

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Re: Letter Of Notification Of PPL Electric :
Utilities Corporation, Filed Pursuant To 52 :
Pa. Code Chapter 57 Subchapter G, With : Docket No. A-2011-_____
Respect To The Trumbauersville #1 & #2 :
138/69 kV Tap Line in Richland Township, :
Bucks County, Pennsylvania :

LETTER OF NOTIFICATION

TO THE PENNSYLVANIA PUBLIC UTILITY COMMISSION:

PPL Electric Utilities Corporation (“PPL Electric”), hereby files, pursuant to 52 Pa. Code §57.72(d), this Letter of Notification to request that the Pennsylvania Public Utility Commission (“Commission”) approve the siting and construction of the Trumbauersville #1 & #2 138/69 kV Tap Line in Richland Township, Bucks County, Pennsylvania. This 275 foot long tap line will supply power to the proposed Trumbauersville 69-12 kV Substation, which will in turn supply three new distribution lines to improve reliability of service by reducing overloading of other substations and distribution lines in the Richland and Milford areas. In support thereof, PPL Electric states as follows:

I. INTRODUCTION AND OVERVIEW

1. This Letter of Notification is filed by PPL Electric, a public utility that provides electric distribution, transmission, and provider of last resort services in Pennsylvania subject to the regulatory jurisdiction of the Commission.

2. PPL Electric's address is:

Two North Ninth Street
Allentown, Pennsylvania 18101

3. PPL Electric's attorneys are:

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PPL Electric's attorneys are authorized to receive all notices and communications regarding this Letter of Notification.

4. PPL Electric furnishes electric service to approximately 1.4 million customers throughout its certificated service territory, which includes all or portions of twenty-nine counties and encompasses approximately 10,000 square miles in eastern and central Pennsylvania. PPL Electric is a "public utility" and an "electric distribution company" as

defined in Sections 102 and 2803 of the Pennsylvania Public Utility Code, 66 Pa. C.S. §§ 102, 2803.

5. PPL Electric owns approximately 5,000 miles of transmission lines operating at 69 kV (kilovolts) or higher, approximately 375 substations with a capacity of 10 MVA (megavolt amperes) or more, and approximately 43,000 miles of distribution lines operating at less than 69 kV.

6. Accompanying this Letter of Notification is a separately bound volume containing Attachments 1-7, which provide additional information about the proposed construction of the Trumbauersville #1 & #2 138/69 kV Tap Line:

- Attachment 1 Necessity Statement.
- Attachment 2 Engineering Description.
- Attachment 3 Environmental Assessment.
- Attachment 4 PPL Electric Design Criteria and Safety Practices.
- Attachment 5 PPL Electric Field Management Program.
- Attachment 6 List of Property Owners.
- Attachment 7 List of Involved Governmental Agencies, Municipalities, and Other Public Entities.

7. This Letter of Notification and accompanying Attachments, which are incorporated herein by reference, contain all the information required by 52 Pa. Code § 57.72(d)(4).

8. This project is required to meet load growth in the Richland and Milford areas and to resolve violations of PPL Electric's Reliability Principles and Practices ("RP&P") guidelines. In addition, the project will help meet the increasing demand for electricity in the area.

9. The 138/69 kV tap line proposed in this Letter of Notification will be approximately 275 feet in length, and will connect the Buxmont – Quakertown #1 & #2 138/69 kV Transmission Lines to a new 69-12 kV Substation to be constructed in conjunction with this tap line. The new substation will be named the Trumbauersville 69-12 kV Substation.

10. The total estimated cost of this solution is approximately \$4,531,000, which includes \$1,341,000 for the new substation, \$644,000 for the transmission work, and \$2,546,000 for distribution work.

11. The project's required in-service date is May 2012. PPL Electric will not be able to meet this required in-service date, as a result of delays in the selection of a suitable location for the Trumbauersville Substation. PPL Electric intends to commence with construction as soon as practical after the Commission approves the project. As such, PPL Electric requests expedited consideration of this Letter of Notification.

II. PROJECT SUMMARY

12. The proposed Trumbauersville #1 & #2 138/69 kV Tap Line will be located in Richland Township, Bucks County. An aerial exhibit showing the location of the proposed facilities is provided at the end of Attachment 2 to the Letter of Notification. The plot plan depicts the location of the proposed construction route.

13. The proposed Trumbauersville #1 & #2 138/69 kV Tap Line will involve the construction of approximately 275 feet of transmission line. The line will be designed for double-circuit operation, however it will be built and will initially operate with a single-circuit. The line will also initially operate at 69 kV. The second circuit will be added, and the operating voltage increased, when load growth in the area makes it appropriate to do so.

14. The Necessity Statement for the proposed construction of the Trumbauersville #1 & #2 138/69 kV Tap Line is provided as Attachment 1 accompanying this Letter of Notification.

As explained there, this Project is necessary to comply with the reliability requirements found in PPL Electric's RP&P and to continue providing reliable service in the Richland and Milford areas.

15. The proposed facilities are required to meet the load growth demands in the Richland and Milford areas. The Richland and Milford areas are currently served by two 69-12 kV Substations. The Richland Substation supplies six 12 kV distribution lines. The Milford Substation supplies three 12 kV distribution lines. Figure 1 to Attachment 2 of this Letter of Notification provides a one-line diagram of the existing transmission system configuration. Figure 3 to Attachment 2 provides a one-line diagram of the existing distribution system.

16. PPL Electric plans its system in accordance with its RP&P guidelines, so that PPL Electric can sustain probable contingencies and disturbances with minimal customer service interruptions and can adequately serve each customer's needs with regard to capacity, voltage and reliability for all load levels throughout the daily load cycle. System Planning is the process which assures that PPL Electric's regional system can supply electricity to all customer load in a reliable and economic manner. In addition, the system is planned so that system reliability can be maintained to prevent large scale, long term, or frequent service interruptions in order to avoid adverse effects and hazards to the public.

17. The planning process begins with the development of a computer model of the future system. A specific study year is chosen. The future system model is then developed using the existing system plus any planned modifications to the transmission system scheduled to be in service prior to the study year. Load levels used in the system model are based on the latest forecast prepared annually by PPL Electric, which is based on recent summer peak load forecasts that take into account ambient temperatures and humidity indices.

18. Once the system model is complete, comprehensive power flow simulations are performed to determine the ability of the system to comply with the PPL Electric transmission planning reliability criteria. All conditions where the system is not in conformance with the reliability criteria are identified, and system reinforcements are added to bring the system into conformance. Also identified are estimated costs and lead-times to implement the required reinforcements. Computer simulations of the system with the identified reinforcement alternatives are completed to identify the best overall reinforcement that will meet the needs of the region in a reliable and economic manner.

19. The maximum 2-hour rating for the Richland 69-12 kV Substation is 39.7 MVA. Due to the increasing demand for electricity, however, the Richland 69 – 12 kV Substation served a peak load of approximately 43.2 MVA in the summer of 2011 and is expected to serve a peak load of 45.7 MVA by 2012. In addition, both the Richland 36-2 and 36-5 12 kV Distribution Lines peaked over the normal planning guideline of 10 MVA in the summer of 2011. The 36-2 line currently serves approximately 1,700 customers, and the 36-5 line serves approximately 1,860 customers. These customer counts exceed the recommended customer count per distribution line of 1,300 customers, as outlined in the RP&P.

20. The Milford 69 – 12 kV Substation has a maximum summer emergency rating of 20.5 MVA. The Milford Substation served a peak load of 21 MVA in the summer of 2011, and is expected to serve a peak load of 21.6 MVA in the summer of 2012. In addition, the Milford 24-2 12 kV Distribution Line served a peak load of 8.2 MVA in the summer of 2011 and is expected to peak at 8.4 MVA in the summer of 2012. Both of these exceed the normal planning guidelines for this type of conductor, which is 8 MVA. The Milford 24-2 and Ridge Road 70-2 12 kV Distribution Lines have both experienced significant outages in recent years.

21. The proposed Project will allow PPL Electric to meet its RP&P guidelines regarding maximum loads and numbers of customers served and to provide additional capacity to meet increased load in the future.

22. The proposed project involves the construction of a 138/69 kV tap line to power a new 69-12 kV substation. Figure 2 to Attachment 2 of this Letter of Notification provides a one-line diagram of the proposed transmission system configuration. Figure 4 to Attachment 2 provides a one-line diagram of the proposed distribution system.

23. The proposed Project will allow PPL Electric to construct additional 12 kV distribution lines. As a result, customer counts will be reduced on existing 12 kV distribution lines in the area, bringing them into compliance with PPL Electric's RP&P. The customer count on the Richland 36-2 will be reduced from 1,700 customers to 409. The customer count on the Richland 36-5 will be reduced from 1,860 customers to 231. The customer count on the Milford 24-2 will be reduced from 1,400 customers to 509. While the customer count on the 70-2 12 kV line does not exceed the RP&P, its customer count will decrease to 1,000. The 24-3 12 kV line will see a modest increase to 657 customers. The three new 12 kV lines proposed as part of this Project will serve 2,920 customers formerly served from the Richland Substation, and 891 customers formerly served from the Milford Substation.

24. The project will be constructed in part on an existing right-of-way, and in part on land held under contract by PPL Electric, wherein the Company has the option to purchase the land.

25. The proposed Trumbauersville #1 & #2 138/69 kV Tap Line will require the construction of approximately 275 feet of new transmission line, 2 high-low poles, 2 Load Sectionalizing Air Breaks ("LSABs"), and 2 steel monopoles.

26. The proposed Tap will be connected to the Buxmont – Quakertown #1 & #2 138/69 kV Line by installing a “high-low” tap system. This arrangement uses a high-height tap pole on the circuit closest to the substation and a low-height pole on the other circuit. This arrangement allows the high pole circuit enough vertical clearance to cross above the low pole’s circuit. Both poles in this arrangement will be steel monopoles. The high pole will be approximately 120 feet tall and the low pole will be approximately 80 feet tall. Both poles will be direct-embedded and guyed. See photograph on page 5 of Attachment 2.

27. Two LSAB switches will be installed. Each switch will be on a direct-embedded steel monopole approximately 85 feet tall. The LSAB switch poles will be connected by an X-brace for structural integrity. See photograph on page 6 of Attachment 2.

28. The remaining two steel monopoles will average 60 feet in height. These poles will be direct-embedded and guyed. See photograph on page 7 of Attachment 2. The insulators on the existing monopoles on either side of the proposed tap will be switched from suspension insulators to tension insulators.

29. Initially, the line will consist of three power conductors and one overhead ground wire. The power conductors will be 556.5 kcmil,¹ 24/7 stranding, ACSR² power conductors. A 3/8 inch steel overhead ground wire will provide lightning protection for the proposed line. When the additional circuit is added, the line will consist of six power conductors and one overhead ground wire.

¹ Kcmil stands for “thousand circular mils.” A circular mil is the cross-sectional area of a wire one mil in diameter, where 1 kcmil = 0.5067 mm².

² ACSR stands for aluminum conductor steel reinforced.

30. The proposed construction of the Trumbauersville #1 & #2 138/69 kV Tap Line will be designed to comply with, and will generally surpass, the applicable minimum standards in the National Electrical Safety Code (“NESC”).

31. The total estimated cost to design and construct the proposed Project is \$4,531,000, which includes \$644,000 in transmission related costs.

32. The proposed construction has a required in-service date of May of 2012. Due to delays experienced in the selection of the substation site, PPL Electric will be unable to meet its May 2012 in-service date. Upon Commission approval of this Letter of Notification, PPL Electric intends to commence construction as soon as feasible.

33. PPL Electric considered one other alternative to alleviate the problems described previously. The other alternative would involve upgrading the transformers at the Richland and Milford substations in order to increase their capacity and add distribution lines supplied by these substations. This alternative is estimated to cost approximately \$3 million.

34. Under the alternative, the Richland substation capacity would be increased from 25 MVA to 35 MVA. With the added capacity, a new 12 kV distribution line could then be constructed. The new line would be run as a double circuit along the 36-05 line. The new line would tap into the existing 36-05, taking a large portion of its load and customers.

35. Similarly, the alternative plan would increase the Milford substation’s capacity from 10 MVA to 28 MVA. The additional capacity would allow a new 12 kV distribution line to be constructed. This new line would run as a double circuit with the 24-03. The new line would tap into the 24-03 and take a large portion of its existing load and customers. In order to improve the performance and reliability of the Milford 24-02 and the Ridge Road 70-02, the 24-02 line

would be extended and tied to the 70-02 via a normally open LSAB. This would allow for transfer of load in the event of an outage on either of these lines.

36. Although this alternative is less expensive than the preferred alternative, PPL Electric has rejected this alternative. The preferred alternative provides much greater capacity for a region that is experiencing large load growth as well as much greater flexibility in sectionalizing and transferring load to restore customers in the event of an outage. Further, because the rejected alternative involves construction of double circuit lines, the reliability of service would be less than under the proposed alternative, because a single event could cause an interruption of service on both circuits.

37. The Engineering Description of the proposed construction of the Trumbauersville #1 & #2 138/69 kV Tap Line is provided in Attachment 2 accompanying this Letter of Notification.

III. HEALTH AND SAFETY

38. The proposed construction of the Trumbauersville #1 & #2 138/69 kV Tap Line will not create any unreasonable risk of danger to the public health or safety. The proposed Project will be designed, constructed, operated, and maintained in a manner that meets or surpasses all applicable NESC minimum standards and all applicable legal requirements. Descriptions of NESC standards, PPL Electric's design criteria, and PPL Electric's safety practices are provided in Attachment 4.

39. Attachment 5 accompanying this Letter of Notification explains PPL Electric's standards for Magnetic and Field Management. PPL Electric has determined, as a matter of policy, to design its new and rebuilt transmission lines to reduce magnetic fields when that can be done at low or no cost and consistent with functional requirements. PPL Electric's Magnetic

Field Management Program has been developed to implement that policy decision. To reduce magnetic field exposures, the program generally prescribes the use of a line design that provides for five feet higher ground clearance than NESC standards and reverse phasing of new double-circuit lines where it is feasible to do so at low or no cost.

40. Consistent with the program, PPL Electric will construct the new overhead line sections for five feet higher ground clearance, in order to reduce magnetic field exposures. Since the line will initially be designed for a single circuit, reverse phasing is not possible. Reverse phasing requires a double circuit line. In the future, when PPL Electric installs the second circuit, the Company will implement reverse phasing if it is practical and economically feasible.

IV. RIGHT- OF-WAY STATUS

41. The proposed construction of the Trumbauersville #1 & #2 138/69 kV Tap Line will be located in part on an existing right-of-way, and in part on property that is under contract with PPL Electric, and provides PPL Electric with the option to purchase the property.

V. ENVIRONMENTAL EVALUATION

42. The proposed construction of the Trumbauersville #1 & #2 138/69 kV Tap Line and substation will be located in a wooded area in a proposed subdivision in close proximity to other transmission facilities. It is anticipated that the proposed construction will have minimal incremental impacts on the surrounding area.

43. No communication towers, pipelines, or other utilities will be affected by the proposed construction of the Trumbauersville #1 & #2 138/69 kV Tap Line. Two airports are located within four miles of the proposed project location. Quakertown Airport is approximately 2.15 miles to the northwest and Pennridge Airport is approximately 3.5 miles southeast of the project location. PPL Electric will contact the PennDOT Bureau of Aviation and the Federal

Aviation Administration to ensure that the proposed construction will not be a hazard to flight operations.

44. The proposed construction of the Trumbauersville #1 & #2 138/69 kV Tap Line was reviewed with the Pennsylvania Historical and Museum Commission (“PHMC”).³ The PHMC determined that there is a high probability of significant archaeological sites in the area. PHMC required a Phase 1 archaeological survey of the site to locate any significant archaeological resources. PPL Electric contracted with Dr. Frank Vento, Professor of Geology at Clarion State University, to perform the Phase 1 survey. Dr. Vento did not find any artifacts in his Phase 1 Survey, and the appropriate documentation was submitted to PHMC. PPL Electric will comply with any further requests for investigations or surveys from the PHMC. Additionally, PHMC notes that no evaluation of historic structures will be necessary for this project.

45. The project will not affect any recreational areas or natural landmarks. The recreation area closest to the proposed project is Lake Nockamixon State Park located approximately 4.8 miles to the east of the Project area. The nearest natural area is Elmont Swamp, which is located approximately 2.8 miles south of the proposed site. Due to the small scale of the proposed tap line and the distance and terrain between these areas, no impacts are expected.

46. The proposed construction of the Trumbauersville #1 & #2 138/69 kV Tap Line will not affect any unique geological, scenic, or natural areas. The line will not cross any wetlands or other aquatic resources. PPL Electric will acquire all required environmental permits and adhere to all of their terms and conditions. Some minimal tree clearing may be

³ File No. ER 2011-0287-017-B.

required, and PPL Electric will apply its “Specification for Initial Clearing and Control of Vegetation On or Adjacent to Electric Line Right-of-Way Through Use of Herbicides, Mechanical and Hand Clearing Techniques” to mitigate any impacts. PPL Electric will acquire any required soil erosion and sedimentation control permits and comply with any conditions imposed by such permits.

47. PPL Electric has consulted with state and federal agencies to obtain information regarding endangered and threatened species in close proximity to the proposed construction of the Trumbauersville #1 & #2 138/69 kV Tap Line.⁴ All agencies report that, except for occasional transient species of wildlife, no threatened or endangered plant or animal life is found in the project area.

VI. NOTICE

48. The proposed construction of the Trumbauersville #1 & #2 138/69 kV Tap Line was reviewed with representatives of Richland Township and Bucks County. The Township and the County have no objection.

49. Attachment 6 accompanying this Letter of Notification identifies the owners of the property which will be crossed by the proposed Project. Copies of this Letter of Notification are being served on the property owners listed in Attachment 6 in accordance with 52 Pa. Code § 57.72(d)(3).

50. Attachment 7 accompanying this Letter of Notification contains a list of the involved governmental agencies, municipalities, and other public entities. Copies of this Letter of Notification are being served on the agencies listed in Attachment 7 in accordance with 52 Pa. Code § 57.72(d)(3).

⁴ The Pennsylvania Natural Diversity Inventory Search ID for this Project is 20110726308529.

51. As soon as practicable after the filing of this Letter of Notification and the assignment by the Commission of a docket number, PPL Electric will publish notice of the filing in newspapers of general circulation in the area of the proposed construction of the Trumbauersville #1 & #2 138/69 kV Tap Line. Such notice will contain: (a) the date this Letter of Notification was filed with the Commission; (b) a brief description of the proposed construction Project and its location; and (c) an instruction that interested parties should contact Secretary Rosemary Chiavetta, at the Commission's Harrisburg address.

VII. LETTER OF NOTIFICATION

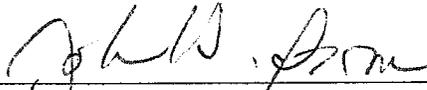
52. PPL Electric is proceeding by means of a Letter of Notification, instead of a full Application, pursuant to the Commission's regulations at 52 Pa. Code § 57.72(d). The proposed construction of the Trumbauersville #1 & #2 138/69 kV Tap Line qualifies for use of a Letter of Notification because the proposed transmission line is less than two miles in length.

53. This Letter of Notification is filed on the date set forth below. As provided in 52 Pa. Code § 57.72(d)(5), the Commission will review and, by order, approve or disapprove this Letter of Notification. If the Commission approves this Letter of Notification, the proposed construction of the Trumbauersville #1 & #2 138/69 kV Tap Line will be completed as proposed herein without the formal application process set forth at 52 Pa. Code §§ 57.71, *et seq.*

VIII. CONCLUSION

WHEREFORE, PPL Electric Utilities Corporation respectfully requests that the Pennsylvania Public Utility Commission approve the proposed siting and construction of the Trumbauersville #1 & #2 138/69 kV Tap Line in Richland Township, Bucks County, Pennsylvania, that is explained above and in the Attachments hereto.

Respectfully submitted,



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Date: Dec. 19, 2011

Attorneys for PPL Electric Utilities Corporation

VERIFICATION

I, Gregory N. Dudkin, being the Senior Vice President - Operations of 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 that 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: 12/15/11