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File #: 149701

May 15, 2012

BY HAND

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

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SECRETARY'S BUREAU

**RE: Application Of PPL Electric Utilities Corporation Under 15 Pa. C.S. §1511(c) For A Finding And Determination That The Service To Be Furnished By The Applicant Through Its Proposed Exercise Of The Power Of Eminent Domain To Acquire A Right-Of-Way And Easement Over And Across The Lands Of Iroquois Ridge Partners LLP In Pocono Township, Monroe County For The Proposed Blooming Grove – Jackson and Peckville – Jackson 138/69 kV Transmission Line Is Necessary Or Proper For The Service, Accommodation, Convenience Or Safety Of The Public Docket No. A-2012-**

Dear Secretary Chiavetta:

Enclosed for filing are the original and three (3) copies of the Application of PPL Electric Utilities Corporation to Exercise the Power of Eminent Domain to Acquire a Right-of-Way and Easement Across the Property of Iroquois Ridge Partners LLP (“Application”) in the above-referenced proceeding. A CD containing copies of the Application and attachment is enclosed. Also enclosed is a check in the amount of \$350 to cover the filing fee.

Respectfully Submitted,

John H. Isom

JHI/jl

Enclosures

cc: Certificate of Service

**BEFORE THE  
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

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SECRETARY'S BUREAU**

Application Of PPL Electric Utilities :  
Corporation Under 15 Pa. C.S. §1511(c) For A :  
Finding And Determination That The Service :  
To Be Furnished By The Applicant Through :  
Its Proposed Exercise Of The Power Of :  
Eminent Domain To Acquire A Right-Of-Way :  
And Easement Over And Across The Lands Of : Docket No. A-2012-  
Iroquois Ridge Partners LLP In Pocono :  
Township, Monroe County For The Proposed :  
Blooming Grove – Jackson and Peckville – :  
Jackson 138/69 kV Transmission Line Is :  
Necessary Or Proper For The Service, :  
Accommodation, Convenience Or Safety Of :  
The Public :

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**APPLICATION OF PPL ELECTRIC UTILITIES CORPORATION TO EXERCISE THE  
POWER OF EMINENT DOMAIN TO ACQUIRE A RIGHT-OF WAY AND EASEMENT  
ACROSS THE PROPERTY OF IROQUOIS RIDGE PARTNERS LLP**

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**TO THE PENNSYLVANIA PUBLIC UTILITY COMMISSION:**

**I. INTRODUCTION AND OVERVIEW**

1. This Application is filed by PPL Electric Utilities Corporation (“PPL Electric”).
2. PPL Electric’s principal address is:

Two North Ninth Street  
Allentown, Pennsylvania 18101

3. 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. PPL Electric is also a “public utility corporation” as defined in Section 1103 of the Business Corporation Law of 1988, 15 Pa.C.S. § 1103.

4. PPL Electric provides electric distribution, transmission and provider of last resort services subject to the regulatory jurisdiction of the Pennsylvania Public Utility Commission (“Commission”) 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.

5. PPL Electric owns approximately 5,000 miles of transmission lines operating at 69 kV<sup>1</sup> or higher, approximately 375 substations with a capacity of 10 MVA<sup>2</sup> or more, and approximately 43,000 miles of distribution lines operating at less than 699 kV.

6. PPL Electric is a corporation organized and existing under the laws of the Commonwealth of Pennsylvania. It was duly formed by consolidation and merger, having received Letters Patent dated June 4, 1920, from the Governor of the Commonwealth of Pennsylvania. PPL Electric is now subject to the Pennsylvania Business Corporation Law of 1988, P.L. 1444, No. 177, Section 103, *as amended*, 15 Pa.C.S. §§ 1101 *et seq.* PPL Electric submits this Application pursuant to Section 1511 of the Business Corporation Law of 1988, 15 Pa.C.S. § 1511.

7. PPL Electric’s attorneys are:

David B. MacGregor (Pa. Bar I.D. #28804)  
Post & Schell, P.C.  
Four Penn Center  
1600 John F. Kennedy Boulevard  
Philadelphia, PA 19103-2808  
Voice: 215.587.1197  
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E-mail: dmacgregor@postschell.com

John H. Isom (Pa. Bar I.D. #16569)  
Jessica R. Rogers (I.D. #309842)  
Post & Schell, P.C.

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<sup>1</sup> Kilovolts.

<sup>2</sup> Mega volt-amperes.

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Paul E. Russell (Pa. Bar I.D. #21643)  
Associate General Counsel  
PPL Services Corporation  
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PPL Electric's attorneys are authorized to receive all notices and communications regarding this Application.

8. This Application includes the accompanying, separately-bound Attachments 1-5. Attachment 1 to this Application includes a map of PPL Electric's transmission system showing substations and transmission lines. PPL Electric's transmission system is operated as part of the PJM Interconnection LLC ("PJM"), which has been approved by the Federal Energy Regulatory Commission ("FERC") as the Regional Transmission Organization ("RTO") of the transmission systems of electric utilities in the region that includes PPL Electric's service territory.

9. Simultaneously with the filing of this Application, PPL Electric filed with the Commission the "Application Of PPL Electric Utilities Corporation Filed Pursuant To 52 Pa. Code Chapter 57, Subchapter G, For Approval Of The Siting And Construction Of The Blooming Grove – Jackson and Peckville – Jackson 138/69 kV Transmission Line In Monroe County, Pennsylvania" ("Siting Application").

10. With the Siting Application, PPL Electric filed Attachments 1 through 14. The Siting Application and its accompanying Attachments are incorporated herein by reference. A

complete copy of the Siting Application is being served on Iroquois Ridge Partners LLP (“Iroquois Ridge”).

## **II. DESCRIPTION OF THE PROJECT**

11. PPL Electric proposes to reduce the electrical load on the existing Blooming Grove – Jackson 138/69 kV circuit and provide operating flexibility and improved reliability for customers in Jackson, Pocono, and Tobyhanna Townships in Monroe County. In its current configuration, the transmission and distribution systems in the area violate the reliability guidelines established in PPL Electric’s Reliability Principles and Practices (“RP&P”).

12. PPL Electric, with approval from the Commission, plans to construct a new double-circuit 138/69 kV line from the 138-69 kV Jackson Substation (“Jackson Substation”), north to the Lake Naomi Tap pole, a distance of approximately 3.8 miles. This Project will bring the system into conformance with PPL Electric’s RP&P. PPL Electric will design the new line to current 138 kV standards, but will operate the line at 69 kV initially. In addition, in the Jackson Substation 69 kV Yard, PPL Electric will install a new line terminal, breaker bay, and circuit breaker.

13. The purpose of the Project is to reduce the electrical load on the existing Blooming Grove – Jackson 138/69 kV circuit and provide operating flexibility and improved reliability for customers in Jackson, Pocono, and Tobyhanna Townships in Monroe County.

14. Attachment 2 to the Siting Application contains functional one-line diagrams of the existing and proposed transmission facilities in the area.

15. The total estimated cost to site, design, and construct this Project is approximately \$6.12 million. This cost includes the proposed overhead transmission line and modifications to the Jackson Substation. The overhead transmission portion of the Project is estimated to cost

approximately \$5.21 million, and the modifications to the Jackson Substation are estimated to cost approximately \$905,000.

16. The required in-service date, which is defined as the date that the proposed facility must be placed in service to prevent overloads that could potentially damage equipment and result in service interruptions to customers, is November 2013. In order to meet that in-service date, subject to the Commission's approval, construction is scheduled to commence in January 2013.

17. In order to construct the proposed Project, PPL Electric needs rights-of-way and easements from six landowners, including the Pennsylvania Game Commission ("PGC"). To date, PPL Electric has successfully obtained appropriate rights-of-way and easements from two landowners through voluntary transactions and is working with the PGC to obtain the necessary rights for the transmission line. This Application is one of three that PPL Electric is filing with the Commission regarding the Blooming Grove – Jackson and Peckville – Jackson 138/69 kV Transmission Line.

### **III. NEED FOR THE PROPOSED PROJECT**

18. The Blooming Grove – Jackson and Peckville – Jackson 138/69 kV Transmission Line will ensure long-term reliability of service to customers in portions of Monroe County by reinforcing the transmission system in order to avoid overloading certain transmission facilities and to resolve transmission reliability criteria violations on PPL Electric's 138/69 kV circuits in northeast Pennsylvania. This Project is required to avoid exceeding the normal thermal loading limit on the existing Blooming Grove – Jackson 138/69 kV circuit under peak winter conditions and to reduce the electrical loading on the existing Blooming Grove – Jackson 138/69 kV single-circuit line below the loading limit, in order to comply with PPL Electric's RP&P. The Project is

also required to prevent overloading of the existing transmission line, which could occur if the existing line at Jackson Substation were out of service.

19. Through its System Planning process, PPL Electric has identified excessive loading and multiple violations of its RP&P guidelines on its 138/69 kV circuits in northeast Pennsylvania beginning in 2013. Specifically, PPL Electric's Transmission Planning Department has identified thermal overloads, excessive loads on a single-circuit, and excessive load interruptions under several contingencies. System Planning is the process which assures that PPL Electric's transmission system can supply electricity to all customer loads in a manner that is reliable, economic and is in conformance with PPL Electric's RP&P.

20. In accordance with PPL Electric's Reliability Criteria, PPL Electric's transmission system is planned so that normal operation of the system will not load any electric facility beyond its normal continuous rating and so that the loss of any single transmission line, generating unit, power transformer, substation bus, circuit breaker, or double-circuit line will not result in any system electric facility being operated beyond its applicable emergency rating. The system is planned so that no customer load should remain interrupted for routine maintenance of transmission facilities and so that the loss of any single facility should not result in a voltage drop of more than 5 percent on the 138/69 kV transmission system. These principles are incorporated in the PPL Electric Utilities Transmission Planning RP&P document.

21. Transmission planning studies project that, due to increasing load growth in the area for 2013 and beyond, the existing Blooming Grove-Jackson 138/69 kV circuit will be loaded to 115 MVA during peak winter conditions. The Blooming Grove-Jackson 138/69 kV circuit has a normal winter rating of 111 MVA, and loading the circuit to 115 MVA would violate PPL Electric's RP&P guidelines. Operating the circuit in an overloaded condition, i.e.,

above its normal rating, could initially damage the conductor and ultimately cause a failure resulting in customer outages. In the event of an outage, service to approximately 16,300 customers would be interrupted.

22. The RP&P guidelines also state that loading on a single-circuit should not exceed 60 Megawatts (“MW”) so that, for the loss of one circuit, the load from the out of service circuit can be transferred to the remaining in-service circuit which can still operate within its emergency ampacity rating. The present load on the Blooming Grove – Jackson 138/69 kV circuit also violates this criterion.

23. By winter 2013, the loss of the Blooming Grove – Jackson 138/69 kV Line would interrupt 115 MVA of load because the load cannot be transferred. Transferring load from the Jackson to the Blooming Grove Substation would cause low voltage at the end of the Blooming Grove – Jackson circuit. In such an outage, customer load served by distribution substations at Wagners and Lake Naomi, as well as the customer-owned Sanofi substation, would be interrupted to restore 69 kV voltages along the line to the acceptable lower limit.

24. The RP&P guideline for maximum allowable load loss is 30 MW for a single-circuit line outage. If an outage were to occur on the Blooming Grove – Jackson circuit in its current configuration, approximately 68 MW would remain interrupted for an extended period of time until the outage could be located and switching moves could be made to re-sectionalize the line. This outage would exceed the RP&P guideline for maximum allowable load loss for a single-circuit line outage.

25. After these violations were identified, PPL Electric explored various electrical solutions to address the violations. After extensive analysis, the Company concluded that the preferred solution was to construct the proposed project. The proposed Project is a long-term

transmission upgrade that will eliminate two of the identified RP&P violations and will maintain reliable electrical service to customers in Monroe County. The remaining violation will be resolved with another project that will be filed with the Commission in the future. A complete discussion is located in Exhibit 1, Attachment 2.

26. A thorough discussion of the necessity of this Project is contained in the Siting Application and Attachment 2 to the Siting Application.

#### **IV. SITING ANALYSIS**

27. PPL Electric conducted an extensive, multi-faceted analysis to determine the route for the proposed Project. This analysis included designation of a General Area of Study for the compilation of an environmental inventory, the designation of a Project Study Area within the General Area of Study, identification of alternative routes, analysis of the alternative routes and selection of the proposed line route. This process enabled PPL Electric to select a route for the proposed transmission line that appropriately balances functional requirements, environmental factors, social factors and cost considerations.

28. The General Area of Study for the project is shown in Figure 3-1 of Attachment 3 to the Siting Application. The General Area of Study is the area for which the environmental inventories were gathered. The Project Study Area, which is a subset of the larger General Area of Study, is the territory in which alternative line routes can be feasibly sited to meet the Project's functional requirements and minimize social impacts, environmental impacts, and project costs. PPL Electric identified a General Area of Study for the Project that encompasses approximately 30-square miles (19,200 acres) within Monroe County, Pennsylvania. The General Area of Study is defined to the south by the Jackson Substation, beyond which a new route extending north to the desired tap location would not be reasonable. Landscape features define the remaining boundaries and include dense residential areas to the west and north, and

residential and commercial districts along Interstate 80 (“I-80”) and State Route 611 to the east. The General Area of Study included portions of Jackson, Pocono, Tobyhanna, and Tunkhannock Townships in Monroe County, Pennsylvania.

29. The next step in the route selection process was the identification of routing constraints. PPL Electric identified numerous constraints in determining potential routes. Specific avoidance areas for this Project included the Big Pocono State Park, non-spannable water bodies (Crescent Lake and Sand Spring), the Butz Landfill Superfund site, and several small historic quarries. Other potential avoidance area categories, such as airports, military facilities, National Register of Historic Places (“NRHP”) –listed historic structures or districts, federally designated wildlife refuges, and federally or state designated wild and scenic rivers are not present within the General Area of Study.

30. PPL Electric identified six alternative routes for this line, Routes A through E. A complete description of the six alternatives can be found in the Siting Application and in Attachment 4 to the Siting Application. The alternative transmission line route development utilized a least impact tool. The alternative route analysis focuses on a single alignment, in an effort to minimize the least preferred areas that are crossed along a route connecting the starting and ending locations. Routes were selected from each of the three perspectives: Built Environment, Natural Environment and Engineering Requirements.

31. The six routes were compared quantitatively based upon a detailed analysis of societal concerns, environmental impacts, engineering considerations, and costs. The quantitative comparison is provided in Table 4-3 in Attachment 4 to the Siting Application. PPL Electric determined that Routes A, C, and E were not suitable for the Project, and excluded them from further consideration. Route A scored the worst due to its impacts on the natural

environment. Route E had the highest impacts on the built environment and engineering impacts. Route C had the second highest impact on the natural environment and engineering impacts.

32. After excluding Routes A, C, and E, the remaining three Routes were subjected to a comprehensive qualitative analysis. In conducting its qualitative assessment, PPL Electric considered the following five qualitative criteria for each alternative:

- (a) Visual concerns;
- (b) Community concerns;
- (c) Special permit issues;
- (d) Construction, maintenance, and accessibility; and
- (e) Schedule delay risk.

33. The results of the qualitative assessment of the three Alternative Routes indicated that Route D-1 had the lowest weighted scores for visual concerns, community concerns, and schedule delay risk. This route also scored favorably with regard to special permit issues and construction issues. Route D-1 had the lowest cumulative total in the qualitative assessment, and was therefore determined to be the Preferred Route for this Project.

34. Route D-1 starts at Jackson Substation and travels northeast for 0.53 miles, paralleling the eastern edge of the existing transmission line right-of-way. After crossing Camelback Mountain, Route D-1 turns to the north for 1.37 miles to a point just south of I-80, where it shifts to the west of the existing transmission line right-of-way to avoid a cluster of residential properties. To accomplish this shift, the existing line would be transferred to new poles constructed in a new right-of-way on the western side of the existing right-of-way. The new line would then be transferred to the existing poles in the existing right-of-way. From the base of the south side of I-80, Route D-1 turns to the east for 0.27 miles, then turns sharply north for 0.15 miles and crosses to the north side of I-80. Turning to the northwest, Route D-1 then

proceeds 0.19 miles over open forest to a point just within the borders of State Game Land #38. After switching to the east side of the existing transmission line right-of-way on the north of I-80, Route D-1 departs from the existing right-of-way and proceeds northeast for 0.17 miles and then turns north for 0.33 miles. In this section, Route D-1 traverses an area of open forest that bypasses several residential properties and goes through an area identified as a proposed residential development. Upon intersecting with the existing transmission line right-of-way, Route D-1 then turns to the northeast and travels 0.57 miles before intersecting with the existing Lake Naomi 138/69 kV Tap Line right-of-way in the eastern end of the Project Study Area.

35. Overall, Route D-1 will have substantially less impact on the natural and built environment, land use, and citizens in Monroe County than the other Routes. A detailed explanation of the qualitative and quantitative analyses and comparison of the Alternatives Routes, and the decision to use Route D-1 for the Project, are provided in Attachment 4 to the Siting Application.

36. A thorough discussion of the siting process for this Project, including Figures showing the quantitative and qualitative analyses, are contained in the Siting Application and Attachment 4 to the Siting Application.

**V. PROPERTY FOR WHICH CONDEMNATION IS SOUGHT**

37. The route of the proposed Project crosses a certain tract of land, a legal description of which is provided in Attachment 2 to this Application. The name and post office address of the owner of record of said land is:

Iroquois Ridge Partners LLP  
C/O Henry Speerstra  
2384 Horse Creek Road  
Oil City, PA 16301

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38. PPL Electric has attempted to purchase a right-of-way and easement over said tract of land for the purposes described above but, to date, has been unable to reach an agreement with the property owner.

39. Prior to commencing negotiations to purchase a right-of-way and easement from Iroquois Ridge, PPL Electric previously disclosed to them that PPL Electric may seek to obtain a right-of-way and easement across the property by eminent domain and furnished information concerning the power of eminent domain by providing the form of notice specified by the Commission at 52 Pa. Code § 57.91.

40. A legal description and map of the right-of-way and easement to be acquired by condemnation are provided in Attachments 3 and 4, respectively, to this Application.

41. The right-of-way and easement sought to be acquired in this Application does not include property used as a burial ground, place of public worship, dwelling house, or any part of the reasonable curtilage appurtenant of a dwelling house.

#### **VI. THE REQUIREMENTS FOR CONDEMNATION HAVE BEEN SATISFIED**

42. No other public utility is now furnishing, or has the corporate authority and certificate to furnish the same service as, or service similar to, that which PPL Electric will furnish by means of the transmission line to be constructed over and upon the right-of-way and easement to be acquired as set forth in this Application.

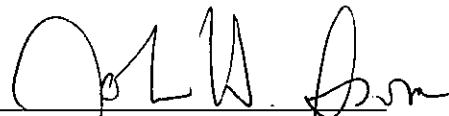
43. The service to be furnished by PPL Electric through the proposed transmission line and related facilities is necessary or proper for the service, accommodation, convenience, or safety of the public for the reasons set forth in this Application and the Siting Application.

44. Appropriate resolutions were adopted by PPL Electric's Board of Directors authorizing and directing this Application. A copy of the applicable resolutions, as certified by the Secretary of PPL Electric, is provided in Attachment 5 to this Application.

**VII. CONCLUSION**

WHEREFORE, PPL Electric Utilities Corporation respectfully requests that the Pennsylvania Public Utility Commission find and determine that the service to be furnished by PPL Electric through the proposed exercise of eminent domain, as set forth above, is reasonably necessary or proper for the service, accommodation, convenience, or safety of the public.

Respectfully submitted,



Paul E. Russell (Pa. Bar I.D. #21643)  
Associate General Counsel  
PPL Services Corporation  
Two North Ninth Street  
Allentown, PA 18101  
Voice: 610.774.4254  
Fax: 610.774.6726  
E-mail: perussell@pplweb.com

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E-mail: jrogers@postschell.com

Dated: May 15, 2012

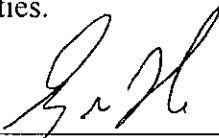
Attorneys for PPL Electric Utilities Corporation

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**VERIFICATION**

I, Gregory N. Dudkin, being the Senior Vice President of 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: 2/23/12

  
\_\_\_\_\_  
Gregory N. Dudkin

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**BEFORE THE  
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Application Of PPL Electric Utilities :  
Corporation Under 15 Pa. C.S. §1511(c) For A :  
Finding And Determination That The Service :  
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Iroquois Ridge Partners LLP In Pocono :  
Township, Monroe County For The Proposed :  
Blooming Grove -- Jackson and Peckville -- :  
Jackson 138/69 kV Transmission Line Is :  
Necessary Or Proper For The Service, :  
Accommodation, Convenience Or Safety Of :  
The Public :

**PPL ELECTRIC UTILITIES CORPORATION**

**STATEMENT NO. 1**

**DIRECT TESTIMONY OF ALEXANDROS LOUSOS**

**DATE: May 15, 2012**

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**SECRETARY'S BUREAU**

1 Q. Please state your name and business address.

2 A. My name is Alexandros Lousos. My business address is Two North Ninth Street,  
3 Allentown, Pennsylvania 18101.

4

5 Q. By whom are you employed and in what capacity?

6 A. I am employed by PPL Electric Utilities Corporation ("PPL Electric") as a Support  
7 Engineer in the Transmission Planning group.

8

9 Q. What is your educational background?

10 A. I received a Bachelor of Science degree in Electrical Engineering from Drexel  
11 University in 2008.

12

13 Q. Do you hold any professional licenses?

14 A. No.

15

16 Q. Are you a member of any professional organizations?

17 A. Yes, I am a member of IEEE - Power & Energy Society

18

19 Q. Describe your experience and employment history with PPL Electric.

20 A. I have been employed by PPL Electric for more than three years. I have been in my  
21 current position since 2008. In this position, I am responsible for planning PPL  
22 Electric's transmission system for lines 69 kilo-Volts (kV) and greater in the  
23 Northeast Region.

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Q. Have you participated in other transmission line siting projects for PPL Electric?

A. Yes. I have worked on a number of projects involving transmission lines greater than 100 kV that have been certificated under the Commission’s siting regulations at 52 Pa. Code Ch. 57, Subchapter G.

Q. What is the purpose of your testimony?

A. My testimony will address the following subjects: (1) the need for the Blooming Grove – Jackson and Peckville – Jackson 138/69 kV Transmission Line; (2) a description of PPL Electric’s system planning process; and (3) an explanation of the proposed Project, which will solve the problems identified by the planning process.

Q. Please provide a brief overview of PPL Electric’s Attachment 2 to Exhibit 1 and identify the portions for which you are responsible.

A. Attachment 2 to Exhibit 1 is the Necessity Statement that sets forth the reasons why the Blooming Grove – Jackson and Peckville – Jackson 138/69 kV Transmission Line is required, describes the system planning process and the issues identified with the current system configuration, and explains how the proposed Project will resolve those issues.

I am responsible for the portions of Attachment 2 which are related to the need for the transmission line.

1 Q. Please briefly summarize the findings and conclusions set forth in the Necessity  
2 Statement.

3 A. This Project will resolve violations of PPL Electric's Reliability Principles and  
4 Practices ("RP&P") guidelines. The Project is part of a long-term, multi-part  
5 solution to the transmission system reliability violations identified through PPL  
6 Electric's planning process and will ensure reliable electric transmission service to  
7 electric customers in the affected areas of Jackson, Pocono, and Tobyhanna  
8 Townships in Monroe County.

9

10 The required in-service date, which is the date when the proposed facility must be  
11 placed in service to prevent overloads that could damage equipment and result in  
12 service interruptions to customers, is November 2013. In order to meet that in-  
13 service date, subject to the Commission's approval, construction is scheduled to  
14 commence in January 2013. The entire line will be designed and constructed to  
15 operate at 138 kV; however, it will initially operate at 69 kV until load growth in the  
16 area makes an increase in voltage appropriate.

17

18 Q. What is system planning?

19 A. System Planning is the process which assures that PPL Electric's electric  
20 transmission system can supply electricity to all customer loads in a manner that is  
21 reliable and economic. This process assures that PPL Electric's electric system  
22 transmission system is planned and constructed so that:

23

- 1 • It can sustain probable contingencies and disturbances with minimal customer  
2 service interruptions;
- 3 • It can adequately serve each customer's needs with regard to capacity, voltage  
4 and reliability for all load levels throughout the daily load cycle; and
- 5 • It is in conformance with PPL Electric's RP&P guidelines.

6

7 Q. What is the RP&P?

8 A. PPL Electric has set forth its planning guidelines in its RP&P. The RP&P guidelines  
9 were developed to ensure adequate and appropriate levels of electric service  
10 consistent with good utility practice. Specifically, the process assures that PPL  
11 Electric's transmission and distribution systems can supply all customer load in a  
12 way that is reliable and economic.

13

14 Q. What are the applicable transmission criteria under the RP&P?

15 A. PPL Electric's transmission systems are planned so that they meet the following  
16 guidelines:

- 17 • Normal operation of the system will not load any electric facility beyond its  
18 normal continuous rating.
- 19 • Excessive load is not interrupted for the loss of a single-circuit 69 kV line or  
20 double-circuit 69 kV line.
- 21 • Large-scale, long-term or frequent interruptions and excessive load loss are to be  
22 avoided due to the adverse and potentially hazardous effect they can have on the  
23 public.

1

2 Q. How does PPL Electric conduct its planning process?

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

10

11 Once the system model is complete, comprehensive power flow simulations are  
12 performed to determine the ability of the system to comply with the PPL Electric  
13 transmission planning reliability criteria. This is accomplished by simulating an  
14 outage of each transmission and bulk electric facility. All conditions where the  
15 system is not in conformance with the reliability criteria are identified and system  
16 reinforcements are added to bring the system into conformance. Also identified are  
17 estimated costs and lead-times to implement the required reinforcements. Computer  
18 simulations of the system with the identified reinforcement alternatives are  
19 completed to identify the best overall reinforcement that will meet the needs of the  
20 region in a reliable and economic manner.

21

22 Q. Please describe the existing system.

1 A. The existing Blooming Grove – Jackson and Peckville – Jackson 138/69 kV circuits  
2 are built on double-circuit 138/69 kV structures –that is, both circuits are installed on  
3 common structures, from Jackson Substation to the Lake Naomi Tap pole. The  
4 circuits are constructed for future 138 kV operation but are currently operated at 69  
5 kV. Currently, the existing Lake Naomi 138/69 kV Tap is sourced by the Blooming  
6 Grove – Jackson 138/69 kV circuit. The Lake Naomi Tap is built for future double-  
7 circuit 138/69 kV operation, but is currently operated as a single-circuit 69 kV  
8 system.

9

10 Q. What transmission problems were identified in the planning process?

11 A. Due to increasing load growth in the area, transmission planning studies project, for  
12 2013 and beyond, the existing Blooming Grove – Jackson 138/69 kV circuit will be  
13 loaded to 115 Mega-Volt Amperes (MVA) during peak winter conditions. The  
14 Blooming Grove-Jackson 138/69 kV circuit has a normal winter rating of 111 MVA,  
15 and loading the circuit to 115 MVA would violate PPL Electric’s RP&P guidelines.  
16 Operating the circuit in an overloaded condition, above its normal rating, could  
17 initially damage the conductor and ultimately cause a failure resulting in customer  
18 outages. This would result in approximately 16,300 customers having service  
19 interrupted.

20

21 The RP&P guidelines also recommend that loading on a single-circuit should not  
22 exceed 60 Mega-Watts (MW), so that for the loss of one circuit, the load from the

1 out-of-service circuit can be transferred to the remaining in-service circuit which  
2 would then operate within its emergency ampacity rating.

3  
4 By the winter of 2013, if an outage occurred near the Jackson Substation on the  
5 Blooming Grove – Jackson 138/69 kV line, it would initially interrupt 115 MVA of  
6 load. Transferring load from Jackson to Blooming Grove Substations would be  
7 limited due to the resulting low voltage at the end of the Blooming Grove – Jackson  
8 circuit. In such an outage, the Power Dispatcher would be required to interrupt  
9 customer load served by distribution substations at Wagners and Lake Naomi, as  
10 well as the customer-owned Sanofi substation, in order to restore 69 kV voltages  
11 along the line to the acceptable lower limit.

12  
13 The RP&P guideline for maximum allowable load loss is 30 MW for a single-circuit  
14 line outage. If an outage were to occur on the Blooming Grove – Jackson circuit in  
15 its current configuration, approximately 68 MW would remain interrupted for an  
16 extended period of time until the outage could be located and switching moves could  
17 be made to re-sectionalize the line. This outage would exceed the RP&P guideline  
18 for maximum allowable load loss for a single-circuit line outage.

19  
20 Q. How does PPL Electric plan to resolve the transmission and reliability violations  
21 identified in the planning process?

22 A. To resolve the issues described above, PPL Electric, with approval from the  
23 Commission, plans to construct the following:

- 1 • A new double-circuit 138/69 kV line from the Jackson Substation, north to the  
2 Lake Naomi Tap pole, a distance of approximately 3.8 miles. PPL Electric will  
3 design the new line to current 138 kV standards, but will operate the line at 69  
4 kV initially.
- 5 • At Jackson Substation in the 69 kV Yard, PPL Electric will install a new line  
6 terminal, breaker bay, and circuit breaker.

7

8 The existing Peckville – Jackson and Blooming Grove – Jackson 138/69 kV Line,  
9 heading north from the Jackson Substation, will become the new Jackson-Wagners  
10 #1 & #2 138/69 kV circuits, respectively. The Lake Naomi 138/69 kV Tap will  
11 become part of the circuit designated as the Jackson – Wagners #1 Line.

12

13 PPL Electric determined that this configuration will resolve two of the RP&P  
14 transmission violations in the area because the new double-circuit line provides  
15 additional transmission capacity and load transfer capability. This new line will  
16 reduce loading on the current Blooming Grove – Jackson 138/69 kV circuit, by  
17 providing another double-circuit line that ties directly into the Jackson Substation.  
18 The load on the existing Lake Naomi Tap will be transferred to the Jackson-Wagners  
19 #1 circuit and terminated separately into Jackson substation. After completion of the  
20 project, the Blooming Grove-Jackson 69 kV single-circuit line will be loaded to 59  
21 MW during peak winter conditions, which is within RP&P guidelines.

22

23 After completion of the project, an outage on the Blooming Grove-Jackson 69 kV  
24 line near the Jackson Substation would interrupt 59 MW. Transferring load between  
25 Blooming Grove and Jackson Substations is limited because of the low voltage

1 levels that result at the end of the abnormally sectionalized Blooming Grove-Jackson  
2 69 kV line. For an outage near the Jackson Substation on the single-circuit  
3 Blooming Grove-Jackson 69 kV line, approximately 32 MW would remain  
4 interrupted for an extended period of time. This situation still violates the RP&P  
5 guideline for maximum allowable load loss for a single-circuit line outage (30 MW),  
6 however the amount of load remaining interrupted will be greatly reduced. The  
7 remaining violation will be resolved with another project that will be filed with the  
8 Commission in the future.

9

10 Q. What functional alternatives were examined to resolve the transmission and  
11 reliability violations identified in the planning process?

12 A. No other reasonably economical functional alternatives were identified that would  
13 resolve the problems as outlined above.

14

15 Q. Does this conclude your direct testimony at this time?

16 A. Yes, it does.

**BEFORE THE  
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Application Of PPL Electric Utilities :  
Corporation Under 15 Pa. C.S. §1511(c) For A :  
Finding And Determination That The Service :  
To Be Furnished By The Applicant Through :  
Its Proposed Exercise Of The Power Of :  
Eminent Domain To Acquire A Right-Of-Way :  
And Easement Over And Across The Lands Of : Docket No. A-2012- \_\_\_\_\_  
Iroquois Ridge Partners LLP In Pocono :  
Township, Monroe County For The Proposed :  
Blooming Grove – Jackson and Peckville – :  
Jackson 138/69 kV Transmission Line Is :  
Necessary Or Proper For The Service, :  
Accommodation, Convenience Or Safety Of :  
The Public :

**PPL ELECTRIC UTILITIES CORPORATION**

**STATEMENT NO. 2**

**DIRECT TESTIMONY OF JUSTIN B. WEHR**

**DATE: May 15, 2012**

2012 MAY 15 AM 11:41  
P.A. PUC  
SECRETARY'S BUREAU

1 Q. Please state your name and business address.

2 A. My name is Justin B. Wehr. My business address is Two North Ninth Street, Allentown,  
3 PA 18101.

4  
5 Q. By whom are you employed and in what capacity?

6 A. I am employed by PPL Electric Utilities Corporation (“PPL Electric”). My position with  
7 PPL Electric is as Siting Coordinator in the Transmission Operations Department. In that  
8 position, I am responsible for identifying and selecting high voltage transmission line  
9 routes and substation locations. I am also responsible for preparing Applications and  
10 Exhibits for approval by the Pennsylvania Public Utility Commission.

11  
12 Q. What is your educational background?

13 A. I received a Bachelor of Science Degree in Environmental Science/Geology with a minor  
14 in Geography from Kutztown University of Pennsylvania in 2002. My additional  
15 continuing education relevant to my current position includes the following courses and  
16 programs:

- 17 • Richard Chinn Environmental Training Inc., ACOE Wetland Delineation  
18 /Regional Supplemental Training (2003)
- 19 • Halfmoon LLC, Pennsylvania Land Use and Environmental Issues (2009)
- 20 • Burns & McDonnell, Routing and Permitting on the NEEWS Project  
21 (2010)
- 22 • Burns & McDonnell, Transmission Line Routing Workshop 2011

23

1 Q. Describe your experience and employment history with PPL Electric.

2 A. I have been employed by PPL Electric for 3 years. I have been in my current position, as  
3 Siting Coordinator, since November of 2008. My previous professional experience  
4 includes employment at Lehigh Engineering Associates, Inc., from June 2002 until  
5 August of 2008. I served in the capacities of Environmental Technician, Environmental  
6 Project Manager, and Project Manager. In those roles, I was responsible for  
7 environmental permitting, grading and drainage calculations, and overall project  
8 management.

9

10 Q. Have you participated in other transmission line siting projects for PPL Electric?

11 A. Yes. I have worked on more than 10 projects involving transmission lines.

12

13 Q. What are your responsibilities in connection with the Blooming Grove – Jackson and  
14 Peckville – Jackson 138/69 kV Transmission Line?

15 A. I am responsible for leading the Siting Team and establishing the General Area of Study,  
16 compilation of environmental inventories, Alternative Route evaluation and the selection  
17 of a preferred route for the Blooming Grove – Jackson and Peckville – Jackson 138/69  
18 kV Transmission Line.

19

20 Q. What are the subjects of your testimony?

21 A. I will describe the Blooming Grove – Jackson and Peckville – Jackson 138/69 kV  
22 Transmission Line, summarize PPL Electric's process to site the line, describe the  
23 property of Iroquois Ridge Partners LLP ("Iroquois Ridge"), describe PPL Electric's

1 proposed right-of-way and easement over the property, and provide the history and status  
2 of negotiations with Iroquois Ridge.

3  
4 Q. Please describe the Blooming Grove – Jackson and Peckville – Jackson 138/69 kV  
5 Transmission Line Project.

6 A. As explained in the testimony of Alexandros Lousos, PPL Electric Statement No. 1, the  
7 purpose of the project is to reduce the electrical load on the existing Blooming Grove –  
8 Jackson 138/69 kV circuit and provide operating flexibility and improved reliability for  
9 customers in Jackson, Pocono, and Tobyhanna Townships in Monroe County. The  
10 proposed line will be constructed entirely within Monroe County, and will include  
11 approximately 3.8 miles of new double-circuit 138/69 kV transmission line.

12  
13 Q. How did PPL Electric identify alternative routes for the new transmission line?

14 A. PPL Electric determined a general area for which environmental inventories as well as  
15 inventories of other significant features were compiled. This area is referred to as the  
16 General Area of Study. PPL Electric identified a General Area of Study for the Project  
17 that encompasses approximately 30-square miles (19,200 acres) within Monroe County,  
18 Pennsylvania. The General Area of Study is bounded to the south by the Jackson  
19 Substation, beyond which a new route extending north to the desired tap location would  
20 not be reasonable. The remaining boundaries were determined by densely populated  
21 residential areas to the west and north, and densely populated residential and commercial  
22 districts along Interstate 80 (“I-80”) and State Route 611 to the east.

1       Once the General Area of Study was selected, the next step in the route selection process  
2       was the identification of routing constraints. Large constraints were identified and  
3       avoided to the extent practical. Specific large constraints for this Project included the Big  
4       Pocono State Park, non-spannable water bodies (Crescent Lake and Sand Spring), the  
5       Butz Landfill Superfund site, and several small historic quarries. Other potential  
6       constraints, such as airports, military facilities, National Register of Historic Places  
7       (“NRHP”)–listed historic structures or districts, federally designated wildlife refuges, and  
8       federally or state designated wild and scenic rivers are not present within the General  
9       Area of Study.

10  
11       PPL Electric determined that a subset of the General Area of Study was appropriate for  
12       line route alternatives, where the alternatives could be sited to feasibly meet the Project’s  
13       functional requirements and, at the same time, minimize environmental and social  
14       impacts and project costs. This area is called the Project Study Area. PPL Electric  
15       determined six alternative routes for this line in the Project Study Area, identified as  
16       Routes A, B, C, D, D-1 and E.

17  
18       The alternative route analysis attempted to minimize the use of constraint areas along a  
19       route connecting the starting and ending locations. While all of the Alternative Routes  
20       take into consideration each of the three perspectives (built environment, engineering  
21       considerations, or natural environment), each alternative specifically optimizes one of the  
22       perspectives.

1 Q. Please describe the alternative routes PPL Electric considered.

2 A. PPL Electric considered the following alternative routes for this line:

3 • Route A begins at the Jackson Substation and travels northwest for 2.26 miles  
4 through State Game Land #38 and crosses to the north side of I-80. Route A then  
5 turns to the northeast for 0.21 miles. Route A then proceeds north for 0.51 miles  
6 along the eastern edge of the Crescent Lake residential development. The route turns  
7 to the west for 0.19 miles crossing over Crescent Lake Road and through a proposed  
8 residential development. Turning to the northwest, Route A travels another 0.19  
9 miles then turns north for 0.45 miles. After crossing Sullivan Trail Road, Route A  
10 intersects with the existing Lake Naomi 138/69 kV Tap Line at the western edge of  
11 the Project Study Area, and close to the Lake Naomi Substation. The total distance of  
12 Route A is 3.81 miles.

13 • Route B starts at the Jackson Substation and travels northwest for 2.26 miles,  
14 mirroring Route A to the north side of I-80. After crossing I-80, Route B turns  
15 sharply to the northeast and proceeds for 0.23 miles. Route B then turns north and  
16 travels 0.51 miles along open forest land bordering a wetland complex. Turning to  
17 the northeast, Route B proceeds 0.19 miles, then turns north and travels 0.49 miles  
18 and crosses Crescent Lake Road, Sullivan Trail Road, and sections of open forest,  
19 before intersecting the existing Lake Naomi 138/69 kV Tap Line east of Route A.  
20 Route B is 3.68 miles long.

21 • Route C starts at the Jackson Substation and travels north for 2.14 miles. After  
22 crossing to the north side of I-80, Route C turns to the northeast and travels 0.32  
23 miles. Route C then turns north for 0.72 miles, passing along the back edges of  
24 existing and proposed residential lots and then crossing over Dry Sawmill Run.  
25 Turning to the northeast, Route C travels 0.47 miles, crossing over Sullivan Trail  
26 Road and over open forest land before intersecting with the existing Lake Naomi  
27 138/69 kV Tap Line in the center of the Project Study Area. Route C is 3.65 miles  
28 long.

29 • Route D starts at the Jackson Substation and travels northeast for 0.53 miles,  
30 paralleling the eastern edge of the existing transmission line right-of-way. After  
31 crossing Camelback Mountain, Route D turns to the north for 1.37 miles to a point  
32 just south of I-80, where it shifts to the west of the existing transmission line right-of-  
33 way to avoid a cluster of residential properties. To accomplish this shift, the existing  
34 line would be transferred to new poles constructed in a new right-of-way on the  
35 western side of the existing right-of-way. The new line would then be transferred to  
36 the existing poles in the existing right-of-way. From the base of the south side of I-  
37 80, Route D turns to the east for 0.27 miles, then turns sharply north for 0.15 miles  
38 and crosses to the north side of I-80. Turning to the northwest, Route D then  
39 proceeds 0.19 miles over open forest to a point just within the borders of State Game  
40 Land #38. Route D turns to the north for 0.61 miles through open forest and parallel  
41 with a private dirt road that provides access to several homes located along the  
42 existing transmission line right-of-way. Prior to reaching the homes, Route D shifts

1 back to the east side of the existing transmission line right-of-way. This shift would  
2 be accomplished by moving the proposed transmission line to the new poles in the  
3 new right-of-way created on the east side of the existing right-of-way. The existing  
4 transmission lines would then be transferred back to the existing poles in the existing  
5 right-of-way. Paralleling the eastern edge of the existing transmission line right-of-  
6 way, Route D then turns to the northeast for 0.64 miles and crosses over Sullivan  
7 Trail Road, Transue Run, and traverses through open forest before intersecting with  
8 the existing Lake Naomi 138/69 kV Tap Line in the eastern end of the Project Study  
9 Area. Route D is 3.76 miles long.

10 • Route D-1 starts at Jackson Substation and mirrors Route D for 2.51 miles. After  
11 switching to the east side of the existing transmission line right-of-way on the north  
12 of I-80, Route D-1 departs from the existing right-of-way and proceeds northeast for  
13 0.17 miles and then turns north for 0.33 miles. In this section, Route D-1 traverses an  
14 area of open forest that bypasses several residential properties, but through proposed  
15 residential development. Upon intersecting with the existing transmission line right-  
16 of-way, Route D-1 then turns to the northeast and travels 0.57 miles before  
17 intersecting with the existing Lake Naomi 138/69 kV Tap Line in the eastern end of  
18 the Project Study Area.

19 • Route E starts at Jackson Substation and travels northeast for 1.12 miles. Route E  
20 parallels the eastern edge of the existing transmission line right-of-way to the crest of  
21 Camelback Mountain, where it crosses the access road for Big Pocono State Park and  
22 parallels the eastern edge of the road down to the northern base of the mountain.  
23 Route E then turns to the east for 0.34 miles paralleling the south side of the access  
24 road. Near PPL Electric's existing Camelback Substation, Route E turns to the  
25 northeast for 0.44 miles and immediately crosses the access road and the existing  
26 Camelback Tap 69 kV transmission line. Route E then traverses an open parking lot  
27 and a wooded area bordering the northwestern edge of the Camelback Ski Resort.  
28 Route E turns north for 0.56 miles, then northwest for 0.85 miles. Route E crosses I-  
29 80, an unnamed tributary to Transue Run and traverses areas of open forest that are a  
30 proposed residential development site. At this point, Route E turns north for 0.51  
31 miles. Route E then intersects the existing transmission line right-of-way and turns to  
32 the northeast for 0.28 miles paralleling the eastern edge of the right-of-way, before  
33 intersecting with the existing Lake Naomi 138/69 kV Tap Line in the eastern portion  
34 of the Project Study Area.

35  
36 Q. How did PPL Electric determine which of the identified alternative routes was preferred?

37 A. The six routes were compared quantitatively based upon a detailed analysis of societal  
38 concerns, environmental impacts, engineering considerations, and costs. The quantitative  
39 comparison is provided in Table 4-3 in Attachment 4 to the Siting Application. PPL

1 Electric found that Routes A, C, and E were not suitable for the Project and excluded  
2 them from further consideration. Route A scored the worst due to its impacts on the  
3 natural environment. Route E had the highest impacts on the built environment and  
4 engineering impacts. Route C had the second highest impact on the natural environment  
5 and engineering impacts.

6  
7 After excluding Routes A, C, and E, the remaining three Routes were subjected to a  
8 comprehensive qualitative analysis. In conducting its qualitative assessment, PPL  
9 Electric considered the following five qualitative criteria for each alternative:

- 10 (a) Visual concerns;
  - 11 (b) Community concerns;
  - 12 (c) Special permit issues;
  - 13 (d) Construction, maintenance, and accessibility; and
  - 14 (e) Schedule delay risk.
- 15

16 The results of the qualitative assessment of the three Alternative Routes indicated that  
17 Route D-1 had the lowest weighted scores for visual concerns, community concerns, and  
18 schedule delay risk. This route also scored favorably with regard to special permit issues  
19 and construction issues. Route D-1 had the lowest cumulative total in the qualitative  
20 assessment.

21  
22 Q. Which route did PPL Electric determine was the most suitable?

23 A. Route D-1 was selected for the Blooming Grove – Jackson and Peckville – Jackson  
24 138/69 kV Transmission Line.

25  
26 Q. What made Route D-1 preferable to the other two alternatives?

1 A. Overall, Route D-1 will have substantially less impact on the natural and built  
2 environment, land use, and citizens in Monroe County than the other Routes considered.

3

4 Q. What is the estimated cost of constructing the Project using Route D-1?

5 A. The estimated cost of the Project is approximately \$6.12 million. This cost includes the  
6 proposed overhead transmission line and substation modifications at Jackson Substation.  
7 The overhead transmission portion is estimated to cost approximately \$5.21 million, and  
8 the modifications to the Jackson Substation are estimated to cost approximately  
9 \$905,000.

10

11 Q. How many rights-of-way and easements are required for the Blooming Grove – Jackson  
12 and Peckville – Jackson 138/69 kV Transmission Line using Route D-1?

13 A. PPL Electric needs rights-of-way and easements from six landowners, including the  
14 Pennsylvania Game Commission (“PGC”). To date, PPL Electric has successfully  
15 obtained appropriate rights-of-way and easements from two landowners through  
16 voluntary transactions and is working with the PGC to obtain the necessary rights-of-way  
17 and easements.

18

19 Q. Does the route of the proposed Blooming Grove – Jackson and Peckville – Jackson  
20 138/69 kV Transmission Line cross the property of Iroquois Ridge, which is the subject  
21 of this proceeding?

22 A. Yes. The route does cross the Iroquois Ridge property, as described more fully below.  
23 PPL Electric has attempted to purchase a right-of-way and easement over this tract of

1 land for the Blooming Grove – Jackson and Peckville – Jackson 138/69 kV Transmission  
2 Line but, to date, has been unable to reach an agreement with the Iroquois Ridge.

3  
4 Q. Please describe the status of negotiations with Iroquois Ridge.

5 A. Initial conversations were held with Henry Speerstra, the representative for the Iroquois  
6 Ridge. The Iroquios Ridge proceeded to hire Attorney Michael F. Faherty to represent  
7 them during negotiations. All pertinent information on the project was forwarded to  
8 Attorney Faherty in September and October, 2011. On October 10, 2011, PPL Electric  
9 Real Estate and Siting personnel met with Attorney Faherty at his Harrisburg office to  
10 discuss the project and compensation offer. Since the time of the October 10, 2011  
11 meeting, PPL Electric has made numerous attempts to contact Attorney Faherty to discuss  
12 the project and compensation for the right-of-way. PPL Electric has been unsuccessful in  
13 making contact with Attorney Faherty. On January 19, 2012, Attorney Faherty informed  
14 PPL Electric via an emailed letter that the initial offer was rejected. Attorney Faherty  
15 made a request that PPL Electric perform a second appraisal on the property. Therefore,  
16 PPL Electric has been unable to reach an agreement with the Iroquois Ridge.

17  
18 Q. Prior to these negotiations, did PPL Electric inform Iroquois Ridge that the Company  
19 may obtain the right-of-way or easement through the use of eminent domain?

20 A. Yes. During the week of May 23, 2011, PPL Electric delivered to Iroquois Ridge, via  
21 mail, the forms of notice required by the Commission's regulations at 52 Pa. Code §  
22 57.91. PPL Electric received the included cover letter back from Iroquois Ridge  
23 confirming their receipt of the information. The cover letter was signed by Henry  
24 Speerstra and dated June 6, 2011. In addition, PPL Electric provided information on real  
25 estate terms and definitions, electric and magnetic fields, and vegetation management.  
26 Copies of these forms are provided as PPL Electric Exhibit JBW-1.

1

2 Q. Have you been to the property of Iroquois Ridge that is the subject of this proceeding?

3 A. Yes, I have visited the property.

4

5 Q. Please describe the property.

6 A. The property consists of two separate parcels of land containing a total of approximately  
7 220 acres located in Pocono Township, Monroe County, Pennsylvania. The property is  
8 wooded.

9

10 Q. Are there any dwellings on the property?

11 A. No, there are no dwellings on the property.

12

13 Q. Does PPL Electric's proposed right-of-way and easement over the Iroquois Ridge  
14 property contain any burial grounds or places of worship?

15 A. No, it does not.

16

17 Q. Please explained PPL Electric Exhibit 1.

18 A. PPL Electric Exhibit 1 is the *Application Of PPL Electric Utilities Corporation Filed*  
19 *Pursuant To 52 Pa. Code Chapter 57, Subchapter G, For Approval Of The Siting And*  
20 *Construction Of The Blooming Grove – Jackson and Peckville – Jackson 138/69 kV*  
21 *Transmission Line In Monroe County, Pennsylvania* (“Siting Application”), which was  
22 filed simultaneously with the Condemnation Application. The Siting Application  
23 requests Commission approval to site and construct the proposed Project.

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23

Q. Please explain Attachment No. 2 to PPL Electric Exhibit 1.

A. Attachment No. 2 to PPL Electric Exhibit No. 1 is the Necessity Statement for the Project, which discusses the reasons why the Project is needed.

Q. Please explain Attachment No. 3 to PPL Electric Exhibit 1.

A. Attachment No. 3 to PPL Electric Exhibit No. 1 is the Environmental Setting which discusses the various features mapped within the General Area of Study.

Q. Please explain Attachment No. 4 to PPL Electric Exhibit 1.

A. Attachment No. 4 to PPL Electric Exhibit No. 1 is the Alternatives and Siting Analysis. This Attachment discusses the impacts of the Alternative Routes and the selection of the Preferred Route.

Q. Please explain Attachment No. 5 to PPL Electric Exhibit 1.

A. Attachment No. 5 to PPL Electric Exhibit No. 1 is the Engineering Description. This Attachment discusses the physical components of the proposed Transmission Line.

Q. Please explain Attachment No. 6 to PPL Electric Exhibit 1.

A. Attachment No. 6 to PPL Electric Exhibit No. 1 is PPL Electric's Vegetation Management. This Attachment describes PPL Electric's current practices for clearing and maintaining the right-of-way.

1 Q. Please explain Attachment No. 7 to PPL Electric Exhibit 1.

2 A. Attachment No. 7 to PPL Electric Exhibit No. 1 is a List of Governmental Agencies,  
3 Municipalities, and Other Public Entities Contacted by PPL Electric in conjunction with  
4 this project.

5

6 Q. Please explain Attachment No. 8 to PPL Electric Exhibit 1.

7 A. Attachment No. 8 to PPL Electric Exhibit No. 1 is a List of Property Owners Within and  
8 Adjacent to the Right-of-Way. A copy of Exhibit 1 was served to all property owners  
9 within the proposed right-of-way.

10

11 Q. Please explain Attachment No. 9 to PPL Electric Exhibit 1.

12 A. Attachment No. 9 to PPL Electric Exhibit No. 1 is List of Governmental Agencies,  
13 Municipalities, and Other Public Entities Receiving a Copy of this Application.

14

15 Q. Please explain Attachment No. 10 to PPL Electric Exhibit 1.

16 A. Attachment No. 10 to PPL Electric Exhibit No. 1 is PPL Electric's Design Criteria and  
17 Safety Practices. This Attachment describes PPL Electric's current standard design  
18 criteria for various voltage classes, and the practices the Company has adopted to  
19 increase safety for employees, contractors and the public.

20

21 Q. Please explain Attachment No. 11 to PPL Electric Exhibit 1.

1 A. Attachment No. 11 to PPL Electric Exhibit No. 1 is a copy of PPL Electric's Magnetic  
2 Field Management Plan. This Attachment describes PPL Electric's current approach to  
3 Electric and Magnetic Field mitigation.

4

5 Q. Please explain Attachment No. 12 to PPL Electric Exhibit 1.

6 A. Attachment No. 12 to PPL Electric Exhibit No. 1 is Agency Coordination. This  
7 Attachment describes the status of PPL Electric's coordination with state and federal  
8 agencies in regards to Threatened and Endangered Species and historic and  
9 archaeological properties.

10

11 Q. Please explain Attachment No. 13 to PPL Electric Exhibit 1.

12 A. Attachment No. 13 to PPL Electric Exhibit No. 1 is Public Notice Requirements. This  
13 Attachment describes the Commission's public notice requirements and the information  
14 PPL Electric provided in order to meet those requirements.

15

16 Q. Please explain Attachment No. 14 to PPL Electric Exhibit 1.

17 A. Attachment No. 14 to PPL Electric Exhibit No. 1 is Agency Permit Requirements. This  
18 Attachment describes the anticipated permits required for the Project.

19

20 Q. Please describe PPL Electric Exhibit 2.

21 A. PPL Electric Exhibit 2 is the Application to the Commission for a finding that the service  
22 to be furnished to the public through the exercise by PPL Electric of the power of  
23 eminent domain to acquire a right-of-way and easement over and across the property of

1 Iroquois Ridge is necessary or proper to the service, accommodation, convenience or  
2 safety of the public.

3  
4 Q. Please explain Attachment No. 1 to PPL Electric Exhibit 2.

5 A. Attachment No. 1 to PPL Electric Exhibit No. 2 is a PPL Electric system map showing  
6 existing transmission facilities with a design voltage of 35 kV or greater.

7  
8 Q. Please explain Attachment No. 2 to PPL Electric Exhibit 2.

9 A. Attachment No. 2 to PPL Electric Exhibit No. 2 is a copy of the metes-and-bounds  
10 description of the property of Iroquois Ridge.

11  
12 Q. Please explain Attachment No. 3 to PPL Electric Exhibit 2.

13 A. Attachment No. 3 to PPL Electric Exhibit No. 2 is a copy of the metes-and-bounds  
14 description of the portion of the property of Iroquois Ridge over which PPL Electric  
15 seeks a right-of-way and easement.

16  
17 Q. Please explain Attachment No. 4 to PPL Electric Exhibit 2.

18 A. Attachment No. 4 to PPL Electric Exhibit No. 2 is a copy of the Plan showing the  
19 property of Iroquois Ridge and the portion of the property over which PPL Electric  
20 proposes to acquire a right-of-way and easement. .

21  
22 Q. Please explain Attachment No. 5 to PPL Electric Exhibit 2.

1 A. Attachment No. 5 to PPL Electric Exhibit No. 2 is a copy of the resolutions of the Board  
2 of Directors of PPL Electric authorizing the acquisition of a right-of-way and easement  
3 over the portion of the land of Iroquois Ridge described in PPL Electric Attachment No.  
4 2. Those resolutions remain in effect.

5

6 Q. In your opinion, is the condemnation of this property necessary?

7 A. Yes. PPL Electric must be able to route the Blooming Grove – Jackson and Peckville –  
8 Jackson 138/69 kV Transmission Line over the property of Iroquois Ridge in order to  
9 site, construct, and operate lines to relieve the existing and projected overloaded  
10 conditions on the existing Blooming Grove – Jackson 138/69 kV Transmission Line.  
11 PPL Electric has proposed a reasonable route for the Project. The service to be provided  
12 by PPL Electric through the proposed transmission line is necessary or proper for the  
13 service, accommodation, convenience or safety of the public for the reasons set forth in  
14 my testimony and the testimony of Alexander Lousos, and in the Condemnation  
15 Application and Siting Application.

16

17 Q. Does this conclude your testimony at this time?

18 A. Yes, it does.

**NOTICE  
EMINENT DOMAIN POWER**

The Pennsylvania Public Utility Commission requires that PPL Electric Utilities Corporation give you the following information:

PPL Electric Utilities Corporation is presently planning to construct a 138/69kv electric transmission line to be known as the Jackson-Lake Naomi line in Pocono and Jackson Townships in Monroe County, Pennsylvania.

Since a field survey and detailed engineering has not been completed, the physical dimensions of the proposed lines and the type and height of supporting structures to be used cannot be precisely determined at this time. However, based on past experience it is expected that the structures normally will be 90 to 100 feet in height. There may be isolated physical conditions that would require either higher or lower structures than those mentioned above. At this time, we do not know the number of structures to be placed on any properties. PPL Electric's current 138/69kv standard right of way width is 100 feet.

Since the route could affect your property, a representative of the utility will contact you in the near future to discuss the utility's plans as they may affect your property. In order to better prepare you for these discussions and to avoid possible misunderstandings, we want to take this opportunity to inform you of your legal rights and the legal rights of PPL Electric Utilities Corporation with regard to this project. You have the right to have legal counsel represent you in these negotiations. You do not have to sign any agreement without the advice of counsel. If you do not know an attorney, you may contact your local bar association.

***MUST YOU ACCEPT AN OFFER MADE BY THE UTILITY FOR YOUR PROPERTY?***

No. You may refuse to accept it. However, the utility has the power to take property by eminent domain, subject to the approval of the Public Utility Commission, for the construction of transmission lines if the utility is unable to negotiate an agreement to buy a right of way. If your property is condemned, you must be paid "just compensation". "Just compensation" has been defined by the courts in Pennsylvania as the difference between the fair market value of your property before condemnation, unaffected by the condemnation, and the fair market value of your remaining property after condemnation, as affected by the condemnation.

***CAN THE UTILITY CONDEMN YOUR HOUSE?***

The company cannot condemn your house or a reasonable "curtilage" around your house. Generally, "curtilage" includes the land or buildings within 100 meters of your

house which are used for your domestic purposes. However, the 100 meter limit does not automatically extend beyond the homeowner's property line.

***DO YOU HAVE A RIGHT TO A PUBLIC HEARING WHEN THE UTILITY SEEKS TO CONDEMN YOUR PROPERTY?***

Yes. When an electric utility seeks to have your property condemned, the utility must first apply to the Pennsylvania Public Utility Commission for a certificate finding the condemnation to be necessary or proper for the service, accommodation, convenience, or safety of the public. The Commission will then hold a public hearing. As the landowner whose property may be condemned, you are a party to the proceeding and may retain counsel, present evidence, and/or testify yourself in opposition to the application for a certificate. If you wish to testify at the public hearing, you should make your intention known by letter to Secretary, Pennsylvania Public Utility Commission, P.O. Box 3265, Harrisburg, PA 17120.

If the Commission approves the utility's application for a certificate finding the condemnation in the public interest, then the utility may proceed before the local Court of Common Pleas to condemn your land. If the Commission denies the utility's application, the utility cannot condemn your land. If you retain an attorney to represent you before the Commission, you must do so at your own expense.

The Commission will not decide how much money you should receive if your land is condemned. The only issue the Commission will decide is whether the condemnation serves the public interest. If the Commission approves the utility's application for condemnation, the amount of money to which you are entitled will be determined by a local Board of View of the Court of Common Pleas. However, you may at any time make an agreement with the utility as to the amount of damages you are to be paid.

**NOTICE  
RIGHT OF WAY MAINTENANCE PRACTICES**

The Pennsylvania Public Utility Commission requires that PPL Electric Utilities Corporation give you the following information on the RIGHT OF WAY MAINTENANCE PRACTICES for the 138/69kv line:

The methods currently used by PPL Electric Utilities Corporation are set forth in PPL Electric Utilities Corporation "Program for Vegetation Management", which will be made available to you for your inspection upon request. If you wish further information concerning right of way maintenance methods, you may contact the person named on the cover letter. You may discuss with this person, either before or during negotiation of the right of way agreement, these methods and any other questions you may have about right of way maintenance.

Once a utility has constructed an electric transmission line on a right of way across your land, the utility must maintain the right of way free of tall growing trees and brush which might impair the reliability of electric service, the safety of the line, and access to the line or its towers. The utility or its contractors may remove and control tall growing trees and brush by several methods: handcutting of trees, limbs and brush; mechanical cutting with chain saws or motorized cutting machines; application of herbicides, either from the ground or from a helicopter. The utility must confine its maintenance activities to the approved right of way across your land, except where tall growing trees or brush or their root systems grow into the right of way from adjoining land and constitute a threat to the electric transmission line and its structures.

If you believe that the maintenance method(s) used by the company would raise problems with your use of your land adjacent to the right of way, it is your responsibility as the landowner to bring this to the attention of the utility before you sign the right of way agreement.

The utility company has the responsibility to maintain its right of way, and regular maintenance must occur. Although you as the landowner cannot determine whether or not maintenance will occur, your right of way agreement may specify certain conditions on the performance of the maintenance program which are important to you. These conditions can be part of the negotiations between you and the utility company for your land, since a right of way agreement is a legal contract between a landowner and a utility company. It is important for you to understand also that the maintenance methods used by the utility company may change over time as the costs of maintenance or the methods of performing maintenance change. You may want to specify in your right of way agreement that the utility company inform you of changes in its maintenance methods or in the maintenance schedule for your land.

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The provisions of the right of way agreement are enforceable in the local Court of Common Pleas. The right of way agreement cannot be enforced by the Pennsylvania Public Utility Commission. Any claims for damages resulting from improper maintenance of the right of way must be settled with the utility, its contractors, or in the local Court of Common Pleas at your own expense. The Commission cannot award damages for violations of the right of way agreement.



**Internal Practices for Dealing with the Public on Power Line Projects**  
PPL Electric Utilities

PPL Corporation has a long-standing commitment to conducting business in an honest and ethical manner. Consistent with the expectations for our employees and representatives laid out in the PPL Standards of Conduct and Integrity, and in the Standards of Conduct and Integrity for Suppliers, PPL Electric Utilities Corporation's employees, contractors and agents who interact with members of the public (including landowners along proposed rights of way) in activities such as planning; real estate and right-of-way transactions; siting; and construction of power lines and other facilities will:

- Act with integrity at all times.
- Treat people courteously and in a professional manner.
- Be forthright and honest in all actions and communications.
- Comply with applicable laws and regulations.
- Seek to avoid conflicts of interest.
- Accept responsibility for actions and decisions.
- Be responsible stewards of the environment.
- Place a high priority on the safety of the public and our representatives and employees.

**NOTICE  
LAND AGENT PRACTICES**

PPL Electric Utilities Corporation is presently planning to construct a 138/69kv electric transmission line to be known as the Jackson-Lake Naomi 138/69kv line in Pocono and Jackson Townships in Monroe County, Pennsylvania. Since the route could affect your property, a representative from PPL Electric Utilities Corporation will contact you in the near future to discuss the utility's plans as they may affect your property.

The Pennsylvania Public Utility Commission requires that PPL Electric Utilities Corporation provide you the following contact information for concerns regarding the practices of the land agents acting on behalf of PPL Electric Utilities Corporation in connection with the proposed construction of the proposed Jackson-Lake Naomi 138/69kv line:

James P. Melia  
Pennsylvania Public Utility Commission  
400 North Street  
Harrisburg PA 17105  
717-787-1859  
jmelia@state.pa.us

Sonny Popowsky  
Pennsylvania Consumer Advocate  
Pennsylvania Office of Consumer Advocate  
555 Walnut Street  
5th Floor Forum Place  
Harrisburg, PA 17101-1923  
Phone: 717-783-5048 or toll free 800-684-6560 (PA only)  
Fax: 717-783-7152  
Email: consumer@paoca.org

JBW-1

**BROCHURE ON ELECTROMAGNETIC FIELDS**

## **PPL's Position on EMF**

PPL takes a reasoned, prudent approach in responding to the EMF issue. PPL has a magnetic field management program to design and build new lines when practicable in ways that allow us to reduce magnetic fields at low cost to our customers. For instance, we reverse the phases of new overhead double-circuit transmission lines, which results in some cancellation of magnetic fields from the line and lowers the magnetic fields at the edge of the right of way. PPL also is increasing ground clearances for transmission lines.

On distribution lines, we're reducing magnetic fields at ground level by using taller poles. Magnetic field management is considered in the process we use to site new facilities, balancing cost and function with land use and environmental concerns. PPL has supported EMF research, both through financial contributions to national organizations and actual participation by PPL employees and customers.

We're also providing information to customers and others interested in the subject. EMF coordinators have been assigned to serve as local contact points for EMF inquiries. PPL representatives are available to talk with groups interested in EMF. PPL also has an EMF issue manager who directs all aspects of the company's EMF program.

## **Frequently Asked Questions about EMF**

From time to time, some of our customers ask us about EMF — electric and magnetic fields. We have compiled common questions and answers, which we hope you will find helpful. If you have additional questions, please don't hesitate to ask us.

### **Q. What are electric and magnetic fields?**

A. Electric and magnetic fields are present wherever there is a flow of electric current, whether in wires in the home, electrical appliances or power lines. Electric fields are produced by the voltage or electrical pressure in a wire and are present as long as an appliance is connected to a source of electricity — even if an appliance is turned off. Magnetic fields are produced whenever there is a flow of electric current through a wire. Electric and magnetic fields are not visible, like other fields such as a gravitational field or a temperature field.

### **Q. Are EMF the same as X-rays or microwaves?**

A. No. Electric and magnetic fields are very low in energy compared with much stronger X-rays or microwaves. X-rays have enough power to dislodge electrons, and microwaves can be strong enough to heat objects. Electric power EMF do not have enough energy to do those things. EMF from power lines, electrical wiring and appliances have a frequency of 60 hertz, which means they alternate, or go back and forth, 60 times a second. On the other hand, microwaves alternate billions of times a second, and X-rays alternate even faster than that.

**Q. How do magnetic fields associated with power lines compare with fields from other sources in our everyday environments?**

A. The chart shows some typical magnetic field levels around power lines and other common sources. The standard unit of measurement is called a milligauss, or mG. Common indoor sources of magnetic fields include appliances, electronic equipment, household wiring and currents that may flow on water pipes or telephone cables. Fields from some sources inside a home can be higher than the fields from power lines outside. Note how the strength of the field becomes lower as you move away from the source.

**Q. Does putting power lines underground reduce magnetic field exposures?**

A. Yes and no. It depends on distance from the line and how the line is configured — the earth itself does not shield magnetic fields. Magnetic field levels directly above a typical underground line may be about twice the levels from a typical overhead line carrying the same electrical load. This is because an underground line is usually buried only a few feet below the surface of the ground and is closer than an overhead line that is suspended well above the ground. The wires of an underground line usually are closer to each other than the wires of an overhead line, and thus cancel the magnetic fields to some extent. Some underground designs can reduce magnetic field levels further. All underground options can cost up to 10 times more than overhead construction.

**Q. What about EMF and health?**

A. Since the 1970s, many credible scientific panels, government agencies and public health entities have reviewed the scientific research on electric and magnetic fields. Evaluations have been conducted by the U.S. National Academy of Sciences, the U.S. National Institute of Environmental Health Sciences, the U.K. National Radiological Protection Board, the International Agency for Research on Cancer and the World Health Organization, among others. None of these review groups has found that there is a demonstrated cause and effect relationship between exposure to EMF and cancer or other diseases.

In 1999, the director of U.S. NIEHS sent a detailed report on EMF and health to the U.S. Congress. The NIEHS Report concluded that "the scientific evidence suggesting that extremely low frequency (ELF)-EMF exposures pose any risk is weak." The NIEHS report noted that while some epidemiology studies showed associations with some leukemias, there was no support for these findings in laboratory research. The NIEHS report concluded that "this finding is insufficient to warrant an aggressive regulatory concern." The NIEHS in 2002 issued updated information, which concluded that for most health outcomes there is no evidence of EMF causing adverse effects. However, the NIEHS said there is some evidence of an association with childhood leukemia, which is difficult to interpret without supporting laboratory evidence. The NIEHS 2002 update concludes that "although questions remain about the possibility of health effects related to EMF, recent reviews have substantially reduced the level of concern." NIEHS did not recommend regulatory action to reduce EMF levels. The NIEHS information about EMF can be found online at <http://www.niehs.nih.gov/health/topics/agents/emf/>.

**Q. What does the latest research show on EMF?**

A. The World Health Organization conducted an extensive review of EMF in 2007. This review concluded that there is "inadequate evidence" that EMF causes or contributes to almost all health endpoints, that based on "limited evidence" of an association from epidemiology studies, there is a "possible" relationship with childhood leukemia, and that a cause and effect relationship has not been established. On its Web site, WHO further emphasizes that: "Based on a recent in-depth review of the scientific literature, the WHO concluded that current evidence does not confirm the existence of any health consequences from exposure to low level electromagnetic fields."

**Q. Do EMF affect livestock, wildlife, crops or other plant life?**

A. Many studies have been conducted in the laboratory and in the field to study the effects of EMF exposures on plants and wildlife. Research and years of operating experience have not shown that electric and magnetic fields cause any adverse effects in livestock, wildlife or plants. A group of researchers from Westinghouse Electric Co. and the Pennsylvania State University exposed more than 80 species of plants to power line electric fields at high intensities. No statistically significant differences were found between exposed and unexposed plants in seed germination, seedling emergence, seedling growth, leaf area for plant, flowering, seed production, biomass production and longevity. One response, damage to the leaf tips of sharp-pointed plants, was observed. Near the leaf tip of a sharply pointed plant, an electric field can be very high and can cause drying of the leaf tips. An extensive series of field experiments on plant responses has been carried out near 765,000-volt transmission lines and a variety of farm crops developed normally.

**Q. How can a fluorescent light glow under a transmission line, even if it's not plugged into an electrical source?**

A. If the electric field is sufficiently strong, it will stimulate the phosphors from the chemicals that coat the inside of the tube and cause them to glow slightly. A fluorescent tube also will glow when held near a car ignition or a radio transmitter, which typically produce enough electric field to cause a glow in a fluorescent light. Fluorescent lights sometimes can be made to glow by rubbing them with a glove or a dry hand, or by carrying them when sliding your feet across a rug.

**Q. Have some states set exposure standards for EMF?**









A. A few states have established limits for electric fields on transmission line right-of-ways: Florida, Minnesota, Montana, New Jersey, New York, North Dakota and Oregon. Only New York and Florida have established right-of-way limits for magnetic fields from new transmission lines. In 1990, New York established a 200-milligauss limit for transmission lines. In 1989, Florida established a 150-milligauss limit for 230,000-volt lines and smaller, and a 250-milligauss limit for 500,000-volt double-circuit transmission lines. Both the New York and Florida limits for new transmission lines were based on the maximum fields from the existing lines in those states at the time. Pennsylvania has not adopted any electric or magnetic field exposure limits.

**Q. What is PPL doing about EMF?**

A. PPL has a magnetic field management program to design and build new lines when practicable in ways that allow us to reduce magnetic fields at low cost to our customers. For instance, we reverse the phases of new overhead double-circuit transmission lines, which results in some cancellation of magnetic fields from the line and lowers the magnetic fields at the edge of the right of way. PPL also is increasing ground clearances for transmission lines. On distribution lines, we're reducing magnetic fields at ground level by using taller poles. Magnetic field management is considered in the process we use to site new facilities, balancing cost and function with land use and environmental concerns. PPL has supported EMF research, both through financial contributions to national organizations and actual participation in research by PPL employees and customers. We're also providing information to customers and others interested in the subject. EMF coordinators have been assigned to serve as local contact points for EMF inquiries. PPL representatives are available to talk with groups interested in EMF. PPL also has an EMF issue manager who directs all aspects of the company's EMF program.

**Q. Where can I get additional information on EMF?**

A. PPL has an EMF coordinator near you who can provide additional technical background. Call 1-800-DIAL-PPL (1-800-342-5775), and you'll be referred to the coordinator in your area or to PPL's EMF issue manager, Jay Keeler. In addition to the NIEHS Web site <http://www.niehs.nih.gov/health/topics/agents/emf/>, other responsible organizations provide information about EMF, including the World Health Organization ([www.who.int/peh-emf](http://www.who.int/peh-emf)).

Magnetic field strengths decrease with distance Magnetic fields are measured in milligauss		Source: National Institute of Environmental Health Sciences (2002)		
		At 6 inches	At 1 foot	At 2 feet
Clothes dryer		2 to 10	* to 3	*
Microwave oven		100 to 300	1 to 200	1 to 30
Toaster		5 to 20	* to 7	*
Power drill		100 to 200	20 to 40	3 to 6
Can opener		500 to 1500	40 to 300	3 to 30
Mixer		30 to 600	5 to 100	* to 10
Hair dryer		1 to 700	* to 70	* to 10
Color television		Data not available	* to 20	* to 8

JBW-1

**BROCHURE ON VEGETATION MANAGEMENT**

## An award-winning program

PPL Electric Utilities is a proud recipient of the Tree Line:USA® award from the Arbor Day Foundation and the National Association of State Foresters. The groups seek to promote proper utility arboriculture and public education through the following five areas: annual worker training; quality tree care; tree planting and public education; energy conservation; and collaboration with community groups. For information about planting the right tree in the right place, visit [www.arborday.org](http://www.arborday.org).



A number of state and federal agencies have established sound, integrated vegetation management practices as the standard for utility rights of way. These practices involve regular surveying, tree pruning, mowing and herbicides to control invasive plant species and promote greater plant diversity.

The desired outcome is the development of areas with native grasses and low-lying shrubs that cannot interfere with overhead power lines.

Likewise, PPL Electric Utilities works with state and local conservation, land management and environmental groups to advance common goals of electric reliability and environmental stewardship.

## Vegetation management is critical to electric reliability

Our customers depend on reliable power, and vegetation management is a critical part of maintaining the reliability of our delivery system.

PPL Electric Utilities operates 1,351 miles of higher-voltage transmission lines that are considered part of the nation's "bulk electric system." Our maintenance of these power lines falls under the jurisdiction of the Federal Energy Regulatory Commission, or FERC, and its enforcement arm, the North American Electric Reliability Corporation, known as NERC. Following the massive blackout in 2003, these two authorities developed strict new reliability standards and stiff penalties for utilities that do not comply.

Transmission lines are interconnected regionally, so power can move long distances from power plants to local communities. It is vital that trees cannot pose any threat to the transmission lines. Tree contact with high-voltage lines can result in widespread power outages.

Now, PPL Electric Utilities' vegetation management program is intended to ensure reliability as well as compliance with these federal reliability standards.

For more information, call 1-877-528-2889, e-mail us at [PPLVegetationManagement@pplweb.com](mailto:PPLVegetationManagement@pplweb.com) or visit [www.pplweb.com/vegetation](http://www.pplweb.com/vegetation).

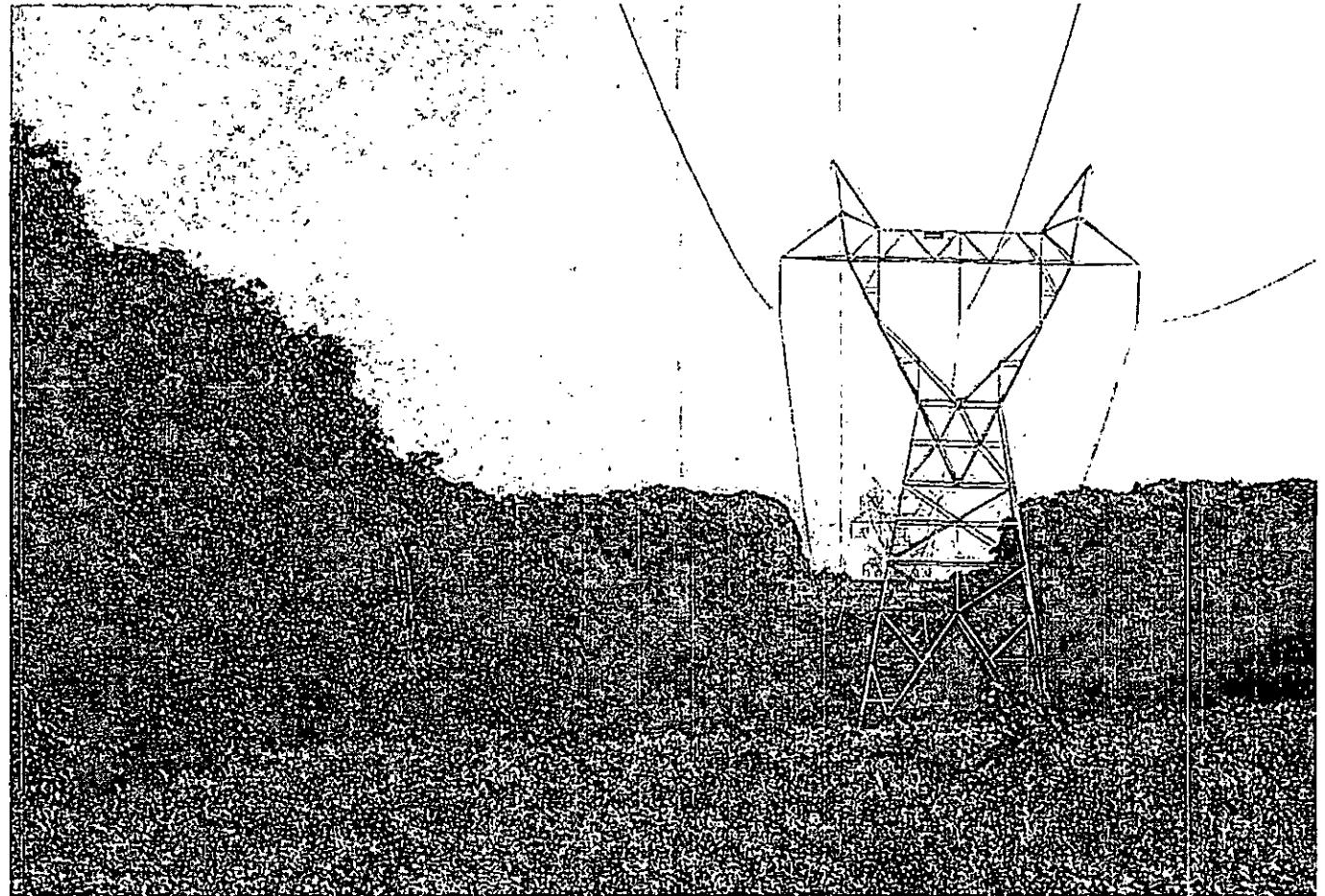


ISM 1/2011



## Transmission Line Vegetation Management

Keeping electricity reliability strong



## A new approach

Transmission power lines are the backbone of the regional electric grid, vital to our economic health and nation's security.

The Northeast blackout of 2003 demonstrated how closely managed the nation's transmission system needs to be operated and maintained.

As a result, PPL Electric Utilities developed changes to its transmission vegetation management program to safeguard system reliability and to comply with recently enacted federal reliability standards. These standards assume a "zero tolerance" for tree-related outages involving transmission lines and for tree "encroachments" near the overhead high-voltage power lines.

Keeping trees away from transmission lines is essential. So the utility industry's best practices require a more proactive approach to ensuring clearance under our transmission facilities. This brochure will outline what PPL Electric Utilities must do to keep trees from causing a problem on the electric grid, so we can maintain the quality of electric service our customers expect.

## Our commitment

We have a longstanding respect for the environment in how we operate as a business and in our community involvement. We respect the rights of property owners, will keep customers informed about any planned work and will perform only work that we believe is absolutely necessary.

## Compliance with federal reliability standards

Under federal reliability standards, certain clearances must be maintained between overhead power lines and any vegetation. In response, PPL Electric Utilities agreed to follow an industry best practice referred to as Wire Zone-Border Zone.

While we may have only selectively pruned tall growing trees away from the transmission lines in the past, tree species that may have been allowed in certain locations previously will be cleared so no trees are allowed to grow directly under the lines.

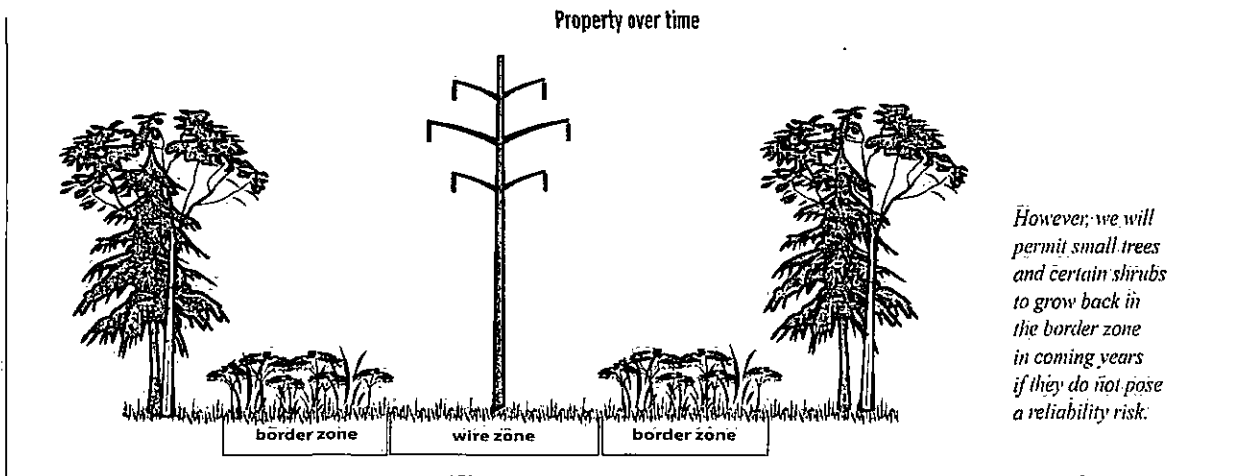
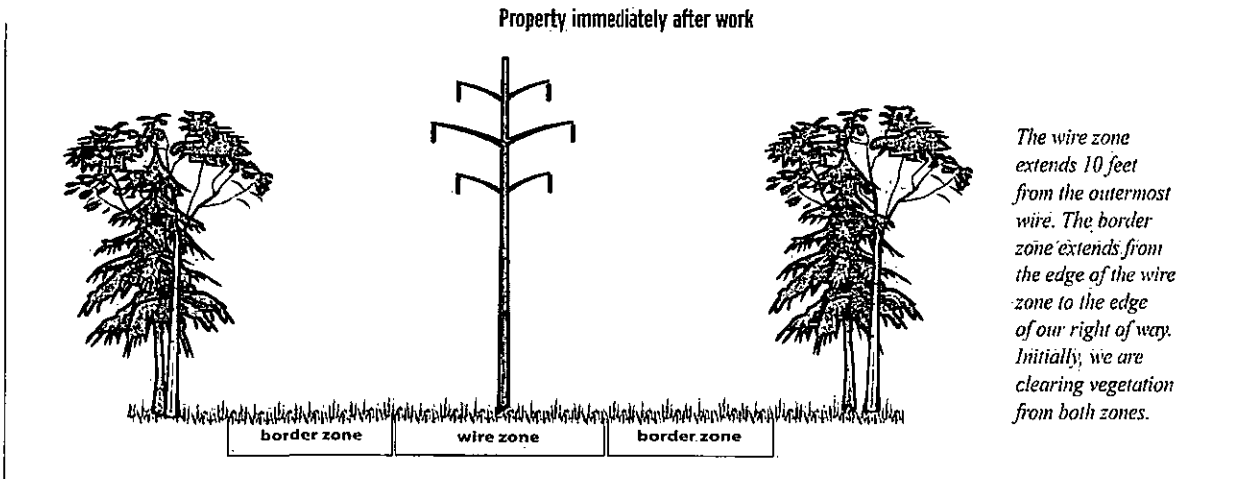
## What is Wire Zone-Border Zone?

The wire zone is the area directly under the power lines. Trees are typically removed from the wire zone because they are incompatible with high-voltage wires. Over time, low-growing grasses and other species native to the area will be permitted.

In the border zone, small trees and certain shrubs will be allowed to grow back over time if they do not pose a risk to power reliability.

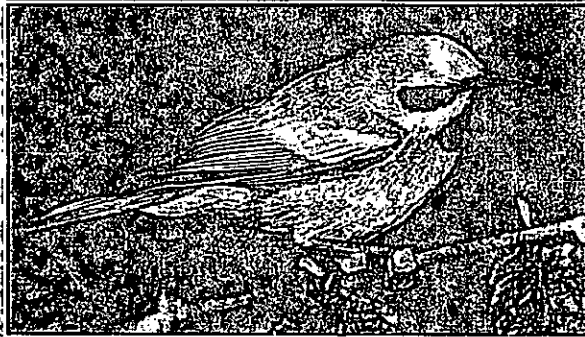
PPL Electric Utilities does not remove or dispose of any vegetation from transmission rights of way after cutting. These materials are left for the property owner. In some areas, like hillsides, leaving cut vegetation can protect against erosion.

In some areas, we use herbicides to effectively manage undesirable vegetation conditions along our power lines. We only use herbicide products that have been approved for use by the U.S. Environmental Protection Agency. Some of the materials our contractors will use are the same as those commonly used by homeowners.



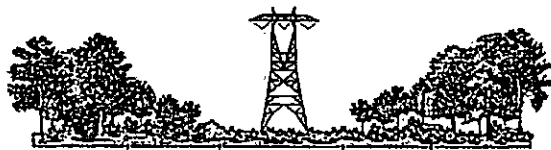
# Audubon PENNSYLVANIA

## PPL Rights-of-way as Bird Habitat



Golden-winged Warbler (Photo © Laurie Smaglick/Johnson)

Federal guidelines make it necessary to clear the areas under power lines (Wire Zone) in utility rights-of-way, but the area bordering the wire zone (the Border Zone) can be planted with plants compatible with those guidelines and managed to control vegetation while providing critical habitat to birds and other wildlife. With the right plants and targeted management, Border Zones can become and remain early successional scrubland (scrub-shrub), a habitat that is important to several bird species of conservation concern in Pennsylvania and other parts of the northeast.



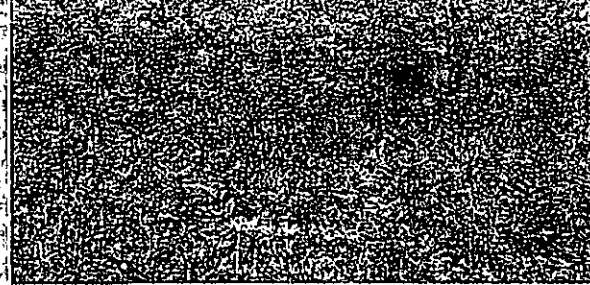
Border Wire Zone Border

### Scrub-Shrub Habitat

When an old field is left unmanaged, woody shrubs become established, which eventually give way to small trees and ultimately forest. Scrub-shrub or successional habitat refers to the middle time period when shrubs and small trees dominate. A host of bird species, including ruffed grouse, brown thrasher, eastern towhee, field sparrow, and golden-winged warbler, are dependent on these transitional habitats.

## Planting and Managing Scrub-Shrub Habitat

Typically scrub-shrub habitat is only a temporary condition before conversion to forest. In areas near power lines, however, it is necessary to keep vegetation height low in perpetuity. This can be accomplished by planting compatible species and selectively removing saplings of large trees. Removing invasive plants like multiflora rose and honeysuckle will allow native shrubs (see compatible list below) which provide nutritious berries and seeds to flourish. Habitat that includes a variety of species and heights will produce the best habitat for many bird species so selective removal of individuals from areas where one species dominates may be considered.



Scrub-shrub habitat at forest edge. Photo © Laurie Smaglick Johnson

## Compatible Plant Species

The following list of native plants are appropriate for planting in Border Zones and provide cover and food to desirable birds and native plants noted above.

### Small trees

Flowering dogwood  
Redbud  
Hawthorn  
American Hornbeam  
Serviceberry  
Eastern Red Cedar  
American Chestnut  
Dwarf Willow  
Winterberry/Holly

### Large shrubs

Alder  
Witch-hazel  
Spicebush  
Common Chokecherry  
Elderberry  
Rhododendron  
Viburnum  
Dogwood  
Sumac species  
Chokeberry

### Small shrubs

Mountain laurel  
American Yew  
Sweetfern  
Trumpet Honeysuckle  
Huckleberries  
Blueberries  
Viburnums  
Meadowsweet (Spirea)  
Wintergreen  
Trailing Arbutus  
Blackberry (Allegheny)  
Raspberry  
Hazelnut  
Scrub Oak species

All native grasses, ferns,  
herbaceous plants

For more information, go  
to <http://pa.audubon.org/habitat>

GLOSSARY OF COMMON REAL ESTATE TERMS

**ABSTRACT OF TITLE** – The condensed history of ownership to a particular parcel of real estate, consisting of a summary of ownership from a given time to the present owner.

**ACRE** – A measure of land equal to 43,560 square feet.

**APPRAISAL** – An estimate of the value of property. The process through which conclusions of property value are reached.

**APPRECIATION** – An increase in the worth or value of a property.

**CHAIN OF TITLE** – A history of ownership of a particular property (see abstract of title).

**CONDEMNATION** – A judicial or administrative proceeding to exercise the power of eminent domain through which private property is taken for public use.

**CONDUCTOR** – The wire which carries electric energy.

**CONVEYANCE** – A transfer of property ownership.

**DEED** – A written document that, when executed and delivered, conveys title to or an interest in real estate.

**DEED RESTRICTIONS** – Clauses in a deed limiting the use of the property.

**DEPRECIATION** – A loss of value in property.

**EASEMENT** – A right to use the land of another for a specific purpose. (Such as a right of way for utilities.)

**EGRESS** – The right to exit a tract of land.

**EMINENT DOMAIN** – The right of a government, municipal body or public utility to acquire property for public use. (See condemnation)

**ENCROACHMENT** – An intrusion, such as a house, sign, wall or fence, that intrudes on another's property or right of way.

**FAIR MARKET VALUE** – The highest price which a willing buyer would pay and the lowest price a willing seller would accept.

**FEE OR FEE SIMPLE** – The complete and absolute ownership of real estate.

**GRANT** – The transfer of property rights through a legal document.

## JBW-1

GRANTEE – One who acquires property or any property rights from another person.

GRANTOR – One who transfers property or any property rights to another person.

INGRESS – The right to enter a tract of land.

KV – Kilovolt or 1000 volts (138 KV = 138 x 1000)

LIEN – A claim against real or personal property for satisfaction of a debt.

METES-AND-BOUNDS DESCRIPTION – A legal description of a parcel of land that begins at a well – marked point and follows the boundaries, using directions and distances.

MONUMENT – A fixed natural or artificial object used to establish real estate boundaries.

OPTION – The right to purchase a certain property at stated terms, price and time.

RECORDING – The act of entering documents in the Recorder of Deeds office established in each county.

RIGHT OF WAY – Used interchangeably with the word easement. (See easement)

SURVEY – The process of scientifically measuring the quantity and location of a parcel of land.

TAX MAP – Maps used by the county Tax Assessment office showing the locations of properties.

TITLE – The evidence of ownership of land.

ZONING – The regulation of the use of land and/or buildings.

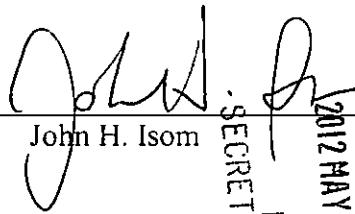
**CERTIFICATE OF SERVICE**

I hereby certify that a true and correct copy of the foregoing **Application of PPL Electric Utilities Corporation to Exercise the Power of Eminent Domain to Acquire a Right-of-Way and Easement Across the Property of Iroquois Ridge Partners LLP** has been served upon the following persons, in the manner indicated, in accordance with the requirements of 52 Pa. Code § 1.54 (relating to service by a participant).

**VIA CERTIFIED MAIL – RETURN RECEIPT REQUESTED**

Iroquois Ridge Partners LLP  
C/O Henry Speerstra  
2384 Horse Creek Road  
Oil City, PA 16301

Date: May 15, 2012

  
\_\_\_\_\_  
John H. Isom  
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PA PUC  
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