

**PENNSYLVANIA PUBLIC UTILITY COMMISSION
HARRISBURG, PENNSYLVANIA 17105**

Letter of Notification of PPL Electric Utilities, for Approval to Rebuild the Existing Breinigsville-Alburtis 500 kV Transmission Line in Lower Macungie and Upper Macungie Townships, Lehigh County, Pennsylvania

**Public Meeting: July 12, 2018
2635709-TUS
Docket No. A-2017-2635709**

MOTION OF VICE CHAIRMAN ANDREW G. PLACE

Before the Pennsylvania Public Utility Commission (Commission) is the Letter of Notification (LON) of PPL Electric Utilities Corporation (PPL Electric or Company) filed pursuant to 52 Pa. Code §57.72(d)(1)(i) of the Commission's transmission line siting regulations. PPL Electric requests Commission approval to rebuild the existing six-mile-long single-circuit transmission Breinigsville-Alburtis 500 kV Transmission Line (Breinigsville-Alburtis) in Lower Macungie and Upper Macungie Townships, Lehigh County. The Proposed Project will rebuild the current transmission line into a double-circuit transmission line and includes the replacement of all existing 27 transmission line structures and the installation of two new structures. The new structures will range from approximately 115 to 195 feet in height replacing the existing structures which range from 115 to 185 feet in height. PPL Electric states that the total estimated cost for the proposed project is \$33 million.

PPL Electric states that the addition of the second circuit and switch yard reconfiguration will enable it to resolve an existing North American Electric Reliability Corporation (NERC) standard violation regarding voltage drop on the 138 kV and 69 kV systems during a contingency event. PPL Electric further states that the Proposed Project will also enable it to bring its Wescosville Substation up to current design standards. According to the utility, the Proposed Project will improve the reliability of the Breinigsville Substation by providing a third 500 kV source. Currently, the Breinigsville Substation has two sources, the Wescosville-Breinigsville 500 kV Transmission Line and the Breinigsville-Alburtis line. PPL Electric avers that during maintenance scenarios when one of the two 500 kV transmission lines is taken out-of-service and a fault occurs on the other transmission line in-service, the entire Breinigsville Substation loses power. This is often referred to as a N-1-1 condition, where two combined system outages happen in close proximity and time. PPL Electric states that the addition of a third 500 kV source will avoid interruptions during maintenance of these 500 kV lines and for certain contingency events. The addition of the second 500 kV circuit to the existing Breinigsville-Alburtis transmission line was presented at the PJM Mid-Atlantic Sub-Regional Transmission Expansion Plan committee and approved as supplemental project number S0864.

The Commission initiated four sets of data requests regarding this LON. PPL Electric responded in January, April and July of 2018, and submitted the following information:

- The Breinigsville-Alburtis 500 kV Transmission Line is about 37 years old with a useful life expectancy of approximately 80 years.

- There have been no unplanned outages for either the Wescosville-Breinigsville 500 kV Transmission Line or the Breinigsville-Alburtis line over the past three years.
- Approximately 95MW consisting of 10,000 customers would have to be dropped prior to the second contingency occurring to prevent the violation. The Company later confirmed, upon further data requests, that if the N-1-1 condition were to occur prior to completion of the subject project, PPL Electric would utilize operational steps to prevent the low voltage and voltage drop violation. These operational steps are an interim solution until the subject project is complete. Per the Company, a protection control system is a “Special Protection Scheme (SPS)” or “Remedial Action Scheme (RAS)”. PJM Manual 7 states “SPS/RAS’s should not be installed as a substitute for good system design or operating practices. Their implementation is generally limited to temporary conditions involving the outage of critical equipment.” PPL Electric would only utilize an SPS/RAS on a temporary basis and not as a permanent substitute for proper system design.
- The Breinigsville substation primarily feeds industrial load customers on the transmission and distribution systems but there are also residential customers sourced from this substation. There are no critical customers among the 10,000 that would be dropped.
- PPL Electric did not provide any information on the probability of such an N-1-1 condition.
- This project is not a regional reliability project, but a supplemental transmission project filed by PPL Electric for the sole purpose of alleged reliability benefits to its distribution system customers.

Under the Commission’s siting regulations at 52 Pa. Code §57.71 *et seq.*, the Company must establish a clear need for the project.¹ PPL Electric has not adequately proven the need for this project. Specifically, the Company has not established a reasonable likelihood that the alleged events leading to an outage event are likely to occur, nor has it demonstrated that the proposed solution is an efficient and cost-effective choice relative to other alternatives.²

The Company avers that service would be lost if only one of the lines associated with the N-1-1 condition occurs. However, it would appear that an SPS or RAS could be effectuated that would maintain service if only one line went down. PPL Electric avers that this is not its preferred final solution, but an “interim” solution. However, whether or not the Company has preferred solutions to an alleged reliability problem is not dispositive of the establishment of the need for the project. As to reliability, PPL Electric has not clearly established a reasonable likelihood of both lines having an outage in the same time frame. In fact, the data request responses in this case have not identified any unplanned outages associated with both lines. Moreover, the lines are not aged facilities requiring replacement.

In the event that a severe event occurred, the loss of a tower on the new double-circuit transmission line would not avoid the outage. Moreover, if a severe weather event did cause the loss of both lines, the damage to the distribution system would likely be equally, if not more

¹ 52 Pa. Code §57.72(5) states that an application shall contain a general statement of the need for the proposed HV line in meeting identified present and future demands for service, of how the proposed HV line will meet that need and of the engineering justifications for the proposed HV line.

² 52. Pa. Code §57.76(a)(4) requires that the Commission finds and determines that a proposed HV line... will have minimum adverse environmental impact, considering the electric power needs of the public, the state of available technology and the available alternatives.

severe, such that load would likely be significantly reduced, obviating the need to prevent the voltage drop on the 138 kV and 69 kV systems. It is not clear that load would need to be dropped under such an event. Based on the information provided by PPL Electric in its original filing and answers to Commission staff data requests, I do not believe that PPL Electric has met its burden under 52 Pa. Code §57.72(c)(5) to demonstrate the need for the subject project.

It should be noted that I do not take this action lightly. However, this filing presents some rather unique characteristics, including replacement of a well-functioning facility well before its full life expectancy, failure to fully resolve a potential threat that PPL Electric alleges to fix, failure to reasonably quantify the alleged reliability benefits of the project, and failure to fully assess alternative solutions to the alleged reliability issues. Given these shortcomings, I have concluded that this project clearly distinguishes itself from previous projects that have I voted affirmatively for in the past.

This Commission has a responsibility to ensure that substantial investments are prudently made, particularly those filed as supplemental projects. Because this is a supplemental project, no other third party like PJM has performed a cost benefit analysis or assessed alternatives.³ Moreover, PPL Electric has filed a vastly disproportionate number of such supplemental projects. As of August 30, 2017, the Company was responsible for \$2.9 Billion of the \$3.1 Billion to be spent on supplemental projects in Pennsylvania, or 93% of such spending. According to our annual Rate Comparison Report, PPL Electric's transmission rates have increased 175% since January 31, 2006, with almost all of that increase starting in 2013. Between 2013 and 2018, PPL Electric's transmission rates increased 19% each year. While this history and inventory of past and future transmission project costs do not have a direct relevance to the particular circumstances to this proposed project, they do highlight the need for further scrutiny by all interested parties to ensure the requirements of 52 Pa. Code §57.72(5) and 52. Pa. Code §57.76(a)(4) are met, particularly for supplemental projects, and that electric distribution companies in Pennsylvania are expected to provide more information to justify these expenditures going forward.

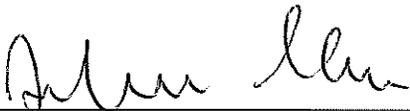
Based on the discussion above, I recommend denial of the proposed LON application. Given PPL Electric's failure to demonstrate the need for the proposed project and examine available alternatives, I must deny PPL Electric's LON and direct PPL Electric to comply with the application process set forth in 52. Pa. Code §57.72. To the extent the Company modifies its LON or files an application and thus provide evidence that this project is an optimal means to enhance reliability on its transmission and distribution system in a cost-effective manner, I am always open to reconsideration. However, at the current time, PPL Electric has not carried its burden to prove the need for this project and examine available alternatives.

THEREFORE, I move that:

³ PJM simply notes supplemental projects for purposes of outage planning.

1. The Letter of Notification of PPL Electric Utilities, for approval to rebuild the existing Breinigsville-Alburtis 500 kV transmission line in Lower Macungie and Upper Macungie townships, Lehigh County, Pennsylvania be denied.
2. PPL Electric Utilities comply with the application process set forth in 52 Pa. Code §57.72 as required by 52 Pa. Code §57.72(d)(5).
3. The Commission's Bureau of Technical Utility Services prepare an Opinion and Order consistent with this Motion.

DATE: July 12, 2018



Andrew G. Place, Vice Chairman