

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

**Letter of Notification of PPL Electric Utilities Corporation, for Approval to Construct New Sections of 230 kV Transmission Line in Salem Township, Luzerne County, Pennsylvania, and**

**Public Meeting: February 27, 2020  
3012304-TUS  
Docket No. A-2019-3012304 and  
P-2019-3012353**

**Petition of PPL Electric Utilities Corporation for a Finding that a Building to Shelter Control Equipment at the Glen Brook Substation to be Constructed in Salem Township, Luzerne County, Pennsylvania is reasonably Necessary for the Convenience or Welfare of the Public**

**STATEMENT OF COMMISSIONER ANDREW G. PLACE**

Before the Pennsylvania Public Utility Commission (Commission) is a Letter of Notification (LON) of PPL Electric Utilities Corporation (PPL Electric or Company) to construct new sections of 230 kV transmission line in Salem Township, Luzerne County, Pennsylvania. The new sections consist of two double-circuit segments that will split the existing Montour-Susquehanna 230 kV Transmission Line (Montour-Susquehanna) and Montour-Susquehanna T10 230 kV Transmission Line (Montour-Susquehanna T10) and will be routed to the proposed Glen Brook 230-69 kV Substation (Glen Brook Substation). Also before us is the Petition requesting the Commission find that a building to shelter control equipment (Control Equipment Building) at the proposed Glen Brook Substation in Salem Township, Luzerne County, Pennsylvania is reasonably necessary for the convenience or welfare of the public and, therefore, exempt from any local zoning ordinance (Zoning Petition). I support denial of the LON and Zoning Petition for the reasons set forth below.

The above LON facilities consist of constructing two sections, each approximately 0.5 miles in length, of new double-circuit 230 kV transmission line supported on 11 new steel monopole structures for an approximate cost of \$7.2 million. The cost for the larger project, including the Glen Brook Substation and associated 69 kV work, is approximately \$65.7 million. Construction of the Proposed Project is anticipated to commence in Fall 2020 with a proposed in-service date of Winter 2021.

These facilities are necessary to mitigate multiple violations of PPL's FERC Form 715 Planning Criteria and are not, per se, NERC violations. PPL's FERC Form 715 criteria and operation by PJM can extend NERC and PJM planning criteria to lower voltage facilities – in this case to 69kV transmission facilities. Extending NERC or PJM planning criteria to lower voltage facilities can have a significant impact on the need for additional transmission facilities,

some of which may not be justifiable based on principles of economic efficiency, and should be closely scrutinized accordingly.

In this case, both thermal and voltage planning violations occur by extending bulk electric system (BES) or PJM planning criteria to these lower voltage facilities.

The thermal violations were identified during analysis of contingency scenarios involving the failure of either a 69 kV bus section circuit breaker at the Columbia Substation or a double-circuit transmission tower failure on the Susquehanna-Harwood #1 & #2 230 kV Transmission Lines (Susquehanna-Harwood), driven by a significant amount of new generation on the bulk transmission system, generator retirements, and changes in load flows.

The voltage violations were identified during analysis of contingency scenarios involving the failure of either a 69 kV or 230 kV bus section circuit breaker at the Columbia 230-69 kV Substation (Columbia Substation).

The record in this case, however, demonstrates that these events are of very low probability. In the previous five years there have been no 69 kV or 230 kV bus-tie circuit breaker failures at the Columbia Substation and no double-circuit transmission tower failures on the Susquehanna-Harwood transmission line. Moreover, the substation facilities involved are relatively new, as reflected in their high operational performance. There are twelve circuit breakers at Columbia substation all of which have been replaced since the initial construction. The circuit breaker age ranges from 9 to 2 years old with an average age of 5 years. PPL does comment that there were 13 circuit breaker failures on the PPL EU system in the last 5 years among all voltage classes and all circuit breaker positions, but fails to provide any meaningful information on the number of total such circuit breakers across its entire system. Such information would have been more informative for a probability analysis of failure.

The Susquehanna-Harwood transmission line is 51 years old but as noted above, has had no tower failures in the last 5 years. On the off chance a failure would occur, the thermal violations could be addressed by redispatching generation. This redispatch solution is generally not appropriate for BES planning purposes, but the decision of PPL to apply more stringent planning criteria to these lower voltage facilities is somewhat arbitrary – thus the planning criteria applied here should not necessary dictate the need for these facilities in all situations. PJM has not reported any PJM, non-FERC Form 715, violations in the Berwick area.

PPL Electric states that the estimated distribution reliability impact that would result from the larger overall project is a CAIDI, SAIDI, and SAIFI avoided up to approximately 31.7 minutes, 0.99 minutes, and 0.003, respectively. These scenarios assume that the probability of such an event is 100%, and thus their analysis does not represent a risk adjusted economic cost/benefit analysis. Customer loss of service impacts identified on the record were estimated at up to 24,000 or 46,200 customers in the Berwick area, depending on the violation. In either of the 230 kV or 69 kV bus-tie circuit breaker failure contingencies the approximate duration of an outage would be approximately 15 minutes and 2 hours respectively. In the event of a double circuit fault on the Susquehanna-Harwood #1 & #2 230 kV lines the approximate duration of an outage would be approximately 15 minutes. This outage estimate is based on the estimated time

it would take to coordinate with PJM to adjust generator dispatch to temporarily resolve the thermal violation.

A first-order cost/benefit analysis, using very conservative estimates, yields some rather insightful statistics on the economics of this project. On a capital basis, this one investment will cost each residential customer, across the entire system, \$21 – or \$619 for each Berwick residential customer. On an annual cost of service basis, this would add about \$2.45 to the annual bill of all PPL residential customers, or \$71 to the annual bill for the Berwick customers benefiting from the potential benefits of this investment.<sup>1</sup>

Even more importantly, the money to be spent, relative to the CAIDI, SAIDI and SAIFI benefits projected by the Company, are, by orders of magnitude, much less cost effective relative to other investments in the Company's Long-Term Infrastructure Improvement Plan (LTIP).

For these reasons, with respect, I will be voting no on this LON and Zoning Petition. The Company has not proven this project to be in the public interest, as the costs of the project are well in excess of the asserted benefits.

Additionally, these filings raise significant issues as to FERC Form 715 related projects and perhaps other instances where PJM and Transmission Owner planning criteria are being applied to lower voltage facilities that this Commission should address.

**DATE: February 27, 2020**

  
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**Andrew G. Place, Commissioner**

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<sup>1</sup> Costs are not allocated to only Berwick customers through PJM billings to load serving entities, but would be socialized across PPL's entire customer base. The Berwick figures represent theoretical costs if only the local beneficiaries paid.