optical ground wire on the line.

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- Q.3 Reference the Letter of Notification, Attachment 1, Section D. Please describe the type of component failures (e.g. line failures, structure failures, etc.) which have caused the subject segment of the Siegfried-Jackson #1 and #2 138 kV Transmission Line to be ranked amongst PPL Electric's worst performing circuits.
- A.3 A combination of failed insulators, switches and structures as well as lightning strikes have contributed to over 50 outages on the SIEG-JKSN 1&2 138kV lines over the last ten years. These outages affect over 17,000 PPL customers. Lightning caused 37 of these outages, flashed or broken insulators caused 5 outages, a switch failure caused 1 outage and a structure failure caused 1 outage. The rest of the outages are from unknown causes.

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Q.4 Reference the Letter of Notification, Attachment 3, Figure 3-1g. Please explain how the section of the 138 kV transmission line passing through lot number 45 will remain within the right-of-way. Specifically, the area where the line turns to the northeast.

A.4 As discussed in Attachment 2, the rebuilt Gilbert – Little Gap Tap #1 and #2 138 kV Transmission Line will be reconstructed with new steel monopoles and two optical ground wires (OPGW). The existing right of way (ROW) generally varies from 50 to 100 feet in width. PPL Electric has designed the rebuilt Gilbert – Little Gap Tap #1 and #2 138 kV Transmission Line to fit within the existing ROW.

Currently, through Lot Number 45, there are four wood monopole structures, one wood angled two-pole guyed structure, and one steel monopole structure, all of which are planned to be replaced as part of this Project. Each of the structures will be replaced with direct-embedded steel poles without foundations. The new steel structures will have similar framing to the existing structures, but will be approximately 10 feet taller, and therefore, will provide additional ground clearance. Due to structural loading conditions under various weather cases, one of the existing monopole structures located north of and adjacent to the angled structure on Lot Number 45, will be replaced with a two-pole structure.

Based on preliminary engineering, all of the proposed structures are anticipated to be located within 10 feet of the existing structures but generally remain on the centerline of the existing ROW.

All structures will satisfy the National Electrical Safety Code (NESC) minimum clearance requirements by utilizing taller poles where necessary and standard vertical framing. The height of the poles for the proposed Project were selected to meet or exceed the NESC minimum clearance requirements based on terrain and mid-span objects that were detected through a Lidar Survey. The clearances were checked against the maximum mid-span sag of the specified conductor at the maximum thermal condition and NESC ice loading for the design area. The proposed poles are designed to utilize 11-

foot arms for the middle conductor. The maximum NESC blowout (6 pounds per square feet wind displacement) dimension for the proposed conductor type at the proposed conductor tension at the typical span is approximately 6.5 feet. The approximate maximum offset from the centerline would be 17.5 feet. That would leave an edge of ROW clearance of 7.5 feet at the narrowest ROW of 50 feet (25 feet on each side of centerline), which exceeds the NESC minimum clearance requirements.

VERIFICATION

I, David Gladey being the Director of Asset Management at PPL Electric Utilities 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: 5/7/18

