POST & SCHELL PC
ATTORNEYS AT LAW

17 North Second Street
12th Floor
Harrisburg, PA 17101-1601
717-731-1970 Main
717-731-1985 Main Fax
www.postschell.com

Jessica R. Rogers

jrogers@postschell.com
717-612-6018 Direct
717-731-1985 Direct Fax
File #: 149701

November 9, 2012

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

RE: Application of PPL Electric Utilities Corporation For Approval Of The Siting And Construction of the Blooming Grove - Jackson and Peckville -Jackson 138/69 kV Transmission Line in Monroe County, Pennsylvania - Docket No. A-2012-2304631

Application of PPL Electric Utilities Corporation 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-2012-2304649

Dear Secretary Chiavetta:

Enclosed for electronic filing is the Main Brief of PPL Electric Utilities Corporation for the above-referenced proceedings. Copies have been provided to the persons in the manner indicated on the Certificate of Service.

Respectfully Submitted,

Jessica R. Rogers

JRR/jl
Enclosures
cc: Honorable Joel H. Cheskis
Certificate of Service

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing **Main Brief of PPL Electric Utilities Corporation** 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 FIRST CLASS MAIL

Office of Consumer Advocate
555 Walnut Street
Forum Place, 5th Floor
Harrisburg, PA 17101-1923

Office of Small Business Advocate
300 North Second Street, Suite 1102
Harrisburg, PA 17101

Bureau of Investigation & Enforcement
PO Box 3265
Commonwealth Keystone Building
400 North Street, 2nd Floor West
Harrisburg, PA 17105-3265

Pennsylvania Historical and
Museum Commission
Bureau for Historic Preservation
Commonwealth Keystone Building,
400 North Street, 2nd Floor
Harrisburg, PA 17120-0053
Attn: Mr. Douglas C. McLearen, Chief

Honorable Barry Schoch, P.E., Secretary
Pennsylvania Department of Transportation
c/o Office of Chief Counsel
Commonwealth Keystone Building
400 North Street, 9th Floor
Harrisburg, PA 17120
Attn: Andrew Gordon, Esquire

Pennsylvania Department of
Environmental Protection
Rachel Carson State Office Building
PO Box 2063
400 Market Street
Harrisburg, PA 17105-8767
Attn: Secretary's Office of Policy

Monroe County Commissioners
1 Quaker Plaza, Room 201
Stroudsburg, PA 18360-2141

Monroe County Planning Commission
1 Quaker Plaza, #106
Stroudsburg, PA 18360

Jackson Township Municipal Building
2162 Route 715
Reeders, PA 18352

Jackson Township Planning Commission
P.O. Box 213
Reeders, PA 18352

Pocono Township Board of Supervisors
PO Box 197
Tannersville, PA 18372

Pocono Township Planning Commission
PO Box 197
Tannersville, PA 18372

Michael F. Faherty, Esquire
225 Market Street, Suite 304
PO Box 1245
Harrisburg, PA 17108
(Iroquois Ridge Partners, LLP)

Pocono Manor Investors, LP
PO Box 38
Pocono Manor, PA 18349

C. Daniel Higgins
Higgins Law Offices
26 North Sixth Street
Stroudsburg, PA 18360
(Estate of Charles L. Vassallo)

U.S. Army Corps of Engineers
Philadelphia District Regulatory Branch
Wanamaker Building, 100 Penn Square East
Philadelphia, PA 19107-3390

US Fish and Wildlife Service
315 South Allen Street, Suite 322
State College, PA 16801-4850
Attn: Pam Shellenberger

PA Department of Conservation
and Natural Resources
Rachel Carson State office Building
PO Box 8767
400 Market Street
Harrisburg, PA 17105-8767
Attn: Rebecca Bowen

Stephen P. Smith, Esquire
Pennsylvania Game Commission
2001 Elmerton Avenue
Harrisburg, PA 17110-9797
(Commonwealth of Pennsylvania & Pennsylvania Game Commission)

Bradley C. Bechtel, Esquire
Pennsylvania Game Commission
2001 Elmerton Avenue
Harrisburg, PA 17110-9797
(Commonwealth of Pennsylvania & Pennsylvania Game Commission)

Pennsylvania Fish and Boat Commission
450 Robinson Lane
Bellefonte, PA 16823-9620
Attn: Kathy Gipe

Monroe County Conservation District
8050 Running Valley Road
Stroudsburg, PA 18360

Jerzy Mackowaik
RR1 Box 115A
Scotrun, PA 18355

Howard L. Curtis et ux
C/O Kripps Shirley
RR1 Box 115
Scotrun, PA 18355

Pocono Manor Investors
C/O Matzel Devel
PO Box 38
Pocono Manor, PA 18349

Paul Richard Frantz et al
RR1 Box 43
Scotrun, PA 18355

Date: November 9, 2012

Jessica R. Rogers

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Application of PPL Electric Utilities Corporation For Approval Of The Siting And Construction of the Blooming Grove - Jackson and Peckville -Jackson 138/69 kV Transmission Line in Monroe County, Pennsylvania	:	Docket No. A-2012-2304631
Application of PPL Electric Utilities Corporation 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-2012-2304649

MAIN BRIEF OF PPL ELECTRIC UTILITIES CORPORATION

Paul E. Russell (ID # 21643)
Associate General Counsel
PPL Services Corporation
Office of General Counsel
Two North Ninth Street
Allentown, PA 18106
Phone: 610-774-4254
Fax: 610-774-6726
E-mail: perussell@pplweb.com

David B. MacGregor (ID # 28804)
Post & Schell, P.C.
Four Penn Center
1600 John F. Kennedy Boulevard
Philadelphia, PA 19103-2808
Phone: 215-587-1197
Fax: 215-320-4879
E-mail: dmacgregor@postschell.com

John H. Isom (ID # 16569)
Jessica R. Rogers (ID #309842)
Post & Schell, P.C.
17 North Second Street
12th Floor
Harrisburg, PA 17101-1601
Phone: 717-731-1970
Fax: 717-731-1985
E-mail: jisom@postschell.com
E-mail: jrogers@postschell.com

Of Counsel:

Post & Schell, P.C.

Attorneys for PPL Electric Utilities Corporation

Date: November 9, 2012

TABLE OF CONTENTS

Page

TABLE OF AUTHORITIES

Page

Pennsylvania Court Decisions

Pennsylvania Administrative Agency Decisions

TABLE OF AUTHORITIES

Page

Pennsylvania Statutes & Regulations

I. INTRODUCTION

In these consolidated proceedings, PPL Electric Utilities Corporation ("PPL Electric") seeks the approvals and findings necessary for the siting and construction of the Blooming Grove – Jackson and Peckville – Jackson 138/69 kV Transmission Line ("Blooming Grove – Jackson and Peckville – Jackson Transmission Line," "Transmission Line," or the "Project"). The Transmission Line is approximately 3.8 miles of a 138/69 kV double circuit transmission line in Monroe County. Through its consolidated applications, PPL Electric seeks approval for the siting and construction of the transmission line, and findings that the exercise of the power of eminent domain to acquire right-of-way across one tract of land is necessary or proper for the service, accommodation, convenience or safety of the public.

PPL Electric is a public utility and electric distribution company subject to the regulatory jurisdiction of the Pennsylvania Public Utility Commission ("PUC" or "Commission"). PPL Electric furnishes electric distribution, transmission and supplier of last resort services to approximately 1.4 million customers in a service area that includes approximately 10,000 square miles covering all or portions of twenty-nine counties in eastern and central Pennsylvania. PPL Electric is a member of PJM Interconnection, L.L.C. ("PJM").

PPL Electric conducted an extensive, multi-faceted analysis to determine the preferred route for the Blooming Grove – Jackson and Peckville – Jackson 138/69 kV Transmission Line. The proposed Line will begin at PPL Electric's Jackson Substation in Jackson Township, Monroe County and will extend north to the Lake Naomi Tap pole in Pocono Township, Monroe County. The preferred route for the new double-circuit line will travel, in general, along the edge of the right-of-way of the existing double-circuit Blooming Grove - Jackson and Peckville - Jackson 138/69 kV Transmission Line through Jackson and Pocono Townships in Monroe County. The existing line will be renamed the Jackson-Wagners #1 & #2 138/69 kV Line as a

result of this Project. Altogether, this Project requires the installation of approximately 35 structures, ranging from 80-100 feet in height. The average span length will be approximately 650 feet. The final design of the proposed transmission line has not been completed. Therefore, the design of some structures may be modified.

For the reasons set forth below, PPL Electric respectfully requests that Administrative Law Judge Joel H. Cheskis ("ALJ") and the Commission: (1) approve the siting and construction of the Blooming Grove – Jackson and Peckville – Jackson 138/69 kV Transmission Line; (2) approve the exercise of the power of eminent domain by PPL Electric to acquire right-of-way across one tract of land as necessary for the service, accommodation, convenience or safety of the public; and (3) grant any other approvals as may be required.

II. STATEMENT OF THE CASE

This proceeding was initiated on May 15, 2012, when PPL Electric filed the above captioned Siting Application and the following three Applications 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 The Property Owners Listed Below For The Proposed Blooming Grove – Jackson and Peckville – Jackson 138/69 kV Transmission Line In Monroe County, Pennsylvania Is Necessary or Proper For The Service, Accommodation, Convenience Or Safety Of The Public (hereinafter, collectively "Condemnation Applications"):

1. Pocono Manor Investors, LP, Doc. No. A-2012-2304648;
2. Iroquois Ridge Partners LLP, Doc. No. A-2012-2304649;
3. Estate of Charles L. Vassallo, Doc. No. A-2012-2304653.

In addition, PPL Electric filed the testimony of five witnesses in support of the Siting Application, and the testimony of two witnesses each in support of the Condemnation Applications. On July 13, 2012, PPL Electric's Siting Application and its Condemnation Applications were consolidated by order of the ALJ.

On May 25, 2012, the Commission's Secretary scheduled an Initial Prehearing Conference on July 9, 2012, at 10:00 a.m. before the Honorable Judge Joel H. Cheskis (the "ALJ"). Prior to the Prehearing Conference, PPL Electric and the Estate of Charles L. Vassallo executed an agreement by which the Estate conveyed to PPL Electric a right-of-way and easement over and across its land. As a result, on July 6, 2012, PPL Electric filed a petition to withdraw the Vassallo Condemnation Application, which was originally joined with the above-captioned proceedings.

Notices of appearance were filed by Michael F. Faherty on behalf of Iroquois Ridge Partners, LLP; and Bradley Bechtel and Stephen P. Smith on behalf of the Pennsylvania Game Commission. On July 9, 2012, a Prehearing Conference was held in the above captioned proceedings. Only PPL Electric and the Pennsylvania Game Commission attended and participated in the Prehearing Conference. The petition to withdraw the Vassallo Application was granted in the Prehearing Order issued by the ALJ on July 23, 2012.

At the Prehearing Conference, the ALJ established a procedural schedule, wherein direct testimony and exhibits of other parties in opposition to the Applications was due on August 13, 2012. No direct testimony or exhibits were filed on August 13, 2012. No party sought additional time for the submission of such evidence. No party submitted any evidence in opposition to the Applications. As a result, PPL Electric filed a Motion to Reschedule Hearings on September 5, 2012. PPL Electric's Motion was granted in an order dated September 13,

2012. Prior to the hearing, PPL Electric and the Pocono Manor Investors, LP, exected an agreement by which Pocono Manor conveyed to PPL Electric a right-of-way and easement over and across its land. As a result, on September 19, 2012, PPL Electric filed a petition to withdraw the Pocono Manor Condemnation Application, which was originally joined with the above-captioned proceedings.. The ALJ granted PPL Electric's petition to withdraw on October 3, 2012.

An evidentiary hearing was held before the ALJ on October 3, 2012. At the hearings, PPL Electric moved into evidence its testimony and exhibits. Pursuant to the scheduling order issued on October 3, 2012, Main Briefs are due November 9, 2012, and Reply Briefs are due November 16, 2012. PPL Electric files herewith its Main Brief on the proceeding.

III. SUMMARY OF ARGUMENT

PPL Electric has proposed to construct the Blooming Grove – Jackson and Peckville – Jackson 138/69 kV transmission line in Monroe County in order to address three violations of the Company's Reliability Principles and Practices ("RP&P") guidelines. The 3.8-mile transmission line will address overloading on the existing transmission lines in the area, and will reduce the load on the existing lines to within the RP&P guidelines, which will improve load transfer capability. This Project will improve reliability of service to the 16,300 PPL Electric customers that are served by the existing transmission lines in the Project Area.

In determining the route for this Project, PPL Electric utilized the Commission's regulations at 52 Pa. Code § 57.75(e) and 57.76. After a thorough inventory of the Project Study Area, PPL Electric developed six alternative routes for comparison. PPL Electric compared the routes on a quantitative basis, and then did a further analysis on the three best scoring routes based on a qualitative analysis, before finally selecting Route D-1 as the preferred Project route.

Route D-1 maximizes the use of existing right-of-way, while limiting impacts on the human and natural environment and reducing project costs. PPL Electric has met its burden of proof in showing that its selection of Route D-1 is reasonable, and was made after a thorough investigation and analysis.

PPL Electric has been able to reach right-of-way agreements with all but one property owner along Route D-1. PPL Electric is therefore requesting approval of the use of the power of eminent domain in order to obtain the additional right-of-way necessary to accommodate the proposed transmission line. As shown in this Main Brief, PPL Electric has met its burden of proof by showing that the project is necessary to provide safe and reliable service to its customers, and that the route it has selected for the Project is reasonable.

IV. ARGUMENT

A. LEGAL STANDARDS

1. Burden of Proof

Section 332(a) of the Public Utility Code, 66 Pa.C.S. § 332(a), provides that the party seeking a rule or order from the Commission has the burden of proof. It is axiomatic that "[a] litigant's burden of proof before administrative tribunals as well as before most civil proceedings is satisfied by establishing a preponderance of evidence which is substantial and legally credible." *Samuel J. Lansberry, Inc. v. Pa. P.U.C.*, 578 A.2d 600, 602 (Pa. Cmwlth. 1990). The preponderance of evidence standard requires proof by a greater weight of the evidence. *Cmwlth. v. Williams*, 557 Pa. 207, 732 A.2d 1167 (1999). This standard is satisfied by presenting evidence more convincing, by even the smallest amount, than that presented by another party. *Brown v. Cmwlth.*, 940 A.2d 610, 614 n.14 (Pa. Cmwlth. 2008).

Additionally, any finding of fact necessary to support an adjudication of the Commission must be based upon substantial evidence. *Met-Ed Indus. Users Group v. Pa. PUC*, 960 A.2d 189, 193 n.2 (Pa. Cmwlth. 2008) (citing 2 Pa.C.S. § 704). Substantial evidence is such relevant evidence as a reasonable mind might accept as adequate to support a conclusion. *Borough of E. McKeesport v. Special/Temporary Civil Serv. Comm'n*, 942 A.2d 274, 281 (Pa. Cmwlth. 2008). Although substantial evidence must be "more than a scintilla and must do more than create a suspicion of the existence of the fact to be established," *Kyu Son Yi v. State Bd. of Vet. Med.*, 960 A.2d 864, 874 (Pa. Cmwlth. 2008) (citation omitted), the "presence of conflicting evidence in the record does not mean that substantial evidence is lacking." *Allied Mechanical and Elec., Inc. v. Pa. Prevailing Wage Appeals Bd.*, 923 A.2d 1220, 1228 (Pa. Cmwlth. 2007) (citation omitted).

If the applicant sets forth a *prima facie* case, then the burden shifts to the opponent. *McDonald v. Pennsylvania Railroad Co.*, 348 Pa. 558, 36 A.2d 492 (1940). Establishing a *prima facie* case requires either evidence sufficient to make a finding of fact permissible or evidence to create a presumption against an opponent which, if not met, results in an obligatory decision for the proponent.

2. **Standards for Approval of the Siting of Public Utility Facilities**

The Commission's regulations provide guidance regarding approval of an application for the construction and siting of high voltage aerial electric transmission lines, which state, in pertinent part, as follows:

> The Commission will not grant the application, either as proposed or as modified, unless it finds and determines as to the proposed HV [high voltage] line:
>
> (1) That there is a need for it.
>
> (2) That it will not create an unreasonable risk of danger to the health and safety of the public.

(3) That it is in compliance with the applicable statutes and regulations providing for the protection of the natural resources of this Commonwealth.

(4) That it will have minimum adverse environmental impact, considering the electric power needs of the public, the state of available technology and the available alternatives.

52 Pa. Code § 57.76(a).

The Pennsylvania appellate court cases dealing with the construction and siting of public utility facilities have arisen primarily in the context of the exercise of the power of eminent domain by public utilities under Section 1511(c) of the Business Corporation Law of 1988, 15 Pa.C.S. § 1511(c) or its predecessors, and exemptions from zoning requirements for proposed buildings to be used by a public utility in serving the public under Section 619 of the Pennsylvania Municipalities Planning Code, Act of July 31, 1968, P.L. 805, *as amended,* 53 P.S. § 10619. In such cases, the courts have established the general standard for review of the determination of need and the selection of routes for aerial utility lines.

With respect to need issues, the Commonwealth Court has determined that a transmission line should not be approved unless the electric utility demonstrates that the line is "necessary or proper for the accommodation, convenience and safety of its patrons, employees and the public." *Pa. Power & Light Co. v. Pa. P.U.C.*, 696 A.2d 248, 250 (Pa. Cmwlth. 1997) (quoting 66 Pa.C.S. § 1501). In applying this standard, the Commonwealth Court held that the Commission should consider the "electric power needs of the public, the state of the available technology and the available alternatives." *Id.* (quoting 52 Pa. Code § 57.76).

Regarding route selection issues, the Commonwealth Court has stated:

> The applicable legal standards for review of the selection of a route for utility lines are whether the powers conferred upon the public utility have been wantonly, capriciously or arbitrarily exercised. *West Penn Power Co. v. Pennsylvania Public Utility Commission,*

> 184 A.2d 143 (1962). The degree of inconvenience to a landowner, therefore, would not constitute grounds for withholding the exercise of the power to condemn the easement, see *Stone v. Pennsylvania Public Utility Commission*, 162 A.2d 18 (1960), where the record establishes that the utility's route selection was reasonable considering all of the factors involved in the selection of the line.

Paxtowne v. Pa. P.U.C., 398 A.2d 254, 256 (Pa. Cmwlth. 1979). Similarly, the selection of a route for transmission lines was explained by the Superior Court as follows:

> Appellant's [affected landowner's] first two contentions are sufficiently answered by our opinion in *Phillips v. Pa. P.U.C.*, [181 Pa. Super. 625, 124 A.2d 625 (1956)], wherein we restated the well-established proposition that the selection of routes for transmission lines is a matter for the utility in the first instance and, unless it is shown that it proposes to exercise the powers conferred upon it wantonly or capriciously, or that the rights of the landowner have been unreasonably disregarded, the Commission is not required to withhold its approval merely because another route might have been adopted.

Laird v. Pa. P.U.C., 183 Pa. Super. 457, 133 A.2d, 579, 581 (1957).

With respect to environmental issues, the Commission should consider the three-part test established in *Payne v. Kassab*, 312 A.2d 86 (Pa. Cmwlth. 1973). The test requires the Commission to determine the following:

> 1. Was there compliance with all applicable statutes and regulations relevant to the protection of the Commonwealth's environment?
>
> 2. Does the record demonstrate a reasonable effort to reduce the environmental incursion to a minimum?
>
> 3. Does the environmental harm which would result from the challenged decision or action so clearly outweigh the benefits to be derived there from that to proceed further would be an abuse of discretion?

Id. at 94. These standards were applied to Commission proceedings in *Moosic v. Pa. P.U.C.*, 429 A.2d 1237, 1240 (Pa. Cmwlth. 1981); and *Application of West Penn Power Co.*, 54 Pa. PUC

319 (May 29, 1980). The Commission's environmental review is properly limited to the impacts at the site of the proposed facilities. *See, e.g., Del-AWARE Unlimited Inc. v. Pa. P.U.C.*, 513 A.2d 593, 596 (Pa. Cmwlth. 1986); *Philadelphia Suburban Water Co.*, 54 Pa. PUC 127, 135 (1980).

3. **Standards for Approval to Exercise the Power of Eminent Domain**

Section 1511 of the Business Corporation Law of 1988 ("BCL"), under which PPL Electric has filed its five remaining Condemnation Applications, grants a public utility the power or authority to condemn property to provide electricity to the public, stating, in pertinent part:

> (a) General Rule. -- A public utility corporation shall ... have the right to take, occupy and condemn property for one or more of the following principal purposes and ancillary purposes reasonably necessary or appropriate for the accomplishment of the principal purposes:
>
> * * * *
>
> (3) The ... transmission ... distribution or furnishing of ... electricity ... to or for the public.

15 Pa.C.S. § 1511(a)(3). Thus, the plain language of Section 1511 of the BCL grants a public utility, such as PPL Electric, the power and authority to take and condemn property for the purpose of providing electricity to the public.

Section 1511(b) of the BCL restricts the authority of a public utility to take and condemn property for the purpose of providing electricity to the public, stating, in pertinent part, as follows:

> The powers conferred by subsection (a) shall not be exercised:
>
> (1) To condemn for the purpose of constructing ... aerial electric transmission ... lines:
>
> (i) Any dwelling house or, except in the case of any condemnation for petroleum or petroleum products transportation lines, any part of the reasonable curtilage of a

> dwelling house within 100 meters therefrom and not within the limits of any street, highway, water or other public way or place.
>
> (ii) Any place of public worship or burying ground.

15 Pa.C.S. § 1511(b).

Before a public utility may seek to exercise its statutorily granted authority to condemn property for the purposes of constructing aerial transmission or distribution facilities, it must obtain approval from the Commission. Section 1511(c) provides, in pertinent part:

> (c) The powers conferred by subsection (a) [for the running of aerial electric facilities] may be exercised to condemn property ... only after the Pennsylvania Utility Public Commission, upon application of the public utility corporation, has found and determined ... that the service to be furnished by the corporation through the exercise of those powers is necessary for the service, accommodation, convenience or safety of the public.

15 Pa.C.S. § 1511(c). Accordingly, on an application for condemnation, the Commission must determine whether the service, *i.e.*, the transmission or distribution of electricity to or for the public that will be provided if the subject property is condemned, is necessary for the service, accommodation, convenience or safety of the public.

Where the record establishes that the public utility's route selection was reasonable, considering all the factors involved in the selection of a line, the degree of inconvenience to a landowner does not constitute grounds for withholding the exercise of the power to condemn the easement. *Paxtowne v. Pa. P.U.C.*, 398 A.2d 254, 256 (Pa. Cmwlth. 1979).

B. NEED

At the outset, PPL Electric notes that the need for the Project has not been contested. The Blooming Grove – Jackson and Peckville – Jackson 138/69 kV Transmission Line is needed to 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 Reliability Principles and Practices ("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

1. PPL Electric Reliability Principles and Practices

In reviewing the need for the proposed Transmission Line Project, it is important, as a preliminary matter, to understand the vital role transmission facilities play in supplying reliable electric service. On PPL Electric's system, power is transmitted via transmission lines that range from 69 kV to 500 kV in voltage from electric generators to transformation substations throughout PPL Electric's system. At these substations, the voltage level is sequentially stepped-down for ultimate delivery into the distribution system. Distribution transformers then further reduce the voltage from primary to secondary distribution levels for ultimate delivery to customers. Secondary distribution lines deliver the lower voltage electricity for use in homes and businesses. The transmission system provides the essential link between generators and end-users and is able to accommodate changes in load as different generators come on and go off line and as customer usage changes throughout the daily and annual load cycles.

PPL Electric's transmission lines are designed to operate at specified voltage levels, 69 kV and higher. PPL Electric's 138/69 kV transmission system is planned using internally developed guidelines, the RP&P, that have been adopted by PPL Electric to ensure that the system provides safe and reliable service to its customers. PPL Electric St. No. 3, p. 3.

The reliable and economical operation of PPL Electric's 138/69 kV transmission system requires planning guidelines for system expansion and reinforcement. The principles upon which the RP&P guidelines are based recognize that system expansion should be coordinated to achieve the most economical balance of construction and operating expenditures. It should also maintain a proper balance between the degree of risk, amount and type of load interrupted, and the cost of providing the needed expansion. System reliability should be maintained to prevent large scale, long term, or frequent service interruptions to avoid adverse effects and hazards to the public.

In accordance with these guidelines and 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. PPL Electric St. No. 3, p. 3. 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 five percent on the 138/69 kV transmission system. *Id.* These principles are incorporated in the PPL Electric's RP&P.

PPL Electric's RP&P guidelines do not allow circuits to be operated in an overloaded condition. Operating the circuit in an overloaded condition for an extended period, i.e., above its normal rating, would initially damage the conductor and ultimately could cause a failure resulting in customer outages. The normal winter rating of the existing Blooming Grove-Jackson 138/69 kV circuit is 111 MVA. PPL Electric St. No. 3, p. 5. Starting in the winter of 2013, the circuit will be loaded to 115 Megavolt Amperes (MVA) during peak winter conditions. *Id.* This

load would violate PPL Electric's RP&P guidelines and could potentially damage the conductor or cause the line to fail.

The RP&P guidelines 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. PPL Electric St. No. 3, p. 5. The present load on the Blooming Grove – Jackson 138/69 kV circuit, 68 MW, violates this criterion.

In addition, the RP&P guideline for maximum allowable load loss is 30 MW for a single-circuit line outage. PPL Electric St. No. 3, p. 6. 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 repaired or switching moves could be made to re-sectionalize the line. *Id.* This outage would exceed the RP&P guideline for maximum allowable load loss for a single-circuit line outage.

PPL Electric has applied its RP&P guidelines to the development of the power system since the 1980s, and this design philosophy has provided for a highly reliable power system that is consistent with good utility practice. This methodology has also been presented to the Commission as the basis for PPL Electric's planning decisions in numerous transmission project applications over the last thirty years.

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 Mega Volt Amperes (MVA) during peak winter conditions. PPL Electric St. No. 3, p. 5. The Blooming Grove-Jackson 138/69 kV circuit has a normal winter rating of 111 MVA. *Id.* Operating the circuit above its normal rating for prolonged periods of time could initially damage

the conductor and ultimately could cause a failure resulting in customer outages. *Id.* In the event of an outage, service to approximately 16,300 customers would be interrupted. *Id.* This violation can be attributed to recent additional commercial/industrial loading which greatly exceeded the normal projected load growth for this area.

By winter 2013, the loss of the Blooming Grove – Jackson 138/69 kV Line would interrupt 68 MW 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. *Id.* 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. PPL Electric St. No. 3, pp. 5-6.

2. **Transmission Planning Process**

PPL Electric's planning process begins with the development of a computer model of the future system. A specific study year is chosen, and the future system model is developed using the existing system plus any planned modifications to the transmission system scheduled to be completed prior to the study year. PPL Electric St. No. 3, p. 3. Load levels used in the system model are based on the latest forecast prepared annually by PPL Electric. PPL Electric St. No. 3, pp. 3-4.

Once the system model is complete, comprehensive power flow simulations are performed to test the ability of the system to comply with the PPL Electric transmission planning reliability criteria. This testing is accomplished by simulating an outage of each transmission and bulk electric facility. All conditions where the system is not in conformance with the reliability criteria are identified, and system reinforcements are added to bring the system into conformance. PPL Electric St. No. 3, p. 4. Also identified are estimated costs and lead times to

implement the required reinforcements. Computer simulations of the system with the identified reinforcement alternatives are completed to identify the best overall reinforcement that will meet the needs of the region in a reliable and economic manner. *Id.*

Here, 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. PPL Electric Ex. 1, Attachment 2, p. 7.

The new line will reduce loading to within the RP&P guidelines on the current Blooming Grove – Jackson 138/69 kV circuit by providing another double circuit line that ties directly into the Jackson Substation. *Id.* The load on the existing Lake Naomi Tap will be transferred to the Jackson – Wagners #1 circuit and terminated separately into the Jackson Substation. *Id.* After completion of the proposed project, the Blooming Grove – Jackson 69 kV single circuit line will be loaded to 59 MW during peak winter conditions, which is within RP&P guidelines.

Transferring load between Blooming Grove and Jackson Substations will continue to be limited due to the low voltage levels that result at the end of the abnormally sectionalized Blooming Grove-Jackson 69 kV line. *Id.* For an outage near the Jackson Substation on the single-circuit Blooming Grove-Jackson 69 kV line, approximately 32 MW would remain interrupted for an extended period of time. *Id.* This situation still violates the RP&P guideline for maximum allowable load loss for a single-circuit line outage, which is 30 MW, however the amount of load remaining interrupted will be greatly reduced. This violation will be resolved with another project that will be filed with the Commission in the future. *Id.*

No other reasonably economical functional alternative was available that would resolve two of the problems identified by PPL Electric and bring the facilities in the area closer to

compliance regarding the third violation. PPL Electric St. No. 3, p. 7. The Project proposed by PPL Electric is the best available alternative to alleviate the identified reliability concerns in the area. Attachment 2 to PPL Electric Ex. 1 contains a detailed description of PPL Electric's transmission planning process. For the reasons stated above, it is important that PPL Electric's transmission system in Monroe County be reinforced the Blooming Grove – Jackson and Peckville – Jackson Transmission Line Project, in order to ensure reliable service to PPL Electric's customers.

C. SITING

After PPL Electric determined that the Blooming Grove – Jackson and Peckville – Jackson Transmission Project was reasonably necessary to provide adequate and reliable service to the public, PPL Electric determined the most appropriate route for the transmission line. As explained below, PPL Electric undertook a detailed study of the area in which the Project must be constructed to accomplish its functional purposes, in order to find the route that best balances the numerous competing interests that must be considered in siting a high voltage transmission line.

At the outset, several general observations are appropriate in order to provide the proper framework for determining whether the route selected in this case is reasonable. Initially, although it may be obvious, there is no "perfect" line route. A transmission line cannot be designed and built without causing some effects on the environment, the public and individual property owners. The only way to avoid all adverse effects on the environment, the public at large and individual property owners would be to not build transmission lines at all. But that approach would have a significant adverse effect in that it would prevent PPL Electric from continuing to provide adequate and reliable electric service. Therefore, merely identifying some

adverse effects along a proposed line route does not justify moving the line somewhere else, where it would have similar or perhaps even greater adverse effects on others.

It should be further noted that the selection of Route D-1 as the preferred route is unopposed. No testimony has been presented to support the selection of any other route.

The siting process must carefully balance a wide variety of relevant factors. For example, the Commission's transmission line siting regulations list specific issues that must be considered. 52 Pa. Code § 57.75(e) & 57.76. PPL Electric has considered all of the elements listed in the Commission's regulations in siting this Project. PPL Electric gave substantial consideration to numerous factors including reliability of the system, safety of the facilities to the public, impact on the environment, Project cost, inconvenience to the public during construction and maintenance, effect on historic areas, effect on archaeologic areas and the need for the Project. Based on a careful balancing of all relevant factors, PPL Electric selected Route D-1 for this Project.

As explained below, Route D-1 is the most appropriate route for the proposed Project, and PPL Electric has met the applicable legal standard of selecting a reasonable route for this Project.

1. Route Selection

In order to select a route for the Transmission Line PPL Electric assembled a multidisciplinary team ("Siting Team") consisting of experts from the functional groups that have a stake in the design, construction and siting of the project. PPL Electric St. No. 1, p. 8. The functional groups involved in the Transmission Line siting were: siting, various engineering disciplines, real estate, system planning, environmental experts, public relations, legal, system operations and construction. *Id.* Information about the characteristics of the area were gathered and mapped. This information includes, but is not limited to: Land Use, Zoning, Natural

Features, Geology, Water Resources, Cultural and Archaeological Resources, and Threatened and Endangered Species Habitat. *Id.* Simultaneously, a communications plan was developed to ensure that external stakeholders such as local, county and state governments, special interest groups and the public are kept informed about the project. *Id.*

The first step in siting a transmission line is to determine the Study Area. The General Area of Study is the area from which the environmental inventories were gathered while the Project Study Area, which is a subset of the General Area of Study, is the territory in which line route alternatives can be sited to feasibly meet the Project's functional requirements and, at the same time, minimize 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. PPL Electric St. No. 1, p. 12. 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. PPL Electric St. No. 1, p. 13. Landscape features define the remaining boundaries and include dense residential areas to the west and north, and compacted residential and commercial districts along Interstate ("I")-80 and State Route 611 to the east. *Id.* The General Area of Study is shown in Figure 3-1 of Attachment 3 to PPL Electric Ex. 1. *Id.*

The General Area of Study contains streams. Major lakes located in the General Area of Study include Crescent Lake and Sand Spring Lake, as well as others. Wetlands were also identified in the General Area of Study, and an official delineation of the wetlands within the Selected Route was completed to aid in determining the environmental permits necessary for construction of the Project. PPL Electric Ex. 1, Attachment 2, pp. 7-9.

The General Area of Study contains native plant and wildlife habitats. Many of these natural areas are preserved for their ecological benefit, as well as for their social recreational value. PPL Electric St. No. 1, p. 13. Typical wildlife species found within the General Area of Study include those found in wetlands, forested habitats, and scrub-shrub habitats. Wetlands in the area provide habitat for frogs, snakes, birds, and raccoon. *Id.* Forests and scrub-shrub habitats are home to species such as white-tailed deer, gray squirrel, wild turkey, box turtle, striped skunk, opossum, and a variety of small mammals and songbirds. PPL Electric St. No. 1, pp. 13-14.

As a result of a search of the Pennsylvania Natural Diversity Inventory ("PNDI") database, administered by the Pennsylvania Natural Heritage Program ("PNHP"), and follow-up consultations with state and federal agencies, PPL Electric identified the following federal and/or state rare, threatened, or endangered species as potentially occurring within the General Area of Study: bog turtles, Indiana bats, timber rattlesnakes, variable sedge, and pitch pine-heath woodland. PPL Electric St. No. 1, p. 14. Habitat assessments for these species may be required by the jurisdictional agencies as part of the environmental permitting and approval process for the Selected Route. If they are required, PPL Electric will undertake all necessary studies and obtain all necessary permits before proceeding with the Project.

Special use areas are places recognized by regulatory agencies or local governments as providing unique habitat characteristics or wildlife management opportunities that indicate a need for preservation. Examples include scenic areas, wilderness areas, wild and scenic rivers, state game lands, and priority natural areas. The only designated scenic area in the General Area of Study is the Big Pocono Overlook, located within Big Pocono State Park. PPL Electric St. No. 1, p. 14. There are no designated wilderness areas, wild and scenic rivers, or Heritage

Geology Sites designated by the PNHP in the General Area of Study. *Id.* A large portion of the 4,000 acre State Game Land #38 is located within the General Area of Study, as well as a portion of State Game Land #318. Three Priority Natural Areas are located in the General Area of Study: Long Pond Macrosite, Camelback Mountain, and Sand Spring Run/Wolf Swamp Run. PPL Electric St. No. 1, pp. 14-15.

There are many land uses, development types and patterns in Monroe County. The main land use in the General Area of Study is Residential, and is composed primarily of single-family residences and vacation rental homes or condominium complexes. PPL Electric St. No. 1, p. 16. Much of the residential development has occurred within the past 30 years. These residential areas range from widespread 200-home development complexes to modest 20-30 home developments. *Id.* Relatively few sections of the General Area of Study are used for agricultural purposes, and all of the land dedicated to agriculture is privately owned. *Id.* The primary agricultural use involves row crops such as hay, corn, and soybeans. Other agricultural uses include horse pastures and dairy farms, but these are limited compared to row crops. There are no industrial land uses within the General Area of Study. *Id.* However, there are several large tracts of land located north of Sullivan Trail Road that are owned by mining companies. PPL Electric Ex. 1, Attachment 3.

There are no active railroads or airports within the General Area of Study. The closest airport is Pocono Mountain Municipal Airport, which is located approximately 2.15 miles north of the General Area of Study. *Id.* A portion of the southwestern corner of the General Area of Study is identified by Monroe County as having a utility land use, but it is actually part of a large forest tract owned by the Bethlehem Water Authority for the protection of its water sources in the area. PPL Electric St. No. 1, pp. 16-17. Similarly, a 20-acre parcel near the intersection of I-

80 and I-380 is identified as having a services land use, but is actually a series of four communication towers. PPL Electric St. No. 1, p. 17. PPL Electric does not anticipate that any of these utility features will be impacted by the proposed Project, due to the distance between the features and the Project. *Id.*

PPL Electric conducted a desktop survey of the historic architectural resources within the General Area of Study. The desktop survey consisted of accessing the Pennsylvania Historical and Museum Commission's ("PHMC") Bureau of Historic Preservation's Cultural Resources Geographic Information System ("CRGIS") to review available information on previously recorded historic architectural sites in the General Area of Study. PPL Electric St. No. 1, p. 15. A windshield survey was also conducted in October 2010 that provided information about the built environment and the types of historic architectural resources. Areas of potential concern were identified during the windshield survey and used in defining constraints during the analysis used to determine the Selected Route for the Project. *Id.*

No National Register of Historic Places ("NRHP")-listed or -eligible historic structures or districts were identified in the General Area of Study. One undetermined above ground resource, identified as the Transue School (PHMC Key No. 039537), is located within the General Area of Study. *Id.* This building is located on Sullivan Trail Road, north of I-80, in Pocono Township. An undetermined status means that, although this resource has been brought to the attention of PHMC, no determination of eligibility has been made. No archeological sites have been documented in the General Area of Study, however the area possesses at least a moderate potential for pre-contact (Native American) archaeological resources. Information regarding the Project was provided to PHMC in June 2011. *Id.* On July 12, 2011, PHMC issued a response

letter stating that based on their review there are no NRHP- eligible or -listed historic or archaeological properties in the area of the proposed Project. PPL Electric St. No. 1, pp. 15-16.

In collecting and analyzing environmental data, PPL Electric utilized the Commission's siting regulations, which require that consideration be given to the impact, and efforts to minimize the impact, of the proposed line on the following:

(i) Land use
(ii) Soil and sedimentation
(iii) Plant and wildlife habitats
(iv) Terrain
(v) Hydrology
(vi) Landscape
(vii) Archaeologic areas
(viii) Geologic areas
(ix) Historic areas
(x) Scenic areas
(xi) Wilderness areas
(xii) Scenic rivers

PPL Electric Ex. 1, Attachment 2, discusses in great detail the individual elements of the Commission's regulations and how they apply to this Project and the Study Area. PPL Electric identified and evaluated all of the elements of the Commission's siting regulations in its route selection process for the Project. The complete analysis of each of the individual elements of the Commission's regulations can be found in PPL Electric Ex. 1, Attachment 2.

2. **Route Selection**

PPL Electric announced its intent to build the Blooming Grove-Jackson and Peckville-Jackson 138/69 kV Line in early May 2011. PPL Electric St. No. 1, p. 31. Since then, PPL Electric has undertaken activities to provide information on the Project to the public and

government officials and to collect input from those audiences. Activities that were undertaken to communicate the Project to the public included calls and e-mails to Government Officials, letters and project fact sheets mailed to property owners, news advertisements placed in a local newspaper, and a public open house meeting held on May 16, 2011. *Id.* More detailed information on the outreach efforts is included in Attachment 4 to PPL Electric Ex. 1. Information gathered during the outreach effort was used in siting the Project.

In siting the transmission line for this Project, PPL Electric utilized a methodology that was adapted from a protocol developed by the Electric Power Research Institute ("EPRI") and the Georgia Transmission Corporation. This method incorporates Geographic Information System ("GIS") technology, statistical evaluation and professional judgment into the decision-making process. PPL Electric St. No. 2, p. 3. The methodology formalizes many of the methods and principles used in the industry to site transmission lines. It was developed over many years with collaboration and feedback from utility companies, federal, state and local government agencies and other key stakeholders such as private landowners. *Id.* The process was tested and calibrated against existing transmission line siting projects that had been successfully completed. *Id.* PPL Electric utilized both a quantitative and qualitative analysis in determining the best route for the project. In order to determine an appropriate area for the route alternatives, PPL Electric used four principle steps:

- Generate Macro Corridors. These macro corridors define the outer edges of the Project Study Area.
- Generate Alternative Corridors. Alternative corridors most suitable for the transmission line are generated from three primary perspectives:
  - Protection of the natural environment;
  - Protection of the built environment; and
  - Engineering requirements.
- Identify alternative routes within the alternative corridors.
- Select the preferred route.

PPL Electric St. No. 2, p. 4.

The quantitative analysis performed by PPL Electric uses a series of grid cells across the General Area of Study. Values are assigned to each cell depending upon its primary use. PPL Electric St. No. 2, p. 4. A value is assigned representing, for example, an opportunity area such as open land or a constraint area such as a residential neighborhood. A "least impact" corridor or path can be determined by the mathematical addition of the value numbers from the value assigned to each cell between the start and end points. *Id.* Opportunity areas are assigned low numbers, and constraint areas are assigned high numbers. Therefore, the corridor or path with the lowest value is the corridor or path with the least adverse impacts. *Id.*

Macro corridor analysis begins after the start and end points of the new transmission lines have been established. The first step in macro corridor development is to develop a land use/land cover GIS database that identifies the key opportunity and constraint areas that are traditionally reviewed in a siting study. PPL Electric St. No. 2, p. 5.

A GIS map of the General Area of Study is created using land use and land cover data and other feature data that include roads, rail, and existing transmission lines. From the GIS map, a Composite Suitability Surface Map, composed of grid cells, is created. *Id.* The features of each cell are identified and the features are ranked from one (most suitable) to nine (least suitable). Corridors with the cells having the lowest values have the highest overall suitability for a transmission line. *Id.* The macro corridor includes all areas determined to be most suitable from all of the three perspectives. PPL Electric St. No. 2, p. 6. The outer boundary of this Macro Corridor area also effectively defines the Project Study Area. *Id.* The Project Study Area is a subset of the larger General Area of Study discussed previously.

The next step in the process involved the identification of alternative corridors. In order to identify alternative corridors, additional and more detailed data was gathered. *Id.* The starting point of the assignment of values was the EPRI-GTC Methodology, which assigned values through a collaborative outreach involving stakeholders from federal, state and local governments, environmental and engineering experts, homeowner associations and other groups. *Id.* The values obtained from EPRI-GTC were then reviewed by PPL Electric's siting team. Values for certain land uses and land covers were refined to reflect circumstances presented in the Project Study Area. These refinements were made by PPL Electric and technical experts in environmental, engineering, and public outreach disciplines to better represent conditions within Pennsylvania, such as the inclusion of stream classifications to offer enhanced protection to this key resource within the natural environment perspective. *Id.*

Alternative corridors were created from three different perspectives – the Built Environment, the Natural Environment and Engineering Requirements. The "Built Environment" refers to protecting human and cultural areas by reducing potential conflicts with existing residential neighborhoods and other community-valued buildings or historic sites. *Id.* The "Natural Environment" refers to protecting plants, animals and aquatic resources by minimizing the impact to ecological resources and natural habitat. PPL Electric St. No. 2, pp. 6-7. The "Engineering Requirements" refer to maximizing co-location and minimizing cost and schedule challenges by seeking the shortest path or utilizing existing rights-of-way, while avoiding areas that pose significant construction obstacles such as steep slopes or unique agricultural practices. PPL Electric St. No.2, p. 7.

The same fundamental data sets are used in determining the alternative corridors for each of the above perspectives. For each perspective, however, weighting of data is based on the

nature of the perspective. *Id.* For example, a Built Environment assessment applies higher weight to features related to proximity and density of buildings in the Project Study Area. The Natural Environment assessment applies a higher weight to flood plain and wildlife habitat. *Id.* The Engineering Assessment seeks to avoid construction obstacles such as slopes and utilize linear infrastructure features. *Id.* By selecting the corridor that is optimal from each of the three perspectives, PPL Electric was able to compare environmental, social, and financial costs and benefits of each of the corridors. *Id.*

The next phase of the process was route development within the alternative corridors. The alternative transmission line route development utilized a least impact tool similar to the one used to identify alternative corridors. *Id.* The alternative route analysis, however, focuses on a single alignment rather than a broad corridor area. The alternative route analysis minimizes the least preferred areas that are crossed along a route connecting the starting and ending locations. Again, routes are selected from each of the three perspectives. PPL Electric St. No. 2, pp. 7-8.

To assess the advantages and disadvantages of alternative routes, specific features, such as the number of residences or streams crossed per route, were considered. The quantitative feature metrics are normalized, assigned relative weights, and organized within the three perspectives — the Built Environment, the Natural Environment and Engineering Requirements. PPL Electric St. No. 2, p. 8. The overall score for each alternative route was then calculated. Lower scores indicated less difficulty or potential impacts of the route. Using this methodology, PPL Electric selected six Alternative Routes for detailed examination. *Id.* At the completion of the detailed examination of the six Alternative Routes, it was determined the three worst scoring routes would not be carried forward for further evaluation. *Id.*

The quantitative assessment required calculating the evaluation metrics of the routes and summarizing them in tabular form organized within the three perspectives – Built, Natural and Engineering. The metrics used are defined in Table 4-2 to Attachment 4 of PPL Electric Ex. 1. The raw metric results of the quantitative analysis are shown in Table 4-3 to Attachment 4 of PPL Electric Ex. 1. The quantitative analysis was then further refined by applying appropriate weights to each of the metrics. The weighting ensures that the features requiring the most "protection" are assigned a higher relative influence in the final ranking. PPL Electric St. No. 1, p. 19. The weighted metrics and weighted totals are shown in Table 4-4 to Attachment 4.

The siting team used the results of the quantitative analysis to identify the three worst scoring alternatives. The worst alternatives are those with the highest scores. The three worst scoring routes were then excluded from further consideration. PPL Electric identified that Routes A, C, and E were not suitable for the Project. PPL Electric St. No. 1, p. 20. 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. *Id.*

In the quantitative analysis, Routes B, D, and D-1 scored the best. Route D-1 had the lowest cumulative value of the six Alternative Routes considered. *Id.* Route B had a low cumulative value due to limited built environment and engineering impacts. Route D also had a low cumulative value, despite having the highest built environment impact.

The next step in the evaluation process was to qualitatively assess the remaining Alternative Routes based on less tangible criteria. The qualitative assessment was performed by applying expert judgment to rank the remaining alternative routes. PPL Electric St. No. 2, p. 8. PPL Electric's siting team qualitatively ranked the preferred routes based on several important

considerations such as visual concerns, community concerns, schedule delay risk, special permit issues, and construction and maintenance accessibility. *Id.* The goal of the qualitative expert judgment was to select a preferred route from the three remaining routes through the Project Study Area. This process is designed to encourage thorough discussion in evaluating and selecting a final route in an objective, consistent, and comprehensive manner. PPL Electric St. No. 2, pp. 8-9.

In conducting its qualitative assessment, PPL Electric considered the following five qualitative criteria for each alternative:

- Visual concerns;
- Community concerns;
- Special permit issues;
- Construction, maintenance, and accessibility; and
- Schedule delay risk.

PPL Electric St. No. 2, p. 9. Each of the qualitative criteria was assigned a weight based on its significance within the scope of the Project. PPL Electric then evaluated the remaining Routes, Routes B, D, and D-1, on the qualitative criteria. After evaluating all the factors considered during the routing process as documented in PPL Electric Ex. 1, Attachment 4, PPL Electric concluded that Route D-1 was the Preferred Route for the Project, because it had the least impact as determined in the qualitative assessment. PPL Electric St. No. 1, p. 26. The goal of the siting study was to select the most suitable route for the double-circuit 138/69 kV line. The most suitable route is the route that minimizes the effect of the transmission line on all factors of the natural and human environment, while minimizing overall project costs and avoiding unreasonable routes and non-standard design requirements to the extent practical. *Id.* Route D-1 will accomplish those goals better than the other Routes considered as part of the siting process. PPL Electric St. No. 1, p. 11.

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. PPL Electric St. No. 1, pp. 26-27. 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. PPL Electric St. No. 1, p. 27. Route D-1 will have substantially less impact on the natural and built environment, land use, and the citizens of Monroe County than the Alternative Routes considered.

3. Mitigating Impact of the Transmission Line

The siting process described above, is specifically designed to select a route that will mitigate adverse impacts. PPL Electric has used this process successfully many times in filings before the Commission. The Company has a long history of building power lines in a way that strikes a balance among maintaining reliable electric service, minimizing impact on property owners, protecting the environment and keeping costs down. Mitigation efforts actually begin in the siting stage where sensitive areas are avoided to the extent practical. PPL Electric St. No. 1, p. 27. When avoidance is not practical, PPL Electric will implement mitigation strategies. PPL Electric strives to minimize the impacts of transmission lines upon property owners and the environment.

PPL Electric's vegetation management program is outlined in the "Specification for Initial Clearing and Control Maintenance of Vegetation on Or Adjacent to Electric Line Right-of-Way through Use of Herbicides, Mechanical and Hand-clearing Techniques." A copy of this specification is provided as Attachment 6 to PPL Electric Ex. 1. PPL Electric's policy is designed to mitigate the impact of tree clearing on property crossed by PPL Electric rights-of-way. PPL Electric St. No. 1, p. 28. PPL Electric utilizes selective clearing on certain PPL

Electric easements. *Id.* Selective clearing allows compatible species (vegetation that would not grow tall enough to threaten the reliable operation of the transmission line) to remain or grow back within the right-of-way. *Id.* Restricted clearing is practiced in environmentally sensitive areas and, along with compatible species, allows some non-compatible species vegetation to remain until the understory vegetation redevelops. Additionally, PPL Electric does not use any aerial herbicide application techniques. Herbicides are applied manually by trained professionals, each of whom applies the herbicide manually with a hand-held sprayer. *Id.* Only those species that require control are treated. PPL Electric limits its use of herbicides in certain sensitive areas or situations, as described in PPL Electric St. No. 1, on pages 28-29. All herbicides used by PPL Electric have been approved by the United States Environmental Protection Agency. PPL Electric St. No. 1, p. 29.

Impacts from soil erosion and sedimentation and crossings of jurisdictional waters and wetlands are mitigated through the acquisition of and compliance with all required permits and plans. *Id.* Initially, all wetlands and waters are identified, delineated, surveyed and added to construction plans. Structure and access road locations are located outside of these sensitive areas as much as practical. In locations where this is not practical, all required permits are obtained and the Company adheres to their terms and conditions during construction. *Id.* The placement of conditions on a permit by the Army Corps of Engineers, the Department of Environmental Protection or similar agencies is a principal tool for protecting the environment. *Id.* The placement of conditions on a permit indicates that the agency has thoroughly reviewed the permit application and that, so long as conditions are followed, there will be no unlawful harm to the environment. PPL Electric will obtain all required permits and will comply with any conditions placed on those permits.

PPL Electric has provided substantial evidence in this proceeding to show that it has assessed the impact this project would have on the environment, and has mitigated environmental impacts where it is practical to do so. As discussed in Section IV.A.2, under the *Payne* decision, the issue is whether the environmental harm from the Project so clearly outweighs the benefits that continuing the Project would be an abuse of discretion. In the sections of this Main Brief on the necessity of the Project, PPL Electric has shown that this Project is needed to avoid overloading the existing transmission lines, which could cause damage to the lines and prolonged outages to thousands of customers. Here, the benefits of this Project to PPL Electric's customers outweigh the environmental harm.

4. Health and Safety

PPL Electric will take many steps to ensure the safety of the public as a result of the construction of the Project. PPL Electric constructs all of its transmission lines to meet or exceed National Electrical Safety Code ("NESC") standards. The NESC is a set of rules to safeguard employees, contractors and the public during the installation, operation, and maintenance of electric power lines. PPL Electric St. No. 4, p. 3. Although it is not intended as a design specification, its provisions establish minimum design requirements. *Id.* The Commission has found in numerous cases that transmission lines that comply with NESC requirements do not create an unreasonable risk or danger to the health and safety of the public. *Investigation on Commission Motion of the Safety of the Cabett-Wylei Ridge 500 kV Transmission Line, I.D.* 236 (Sept. 18, 1981); *Application of PP&L for Approval to Locate and Construct a 138 kV Transmission Line Between West Allentown and Salisbury Substations,* Docket No. A-00104160 (July 20, 1984); *Application of PP&L for Authorization to Locate and Construct its Hamlin 138 kV Electric Transmission Line*, Docket No. A-00101826 (April 3, 1981); *Larken v. Philadelphia Electric Co,* 39 Pa. PUC 777 (1961). For this Project, PPL

Electric has developed design specifications and safety rules which meet or surpass all requirements specified by the NESC. PPL Electric St. No. 4, p. 3.

In addition, PPL Electric has instituted a Magnetic Field Management Program for new and rebuilt transmission lines. The Company does not believe that current scientific evidence demonstrates that magnetic fields cause any adverse health effects or pose a health or safety danger to the public. PPL Electric St. No. 4, p. 4. Nevertheless, PPL Electric has determined, as a matter of policy, to design its new and rebuilt transmission lines to reduce magnetic fields when that can be done at low or no cost and consistent with functional requirements. *Id.* PPL Electric's Magnetic Field Management Program has been developed to implement that policy decision. To reduce magnetic field exposures, the program generally prescribes the use of line design that provides five feet higher ground clearances than minimum clearances specified in the NESC and reverse phasing of new double-circuit lines where it is feasible to do so at low or no cost. *Id.* Here, the transmission line will have ground clearances that exceed NESC requirements by at least five feet, and will reverse phase the two circuits, thus causing a reduction in magnetic fields. PPL Electric Ex. 1, Attachment 5, p. 4.

The proposed Project does not present any undue risk of harm to the public, and should be approved as proposed.

D. EMINENT DOMAIN

On May 15, 2012, PPL Electric filed with the Commission three (3) applications for a finding and determination that the service to be furnished by PPL Electric through its proposed exercise of the power of eminent domain to acquire rights-of-way and easements for the construction, operation, and maintenance of the proposed Transmission Line is necessary or proper for the service, accommodation, convenience, or safety of the public. During the course of the proceeding, PPL Electric withdrew two of the applications. PPL Electric now seeks

sufficient land rights for an aerial crossing of the property of Iroquois Ridge Partners, LLP, In Pocono Township, Monroe County, Docket No. A-2012-2304649. For the reasons set forth below, PPL Electric requests that the ALJ find, and the Commission approve, that the acquisition of the right-of-way and easement for the aerial crossing of the aforementioned property is necessary and proper for the service, accommodation, convenience, or safety of the public and grant PPL Electric's Condemnation Application.

PPL Electric's proposed exercise of the power of eminent domain to acquire a right-of-way and easement for the construction, operation, and maintenance of the proposed Project over the lands identified in the Condemnation Application is necessary for the service, accommodation, convenience, or safety of the public. As explained above, the Transmission Line is required to resolve violations of PPL Electric's Reliability Principles and Practices. (See Section IV.B, supra.) The Project will ensure reliable long-term electric service to customers in the Project area.

As explained above, the Blooming Grove – Jackson and Peckville – Jackson Transmission Line will be approximately 3.8 miles of 138/69 kV transmission line, which will be situated mostly in existing right-of-way and along the path of an existing transmission line in the area. (See Section IV.C, supra.) The proposed route for the Project was selected after a detailed analysis, which included a comprehensive environmental inventory, identification and analysis of alternative routes, and public input regarding the selection of the preferred route. Factors considered in the siting analysis included functional requirements, environmental impacts, social impacts, public input, cost, and other factors identified in the Commission's siting regulations. (See Section IV.C., supra.)

PPL Electric seeks to exercise the power of eminent domain to acquire a right-of-way for the construction, operation, and maintenance of the Blooming Grove – Jackson and Peckville – Jackson Transmission Line over and across the property identified in the Condemnation Application. The proposed right-of-way and easement over the property identified in the Condemnation Application will not interfere or require the condemnation of any place of public worship, burying ground, dwelling or its reasonable curtilage. See 15 Pa.C.S. § 1511(b). PPL Electric St. No. 1 to Condemnation Application, p. 10. PPL Electric requires a 100 foot right-of-way and easement on the property associated with the remaining Condemnation Application in order to accommodate the Transmission Line. *Id.* at 15. Furthermore, while represented by counsel in this proceeding, the property owners have not protested PPL Electric's Condemnation Application.

PPL Electric must be able to route the Blooming Grove – Jackson and Peckville – Jackson Transmission Line over and across the above-mentioned property in order to site, construct, and operate that line at the selected route. The service to be provided 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 above. (See Section IV.B, supra.) Accordingly, PPL Electric's proposed exercise of the power of eminent domain to acquire a right-of-way and easement for the proposed Project over the lands identified in the Condemnation Application is necessary for the service, accommodation, convenience, or safety of the public and, therefore, should be approved.

V. CONCLUSION

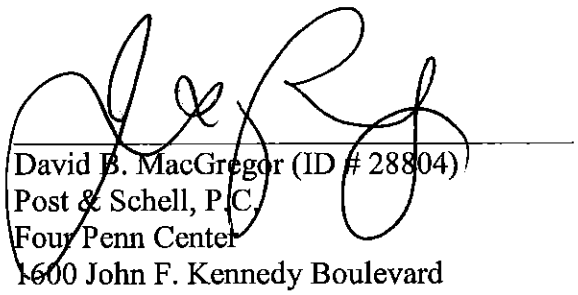
WHEREFORE, PPL Electric Utilities Corporation respectfully requests that the Administrative Law Judge and Pennsylvania Public Utility Commission approve the Application of PPL Electric Utilities Corporation Filed Pursuant to 52 Pa. Code Chapter 57, Subchapter G, for Approval of the Siting and Construction of the Pennsylvania Portion of The Proposed Blooming Grove – Jackson and Peckville – Jackson 138/69 kV Transmission Line in Monroe County, Pennsylvania at Docket No. A-2012-2304631.

PPL Electric Utilities Corporation requests specifically that the Administrative Law Judge and the Pennsylvania Public Utility Commission approve future operation of the Blooming Grove – Jackson and Peckville – Jackson Transmission Line at the highest voltage for which the lines are designed and constructed, although the line will initially operate at 69 kV until load growth in the area makes it appropriate to increase the operating voltage.

PPL Electric Utilities Corporation respectfully requests that the Administrative Law Judge and the Pennsylvania Public Utility Commission approve the "Application of PPL Electric Utilities Corporation 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," at Docket No. A-2012-2304649.

PPL Electric Utilities Corporation respectfully requests that the Administrative Law Judge and the Pennsylvania Public Utility Commission grant such other approvals as are necessary or appropriate under all of the circumstances.

Respectfully submitted,



David B. MacGregor (ID # 28804)
Post & Schell, P.C.
Four Penn Center
1600 John F. Kennedy Boulevard
Philadelphia, PA 19103-2808
Phone: 215-587-1197
Fax: 215-320-4879
E-mail: dmacgregor@postschell.com

John H. Isom (ID # 16569)
Jessica R. Rogers (ID #309842)
Post & Schell, P.C.
17 North Second Street
12th Floor
Harrisburg, PA 17101-1601
Phone: 717-731-1970
Fax: 717-731-1985
E-mail: jisom@postschell.com
E-mail: jrogers@postschell.com

Attorneys for PPL Electric Utilities Corporation

Paul E. Russell (ID # 21643)
Associate General Counsel
PPL Services Corporation
Office of General Counsel
Two North Ninth Street
Allentown, PA 18106
Phone: 610-774-4254
Fax: 610-774-6726
E-mail: perussell@pplweb.com

Of Counsel:

Post & Schell, P.C.

Date: November 9, 2012

APPENDIX A

FINDING OF FACTS

1. PPL Electric is a public utility and electric distribution company subject to the regulatory jurisdiction of the Pennsylvania Public Utility Commission ("PUC" or "Commission"). PPL Electric Ex. 1, p 1.

2. PPL Electric furnishes electric distribution, transmission and supplier of last resort services to approximately 1.4 million customers in a service area that includes approximately 10,000 square miles covering all or portions of twenty-nine counties in eastern and central Pennsylvania. PPL Electric Ex. 1, pp. 1-2.

3. PPL Electric seeks findings that the service to be furnished through the exercise of the power of eminent domain by PPL Electric to acquire rights-of-way across the nine identified tracts of land for construction of aerial transmission lines is necessary for the service, accommodation, convenience or safety of the public. PPL Electric Ex 1., p. 14.

4. The Blooming Grove – Jackson and Peckville – Jackson 138/69 kV Transmission Line is needed to 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. PPL Electric St. No. 1, p. 31.

5. 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 Reliability Principles and Practices ("RP&P"). PPL Electric Ex. 1, p. 7.

6. 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. PPL Electric Ex. 1, p. 7.

7. On PPL Electric's system, power is transmitted via transmission lines that range from 69 kV to 500 kV in voltage from electric generators to transformation substations throughout PPL Electric's system.

8. PPL Electric's 138/69 kV transmission system is planned using internally developed guidelines, the RP&P, that have been adopted by PPL Electric to ensure that the system provides safe and reliable service to its customers. PPL Electric St. No. 3, p. 3.

9. The reliable and economical operation of PPL Electric's 138/69 kV transmission system requires planning guidelines for system expansion and reinforcement. PPL Electric Ex. 1, p. 8.

10. System reliability should be maintained to prevent large scale, long term, or frequent service interruptions to avoid adverse effects and hazards to the public. PPL Electric Ex. 1, p. 8.

11. In accordance with these guidelines and 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. PPL Electric St. No. 3, p. 3.

12. 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 five percent on the 138/69 kV transmission system. PPL Electric St. No. 3, p. 3.

13. Operating the circuit in an overloaded condition for an extended period would initially damage the conductor and ultimately could cause a failure resulting in customer outages. PPL Electric St. No. 3, p. 5.

14. The normal winter rating of the existing Blooming Grove-Jackson 138/69 kV circuit is 111 MVA. PPL Electric St. No. 3, p. 5.

15. Starting in the winter of 2013, the circuit will be loaded to 115 Megavolt Amperes (MVA) during peak winter conditions. PPL Electric St. No. 3, p. 5.

16. The RP&P guidelines 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. PPL Electric St. No. 3, p. 5.

17. The present load on the Blooming Grove – Jackson 138/69 kV circuit, 68 MW, violates this criterion. PPL Electric St. No. 3, p. 5.

18. In addition, the RP&P guideline for maximum allowable load loss is 30 MW for a single-circuit line outage. PPL Electric St. No. 3, p. 6.

19. 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. PPL Electric St. No. 3, p. 6.

20. In the event of an outage, service to approximately 16,300 customers would be interrupted. PPL Electric St. No. 3, p. 5.

21. These violations can be attributed to recent additional commercial/industrial loading which greatly exceeded the normal projected load growth for this area. PPL Electric Ex. 1, Attachment 2, p. 5.

22. By winter 2013, the loss of the Blooming Grove – Jackson 138/69 kV Line would interrupt 68 MW of load because the load cannot be transferred. PPL Electric St. No. 3, p. 5.

23. Transferring load from the Jackson to the Blooming Grove Substation would cause low voltage at the end of the Blooming Grove – Jackson circuit. PPL Electric St. No. 3, p. 5.

24. 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. PPL Electric St. No. 3, pp. 5-6.

25. PPL Electric's planning process begins with the development of a computer model of the future system. A specific study year is chosen, and the future system model is developed using the existing system plus any planned modifications to the transmission system scheduled to be completed prior to the study year. PPL Electric St. No. 3, p. 3.

26. Load levels used in the system model are based on the latest forecast prepared annually by PPL Electric. PPL Electric St. No. 3, pp. 3-4.

27. Once the system model is complete, comprehensive power flow simulations are performed to test the ability of the system to comply with the PPL Electric transmission planning reliability criteria by simulating an outage of each transmission and bulk electric facility. PPL Electric St. No. 3, p. 4.

28. All conditions where the system is not in conformance with the reliability criteria are identified, and system reinforcements are added to bring the system into conformance. PPL Electric St. No. 3, p. 4.

29. Computer simulations of the system with the identified reinforcement alternatives are completed to identify the best overall reinforcement that will meet the needs of the region in a reliable and economic manner. Electric St. No. 3, p. 4.

30. 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. PPL Electric Ex. 1, Attachment 2, p. 7.

31. The new line will reduce loading to within the RP&P guidelines on the current Blooming Grove – Jackson 138/69 kV circuit by providing another double circuit line that ties directly into the Jackson Substation. PPL Electric Ex. 1, Attachment 2, p. 7.

32. The load on the existing Lake Naomi Tap will be transferred to the Jackson – Wagners #1 circuit and terminated separately into the Jackson Substation. PPL Electric Ex. 1, Attachment 2, p. 7.

33. After completion of the proposed project, the Blooming Grove – Jackson 69 kV single circuit line will be loaded to 59 MW during peak winter conditions, which is within the RP&P guidelines. PPL Electric Ex. 1, Attachment 2, p. 7.

34. Transferring load between Blooming Grove and Jackson Substations will continue to be limited due to the low voltage levels that result at the end of the abnormally sectionalized Blooming Grove-Jackson 69 kV line. PPL Electric Ex. 1, Attachment 2, p. 7.

35. For an outage near the Jackson Substation on the single-circuit Blooming Grove-Jackson 69 kV line, approximately 32 MW would remain interrupted for an extended period of time. PPL Electric Ex. 1, Attachment 2, p. 7.

36. This situation still violates the RP&P guideline for maximum allowable load loss for a single-circuit line outage, which is 30 MW, however the amount of load remaining interrupted will be greatly reduced. This violation will be resolved with another project that will be filed with the Commission in the future. PPL Electric Ex. 1, Attachment 2, p. 7.

37. No other reasonably economical functional alternative was available that would resolve two of the problems identified by PPL Electric and bring the facilities in the area closer to compliance regarding the third violation. PPL Electric St. No. 3, p. 7.

38. In order to select a route for the Project, PPL Electric assembled a multidisciplinary team ("Siting Team") consisting of experts from the functional groups that have a stake in the design, construction and siting of the project. PPL Electric St. No. 1, p. 8.

39. The functional groups involved in the Transmission Line siting were: siting, various engineering disciplines, real estate, system planning, environmental experts, public relations, legal, system operations and construction. PPL Electric St. No. 1, p. 8.

40. Information about the characteristics of the area were gathered and mapped. PPL Electric St. No. 1, p. 8.

41. A communications plan was developed to ensure that external stakeholders such as local, county and state governments, special interest groups and the public were kept informed about the project. PPL Electric St. No. 1, p. 8.

42. PPL Electric identified a General Area of Study for the Project that encompasses approximately 30-square miles (19,200 acres) within Monroe County, Pennsylvania. PPL Electric St. No. 1, p. 12.

43. 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. PPL Electric St. No. 1, p. 13.

44. The General Area of Study contains native plant and wildlife habitats. Many of these natural areas are preserved for their ecological benefit, as well as for their social recreational value. PPL Electric St. No. 1, p. 13.

45. Typical wildlife species found within the General Area of Study include those found in wetlands, forested habitats, and scrub-shrub habitats. PPL Electric St. No. 1, p. 13.

46. As a result of a search of the Pennsylvania Natural Diversity Inventory ("PNDI") database, administered by the Pennsylvania Natural Heritage Program ("PNHP"), and follow-up consultations with state and federal agencies, PPL Electric identified the following federal and/or state rare, threatened, or endangered species as potentially occurring within the General Area of Study: bog turtles, Indiana bats, timber rattlesnakes, variable sedge, and pitch pine-heath woodland. PPL Electric St. No. 1, p. 14.

47. The only designated scenic area in the General Area of Study is the Big Pocono Overlook, located within Big Pocono State Park. PPL Electric St. No. 1, p. 14.

48. There are no designated wilderness areas, wild and scenic rivers, or Heritage Geology Sites designated by the PNHP in the General Area of Study. PPL Electric St. No. 1, p. 14.

49. A large portion of the 4,000 acre State Game Land #38 is located within the General Area of Study, as well as a portion of State Game Land #318. Three Priority Natural Areas are located in the General Area of Study: Long Pond Macrosite, Camelback Mountain, and Sand Spring Run/Wolf Swamp Run. PPL Electric St. No. 1, pp. 14-15.

50. The main land use in the General Area of Study is Residential, and is composed primarily of single-family residences and vacation rental homes or condominium complexes. PPL Electric St. No. 1, p. 16.

51. Relatively few sections of the General Area of Study are used for agricultural purposes, and all of the land dedicated to agriculture is privately owned. PPL Electric St. No. 1, p. 16.

52. There are no industrial land uses within the General Area of Study. PPL Electric St. No. 1, p. 16.

53. There are several large tracts of land located north of Sullivan Trail Road that are owned by mining companies. PPL Electric Ex. 1, Attachment 3, p. 17.

54. There are no active railroads or airports within the General Area of Study. PPL Electric St. No. 1, p. 16.

55. The closest airport is Pocono Mountain Municipal Airport, which is located approximately 2.15 miles north of the General Area of Study. PPL Electric St. No. 1, p. 16.

56. A portion of the southwestern corner of the General Area of Study is identified by Monroe County as having a utility land use, but it is actually part of a large forest tract owned by the Bethlehem Water Authority for the protection of its water sources in the area. PPL Electric St. No. 1, pp. 16-17.

57. A 20-acre parcel near the intersection of I-80 and I-380 is identified as having a services land use, but is actually a series of four communication towers. PPL Electric St. No. 1, p. 17.

58. PPL Electric does not anticipate that any of these utility features will be impacted by the proposed Project, due to the distance between the features and the Project. PPL Electric St. No. 1, p. 17.

59. Areas of potential concern were identified during a windshield survey conducted in October 2010 and used in defining constraints during the analysis used to determine the Selected Route for the Project. PPL Electric St. No. 1, p. 15.

60. No National Register of Historic Places ("NRHP")-listed or -eligible historic structures or districts were identified in the General Area of Study. PPL Electric St. No. 1, p. 15.

61. Information regarding the Project was provided to Pennsylvania Historical and Museum Commission ("PHMC") in June 2011, and on July 12, 2011, PHMC issued a response letter stating that based on their review there are no NRHP- eligible or -listed historic or archaeological properties in the area of the proposed Project. PPL Electric St. No. 1, pp. 15-16.

62. PPL Electric utilized the Commission's siting regulations in its siting process. PPL Electric Ex. 1, Attachment 3.

63. PPL Electric announced its intent to build the Blooming Grove-Jackson and Peckville-Jackson 138/69 kV Line in early May 2011. PPL Electric St. No. 1, p. 31.

64. PPL Electric has undertaken activities to provide information on the Project to the public and government officials and to collect input from those audiences, including calls and e-mails to Government Officials, letters and project fact sheets mailed to property owners, news

advertisements placed in a local newspaper, and a public open house meeting held on May 16, 2011. PPL Electric St. No. 1, p. 31.

65. In siting the transmission line for this Project, PPL Electric utilized a methodology that was adapted from a protocol developed by the Electric Power Research Institute ("EPRI") and the Georgia Transmission Corporation, which incorporates Geographic Information System ("GIS") technology, statistical evaluation and professional judgment into the decision-making process. PPL Electric St. No. 2, p. 3.

66. In order to determine an appropriate area for the route alternatives, PPL Electric used four principle steps, which were to generate macro corridors, generate alternative corridors, identify alternative routes within the alternative corridors; and select the preferred route. PPL Electric St. No. 2, p. 4.

67. The quantitative analysis performed by PPL Electric uses a series of grid cells across the General Area of Study to determine a "least impact" corridor or path through the mathematical addition of the value numbers from the value assigned to each cell between the start and end points. PPL Electric St. No. 2, p. 4.

68. Opportunity areas are assigned low numbers, and constraint areas are assigned high numbers. Therefore, the corridor or path with the lowest value is the corridor or path with the least adverse impacts. PPL Electric St. No. 2, p. 4.

69. Macro corridor analysis begins after the start and end points of the new transmission lines have been established. PPL Electric St. No. 2, p. 5.

70. The macro corridor includes all areas determined to be most suitable from all of the three perspectives: Natural Environment, Built Environment, Engineering Requirements. PPL Electric St. No. 2, p. 6.

71. The outer boundary of this macro corridor area also effectively defines the Project Study Area. PPL Electric St. No. 2, p. 6.

72. Refinements were made by PPL Electric and technical experts in environmental, engineering, and public outreach disciplines to better represent conditions within Pennsylvania, such as the inclusion of stream classifications to offer enhanced protection to this key resource within the natural environment perspective. PPL Electric St. No. 2, p. 6.

73. Alternative corridors were created from three different perspectives – the Built Environment, the Natural Environment and Engineering Requirements. PPL Electric St. No. 2, p. 6.

74. The alternative route analysis focused on a single alignment rather than a broad corridor area. The alternative route analysis minimized the least preferred areas that are crossed along a route connecting the starting and ending locations. Again, routes were selected from each of the three perspectives. PPL Electric St. No. 2, pp. 7-8.

75. The quantitative feature metrics were normalized, assigned relative weights, and organized within the three perspectives — the Built Environment, the Natural Environment and Engineering Requirements. PPL Electric St. No. 2, p. 8.

76. The weighting ensures that the features requiring the most "protection" are assigned a higher relative influence in the final ranking. PPL Electric St. No. 1, p. 19.

77. The overall score for each alternative route was then calculated. Lower scores indicated less difficulty or potential impacts of the route. PPL Electric St. No. 2, p. 8.

78. Using this methodology, PPL Electric selected six Alternative Routes for detailed examination. PPL Electric St. No. 2, p. 8.

79. At the completion of the detailed examination of the six Alternative Routes, it was determined the three worst scoring routes would not be carried forward for further evaluation. PPL Electric St. No. 2, p. 8.

80. The siting team used the results of the quantitative analysis to identify the three worst scoring alternatives. The worst alternatives were those with the highest scores. The three worst scoring routes were then excluded from further consideration. PPL Electric identified that Routes A, C, and E were not suitable for the Project. PPL Electric St. No. 1, p. 20.

81. In the quantitative analysis, Routes B, D, and D-1 scored the best. Route D-1 had the lowest cumulative value of the six Alternative Routes considered. PPL Electric St. No. 1, p. 20.

82. The next step in the evaluation process was to qualitatively assess the remaining Alternative Routes based on less tangible criteria. The qualitative assessment was performed by applying expert judgment to rank the remaining alternative routes. PPL Electric St. No. 2, p. 8.

83. PPL Electric's siting team qualitatively ranked the preferred routes based on several important considerations such as visual concerns, community concerns, schedule delay risk, special permit issues, and construction and maintenance accessibility. PPL Electric St. No. 2, p. 8.

84. This process is designed to encourage thorough discussion in evaluating and selecting a final route in an objective, consistent, and comprehensive manner. PPL Electric St. No. 2, pp. 8-9.

85. In conducting its qualitative assessment, PPL Electric considered the following five qualitative criteria for each alternative: visual concerns; community concerns; special permit

issues; construction, maintenance, and accessibility; and schedule delay risk. PPL Electric St. No. 2, p. 9.

86. Each of the qualitative criteria was assigned a weight based on its significance within the scope of the Project. PPL Electric then evaluated the remaining Routes, Routes B, D, and D-1, on the qualitative criteria. PPL Electric St. No. 2, p. 9.

87. After evaluating all the factors considered during the routing process as documented in PPL Electric Ex. 1, Attachment 4, PPL Electric concluded that Route D-1 was the Preferred Route for the Project, because it had the least impact as determined in the qualitative assessment. PPL Electric St. No. 1, p. 26.

88. 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. PPL Electric St. No. 1, pp. 26-27.

89. Route D-1 had the lowest cumulative total in the qualitative assessment and was, therefore, determined to be the Preferred Route for this Project. PPL Electric St. No. 1, p. 27.

90. The most suitable route is the route that minimizes the effect of the transmission line on all factors of the natural and human environment, while minimizing overall project costs and avoiding unreasonable routes and non-standard design requirements to the extent practical. PPL Electric St. No. 1, p. 26.

91. Route D-1 will accomplish those goals better than the other Routes considered as part of the siting process. PPL Electric St. No. 1, p. 11.

92. Mitigation efforts begin in the siting stage where sensitive areas are avoided to the extent practical. PPL Electric St. No. 1, p. 27.

93. When avoidance is not practical, PPL Electric will implement mitigation strategies. PPL Electric St. No. 1, p. 27.

94. PPL Electric's vegetation management policy is designed to mitigate the impact of tree clearing on property crossed by PPL Electric rights-of-way. PPL Electric St. No. 1, p. 28.

95. PPL Electric utilizes selective clearing on certain PPL Electric easements. PPL Electric St. No. 1, p. 28.

96. Selective clearing allows compatible species (vegetation that would not grow tall enough to threaten the reliable operation of the transmission line) to remain or grow back within the right-of-way. PPL Electric St. No. 1, p. 28.

97. PPL Electric does not use any aerial herbicide application techniques. Herbicides are applied manually by trained professionals, each of whom applies the herbicide manually with a hand-held sprayer. PPL Electric St. No. 1, p. 28.

98. PPL Electric limits its use of herbicides in certain sensitive areas or situations. PPL Electric St. No. 1, pp. 28-29.

99. All herbicides used by PPL Electric have been approved by the United States Environmental Protection Agency. PPL Electric St. No. 1, p. 29.

100. Impacts from soil erosion and sedimentation and crossings of jurisdictional waters and wetlands are mitigated through the acquisition of and compliance with all required permits and plans. PPL Electric St. No. 1, p. 29.

101. Initially, all wetlands and waters are identified, delineated, surveyed and added to construction plans, and structure and access road locations are located outside of these sensitive areas as much as practical. In locations where this is not practical, all required permits are

obtained and the Company adheres to their terms and conditions during construction. PPL Electric St. No. 1, p. 29.

102. The placement of conditions on a permit by the Army Corps of Engineers, the Department of Environmental Protection or similar agencies is a principal tool for protecting the environment. PPL Electric St. No. 1, p. 29.

103. PPL Electric will obtain all required permits and will comply with any conditions placed on those permits. PPL Electric St. No. 1, p. 30.

104. PPL Electric constructs all of its transmission lines to meet or exceed National Electrical Safety Code ("NESC") standards. PPL Electric St. No. 4, p. 3.

105. The NESC is a set of rules to safeguard employees, contractors and the public during the installation, operation, and maintenance of electric power lines. PPL Electric St. No. 4, p. 3.

106. For this Project, PPL Electric has developed design specifications and safety rules which meet or surpass all requirements specified by the NESC. PPL Electric St. No. 4, p. 3.

107. PPL Electric has instituted a Magnetic Field Management Program for new and rebuilt transmission lines. PPL Electric St. No. 4, p. 4.

108. To reduce magnetic field exposures, the program generally prescribes the use of line design that provides five feet higher ground clearances than minimum clearances specified in the NESC and reverse phasing of new double-circuit lines where it is feasible to do so at low or no cost. PPL Electric St. No. 4, p. 4.

109. The transmission line will have ground clearances that exceed NESC requirements by at least five feet, and will reverse phase the two circuits, thus causing a reduction in magnetic fields. PPL Electric Ex. 1, Attachment 5, p. 4.

110. The proposed right-of-way and easement over the property identified in the Condemnation Application will not interfere or require the condemnation of any place of public worship, burying ground, dwelling or its reasonable curtilage. See 15 Pa.C.S. § 1511(b). PPL Electric St. No. 1 to Condemnation Application, p. 10.

111. While represented by counsel in this proceeding, the property owners have not protested PPL Electric's Condemnation Application.

APPENDIX B
PROPOSED CONCLUSIONS OF LAW

1. Pursuant to Chapter 11 of the Public Utility Code, 66 Pa.C.S. §§ 1101, *et seq.*, and 15 Pa.C.S. § 1511(c), the Commission has jurisdiction over the subject matter of this proceeding.

2. PPL Electric has met its burden to prove that the Application requesting approval of the siting and construction of the Blooming Grove – Jackson and Peckville – Jackson 138/69 kV Transmission Line in Monroe County, Docket No. A-2012-2304631, is necessary or proper for the accommodation, convenience, and safety of its patrons, employees and the public.

3. The siting and construction of the Blooming Grove – Jackson and Peckville – Jackson 138/69 Transmission Line in Route D-1 will not create an unreasonable risk of danger to the health and safety of the public.

4. The siting and construction of the Blooming Grove – Jackson and Peckville – Jackson 138/69 kV Transmission Line in Route D-1 is in compliance with applicable statutes and regulations providing for the protection of the natural resources of this Commonwealth.

5. The siting and construction of the Blooming Grove – Jackson and Peckville – Jackson 138/69 kV Transmission Line in Route D-1 will have a minimum adverse environmental impact, considering the electric power needs of the public and the available alternatives.

6. The selection of Route D-1 for the Blooming Grove – Jackson and Peckville – Jackson 138/69 kV Transmission Line is reasonable and was not selected wantonly, capriciously, or arbitrarily.

7. PPL Electric has demonstrated that the Alternative Route D-1 is superior to the other alternative Routes considered in this Application.

8. The Application for findings that the service to be furnished through the exercise of the power of eminent domain, pursuant to 15 Pa.C.S. § 1511, to acquire rights-of-way and

easements necessary for the construction, operation, maintenance, and aerial crossing by the Blooming Grove – Jackson and Peckville – Jackson 138/69 kV Transmission Line over the property owned by Iroquois Ridge Partners, LLP in Pocono Township, Monroe County, Docket No. A-2012-2304649, is necessary and proper for the service, accommodation, convenience or safety of the public