

**ATTACHMENT 16**  
**NORTHEAST-POCONO RELIABILITY PROJECT**  
**PUBLIC NOTICE REQUIREMENTS**

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PPL Electric Utilities Corporation (“PPL Electric”) proposes to reinforce the 138/69 kV transmission system in northeast Pennsylvania. The Northeast Pocono Reliability Project is required to resolve violations of PPL Electric’s “Reliability Principles & Practices” (“RP&P”) guidelines and reinforce the 69 kV systems in Carbon, Lackawanna, Monroe, Pike and Wayne Counties. The construction of the new transmission lines will enable PPL Electric to shorten the length of the existing 138/69 kV circuits, which will reduce the distance between the supply of power and the homes and businesses that use the electricity. This proposed arrangement also will provide a backup source of power to the Northeast Pocono region in the event that the normal sources are interrupted, which will improve power restoration times and provide operating flexibility and improved reliability for customers in the region. The Northeast-Pocono Reliability Project will reduce the number of customers affected by a single facility outage, as well as the duration of the outage.

The total estimated cost to site, design, and construct this project is approximately \$154 million. The overhead transmission portion is estimated to cost approximately \$100.9 million and the required substation installations are estimated to cost approximately \$36 million. Construction of this project is scheduled to begin in Spring 2014 to meet an in-service date of November 2017.

Pursuant to Subchapters G and I of the Commission regulations, 52 Pa. Code §§ 57.71-57.77, 57.91-57.93, and the Commission’s Interim Siting Guidelines, 52 Pa. Code §§ 69.3101-69.3107, PPL Electric has provided packets of information to fully notify owners of land that will be subject to the rights-of-way and easements for the proposed Project. These packets of information included the following:

- A Cover Letter from a PPL Electric Senior Real Estate Specialist.
- A Disclosure of Eminent Domain Power of Electric Utilities Required by 52 Pa. Code § 57.91.



- Notification of Right-of-Way Maintenance Practices Required by 52 Pa. Code § 57.91.
- PPL Electric’s Internal Practices for Dealing with the Public on Power Line Projects Required by 52 Pa. Code § 69.3102.
- Notification to Contact the Commission or Office of Consumer Advocate for Improper Land Agent Practices.
- A Brochure on Electromagnetic Fields.
- A Brochure on Vegetation Management.
- A Glossary of Real Estate Terms.

Following this Attachment are the forms of the information that were sent to all landowners that will be subject to the rights-of-way and easements for the Project. In addition, copies of the Application and supporting Attachments or Notice of Filing are being served in accordance with the provisions of Section 57.74 of the Commission’s regulations, 52 Pa. Code 57.74.

**Packet of Information Provided to Landowners that will be  
Subject to the Right-of-Way and Easement**



DATE

Customer Name and Address

Dear

PPL Electric Utilities Corporation (PPL) is planning to build a new 230-kilovolt transmission line, three new electrical substations, and some short segments of 69-kilovolt transmission line. These improvements are required to improve the reliability of electric service for homes and businesses in this region.

Since this line route may involve your property I am notifying you of the proposed project as required by the Pennsylvania Public Utility Commission.

Enclosed are notices required by the Pennsylvania Public Utility Commission that provide important information regarding eminent domain, right-of-way maintenance practices, and land agents conduct. Also enclosed is PPL's Internal Practices for Dealing with the Public on Power Line Projects. The Pennsylvania Public Utility Commission's regulations require that PPL provide you with this information at least 15 days in advance of our discussions. For your convenience, I also have enclosed information on electromagnetic fields and a brochure on vegetation management, as well as a glossary of real estate terms.

In the near future a PPL Real Estate representative will contact you to discuss the project in greater detail, including compensation offers.

I kindly request that you sign on the attached page to indicate that you have received this information.

Very truly yours,

Agents Name

PPL Senior Real Estate Specialist



I acknowledge receiving the information referred to in the letter above and understand that it does not obligate me in any way.

\_\_\_\_\_  
Date \_\_\_\_\_

Phone \_\_\_\_\_

Attachments:      Disclosure of Eminent Domain Power  
                         Notification of Right-of-Way Maintenance Practices  
                         Internal Practices for Dealing with the Public on Power Line Project  
                         Notification Regarding Land Agent Practices  
                         Information on Electromagnetic Fields  
                         Brochure on Vegetation Management

**NOTICE  
EMINENT DOMAIN POWER**

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

PPL Electric Utilities Corporation is presently planning to construct a new 230 kV electric transmission lines known as the Northeast-Pocono 230 kV line in the Counties of Wayne, Lackawanna and Luzerne, Pennsylvania.

Since a field survey and detailed engineering has not been completed, the physical dimensions of the proposed lines and the type and height of supporting structures to be used cannot be precisely determined at this time. However, based on past experience and assuming relatively flat terrain along the line route, it is expected that the structures normally will be 145 feet in height requiring a right of way width of One Hundred Fifty (150) feet. There may be isolated physical conditions that would require either higher or lower structures than those mentioned above. At this time, we do not know the number of structures to be placed on any properties.

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

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

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

**CAN THE UTILITY CONDEMN YOUR HOUSE?**

The company cannot condemn your house or a reasonable "curtilage" around your house. Generally, "curtilage" includes the land or buildings within 100 meters of your house which are used for your domestic purposes. However, the 100 meters limit does not automatically extend beyond the homeowner's property line.



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

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

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

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

**NOTICE  
RIGHT OF WAY MAINTENANCE PRACTICES**

The Pennsylvania Public Utility Commission requires that PPL Electric Utilities Corporation give you the following information on the RIGHT OF WAY MAINTENANCE PRACTICES for the 230kv line:

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

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

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

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

The provisions of the right of way agreement are enforceable in the local Court of Common Pleas. The right of way agreement cannot be enforced by the Pennsylvania Public Utility



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





### **Internal Practices for Dealing with the Public on Power Line Projects**

PPL Electric Utilities

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

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

**NOTICE  
LAND AGENT PRACTICES**

PPL Electric Utilities Corporation is presently planning to construct a 230 kV electric transmission line to be known as the Northeast-Pocono 230 kV line in Wayne, Lackawanna and Luzerne Counties, Pennsylvania. Since the route could affect your property, a representative from PPL Electric Utilities Corporation will contact you in the near future to discuss the utility's plans as they may affect your property.

The Pennsylvania Public Utility Commission requires that PPL Electric Utilities Corporation provide you the following contact information for concerns regarding the practices of the land agents acting on behalf of PPL Electric Utilities Corporation in connection with the proposed construction of the proposed Northeast-Pocono 230 kV line:

James P. Melia

Pennsylvania Public Utility Commission

400 North Street

Harrisburg PA 17105

717-787-1859

[jmelia@state.pa.us](mailto:jmelia@state.pa.us)

Tanya McCloskey

Acting Pennsylvania Consumer Advocate

Pennsylvania Office of Consumer Advocate

555 Walnut Street

5th Floor Forum Place

Harrisburg, PA 17101-1923

Phone: 717-783-5048 or toll free 800-684-6560 (PA only)

Fax: 717-783-7152

Email: [consumer@paoca.org](mailto:consumer@paoca.org)



**GLOSSARY OF COMMON REAL ESTATE TERMS**

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

**INGRESS** – The right to enter a tract of land.

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

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

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

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

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

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

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

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

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

**TITLE** – The evidence of ownership of land.

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

**BROCHURE ON ELECTROMAGNETIC FIELDS**





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

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

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

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

## **Frequently Asked Questions about EMF**

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

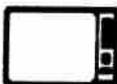
A. A few states have established limits for electric fields on transmission line right-of-ways: Florida, Minnesota, Montana, New Jersey, New York, North Dakota and Oregon. Only New York and Florida have established right-of-way limits for magnetic fields from new transmission lines. In 1990, New York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

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

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

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

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

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



**BROCHURE ON VEGETATION MANAGEMENT**





## A new approach

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

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

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

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

## Our commitment

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

## Compliance with federal reliability standards

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

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

## What is Wire Zone-Border Zone?

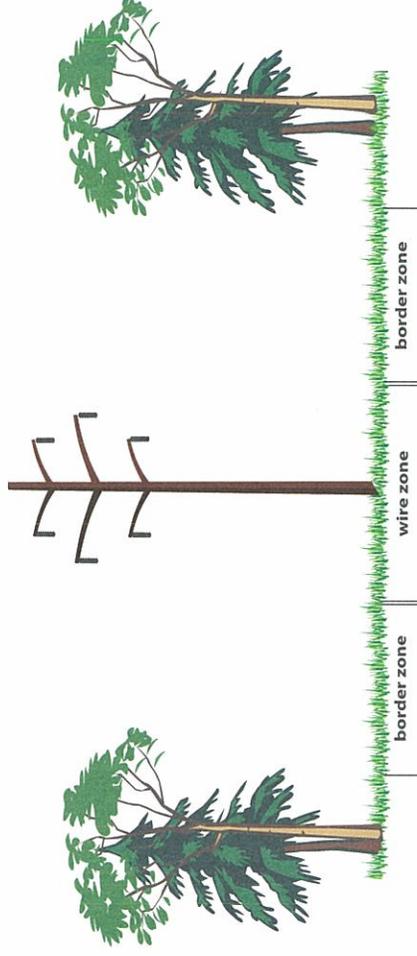
The wire zone is the area directly under the power lines. Trees are typically removed from the wire zone because they are incompatible with high-voltage wires. Over time, low-growing grasses and other species native to the area will be permitted.

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

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

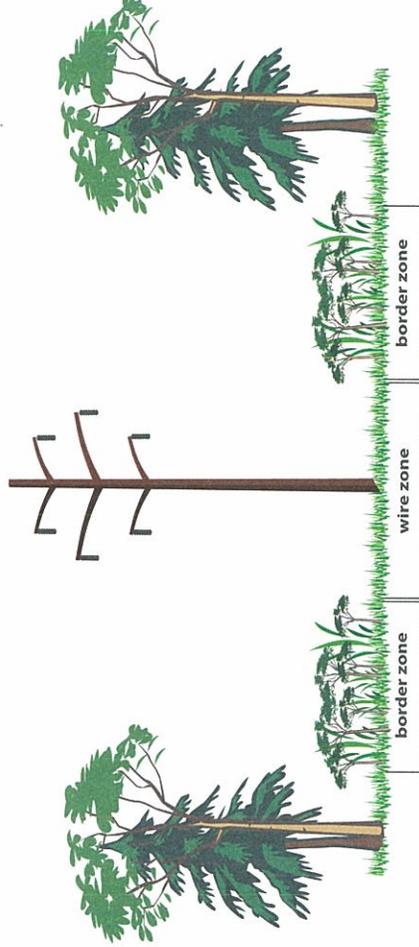
In some areas, we use herbicides to effectively manage undesirable vegetation conditions along our power lines. We only use herbicide products that have been approved for use by the U.S. Environmental Protection Agency. Some of the materials our contractors will use are the same as those commonly used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

### Property immediately after work



*The wire zone extends 10 feet from the outermost wire. The border zone extends from the edge of the wire zone to the edge of our right of way. Initially, we are clearing vegetation from both zones.*

### Property over time



*However, we will permit small trees and certain shrubs to grow back in the border zone in coming years if they do not pose a reliability risk.*

## An award-winning program

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



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

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

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

## Vegetation management is critical to electric reliability

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

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

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

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

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



PPL Electric Utilities

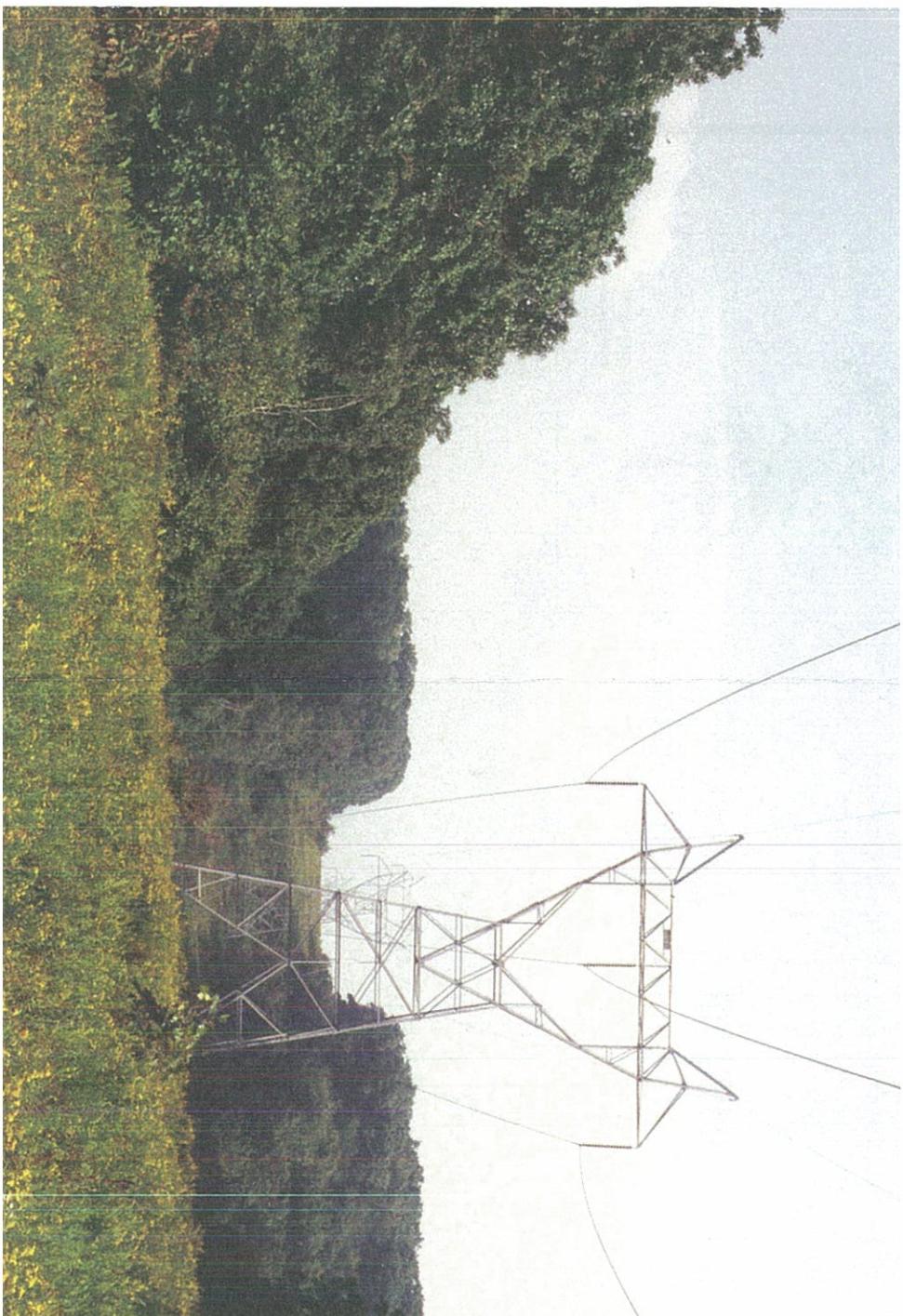
ISM 12011

## Transmission Line Vegetation Management

### Keeping electricity reliability strong



PPL Electric Utilities

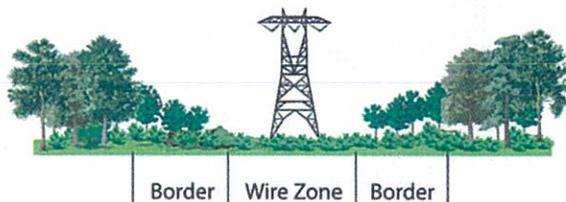


## PPL Rights-of-way as Bird Habitat



Golden-winged Warbler. Photo ©Laurie Smaglick Johnson

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



### Scrub-Shrub Habitat

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

## Planting and Managing Scrub-Shrub Habitat

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



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

### Compatible Plant Species

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

#### Small trees

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

#### Large shrubs

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

#### Small shrubs

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

All native grasses, ferns,  
herbaceous plants

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