BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Letter of Notification of PPL Electric Utilities Corporation, Filed Pursuant to 52 Pa. Code Chapter 57 Subchapter G, for Approval to Construct Approximately 1.32 Miles of New 230 kV Transmission Lines to Interconnect the Summit 230-69 kV Substation with the 230 kV System	:	Docket No. A-2016-_____

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 approval from the Pennsylvania Public Utility Commission ("Commission") to construct new 230 kV transmission lines needed to interconnect the proposed new Summit 230-69 kV Substation (the "Project"). To interconnect the new Summit Substation to the 230 kV system, PPL Electric proposes to construct approximately 1.32 miles of new 230 kV transmission lines that will traverse the following municipalities: City of Scranton, Ransom Township, and Newton Township. The Project is needed to avoid multiple reliability issues, and to reinforce the 230 kV and 69 kV systems serving Lackawanna County.

Subject to the Commission's approval, construction is scheduled to begin in September 2016 to support an in-service date of November 2017. In support thereof, PPL Electric states as follows:

I. INTRODUCTION

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 PPL Electric Utilities Corporation, 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. This Letter of Notification includes the following accompanying attachments:

- Attachment 1 Necessity Statement.
- Attachment 2 Engineering Description.

- Attachment 3 Description of the Right-of-Way.
- Attachment 4 PPL Electric Design Criteria and Safety Practices.

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).

II. THE PROJECT

A. NEED FOR THE PROJECT

8. The proposed Project is one part of a large comprehensive plan to improve the reliability of service to approximately 118,492 customers served from the Stanton, Lackawanna, and Jenkins 230-69 kV regional substations that provide supply to the greater Scranton area.

9. As explained in Attachment 1 to this Letter of Notification, this comprehensive plan will improve the reliability of the transmission and distribution systems serving the greater Scranton area by replacing facilities that have reached the end of their useful lives, and do not meet current design standards, with modern facilities that meet current design standards and have the technical ability to reduce the potential and duration of outages experienced by customers. The improved transmission and distribution systems will allow quicker load restoration after a system interruption, which will contribute to a higher level of reliability for the customers served from these lines.

10. The Project proposed in this Letter of Notification is a critical part of the larger comprehensive plan to improve the reliability of electric service to approximately 118,492 customers in the Scranton area.

1. Existing System

11. Presently, customers in Lackawanna County receive their bulk electric power supply from multiple 230 kV lines. These 230 kV transmission lines provide power to two

regional transmission substations, the Lackawanna 230-69 kV Substation and Stanton 230-69 kV Substation. These regional substations serve approximately 99,287 customers in Lackawanna County, including 6 large transmission connected customers.

12. The double-circuit Stanton-Lackawanna #3 and #4 230 kV Transmission Line extends approximately 13.5 miles between the Stanton 230-69 kV Substation in Exeter Township and the Lackawanna 230-69 kV Substation in Blakely Township.

13. The Lackawanna 230-69 kV Substation and Stanton 230-69 kV Substation supply several 69 kV transmission lines, which in turn supply various 69-12 kV distribution substations in Lackawanna County.

14. The Stanton-Providence #1 and #2 69 kV transmission lines are supplied by the Stanton 230-69 kV Substation. The Stanton-Providence #1 69 kV line extends approximately 14.14 miles and serves an approximate 3,221 customers. The Stanton-Providence #2 69 kV line extends approximately 10.30 miles and serves an approximate 3,351 customers. These 69 kV transmission lines currently are operated in a networked configuration.[1]

15. Lackawanna-Providence #1 and #2 69 kV transmission lines are supplied by the Lackawanna 230-69 kV Substation. The Lackawanna-Providence #1 69 kV line extends approximately 7.27 miles and serves an approximate 4,854 customers. The Lackawanna-Providence #2 69 kV line extends approximately 7.25 miles and serves an approximate 8,464 customers. These 69 kV transmission lines currently are operated in a networked configuration.

16. A description and one-line diagram of the existing system is provided in the Necessity Statement included as Attachment 1 to this Letter of Notification.

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[1] In a "networked" configuration, the transmission line has a voltage source and power supply available at each end of the line. Power can flow from either end of the line to serve customer load.

2. Need for the Project

17. PPL Electric's system planning studies[2] identified several 69 kV transmission lines in Lackawanna County at risk for excessive load drops due to unacceptable line exposure and high momentary outage rates.

18. In addition, PPL Electric's studies determined that the heavily loaded transformers at the Lackawanna 230-69 kV Substation are at risk of reaching their maximum thermal emergency rating. For the loss of one of the 230-69 kV transformers at Lackawanna Substation, the power flow through the remaining transformer will cause the transformer to approach its thermal emergency rating. Similarly, the loss of either 230 kV bus at the Lackawanna 230-69 kV Substation will cause one transformer to be removed from service and power will flow through the other remaining transformer, which will cause the transformer to approach its thermal emergency rating.

19. Due to high load density in the greater Scranton area and the limited capacity of the existing 69 kV lines, the load transfer capability between the Stanton and Lackawanna 230-69 kV Substations is poor during peak loads.

20. As explained above, the Stanton-Providence #1 and #2 and Lackawanna-Providence #1 and #2 69 kV transmission lines are networked transmission lines. As explained in Attachment 1, operating 69 kV transmission lines in a networked configuration presents serious technical concerns and is less reliable than a radial configuration.[3]

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[2] A detailed description PPL Electric's system planning process is Attachment 1 to this Letter of Notification

[3] In a "radial" configuration, the transmission line has a voltage source and power supply available at only one end of the line. Power will flow from the transmission substation (230-69 kV) source to the loads along the line.

21. The need for this Project is further explained in Attachment 1 to this Letter of Notification.

B. THE PROPOSED PROJECT

22. To address the issues identified by PPL Electric's system planning process, and to improve service to customers in the Lackawanna County, PPL Electric proposes to construct the Summit 230-69 kV Substation in the City of Scranton, Lackawanna County, Pennsylvania.

23. The new Summit Substation will provide a new 230 kV backbone source that will be located more central to the load it will serve. It also will relieve the long line exposures, momentary outage rates, networked line conditions, and heavy loading on the Stanton and Lackawanna 230-69 kV Substations described above.

24. The site for the proposed Summit Substation is in close proximity to the existing 13.5-mile, double-circuit Stanton-Lackawanna #3 and #4 230 kV Transmission Line. This line will be split and tied into the Summit Substation.

25. To tie the existing double-circuit 230 kV line into the new Summit Substation, PPL Electric proposes to construct two new double circuit 230 kV transmission lines that will extend approximately 1.32 miles from the Summit Substation to the Stanton-Lackawanna #3 and #4 230 kV Transmission Line. The two new double-circuit 230 kV transmission lines will parallel each other on a common new right-of-way obtained by PPL Electric as explained in Attachment 3 to this Letter of Notification.

26. Upon completion the existing Stanton-Lackawanna #3 and #4 230 kV Transmission Line between the Stanton 230-69 kV Substation and the proposed new Summit Substation will be renamed the Stanton-Summit #3 and #4 230 kV Transmission Line. The the existing Stanton-Lackawanna #3 and #4 230 kV Transmission Line between the Lackawanna

230-69 kV Substation and the proposed new Summit Substation will be renamed the Lackawanna-Summit #1 and #2 230 kV Transmission Line.

27. The new Summit 230-69 kV Substation also will be interconnected with six 69 kV lines that will pick up load from the Stanton and Lackawanna 230-69 kV Substations. This Project will allow for the conversion of the Stanton-Providence #1 and #2, and Lackawanna-Providence #1 and #2 69 kV transmission lines from networked operation to radial operation.[4]

28. A description and one-line diagram of the proposed Project is provided in the Necessity Statement included as Attachment 1 to this Letter of Notification. An aerial exhibit showing the location of the proposed facilities is provided as Figure 3-1 to Attachment 3.

29. The new 230 kV transmission lines will consist of thirty-two self-weathering steel monopoles equipped with steel arms and glass 230 kV insulator assemblies, high capacity conductors, and two optical ground wires. All new poles will be self-supported on concrete caisson foundations. The new structures are expected to range between 120 and 200 feet in height, with an average height of approximately 150 feet. Typical 230 kV structures used for this Project are shown in Figure 2-1 through 2-5 of Attachment 2.

30. Each of the new double-circuit 230 kV transmission lines to be constructed as part of this Project will utilize six power conductors and two fiber optic ground wires for lightning protection and for communications between the transmission system facilities. The minimum conductor-to-ground clearance will be 32 feet, which occurs at a maximum conductor temperature of 125° C. An engineering description of the Project is provided in Attachment 2 to this Letter of Notification.

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[4] Because PPL Electric does not need Commission approval to site, construct, or rebuild transmission lines operating at less than 100 kV, *see* 52 Pa. Code § 57.71, these 69 kV circuits are not the subject of this Letter of Notification.

31. The proposed Project resolves all reliability issues explained above. The proposed Summit Substation will provide an alternate supply of power to the customers in Lackawanna County in the event that the normal supply is interrupted, which will improve power restoration times and provide operating flexibility and improved reliability. The proposed Project also will improve the operation of the 69 kV lines in Lackawanna County by reconfiguring the lines from network operation to radial operation, which reduces the likelihood of customers experiencing an outage on a given line. The proposed Project will provide the region with the required electric power supply reinforcement and will meet all NERC, PJM, and PPL Electric reliability criteria.

32. The proposed Project was presented, without any objections, before the PJM sub-regional RTEP committee for the mid-Atlantic zone on July 29, 2015. The Williams Grove Project was included in the 2015 RTEP Report as supplemental project s0974.3.

33. The total estimated cost of the Project is approximately $12.3 million for the construction of the proposed 230 kV transmission lines.[5]

34. Upon Commission approval, the Project has a scheduled construction start date September 2016 to support an in-service date of November 2017.

III. HEALTH AND SAFETY

35. The proposed Project will not create any unreasonable risk of danger to the public health or safety.

[5] The estimated cost for the proposed Project is an order-of-magnitude estimate developed using averages of recent costs for similar projects and without an in-depth analysis or field investigation. The estimated cost is subject to change as the constructability of the Project, sequence of construction, and other factors that may affect the cost are identified and analyzed as the Project progresses.

36. The Project will be designed, constructed, operated, and maintained in a manner that meets or surpasses all applicable National Electrical Safety Code ("NESC") minimum standards and all applicable legal requirements. Descriptions of PPL Electric's design criteria and safety practices are provided in Attachment 4 to this Letter of Notification.

37. Consistent with its Magnetic Field Management Program, PPL Electric will construct the Project for ground clearances that are a minimum of five feet higher than the required NESC minimum ground clearance for 230 kV lines in order to reduce the magnetic field exposure. Further, to the extent feasible from an engineering perspective, the double-circuit 230 kV lines will be reverse-phased to minimize the potential for exposure to magnetic fields. A description of PPL Electric's Magnetic Field Management Program is provided in Attachment 2 to this Letter of Notification.

IV. DESCRIPTION OF RIGHT-OF-WAY

38. As explained above, to interconnect the Summit Substation with the existing 230 kV system, PPL Electric proposes to construct approximately 1.32 miles of new 230 kV transmission lines that will traverse the following municipalities in Lackawanna County: City of Scranton, Ransom Township, and Newton Township. An aerial map is provided at the end of Attachment 3 to this Letter of Notification.

39. Of the total 1.32 miles of new 230 kV transmission lines to be constructed, 0.24 miles will be located on the Summit 230-69 kV Substation property and 1.08 miles will be located within a new wide right of way.

40. The two new double-circuit 230 kV transmission lines will share a 225-foot wide right-of-way. The two double-circuits will parallel each and will be separated by approximately 100 feet. The new 225-foot wide right-of-way is sufficient to accommodate the construction, operation, and maintenance of both new 230 kV double circuits.

41. Land use impacts are anticipated to be minimal as explained in Attachment 3. Where practical, PPL Electric will use previously established access roads for construction to further reduce interference with existing land uses.

42. Vegetation management will be required to build the new double-circuit 230 kV transmission line. In areas where vegetation management is required, PPL Electric will apply its "*Specifications for Transmission Vegetation Management LA-79827*" to minimize any potential impacts.

43. No communication towers, pipelines, or other utilities will be affected by the proposed Project.

44. PPL Electric does not anticipate any interference with airport operations because of the distance from the Project area and the presence of existing electrical facilities in the Project area.

45. No other state lands, national parks, state parks, or local parks will be impacted by the proposed Project.

46. The Project will not traverse or affect any unique geological, scenic, or natural areas.

47. The proposed Project will not affect any state lands, national parks, state parks, local parks, recreational areas or natural landmarks.

48. PPL Electric conducted a review of the online Pennsylvania Historical and Museum Commission ("PHMC") Bureau for Historic Preservation Cultural Resources Geographic Information System database to determine if National Register of Historic Places listed or eligible historic properties are located in the Project vicinity. It is anticipated that the

proposed Project will have minimal impacts to cultural resources. PPL Electric will coordinate with the PHMC and comply with any terms and conditions required by the PHMC.

49. The proposed Project will not affect any unique geological, scenic or natural areas.

50. Although the Project will cross one stream, this stream will be spanned by the new 230 kV transmission lines.

51. The Project will not cross any wetlands or floodplains.

52. To the extent required, PPL Electric will obtain all necessary permits from the Pennsylvania Department of Environmental Protection and the United States Army Corps of Engineers and will comply with all of the terms and conditions placed on those permits.

53. PPL Electric will acquire any required soil erosion and sedimentation control permits and will comply with any conditions placed on those permits.

54. PPL Electric has consulted with state and federal agencies to obtain information regarding endangered and threatened species in close proximity to the Project. PPL Electric has reviewed the Pennsylvania Natural Diversity Inventory records under the jurisdiction of the Pennsylvania Department of Conservation and Natural Resources, the Pennsylvania Fish and Boat Commission, and the Pennsylvania Game Commission. PPL Electric will continue to consult with the jurisdictional agencies regarding potential impacts to protected species. PPL Electric will obtain all approvals and permits necessary for the construction of the Project, and will comply with any conditions placed on those permits.

55. The Project is located in in an area identified as a potential habitat for two plant species of concern. Therefore, the Pennsylvania Department of Conservation and Natural Resources requires a botanical survey for the presence of the two plant species of concern. PPL

Electric will perform the required botanical surveys and continue to consult with the Pennsylvania Department of Conservation and Natural Resources.

V. NOTICE

56. PPL Electric has provided information regarding the Project to representatives of Upper Allen Township and Cumberland County.

57. Copies of this Letter of Notification will be served on the governmental agencies, municipalities, and other public entities agencies in accordance with 52 Pa. Code § 57.72(d)(3).

58. Copies of this Letter of Notification will be served on the owners of land subject to the right-of-way and easement in accordance with 52 Pa. Code § 57.72(d)(3).

VI. LETTER OF NOTIFICATION

59. 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)(1)(vi).

60. The proposed Project qualifies for use of a Letter of Notification because the new 230 kV transmission lines will be less than two miles.

61. 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 Project will be constructed as proposed herein without the formal application process set forth at 52 Pa. Code §§ 57.71, *et seq.*

VII. CONCLUSION

WHEREFORE, PPL Electric Utilities Corporation respectfully requests that the Pennsylvania Public Utility Commission approve the construction of approximately 1.32 miles of new 230 kV transmission lines in City of Scranton, Ransom Township, and Newton Township Lackawanna County, Pennsylvania, as explained above and in the Attachments hereto.

Respectfully submitted,

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Date: May 5 2016

Attorneys for PPL Electric Utilities Corporation

VERIFICATION

I, STEPHANIE R. RAYMOND, being the VICE PRESIDENT-TRANSMISSION AND SUBSTATIONS 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: 3/4/16

S Raymond