

CAPTION SHEET

CASE MANAGEMENT SYSTEM

1. REPORT DATE: 00/00/00 :  
 2. BUREAU: FUS :  
 3. SECTION(S) : 4. PUBLIC MEETING DATE:  
 5. APPROVED BY: : 00/00/00  
 DIRECTOR: :  
 SUPERVISOR: :  
 6. PERSON IN CHARGE: : 7. DATE FILED: 04/27/07  
 8. DOCKET NO: A-110500 F0390 : 9. EFFECTIVE DATE: 00/00/00

PARTY/COMPLAINANT: WAYNE TOWNSHIP, CLINTON COUNTY

RESPONDENT/APPLICANT: PPL ELECTRIC UTILITIES CORP

COMP/APP COUNTY: CLINTON

UTILITY CODE: 110500

ALLEGATION OR SUBJECT

LETTER OF NOTIFICATION OF PPL ELECTRIC UTILITIES CORPORATION, FILED PURSUANT TO 52 PA CODE CHAPTER 57 SUBCHAPTER G, WITH RESPECT TO THE RELOCATION OF A PORTION OF THE LYCOMING-LOCK HAVEN #3 TRANSMISSION LINE IN WAYNE TOWNSHIP, CLINTON COUNTY FOR THE CLINTON COUNTY SOLID WASTE AUTHORITY.

**DOCKETED**  
MAY 07 2007

**DOCUMENT  
FOLDER**



17 North Second Street  
12th Floor  
Harrisburg, PA 17101-1601  
717-731-1970 Main  
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John H. Isom

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File #: 2507-132676

RECEIVED  
2007 APR 27 AM 11:48  
SECRETARY'S BUREAU

April 27, 2007

VIA HAND DELIVERY

James J. McNulty  
Secretary  
Pennsylvania Public Utility Commission  
Commonwealth Keystone Building  
400 North Street, 2nd Floor North  
PO Box 3265  
Harrisburg, PA 17105-3265

ORIGINAL

**RE: Letter of Notification of PPL Electric Utilities Corporation, Filed Pursuant to 52 Pa. Code Chapter 57 Subchapter G, With Respect to the Relocation of a Portion of the Lycoming-Lock Haven #3 Transmission Line in Wayne Township, Clinton County for the Clinton County Solid Waste Authority**  
Docket No. A- 110500 F0390

Dear Secretary McNulty:

Enclosed, for filing, are the original and six (6) copies of the Letter of Notification of PPL Electric Utilities Corporation ("PPL Electric") Filed Pursuant to 52 Pa. Code Chapter 57 Subchapter G, With Respect to the Relocation of a Portion of the Lycoming-Lock Haven # 3 Transmission Line in Wayne Township, Clinton County for the Clinton County Solid Waste Authority, together with seven (7) copies of the accompanying exhibits and appendices which are contained in a separately-bound volume.

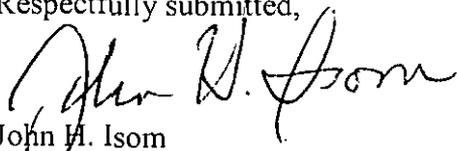
As indicated in the enclosed certificate of service, copies of the Letter of Notification including the exhibits and appendices are being served by certified mail, return receipt requested upon all involved governmental agencies and municipalities. As indicated in Paragraph No. 7 of the enclosed Letter of Notification, the only affected landowner is PPL Electric. If there are any questions concerning this matter, please contact me at the addresses or telephone numbers provided above.

DOCKETED  
MAY 07 2007

DOCUMENT  
FOLDER

James J. McNulty  
April 27, 2007  
Page 2

Respectfully submitted,

A handwritten signature in black ink, appearing to read "John H. Isom". The signature is written in a cursive style with a large, prominent initial "J".

John H. Isom

JHI/jl

Enclosures

cc: Certificate of Service

ORIGINAL

RECEIVED

BEFORE THE  
PENNSYLVANIA PUBLIC UTILITY COMMISSION

2007 APR 27 AM 11:49

Re: Letter Of Notification Of PPL Electric :  
Utilities Corporation, Filed Pursuant To 52 :  
Pa. Code Chapter 57 Subchapter G, With :  
Respect To The Relocation Of A Portion Of :  
The Lycoming-Lock Haven #3 Transmission :  
Line In Wayne Township, Clinton County :  
for the Clinton County Solid Waste :  
Authority :

PA PUC  
SECRETARY'S BUREAU  
Docket No. A- 110500 F0390

DOCUMENT  
FOLDER

LETTER OF NOTIFICATION

TO THE PENNSYLVANIA PUBLIC UTILITY COMMISSION:

1. This Letter of Notification is filed by PPL Electric Utilities Corporation ("PPL Electric"), pursuant to 52 Pa. Code §57.72(d)(1), to request the Pennsylvania Public Utility Commission's ("Commission") approval for the relocation of a portion of the Lycoming-Lock Haven #3 138/69 kV Transmission Line in Wayne Township, Clinton County. The portion of the Lycoming-Lock Haven #3 138/69 kV Transmission Line that is being relocated is situated entirely on land owned by the Clinton County Solid Waste Authority ("CCSWA"). The purpose of the relocation is to permit the CCSWA to expand its present land fill at that location. The relocation is being undertaken at the request of the CCSWA.

2. The total estimated cost for the proposed work in relocating the portion of the Lycoming-Lock Haven #3 138/69 kV Transmission Line on the property of the CCSWA is \$1,020,000. The CCSWA will bear the entire estimated cost of the project.

3. This project has a scheduled construction start date of July, 2007, to support the project's in-service date of August, 2007. The in-service date was selected to accommodate the schedule of the CCWSA to expand its land fill.

DOCKETED  
MAY 07 2007

4. The entire project will be located on property owned by the CCSWA except that there will be an aerial crossing of United States Route 220. CCSWA will grant to PPL Electric a new right-of-way for the relocation. When the portion of Lycoming-Lock Haven #3 138/69 kV Transmission Line on the land of CCSWA has been relocated, the existing right-of-way will be abandoned by PPL Electric, and the CCSWA will be able to expand its land fill.

5. All required permits for the crossing of U.S. Route 220 will be obtained before construction of the crossing is commenced.

6. Accompanying this Letter of Notification is a separately bound volume containing Exhibits A-C and Appendices A-D, which provide additional information about the project. This Letter of Notification and the accompanying Exhibits and Appendices, which are incorporated herein by reference, contain all of the information required by 52 Pa. Code § 57.72(d)(4).

7. The name and address of the Applicant are:

PPL Electric Utilities Corporation  
Two North Ninth Street  
Allentown, Pennsylvania 18101

8. PPL Electric is a Pennsylvania corporation, which provides electric distribution and provider of last resort electric supply services, subject to the Commission's regulatory jurisdiction, to approximately 1.4 million customers in all or portions of twenty-nine counties in eastern and central Pennsylvania.

9. The names, addresses and telephone numbers of PPL Electric's attorneys are:

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

11. PPL Electric is proceeding by means of a Letter of Notification, instead of a full Application, pursuant to the Commission's regulations at 52 Pa. Code § 57.72(d). This Transmission Line relocation qualifies for use of a Letter of Notification because it is less than 2 miles long. The portion of the Lycoming-Lock Haven #3 138/69 Transmission Line being abandoned is 0.73 miles. It will be replaced by 0.9 miles of transmission line along the periphery of the tract of land owned by the CCSWA which contains the land fill.

12. The relocated transmission line will cross over and then parallel a short portion of U.S. Highway 220. It will then parallel a portion of the Norfolk Southern railroad line. It will also cross over PPL Electric's Woolrich 69 kV Transmission Line and turn south to reconnect with the existing line.

13. The proposed relocated transmission line will consist of a combination of single and multi-pole, direct embedded, fabricated steel poles with guyed angles. Sixteen existing

wood pole structures will be replaced by 14 new steel pole structures installed on average spans of 335 feet on the relocated line section. The new steel pole structures will on average extend 100 feet above the ground. Three 556.5 KCMIL, 24/7 strand, ACSR power conductors and one 3/8 inch high strength steel overhead ground wire will be installed on the relocated line section.

14. The Necessity Statement for the project is provided as Exhibit “A” in the Exhibits and Appendices accompanying this Letter of Notification.

15. The project will be designed, constructed, operated and maintained in a manner that meets or surpasses National Electrical Safety Code (“NESC”) standards and all applicable legal requirements. The proposed project will not create an unreasonable risk of danger to the public health or safety. Descriptions of NESC standards and PPL Electric’s design criteria and safety practices are set forth in Appendix A in the accompanying Exhibits and Appendices.

16. The Engineering Description of the project is provided in Exhibit “B” in the Exhibits and Appendices accompanying this Letter of Notification.

17. The portion of the Lycoming-Lock Haven #3 138/69 kV Transmission Line being relocated is situated entirely on land owned by the CCSWA, except for the aerial crossing of U.S. Route 220. Consequently, no additional impact on land use is anticipated.

18. No nearby railroads, communication towers, pipelines or other utilities will be affected by the proposed project.

19. The nearest aviation facilities are the Jersey Shore Airport, which is approximately 6.8 miles from the proposed new location of the Lycoming-Lock Haven #3 138/69 kV Transmission Line, and the Piper Airport, which is approximately 3.6 miles from the project location. The project will have no effect on the airports or light operations.

20. The following lists were reviewed for the presence of historical districts and structures in the project area:

National Historic Landmarks in Pennsylvania

National Register Historic Districts in Pennsylvania

National Register Individual Properties and Historic Districts in Pennsylvania

National Register/Listed and Eligible Properties in Pennsylvania

21. The closest structure of historical significance, Quiggle Cemetery, is located approximately 700 feet northeast of the project location. The project will have no effect on the cemetery.

22. The project has been reviewed by the Pennsylvania Historical and Museum Commission (“PHMC”). The PHMC has identified a recorded archaeological site close to the proposed project. As long as PPL Electric takes care to avoid the site, no further archaeological investigations are required.

23. The project will not affect any unique geological, scenic or natural areas. No parks or recreational facilities are located in or near the project area.

24. Tree clearing for the project will be minimal, and PPL Electric’s “Program for Vegetation Management” will be applied to mitigate any impacts.

25. The project will not cross any wetlands, but it will cross an area designated as “Waters of the U.S.” All required permits will be acquired prior to the start of construction. PPL Electric will employ its “Specifications for Soil Erosion and Sedimentation Control on Transmission Line Rights-of-Way” as appropriate.

26. PPL Electric has coordinated with state and federal agencies to obtain information regarding endangered and threatened species in close proximity to the project. A review of the

Pennsylvania Natural Diversity Inventory Records indicates that the project will have no known effects on wildlife, threatened or endangered plant or animal life.

27. The Environmental Assessment for the project is provided as Exhibit “C” in the Exhibits and Appendices accompanying this Letter of Notification.

28. Appendix B in the Exhibits and Appendices accompanying this Letter of Notification explains PPL Electric’s standards for Magnetic Field Management.

29. Appendix C in the Exhibits and Appendices accompanying this Letter of Notification contains a list of affected property owners. As indicated above, the only land which will be affected by the project is land owned by the CCSWA and land on which U.S. Route 220 is situated.

30. The proposed project was reviewed with officials from Wayne Township and Clinton County. Neither of these governmental units objects to the project. A list of involved governmental agencies, municipalities and other public entities is presented in Appendix D in the accompanying Exhibits and Appendices.

31. Copies of this Letter of Notification are being served in accordance with 52 Pa. Code §57.72(d)(3).

32. As soon as practicable after the filing of this Letter of Notification and the assignment by the Commission of a docket number, PPL Electric will publish notice of the filing in newspapers of general circulation in the area of the proposed project. Such notice will contain: (a) the date this Letter of Notification was filed with the Commission; (b) a brief description of the project and its location; (c) locations where the complete Letter of Notification may be reviewed by the public; and (d) an instruction that the interested parties should contact, within 15 days, James J. McNulty, Secretary, at the Commission’s Harrisburg address.

33. This Letter of Notification is filed on the date set forth below. As provided in 52 Pa. Code § 57.72(d)(5), the Commission will review and, by order, approve or disapprove this Letter of Notification. If the Commission approves this Letter of Notification, the proposed project will be constructed as proposed herein without the formal application process set forth at 52 Pa. Code §§ 57.71 *et seq.* If the Commission does not approve this Letter of Notification, the Commission's Order shall direct PPL Electric to file for approval to construct the proposed project pursuant to the Commission's formal certification regulations.

WHEREFORE, PPL Electric Utilities Corporation respectfully requests that the Commission approve the relocation of a portion of the Lycoming-Lock Haven #3 138/69 kV Transmission Line that is explained above.

Respectfully submitted,



David B. MacGregor (ID # 28804)  
Post & Schell, P.C.  
Four Penn Center  
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Phone: 610.774.4254  
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E-mail: perussell@pplweb.com

Of Counsel:

Post & Schell, P.C.

Date: April 27, 2007

Attorneys for PPL Electric Utilities Corporation



ORIGINAL

Before the  
Pennsylvania Public Utility Commission

**LYCOMING-LOCK HAVEN #3  
138/69 kV LINE RELOCATION**

DOCUMENT  
FOLDER

EXHIBITS AND APPENDICES IN SUPPORT OF THE  
**Letter of Notification**

Application Docket No. A-110500 FD390  
~~110~~

Submitted by: PPL Electric Utilities Corporation

**DOCKETED**  
MAY 07 2007

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PA PUC  
SECRETARY'S BUREAU

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Appendix C	List of Property Owners Within the Proposed Right-Of-Way	
Appendix D	List of Involved Governmental Agencies, Municipalities, And Other Public Entities	

## SUMMARY

This filing is submitted by PPL EU Electric Utilities Corporation (PPL EU) pursuant to the Pennsylvania Public Utility Commission's (PUC, or the Commission) regulations at 52 Pa. Code §§57.71 through 57.77 for PUC approval to relocate a section of the existing Lycoming-Lock Haven #3 138/69 kV Line.

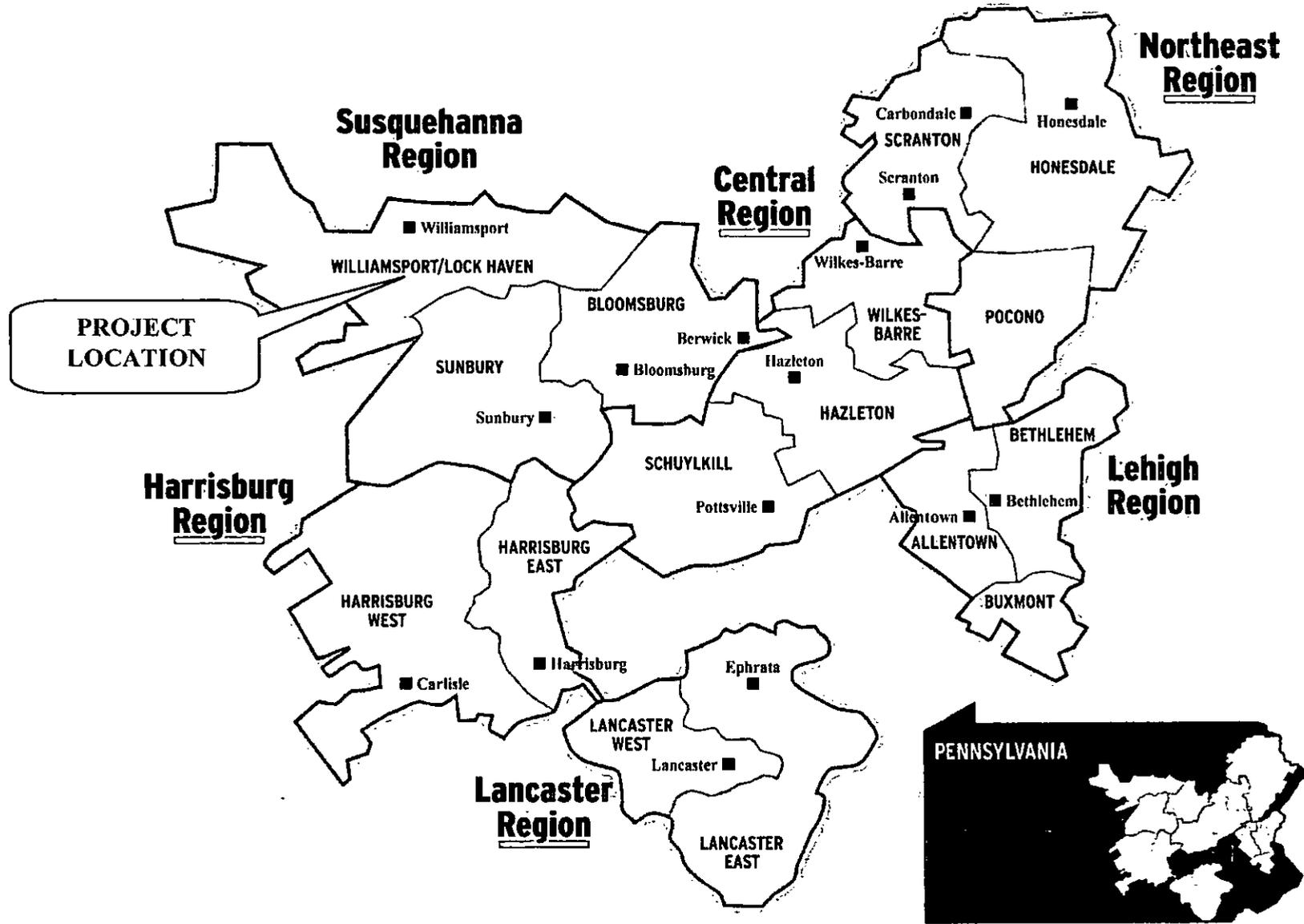
The relocation is required to accommodate the Northside Expansion of the Wayne Township Landfill by the Clinton County Solid Waste Authority.

The estimated cost to design, relocate, and construct the proposed 138/69 kV line is \$1,020,000 and will be borne by Clinton County Solid Waste Authority. The project has a scheduled construction start date of July 2007 in order to meet an in-service date of August 2007.

This document, which describes the need for the project and discusses the engineering and siting analysis for the proposed reconstruction, consists of the following exhibits and appendices:

Exhibit "A"	Necessity Statement
Exhibit "B"	Engineering Description
Exhibit "C"	Environmental Assessment
APPENDIX A	PPL Design Criteria and Safety Practices
APPENDIX B	PPL Magnetic Field Management Program
APPENDIX C	List of Property Owners Within the Proposed Right-of-Way
APPENDIX D	List of Involved Governmental Agencies, Municipalities and Other Public Entities

# PPL ELECTRIC UTILITIES SERVICE TERRITORY



**EXHIBIT "A"**  
**LYCOMING-LOCK HAVEN #3 138/69 kV LINE RELOCATION**  
**NECESSITY STATEMENT**

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**EXHIBIT "A"**  
**LYCOMING-LOCK HAVEN #3 138/69 kV LINE RELOCATION**  
**NECESSITY STATEMENT**

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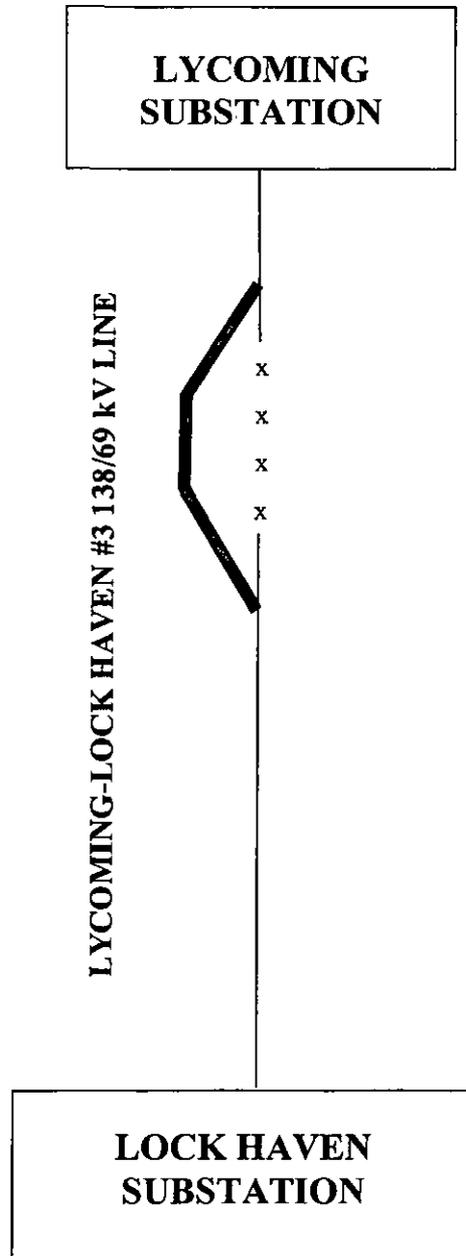
*Clinton County Solid Waste Authority is an existing customer in Wayne Township, Clinton County. The Authority has requested that PPL Electric Utilities (PPL EU) relocate the existing Lycoming-Lock Haven #3 138/69 kV Line to the northern boundary on the County's landfill. By relocating the transmission line, the landfill will be able to expand. The proposed relocation will not change the functionality of the transmission system as shown in Figure 1 on page 2 of Exhibit "A."*

The estimated cost to design and relocate the existing 138/69 kV line is \$1,020,000. PPL EU will construct, own and operate the lines. In order to meet a project in-service date of August 2007, line construction is scheduled to begin in July 2007.

A PPL EU system map showing existing transmission facilities with a design voltage of 35 kV or greater is included in the Exhibit "A" map pocket. This filing addresses only the existing and proposed 69 kV regional transmission system in the Wayne Township area.

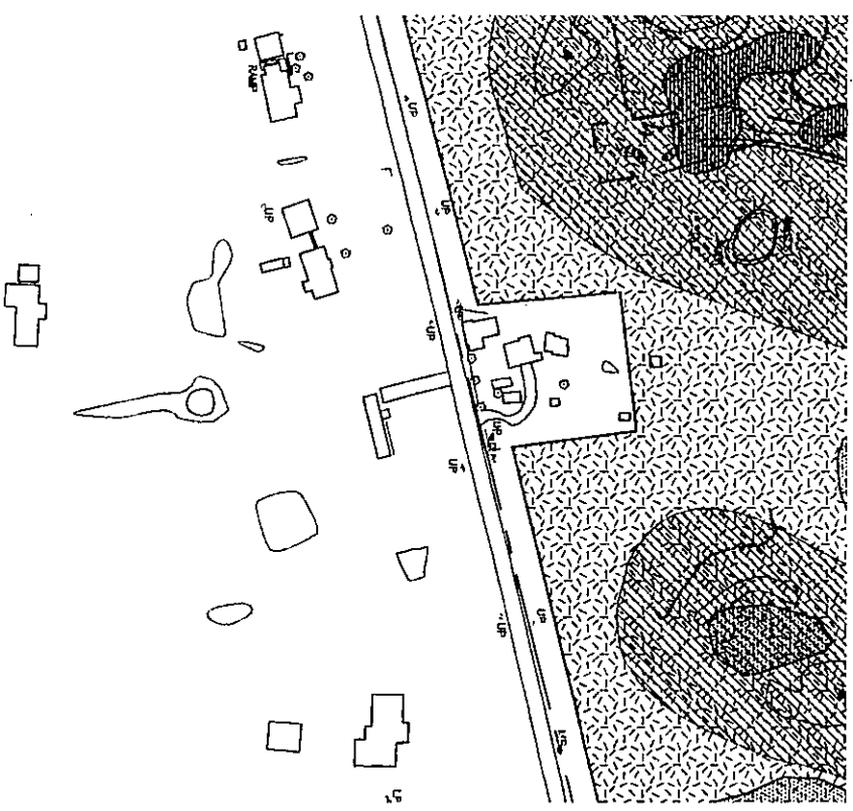
FIGURE 1

FUNCTIONAL 1-LINE DIAGRAM FOR THE  
LYCOMING-LOCK HAVEN #3 138/69 kV LINE RELOCATION



- EXISTING FACILITIES
- FACILITIES TO BE RELOCATED
- xxxxxxx FACILITY TO BE REMOVED





- WATER COURSE FROM AERIAL PHOTOGRAPHY
- EXISTING LINED DISPOSAL AREA
- WETLAND PREVIOUSLY DELINEATED
- WETLAND CONSTRUCTED BY CCSWA
- EXISTING CONSERVATION EASEMENT
- PROPOSED CONCEPTUAL DISPOSAL AREA FOOTPRINT
- EXISTING POWERLINE (APPROXIMATE)
- EXISTING UTILITY EASEMENT
- PROPOSED POWERLINE RELOCATION
- PROPOSED UTILITY EASEMENT FOR RELOCATED LINE

ACCT - 165193	<b>EXHIBIT B</b> PLOT PLAN EXHIBIT PROPOSED LYCOMING - LOCK HAVEN #3 138/69KV LINE RELOCATION		
SCALE - 1"=200'			
BY - CDW			
NHJ			
REVIEWED	APPROVED	DATE	PPL ELECTRIC UTILITIES
PPL DRAWING NO.		SHEET NO.	REV.
<b>EXHIBIT</b>		1	0



PLAN & PROFILE NO. \_\_\_\_\_ TRANSMISSION MAP NO. \_\_\_\_\_

C SORTS

PC CAD

OVER SIZED DOCUMENTS

**EXHIBIT "B"**  
**LYCOMING-LOCK HAVEN #3 138/69 kV LINE RELOCATION**  
**ENGINEERING DESCRIPTION**

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**EXHIBIT "B"**  
**LYCOMING-LOCK HAVEN #3 138/69 kV LINE RELOCATION**  
**ENGINEERING DESCRIPTION**

---

**A. DESCRIPTION OF PROPOSED PROJECT**

PPL EU proposes to relocate a section of the existing Lycoming-Lock Haven #3 138/69 kV transmission line to accommodate the Northside Expansion of the Wayne Township Landfill by the Clinton County Solid Waste Authority. This project involves the removal of approximately 0.73 mile of existing wood pole, 138/69 kV line and the installation of approximately 0.9 miles of new 138/69 kV transmission line. Both the existing and relocated transmission line sections are designed to accommodate the future installation of a second circuit. The proposed relocation is located in Wayne Township, Clinton County.

The proposed relocated line will consist of a combination of single and multi-pole, direct embedded, fabricated steel poles with guyed angles. Sixteen existing wood pole structures will be replaced by 14 new steel pole structures installed on average spans of 335 feet on the relocated line section. The new steel pole structures will on average extend 100 feet out of ground. Three 556.5 KCML, 24/7 strand, ACSR power conductors and one 3/8 inch high strength steel overhead ground wire will be installed on the relocated line section.

The relocated line will be designed according to and will generally exceed National Electrical Safety Code standards. Additional design criteria and safety rules practiced by PPL EU are included in Appendix A. The minimum conductor-to-ground clearance will be 30 feet. This minimum clearance occurs at a maximum thermal conductor temperature of 125°C. The design minimum conductor ground clearances and conductor thermal ratings are as follows:

**DESIGN MINIMUM CONDUCTOR CLEARANCES**  
**FOR 556.5 KCMIL 24/7 STRAND ACSR\***

<u>Condition</u>	<u>Double-Circuit Design Clearance-to-Ground</u>
Normal load, average weather (16°C ambient temperature)	33.6 feet
Predicted extreme thermal load (125°C conductor temperature)	30.0 feet
Predicted NESC Extreme wind load (16°C ambient temperature)	32.7 feet
Predicted extreme weather conditions (1-inch ice, 0 lbs. wind, -18°C)	30.3 feet

\*Clearances based on a maximum tension of 6,500 pounds at 1 inch ice, 0 lbs. wind, 0°F and a ruling span of 350 feet.

**CONDUCTOR THERMAL RATING**  
**556.5 KCMIL 24/7 ACSR**  
**(257°F) 125°C MAXIMUM CONDUCTOR TEMPERATURE**

<u>Condition</u>	<u>Ambient Temperature °C</u>	<u>Wind Speed Knots</u>	<u>Ampacity Amps</u>
Summer Normal	35	0	806
Winter Normal	10	0	1054
Summer Emergency	35	1.5	929
Winter Emergency	10	1.5	1187

**B. MAGNETIC FIELD MANAGEMENT**

PPL EU's Magnetic Field Management Program is summarized in Appendix B and applied to reconstruction and new line projects. In order to lower magnetic field exposures, the program generally prescribes the use of line design that provides 5 feet higher ground clearances and reverse phasing new double-circuit lines where it is feasible to do so at low or no cost. The implementation of additional modifications will be considered, provided those modifications can be made at low or no cost.

Reverse phasing is not possible on this project because the relocated line is only a single circuit line. Some reduction of magnetic field is anticipated through the use of taller poles.

**C. RIGHT-OF-WAY STATUS**

The Clinton County Solid Waste Authority, the only property owner involved with the relocation, will execute a new right-of-way agreement for the required easement. The existing PPL EU right-of-way will be relinquished for the section of line being removed.

In addition, the new transmission line will make an aerial crossing of U.S. Highway 220. PPL EU will obtain all required permits for the crossing. No right-of-way over U.S. Highway 220 is required.

**EXHIBIT "C"**  
**LYCOMING-LOCK HAVEN #3 138/69 kV LINE RELOCATION**  
**ENVIRONMENTAL ASSESSMENT**

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**EXHIBIT "C"**  
**LYCOMING-LOCK HAVEN #3 138/69 kV LINE RELOCATION**  
**ENVIRONMENTAL ASSESSMENT**

---

**A. INTRODUCTION**

This proposed line relocation is requested by the Clinton County Solid Waste Authority to relocate the Lycoming-Lock Haven #3 138/69 kV Line to the perimeter of its property in order to expand its landfill operations.

The proposed project was reviewed with Wayne Township and Clinton County, and neither the Township nor the County has any objection. A list of involved governmental agencies, municipalities and other public entities is presented in Appendix D.

**B. LAND USE**

The proposed 0.9-mile line relocation is located entirely on Clinton County Solid Waste Authority property. The relocation will make an aerial crossing of U.S. Highway 220. Therefore, no additional impact on existing land use is anticipated.

The proposed line relocation will cross over and then parallel a short portion of U.S. Highway 220. It will then parallel a portion of the Norfolk Southern railroad line. It will also cross over PPL EU's Woolrich 69 kV Transmission Line and turn south to reconnect with the existing line. No nearby communication towers, pipelines or other utilities will be affected by the proposed project. Jersey Shore Airport is approximately 6.8 miles from the project location, and the Piper Airport is 3.6 miles from the project location. There will be no impact on the airports or flight operations.

### C. CULTURAL RESOURCES

This project was reviewed with the Pennsylvania Historical and Museum Commission (PHMC). PHMC has identified a recorded archaeological site in close proximity to the proposed project. As long as care is taken to avoid the site, no further archaeological investigations are required.

The following lists were reviewed for the presence of historical districts and structures in the area:

- National Historic Landmarks in Pennsylvania
- National Register Historic Districts in Pennsylvania
- National Register Individual Properties and Historic Districts in Pennsylvania
- National Register/Listed and Eligible Properties in Pennsylvania

The closest structure of historical significance, Quiggle Cemetery, is located approximately 700 feet northeast of the project location. The cemetery will not be impacted.

### D. NATURAL FEATURES

The proposed project will not affect any unique geological, scenic, or natural areas. No National Natural Landmarks, parks, or recreational facilities are located near the project area. Tree clearing, if required, will be minimal and PPL's "Program for Vegetation Management" will be applied to mitigate any impacts. The line will not cross any wetlands, but it will cross an area designated as "Waters of the U.S." All required permits will be acquired prior to the start of construction. PPL EU will employ its "Specification for Soil Erosion and Sedimentation Control on Transmission Line Rights-of-Way" as appropriate.

E. **THREATENED AND ENDANGERED SPECIES**

PPL EU has coordinated with different state and federal agencies to obtain information regarding endangered and threatened species that could occur in the area. A review of the Pennsylvania Natural Diversity Inventory records indicates that no known impacts were found to wildlife, threatened or endangered plant or animal life in the project area.

## LIST OF APPENDICES

<b>APPENDIX A</b>	PPL Design Criteria and Safety Practices
<b>APPENDIX B</b>	PPL Magnetic Field Management Program
<b>APPENDIX C</b>	List of Property Owners Within the Proposed Right-of-Way
<b>APPENDIX D</b>	List of Involved Governmental Agencies, Municipalities and Other Public Entities

## APPENDIX A

### PPL DESIGN CRITERIA AND SAFETY PRACTICES

The National Electrical Safety Code (NESC) is a set of rules to safeguard people during the installation, operation, and maintenance of electric power lines. The NESC contains the basic provisions considered necessary for the safety of employees and the public. Although it is not intended as a design specification, its provisions establish minimum design requirements. PPL Electric Utilities Corp. (PPL) has developed design specifications and safety rules which meet or surpass all provisions specified by the NESC.

#### Engineering Design Criteria and Parameters

The NESC includes loading requirements and clearances for the design, construction, and operation of power lines. The "loads" on conductors and supporting structures are the mechanical forces that develop from the weight of the conductors, the weight of ice on the conductors, plus wind pressure on the conductors and supporting structures. Loading requirements are the loads on the conductors and structures that are anticipated assuming certain ice and wind conditions. Loading requirements always contain "safety factors" to allow for unknown or unanticipated contingencies. The clearances and loading requirements contained in the NESC were developed to ensure public safety and welfare.

PPL transmission line design standards meet or surpass the NESC standards. For example, the relative order of grades of construction for conductors and supporting structures is B, C, and N; Grade B being the highest. According to the NESC standards, construction Grades B, C, or N may be used for transmission lines (except at crossings of railroad tracks and limited access highways where Grade B construction is specified). However, PPL designs all of its transmission lines for Grade B construction. The use of Grade B design and construction specifies such things as larger-minimum crossarm dimensions, larger-minimum conductor size, and increased safety factors.

Another example is the design parameters utilized to account for ice and wind loadings on the overhead ground wire (OHGW) and power conductors. The NESC standard ice and wind design magnitudes for the PPL territory are 0.5 inch thickness of radial ice combined with four pounds per square foot horizontal wind pressure (equivalent to 40-mile per hour wind velocity). The conductor sags and tensions used in line designs are the result of various ice and wind combinations, depending on the elevation at the line location and line design voltage. The conductor sags and tensions used in the design of all PPL transmission lines are at least 0.5-inch ice combined with eight pounds wind pressure (equivalent to 57 miles per hour wind velocity). This means that PPL lines are designed to operate safely and reliably during inclement weather even more severe than assumed by the NESC. In addition, PPL transmission lines are designed with more clearance to the ground than required by the NESC. The tables below compare PPL and NESC ground clearances for lines of various voltages.

**138 kV**

<u>Surface Underneath Conductors</u>	<u>Vertical Clearance to Ground</u>	
	<u>NESC Standard</u>	<u>PPL Design</u>
Roads, streets, alleys	21 Ft.	30 Ft.
Other land traversed by vehicles (such as cultivated field, forest, etc.)	21 Ft.	30 Ft.
Spaces accessible to pedestrians only	17 Ft.	30 Ft.
Railroad tracks	31 Ft.	35 Ft.

## 230 kV

<u>Surface Underneath Conductors</u>	<u>Vertical Clearance to Ground</u>	
	<u>NESC Standard</u>	<u>PPL Design</u>
Roads, streets, alleys	23 Ft.	32 Ft.
Other land traversed by vehicles (such as cultivated field, forest, etc.)	23 Ft.	32 Ft.
Spaces accessible to pedestrians only	19 Ft.	32 Ft.
Railroad tracks	31 Ft.	36 Ft.

## 500 kV

<u>Surface Underneath Conductors</u>	<u>Vertical Clearance to Ground</u>	
	<u>NESC Standard</u>	<u>PPL Design</u>
Roads, streets, alleys	28 Ft.	53 Ft.
Other land traversed by vehicles (such as cultivated field, forest, etc.)	28 Ft.	53 Ft.
Spaces accessible to pedestrians only	24 Ft.	53 Ft.
Railroad tracks	38 Ft.	53 Ft.

A relay protection system is used to protect the public safety and welfare as well as equipment and the transmission system. Relay protection is installed for all transmission lines to automatically de-energize the line in the unlikely event that the line or supporting structure fails and the line contacts the ground.

### Periodic Maintenance Program on All Transmission Lines

To ensure continued public safety and integrity of service, a periodic maintenance and inspection program is implemented for every transmission line. The program is administered through the use of helicopter patrols, with supplemental foot and structure

climbing patrols. A number of helicopter patrols are performed on all lines annually. The two-man helicopter crew flies parallel, to the left, and above the line so that the observer can look for signs of line damage or deterioration and observe clearances between vegetation and conductors. The observations are included in a report that is forwarded to the appropriate department for corrective action.

Foot and structure climbing patrol programs for a transmission line begin approximately three to five years after the line is energized, unless a helicopter patrol reports a need for earlier action. The frequency of foot patrols varies from once every year to once every several years depending on line type and age.

An assigned foot patroller checks right-of-way conditions, including access roads, bridges, pole washouts, tower footers, vegetation height and clearance to conductors, pole and tower deterioration and, with the use of binoculars, insulators, and condition of hardware. Identified problems are included in a report that is forwarded to the appropriate department for corrective action.

A scheduled line outage is required to perform an overhead patrol because of "hands-on" inspection of hardware. Overhead patrols are conducted on a schedule determined by line age, operating record, and observed general condition. The necessary repairs are also done during the inspection outage.

### Personnel Safety Rules

The following are a few of the PPL safety rules that demonstrate the Company's concern for employee safety:

- Work procedures have been developed to allow work to be performed on energized facilities in a safe manner. When lines or apparatus are removed from service to be worked on, the Energy Control Process system is applied. This system provides that a red tag must be physically placed on the control handle of the de-energized equipment. The red tag may be removed only after proper authorization to energize the equipment. Various other tags are used for limited operations and informational purposes.

Employees will not apply or remove a tag or change the status of tagged equipment unless authorized.

- Temporary safety grounds are used on de-energized facilities for employee safety during maintenance, construction, or reconstruction work. Safety grounds are wires connecting the de-energized facility to an electrical ground. If the facility should be energized, the safety grounds will divert the current directly to ground and reduce the likelihood of personal injury. The conductor size and attachment clamps of temporary safety grounds must be capable of conducting anticipated fault currents. Rubber gloves, rubber sleeves, and additional rubber protective equipment are used as required when applying or removing temporary safety grounds to or from the lines or apparatus to be grounded. An approved nonconductive working stick of sufficient length to allow workers to maintain the following required minimum clearances is used to test that the line has been de-energized and to apply temporary safety grounds:

<u>Voltage-kV</u>	<u>Minimum Clearance</u>
138	3'-7"
230	5'-3"
500	11'-3"

Before applying grounds, a test is done to confirm that the line is de-energized. The voltage test device is checked before and after use to assure reliability. When ground pins are used to establish proper ground points, they are driven to a depth of not less than four feet as near vertical as possible.

- Poles or structures are inspected and examined for structural integrity before climbing. If there is any reason to believe that a pole is unsafe, it is stabilized before work is performed. Appropriate safety gear in the form of body belts, safety straps, hard hats, gloves, etc., is worn by linemen during line work activity.



**MAGNETIC  
FIELD  
MANAGEMENT**  
PPL Electric Utilities  
Corporation

**APPENDIX B**

**DECEMBER 2004**

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## INTRODUCTION

At PPL Electric Utilities Corp. (PPL EU), magnetic field management means investigating and implementing methods at low or no cost to reduce magnetic fields in new or rebuilt transmission and distribution lines. This document explains PPL EU's Magnetic Field Management Program, which is part of PPL EU's larger Electric and Magnetic Fields (EMF) policy.

### **PPL EU's View**

Some people are worried that electric and magnetic fields are harming their health. Others think the scientific research does not show a problem at all, and still others believe there's just too much scientific uncertainty to draw any conclusions.

Here's what we do know now. Various panels of scientists that have reviewed the EMF research generally have drawn two main conclusions. First, the large body of evidence does not demonstrate that EMF are harmful. Second, additional research is recommended to explore questions raised in some studies.

Given these conclusions, PPL EU is taking a reasoned approach in responding to the EMF issue. PPL EU's approach to the EMF issue consists of five elements:

- Providing EMF information to customers and employees
- Providing magnetic field measurements
- Establishing and implementing a magnetic field management program to reduce magnetic fields in new or rebuilt facilities when it can be done at no, or low, cost
- Integrating EMF in the public involvement process that PPL EU undertakes in the siting of transmission lines
- Have supported additional research

## **EMF Are All Around Us**

Electric and magnetic fields occur in nature and in all living things. The earth, for instance, has a magnetic field, which makes the needle on a compass point north.

Electric fields and magnetic fields of a different type also surround every wire that carries electricity. In everyday life, these EMF arise from several basic sources, including power lines, electrical appliances, home and building wiring, other utility lines and cables, and currents flowing on water pipes. Though they often occur together, EMF are made up of two separate components:

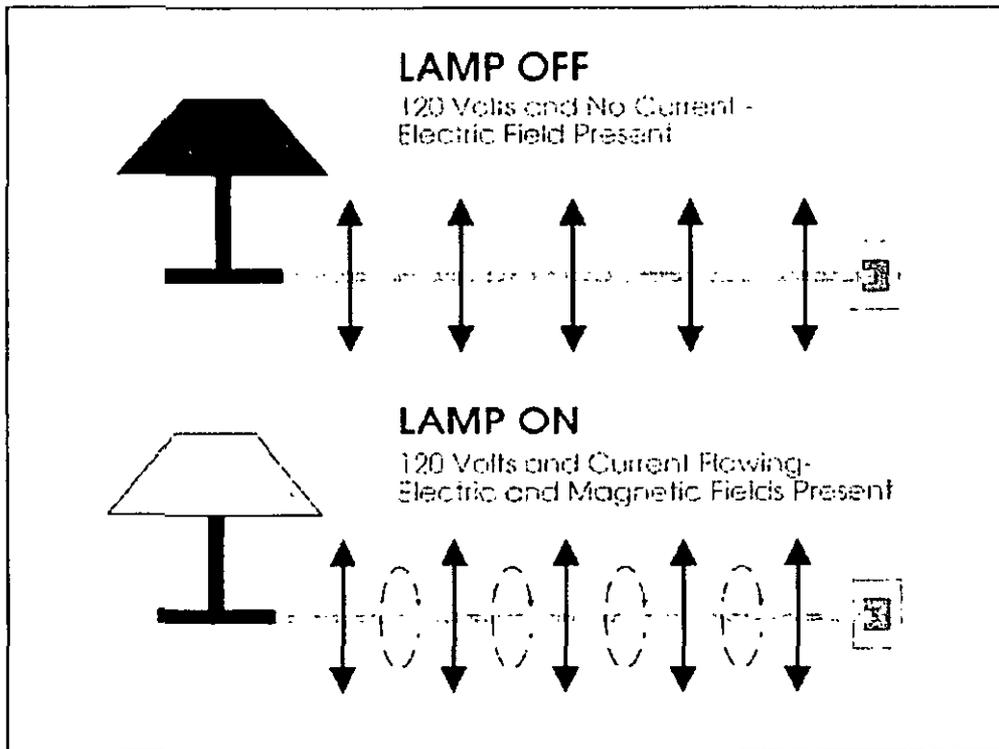
### **Electric Fields**

Electric fields are produced by the voltage—or electrical pressure—on a wire. The higher the voltage, the higher the electric field. As long as a wire is energized—has voltage present—an electric field is present (see Figure 1). In other words, an appliance, or an electric power line, doesn't actually have to be turned on to create an electric field. It just has to be plugged in. Electric fields diminish with distance and can be blocked or partially shielded by objects such as trees and houses.

### **Magnetic Fields**

Magnetic fields are created by the current or flow of electricity through a wire. Generally speaking, the higher the current, the higher the magnetic field. Because they only occur when current is flowing, magnetic fields are present only when the power is turned on (see Figure 1). Magnetic fields also diminish with distance, but—unlike electric fields—are not blocked by common objects. In recent years, public and scientific interest has turned toward the magnetic field component of EMF because of some scientific studies regarding these fields.

Figure 1



**Figure 2**

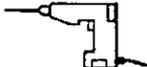
Magnetic field strengths decrease with distance Magnetic fields are measured in milligauss		Source: "EMF in Your Environment", U.S. Environmental Protection Agency 1992		
		At 6 inches	At 1 foot	At 2 feet
Clothes dryer		2 to 10	* to 3	*
Microwave oven		100 to 300	1 to 200	1 to 30
Toaster		5 to 20	* to 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

FIGURE 2 \* The magnetic field measurement at this distance from the operating appliance could not be distinguished from background measurements taken before the appliance had been turned on.

### Measuring Magnetic Fields

Magnetic fields usually are measured in a unit called a milligauss. Magnetic field levels found in the living areas of homes typically range from less than 1 milligauss to about 4 milligauss according to the U.S. Environmental Protection Agency. They can be higher in some cases. The levels next to appliances can exceed 1,000 milligauss (1 gauss). Figures 2 and 3 show how the strength of the field falls off as you move away from the source, just as the heat of a campfire grows weaker as you walk away from it. For overhead power lines, the strength of the magnetic fields is dependent upon a number of factors that will be explained later. Those factors produce a magnetic field that drops off rapidly as you move away from the power line.

Figure 3

<b>Sample Magnetic Field Levels in Milligauss</b>				
<b>Type of Overhead Power Line</b>	<b>Distance from the line</b>			
	<b>Under the line</b>	<b>50 ft.</b>	<b>100 ft.</b>	<b>200 ft.</b>
220 kV and 500 kV	5-400	5-250	1-75	0.5-20
69 kV and 138 kV	3-80	0.5-2.5	0.1-10	0.1-3
12 kV and below	0.4-20	0.1-1	-	-

The magnetic field values provided in this table represent a general range of values associated with the types of overhead power lines listed and are provided for illustration. There will be circumstances in which there will be magnetic field levels above or below the range of values provided due to variations in such factors as height of the wires, current flow and so on.

## **DEVELOPMENT OF PPL EU's MAGNETIC FIELD MANAGEMENT PROGRAM**

One element of our response to EMF concerns expressed by some of our customers is PPL EU's Magnetic Field Management Program. The program was initiated in March 1991 because PPL EU believes it makes good sense, as a matter of policy, to respond to the concerns expressed by some of our customers and to reduce magnetic fields in new and rebuilt facilities where it can be done with either no-cost or low-cost design changes.

This document updates the original program which has been revised several times since 1991. These guidelines were developed by PPL EU's EMF Working Group.

### **VARIABLES THAT AFFECT MAGNETIC FIELDS**

Magnetic fields from transmission and distribution lines are a function of a number of design variables. The following parameters affect the magnetic field levels produced by transmission and distribution lines:

- Current
- Height of conductors above ground
- Configuration of conductors
- Distance from the line

### **EFFECT OF PHASE CURRENT ON MAGNETIC FIELDS**

At power frequencies (i.e., 60 hertz), the magnetic field level is a function of the current or flow of electricity through a wire. Keeping all other parameters the same, the magnetic field is proportional to the current. Hence, if the current increases by 25 percent, the resulting magnetic field level will increase by 25 percent.

The overall load current on any line varies with the demand for power. It's usually highest during daytime hours and lowest at night. There also are weekly, monthly, seasonal and yearly variations.

The difference in the currents between each phase in a multiphase line also can affect the magnetic field. This difference is called phase unbalance. For a constant load, a statistical analysis of this phase unbalance can be made to determine its effect on the magnetic field. Close to the line, there is very little effect. However, the phase unbalance slows the rate at which the magnetic field decreases with distance from the line.

### **EFFECT OF CONDUCTOR CONFIGURATION ON MAGNETIC FIELDS**

In the transmission and distribution of power, utilities like PPL EU presently use both three-phase and single-phase lines. Each phase on a three-phase power line has either a single conductor or a bundle of two or more conductors. In a three-phase system, the ground-level magnetic field is a result of the fields produced by the currents in each of the phases. Placing the three phases as close together as possible (compaction) creates some field cancellation, and the ground-level magnetic field is reduced. However, appropriate phase separation is required for the reliable operation of the line. In addition, the arrangement of the phases can create some; field cancellation and reduction of the ground-level magnetic field.

### **EFFECT OF DISTANCE FROM THE MAGNETIC FIELD SOURCE**

Magnetic field strength diminishes with the vertical and lateral distances from the magnetic field source. Increasing the height of the conductors above ground is useful for magnetic field reduction at ground level, but may result in increased structure costs and increased aesthetic impact of the structures. Another possible method of increasing the distance to the magnetic field source is to increase the right-of-way requirements. By keeping buildings off increased rights of way, thereby requiring the public to live and work further away from lines, exposure to magnetic fields produced by the lines can be reduced. Increases in right of way are not always practical and may increase costs significantly, however.

## **SUMMARY OF PPL EU's MAGNETIC FIELD MANAGEMENT PROGRAM**

Under its Magnetic Field Management Program, PPL EU has changed the way it builds and rebuilds some of its transmission and distribution lines. These design changes reduce magnetic field levels (assuming balanced circuit loadings and phase currents) by up to 69 percent in most of the company's new transmission lines. These guidelines now are being applied to new and reconstructed transmission facilities, based on this program.

The distribution component of the program focuses on 12 kV lines, the company's standard distribution voltage. It concentrates on the three-phase, primary 12 kV lines, since these are the most heavily loaded facilities and often are located in densely populated areas. The guidelines in this program are being applied to these three-phase, primary 12 kV lines.

*A maximum 3-5 percent change in estimated cost was used as the limit for the guidelines since this value is consistent with low cost, is within estimating accuracy and is likely to have little impact on overall line costs.*

The magnetic field calculations used in this document for the design of PPL EU's overall magnetic field management plan assume balanced load conditions among the phases and a fixed level of current, not necessarily representative of specific transmission or distribution lines. These levels were calculated using the Electric Power Research Institute's ENVIRO computer program. *Under actual operating conditions, the magnetic field levels that result may vary due to such things as actual load per circuit, overall current on each phase conductor and the electrical configuration and operation of each line.*

# MAGNETIC FIELD MANAGEMENT PROGRAM GUIDELINES

The guidelines for magnetic field management are noted below, with discussion points for each.

## OVERHEAD LINES

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### NEW OR REBUILT TRANSMISSION LINES

1. **Balance transmission circuit loads and phase currents as much as possible.**
  - PPL EU should continue to make every effort to balance loadings between the two circuits of a double circuit line when planning new or rebuilt facilities to maximize the effects of reverse phasing.
  - PPL EU should continue the practice of balancing single-phase loads across the three phases of the distribution system. (*Unbalanced phase currents on the distribution system are reflected through to the transmission system.*)
    - Unbalanced phase currents result in higher magnetic fields that do not drop off as quickly with distance as do the fields resulting from balanced phase currents.
    - For a 5 percent phase current unbalance, the magnetic field 50 feet from the centerline of a single circuit 138 kV line could be more than twice the value than if the same line had balanced phase circuits.
  - Balanced phase currents on each three-phase distribution circuit also reduce magnetic fields from the distribution circuits themselves. In addition, they reduce magnetic fields on the transmission system from which the distribution system circuits are supplied and connected through substations.
  - Apart from magnetic field considerations, balanced phase currents on each three-phase distribution circuit also reduce line losses and improve the system voltage.

**2. Continue with the present practice of using long-span construction as the PPL EU 138/69 kV standard**

- Structure designs for short-span and long-span construction are illustrated on Charts I and II, respectively.
  - Short-span design does not significantly reduce magnetic fields when compared to long-span design even though it is more compact than long-span design. Comparison of the magnetic field values from Chart III indicates essentially the same values. Therefore, short-span design should not be used solely to reduce magnetic fields.
  - PPL EU will continue to use long-span construction for 138/69 kV double-circuit lines and for single-circuit/future-double-circuit lines.
  - For single-circuit/future-double-circuit lines, PPL EU will continue to install two conductors on the top positions and one in the middle position as shown in Chart IV.
    - This arrangement minimizes magnetic fields as shown in Chart V by placing the three initial conductors higher on the structure, which increases the ground clearances, and by placing the conductors in a triangular configuration.

**3. Compact design structures are not a low-cost alternative and should be used for magnetic field reduction only in special applications.**

Chart VI illustrates the compact design structure.

- The compact design increases the initial installation costs by 79 percent when compared to the long-span design but reduces the magnetic field from 9 mG to 3 mG (about 67 percent) at the edge of the 100-foot-wide right of way as shown on Chart III.

**4. Reverse phase new or rebuilt double-circuit transmission lines for all voltage levels.**

- Reverse phasing was adopted by PPL EU in March 1991 for double-circuit 138/69 kV transmission lines and in April 1992 for all other double circuit transmission lines. Reverse phasing is shown in Chart VII. Reverse phasing will reduce the magnetic fields when the current flow on both circuits is in the same

direction. Calculated values contained here are based on balanced and equal phase currents on both circuits.

- Reverse phasing reduces the magnetic field of a double circuit 138 kV single pole transmission line from 29 mG to 9 mG (about 69 percent) at the edge of the 100-foot-wide right of way as shown on Chart III.
- Reverse phasing reduces the magnetic field of a double circuit 230 kV single pole transmission line from 49 mG to 16 mG (about 67 percent) at the edge of the 150-foot-wide right of way as shown on Chart VIII.
- Reverse phasing reduces the magnetic field of a double-circuit 500 kV single pole transmission line from 37 mG to 21 mG (about 43 percent) at the edge of the 200-foot-wide right of way as shown on Chart IX.
- When new or rebuilt double-circuit lines require tapping existing double-circuit lines, PPL EU will review the existing lines to determine if reverse phasing can be provided at low cost.
- Computer modeling is required to develop the optimum phasing and overall conductor arrangements for lines added to, or rebuilt in, multiple-line corridors.
  - Merely adding a reverse-phase double-circuit line to an existing transmission line corridor or reverse phasing a rebuilt line in the multiple-line corridor will not necessarily produce lower magnetic field levels at the edge of the corridor right of way.
  - The corridor must be computer modeled with all the lines, existing phase conductor locations and currents. Then, magnetic field calculations must be made varying the phase arrangements of the new or reconstructed line to determine the appropriate phasing arrangement.
  - Current flow direction on a line also must be considered. For example, a reverse-phased line should have the current flowing in the same direction on both circuits. If the current flow is in the opposite direction for one circuit, reverse phasing will not produce the lowest magnetic field and another phase arrangement that produces lower fields may need to be utilized.

**5. Increase the minimum ground clearance for all new transmission lines.**

**138/69 kV Transmission Lines**

- Increasing the minimum line design ground clearance from 25 feet to 30 feet may add up to about 5 percent to the installed cost of a new double-circuit single pole 138/69 kV line. For a given project, such cost may be substantially less, however. In fact, PPL EU frequently uses higher-than-minimum ground clearances due to such features as road crossings, line crossings and site-specific terrain. With long-span reverse-phase design, the magnetic field is reduced from 9 mG to 7 mG (about 22 percent) at the edge of a 100-foot-wide right of way as shown in Chart X.
  - In the actual design of transmission lines to include higher minimum ground clearances, there may be limited segments (such as highway crossings, severe slopes and transmission line crossing locations) where National Electrical Safety Code (NESC) minimum ground clearances may need to be used. The NESC minimum ground clearances are less than the increased ground clearance discussed previously.

**230 kV Transmission Lines**

- Increasing the minimum line design ground clearances from 27 feet to 32 feet may add up to about 5 percent to the cost of a single-circuit single-pole line (current standard). For a given project, such cost may be substantially less, however. In fact, PPL EU frequently uses higher-than-minimum ground clearances due to such features as road crossings, line crossings and site-specific terrain. By increasing the clearances, the magnetic field is reduced from 30 mG to 28 mG (about 7 percent) at the edge of a 150-foot-wide right of way.
- Increasing clearances from 27 feet to 32 feet could theoretically add up to about 2.8 percent to the cost of a double-circuit single-pole line (current standard) and reduce the magnetic field of a reverse-phase line from 16 mG to 15 mG (about 6 percent) at the edge of a 150-foot-wide right of way. Chart XI is a summary of this data.
- Studies are required for each new 230 kV line to determine optimum structure types, ground clearances, configurations and designs to reduce field levels. Such

studies could include analysis of reduction measures such as additional minimum ground clearances, increasing conductor tensions, using reduced phase spacing (a "Delta" configuration on a single-circuit line), installing the second circuit initially, and/or adding a second set of conductors that are reverse phased and operated in parallel with the first set (bundled/split phase).

#### **500 kV Transmission Lines**

- Increasing ground clearances from 33 feet to 53 feet may add up to about 4.5 percent to the cost of a single-circuit "H-frame" line (current standard). For a given project, such cost may be substantially less, however. In fact, PPL EU frequently uses higher-than-minimum ground clearances due to such features as road crossings, line crossings and site-specific terrain. By increasing the clearances, the magnetic field is reduced from 42 mG to 35 mG (about 17 percent) at the edge of a 200-foot-wide right of way.
- Increasing ground clearances from 33 feet to 53 feet could theoretically add up to 2.8 percent to the cost of a double-circuit "H-frame" line (current standard) and reduces the magnetic field of a reverse-phase line from 21 mG to 16 mG (about 24 percent) at the edge of a 200-foot-wide right of way. Chart XII is a summary of this data.
- Studies are required for each new 500 kV line to determine optimum structure types, ground clearances, configurations and designs to reduce field levels. Such studies could include analysis of reduction measures such as additional minimum ground clearances, increasing conductor tensions, using reduced-phase spacing (a "Delta" configuration on a single circuit line), installing the second circuit initially, and/or adding a second set of conductors that are reverse phased and operated in parallel with the first set (bundled/split phase).

## **RECONDUCTORING OR ADDING ADDITIONAL CIRCUITS TO EXISTING TRANSMISSION LINES**

**When reconductoring or adding additional circuits to existing transmission lines, PPL EU will evaluate low-cost or no-cost options for magnetic field management on a case-by-case basis.**

When reconductoring existing transmission lines or adding additional circuits, low-cost alternatives may not exist; however, the following steps will be taken:

- For a single-circuit line, the use of a Delta arrangement or other modifications on the existing structure, with reduced-phase spacing, will be evaluated.
- For double-circuit lines, application of reverse phasing may reduce the magnetic field under the line and within the right of way and will be evaluated.
- For single- and double-circuit lines, evaluate using higher conductor tensions that can increase the minimum line design ground clearance.

## **DISTRIBUTION LINES**

**At the 12 kV distribution level, new main three-phase lines will continue to be constructed with five feet of additional ground clearance.**

- Main lines are the most heavily loaded sections of a distribution line and therefore have the highest magnetic fields associated with them.
- Increasing the ground clearance by five feet reduces the magnetic field under the line from 14 mG to 11 mG using the standard eight-foot crossarm design. These values are based on increasing pole heights from 45 feet to 50 feet and a typical operating current of 300 amps per phase.
- Chart XIII is a summary of this data. Increasing ground clearance by five feet could theoretically add about 5 percent to the cost of a typical distribution line.

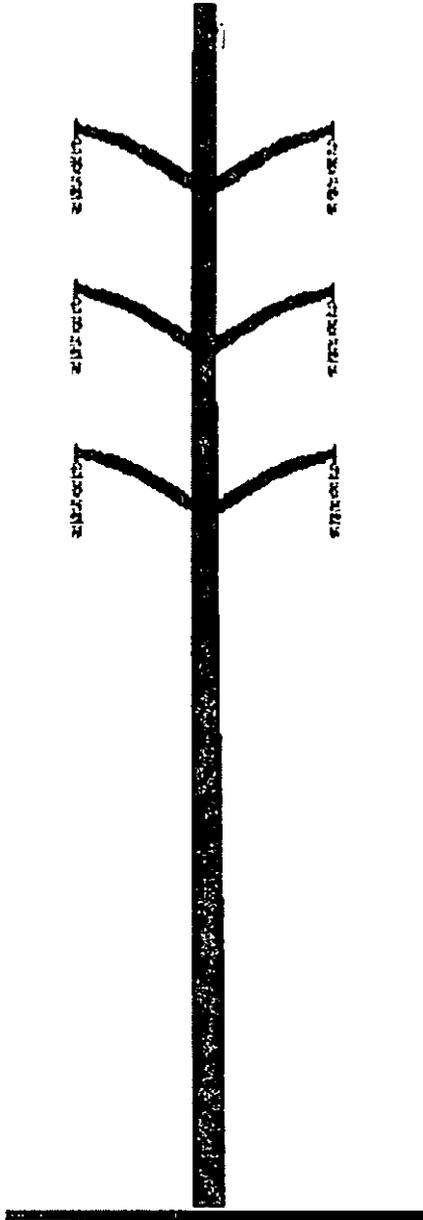
## **UNDERGROUND TRANSMISSION LINES**

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**Underground transmission lines are required due to environmental or land use factors or restrictions on available clearances, PPL EU will evaluate options for magnetic field management techniques on a case-by-case basis.**

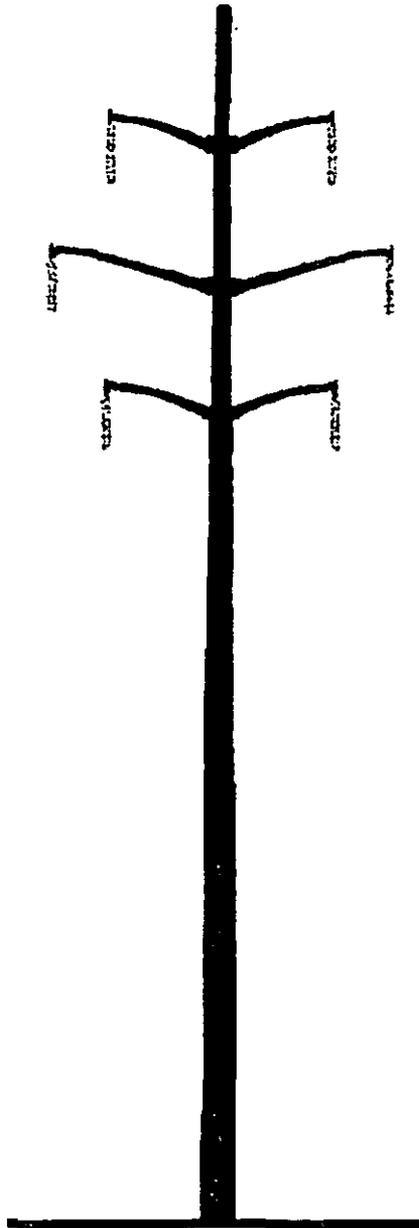
- The phase arrangement that produces the lowest field will be determined.
- The depth of burial of the line will be determined considering the cost of excavation and the location of other buried utilities in the area.
- *The use of steel pipe ferromagnetic shielding that reduces magnetic fields will be evaluated.*

# Short-Span Construction



- **More compact design**
- **Should not be used solely to reduce magnetic fields**
- **Typical conductor data:**
  - 1 3/8" HS steel overhead ground wire - 7.3 feet sag
  - 6-556.5 KCMIL 24/7 ACSR power conductors - (PARAKEET) 10.0 feet sag
  - Average span - 400 feet

# Long-Span Construction Remains PPL EU 138 kV Standard



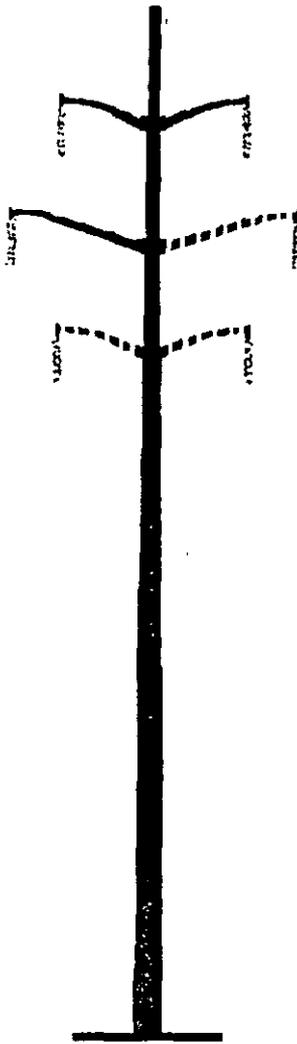
- Lower cost alternative
- Reduces magnetic fields due to higher structures
- Typical conductor data:
  - 1 3/8" HS steel overhead ground wire - 17.3 feet sag
  - 6-556.5 KCMIL 24/7 ACSR power conductors - (PARAKEET) 23.0 feet sag
  - Average span - 600 feet

**138/69 kV REVERSE-PHASE TRANSMISSION LINES  
CALCULATED MAGNETIC FIELDS AT 400 AMPERES**

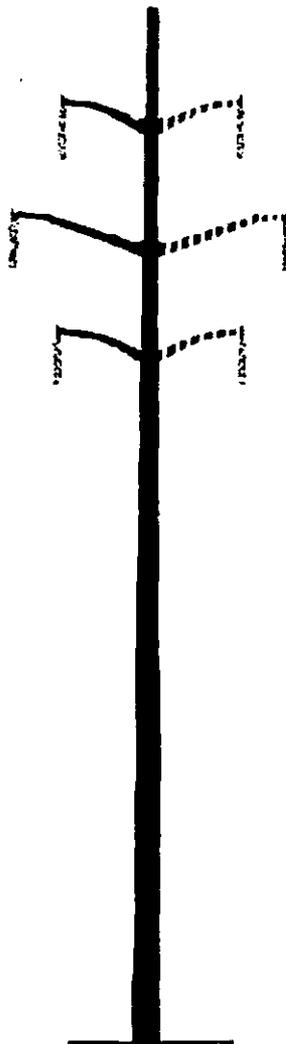
TYPE CONSTRUCTION	MAGNETIC FIELD IN MILLIGAUSS AT THE EDGE OF THE RIGHT OF WAY
SHORT SPAN (CHART I)	30
SHORT SPAN (REVERSE PHASE)	8
LONG SPAN (CHART II)	29
LONG SPAN (REVERSE PHASE)	9
COMPACT (CHART VI)	14
COMPACT (REVERSE PHASE)	3

The edge of right of way is 50 feet from the line centerline.  
The 400 ampere phase current is balanced between phases.  
Calculations are based on a minimum ground clearance of 25 feet.  
LONG SPAN, SHORT SPAN and COMPACT are double-circuit lines.

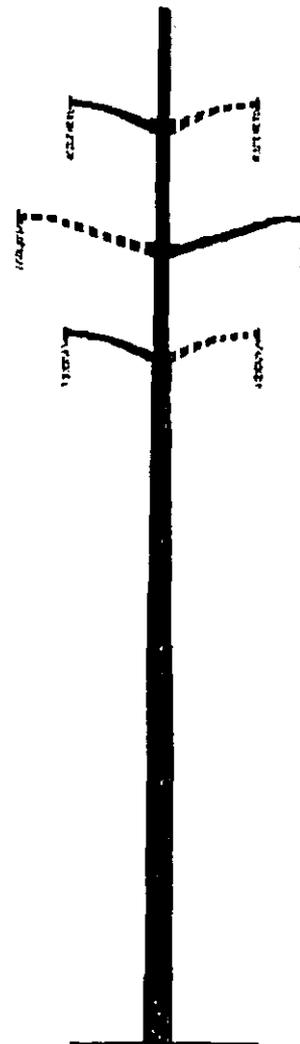
# Typical Single-Circuit Structure Designs



Top/Middle



Vertical



Top/Middle/Bottom

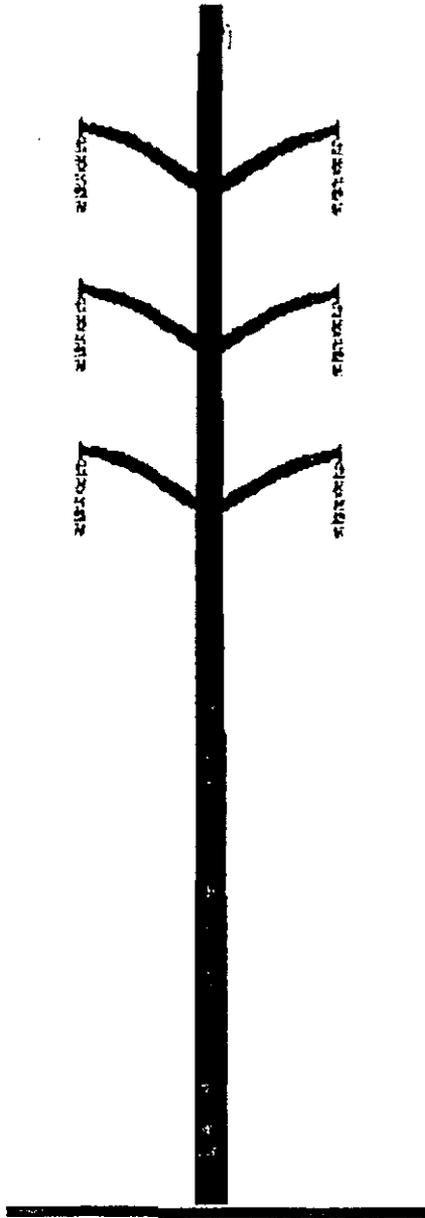
—— initial single circuit  
- - - - future second circuit

**138/69 kV SINGLE CIRCUIT TRANSMISSION LINES  
CALCULATED MAGNETIC FIELDS AT 400 AMPERES**

TYPE CONSTRUCTION	MAGNETIC FIELD IN MILLIGAUSS AT THE EDGE OF THE RIGHT OF WAY
TOP/MIDDLE/BOTTOM	20
VERTICAL	17
TOP/MIDDLE	12

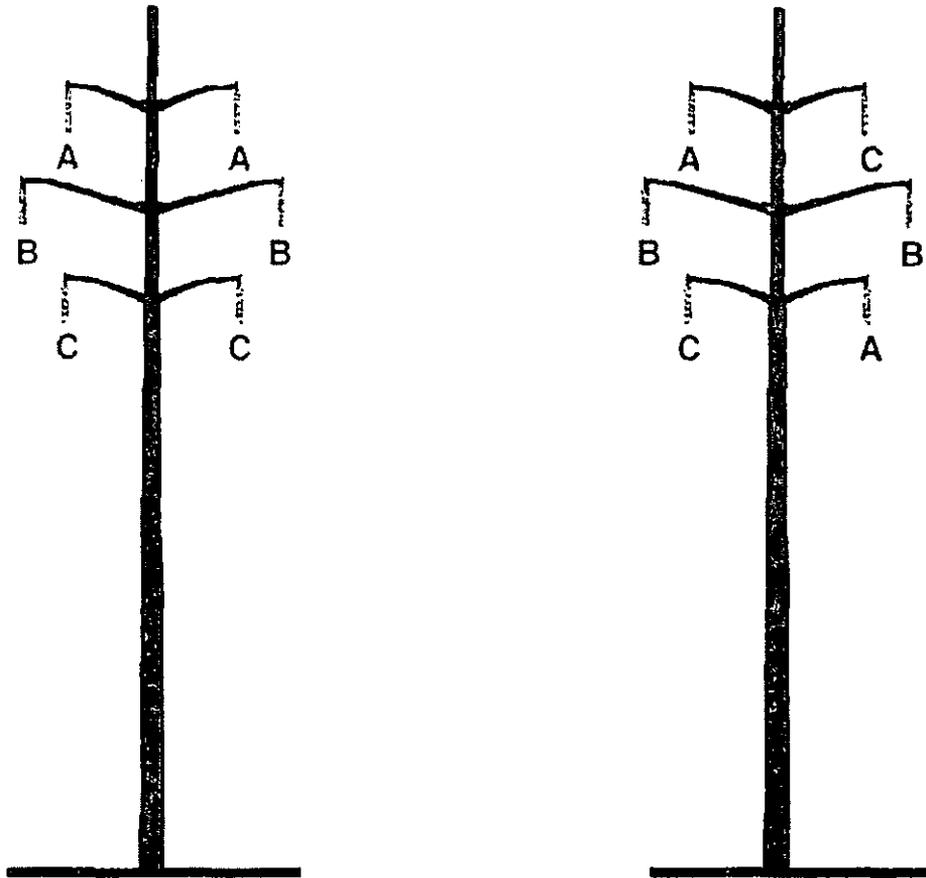
The edge of right of way is 50 feet from the line centerline.  
The 400 ampere phase current is balanced between phases.  
Calculations are based on a minimum ground clearance of 25 feet.

# Compact Design Structure



- Minimize magnetic fields due to compact design
- Not a low-cost alternative
- Typical conductor data:
  - 1 3/8" HS steel overhead ground wire - 9.0 feet sag
  - 6-556.5 KCMIL 24/7 ACSR power conductors - (PARAKEET) 9.0 feet sag
  - Average span - 300 feet

# Reverse Phasing of Double-Circuit Transmission Lines



From: → → → → To:

Reverse phasing also can be one of the following phase arrangements:

A	B		B	A		B	C		C	A		C	B
C	C	or	C	C	or	A	A	or	B	B	or	A	A
B	A		A	B		C	B		A	C		B	C

**230 kV REVERSE-PHASE TRANSMISSION LINES  
CALCULATED MAGNETIC FIELDS AT 800 AMPERES**

TYPE CONSTRUCTION	MAGNETIC FIELD IN MILLIGAUSS AT THE EDGE OF THE RIGHT OF WAY
DOUBLE CIRCUIT POLE	49
DOUBLE CIRCUIT POLE (REVERSE-PHASE)	16

The edge of right of way is 75 feet from the line centerline.  
The 800 ampere phase current is balanced between phases.  
Calculations are based on a minimum ground clearance of 27 feet.

**500 kV REVERSE-PHASE TRANSMISSION LINES  
CALCULATED MAGNETIC FIELDS AT 1100 AMPERES**

TYPE CONSTRUCTION	MAGNETIC FIELD IN MILLIGAUSS AT THE EDGE OF THE RIGHT OF WAY
DOUBLE CIRCUIT POLE	37
DOUBLE CIRCUIT POLE (REVERSE PHASE)	21

The edge of right of way is 100 feet from the line centerline.  
The 1,100 ampere phase current is balanced between phases.  
Calculations are based on a minimum ground clearance of 33 feet.

**INCREASED 138/69 kV MINIMUM GROUND CLEARANCE  
CALCULATED MAGNETIC FIELDS AT 400 AMPERES**

TYPE CONSTRUCTION	MINIMUM GROUND CLEARANCE FEET	MAGNETIC FIELD IN MILLIGAUSS AT THE EDGE OF THE RIGHT OF WAY
SINGLE CIRCUIT TOP/MIDDLE	25	12
SINGLE CIRCUIT TOP/MIDDLE	30	10
LONG SPAN	25	29
LONG SPAN	30	26
LONG SPAN (REVERSE PHASE)	25	9
LONG SPAN (REVERSE PHASE)	30	7

The edge of right of way is 50 feet from the line centerline.  
The 400 ampere phase current is balanced between phases.

**INCREASED 230 kV MINIMUM GROUND CLEARANCE  
CALCULATED MAGNETIC FIELDS AT 800 AMPERES**

TYPE CONSTRUCTION	MINIMUM GROUND CLEARANCE FEET	MAGNETIC FIELD IN MILLIGAUSS AT THE EDGE OF THE RIGHT OF WAY
SINGLE CIRCUIT TOP/MIDDLE	27	30
SINGLE CIRCUIT TOP/MIDDLE	32	28
DOUBLE CIRCUIT POLE	27	49
DOUBLE CIRCUIT POLE	32	46
DOUBLE CIRCUIT POLE (REVERSE PHASE)	27	16
DOUBLE CIRCUIT POLE (REVERSE PHASE)	32	15

The edge of right of way is 75 feet from the line centerline.  
The 800 ampere phase current is balanced between phases.

**INCREASED 500 kV MINIMUM GROUND CLEARANCE  
CALCULATED MAGNETIC FIELDS AT 1,100 AMPERES**

TYPE CONSTRUCTION	MINIMUM GROUND CLEARANCE FEET	MAGNETIC FIELD IN MILLIGAUSS AT THE EDGE OF THE RIGHT OF WAY
SINGLE CIRCUIT "H" STRUCTURE	33	42
SINGLE CIRCUIT "H" STRUCTURE	53	35
DOUBLE CIRCUIT POLE	33	37
DOUBLE CIRCUIT POLE	53	31
DOUBLE CIRCUIT POLE (REVERSE PHASE)	33	21
DOUBLE CIRCUIT POLE (REVERSE PHASE)	53	16

The edge of right of way is 100 feet from the line centerline.  
The 1,100 ampere phase current is balanced between phases.

**12 kV DISTRIBUTION LINES  
CALCULATED MAGNETIC FIELDS AT 300 AMPERES**

TYPE CONSTRUCTION	POLE HEIGHT FEET	MAGNETIC FIELD IN MILLIGAUSS*	
		AT CENTERLINE	AT 30 FEET FROM CENTERLINE
STANDARD CROSSARM	45	14	7
STANDARD CROSSARM	50	11	6

\* Field level under the line at mid-span based on 300 amps, balanced loading, one meter above ground level.

**APPENDIX C**

**LIST OF PROPERTY OWNERS WITHIN THE PROPOSED RIGHT-OF-WAY**

Jay B. Alexander, General Manager  
Clinton County Solid Waste Authority  
PO Box 209  
McElhattan, PA 17748

Pennsylvania Department of Transportation  
Commonwealth Keystone Building  
400 North Street, 8<sup>th</sup> Floor  
Harrisburg, Pennsylvania 17120  
Attn: The Honorable Allen D. Beihler, P.E., Secretary

APPENDIX D

**LIST OF INVOLVED GOVERNMENTAL AGENCIES, MUNICIPALITIES AND  
OTHER PUBLIC ENTITIES**

---

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

Pennsylvania Department of Transportation  
Commonwealth Keystone Building  
400 North Street, 8th Floor  
Harrisburg, Pennsylvania 17120  
Attn: The Honorable Allen D. Beihler, P.E., Secretary

Department of Environmental Protection  
P. O. Box 2063  
Market Street Office Building  
Harrisburg, Pennsylvania 17105-2063  
Attn: Office of Field Operations

Richard Kyle, Commissioner  
Clinton County  
232 E Main Street  
Lock Haven, PA 17745

Timothy Holladay, Director  
Clinton County Planning Department  
232 E Main Street  
Lock Haven, PA 17745

James Maguire, Supervisor

Wayne Township

PO Box 217

Lock Haven, PA 17745

Miles Houseknecht, Chairman

Wayne Twp. Planning Commission

PO Box 217

Lock Haven, PA 17745

**CERTIFICATE OF SERVICE**

I hereby certify that a true and correct copies of the foregoing Letter of Notification (including the exhibits and appendices) have been served upon the following persons, in the manner indicated, in accordance with the requirements of § 1.54 (relating to service by a participant).

**VIA CERTIFIED MAIL – RETURN RECEIPT REQUESTED**

PA Historical and Museum Commission  
Bureau for Historic Preservation  
Commonwealth Keystone Building, 2<sup>nd</sup> Floor  
400 North Street  
Harrisburg, PA 17120-0053  
ATTN: Douglas C. McLearen, Chief

PA Department of Transportation  
Commonwealth Keystone Building  
400 North Street, 8th Floor  
Harrisburg, PA 17120  
ATTN: Honorable Allen D. Biehler,  
P.E., Secretary

Department of Environmental Protection  
P.O. Box 2063  
Market Street State Office Building  
Harrisburg, PA 17105-2063  
ATTN: Office of Field Operations

Jay B. Alexander, General Manager  
Clinton County Solid Waste Authority  
PO Box 209  
McElhattan, PA 17748

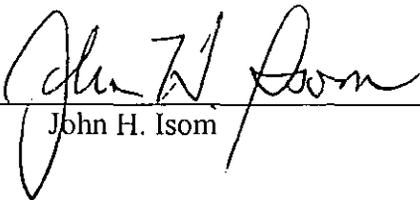
Richard Kyle, Commissioner  
Clinton County  
232 E. Main Street  
Lock Haven, PA 17745

Timothy Holladay, Director  
Clinton County Planning Department  
232 E. Main Street  
Lock Haven, PA 17745

James Maguire, Supervisor  
Wayne Township  
PO Box 217  
Lock Haven, PA 17745

Miles Houseknecht, Chairman  
Wayne Township Planning Commission  
PO Box 217  
Lock Haven, PA 17745

Date: April 27, 2007

  
\_\_\_\_\_  
John H. Isom

RECEIVED  
2007 APR 27 AM 11:48  
PA HUC BUREAU  
SECRETARY'S BUREAU



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

John H. Isom

jisom@postschell.com  
717-612-6032 Direct  
File #: 2507-132676

# DOCUMENT FOLDER

May 1, 2007

VIA HAND DELIVERY

James J. McNulty  
Secretary  
Pennsylvania Public Utility Commission  
Commonwealth Keystone Building  
400 North Street, 2nd Floor North  
PO Box 3265  
Harrisburg, PA 17105-3265

ORIGINAL

**RE: Letter of Notification of PPL Electric Utilities Corporation, Filed Pursuant to 52 Pa. Code Chapter 57 Subchapter G, With Respect to the Relocation of a Portion of the Lycoming-Lock Haven #3 Transmission Line in Wayne Township, Clinton County for the Clinton County Solid Waste Authority**  
Docket No. A- 110500 F0390

Dear Secretary McNulty:

It has been brought to my attention that the cover letter for the above-reference Letter of Notification that was filed on April 27, 2007, contains an erroneous statement. It indicated that PPL Electric Utilities Corporation was the only affected landowner. That statement is incorrect. There is only one affected landowner, but that landowner is the Clinton Solid Waste Authority.

If there are any questions concerning this matter, please contact me at the addresses or telephone numbers provided above.

Respectfully submitted,

John H. Isom

JHI/jl

cc: Certificate of Service

RECEIVED  
2007 MAY -1 PM 3:26  
SECRETARY'S BUREAU

50

**CERTIFICATE OF SERVICE**

I hereby certify that a true and correct copy of the foregoing correspondence has been served upon the following persons, in the manner indicated, in accordance with the requirements of § 1.54 (relating to service by a participant).

**FIRST CLASS MAIL**

PA Historical and Museum Commission  
Bureau for Historic Preservation  
Commonwealth Keystone Building, 2<sup>nd</sup> Floor  
400 North Street  
Harrisburg, PA 17120-0053  
ATTN: Douglas C. McLearen, Chief

PA Department of Transportation  
Commonwealth Keystone Building  
400 North Street, 8th Floor  
Harrisburg, PA 17120  
ATTN: Honorable Allen D. Biehler,  
P.E., Secretary

Department of Environmental Protection  
P.O. Box 2063  
Market Street State Office Building  
Harrisburg, PA 17105-2063  
ATTN: Office of Field Operations

Jay B. Alexander, General Manager  
Clinton County Solid Waste Authority  
PO Box 209  
McElhattan, PA 17748

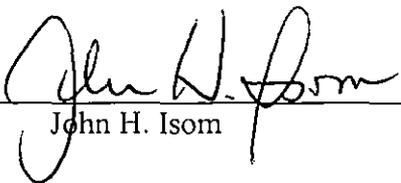
Richard Kyle, Commissioner  
Clinton County  
232 E. Main Street  
Lock Haven, PA 17745

Timothy Holladay, Director  
Clinton County Planning Department  
232 E. Main Street  
Lock Haven, PA 17745

James Maguire, Supervisor  
Wayne Township  
PO Box 217  
Lock Haven, PA 17745

Miles Houseknecht, Chairman  
Wayne Township Planning Commission  
PO Box 217  
Lock Haven, PA 17745

Date: May 1, 2007

  
\_\_\_\_\_  
John H. Isom

SECRETARY'S BUREAU  
2007 MAY -1 PM 3:26

COMMONWEALTH OF PENNSYLVANIA  
PENNSYLVANIA PUBLIC UTILITY COMMISSION  
P. O. BOX 3265, HARRISBURG PA 17105-3265

IN REPLY PLEASE  
REFER TO OUR FILE  
Secretary  
717-772-7777

May 7, 2007

A-110500 F0390

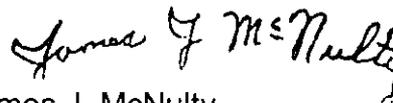
JOHN H. ISOM  
POST & SCHELL, P.C.  
12<sup>TH</sup> FLOOR  
17 NORTH SECOND STREET  
HARRISBURG PA 17101-1601

Dear Mr. Isom:

Receipt is acknowledged of the Letter of Notification of PPL Electric Utilities Corporation, which has been captioned and docketed to the above number.

This matter will receive the attention of the Commission and you will be advised of any further necessary procedure.

Sincerely,



James J. McNulty  
Secretary

JJM:jih

**DOCKETED**  
MAY 07 2007

**DOCUMENT  
FOLDER**

**DATE:** May 7, 2007

**SUBJECT:** A-110500 F0390

**TO:** Bureau of Fixed Utility Services

**FROM:**  James J. McNulty, Secretary

**Letter of Notification of PPL Electric Utilities Corporation**

---

We attach hereto a copy of the Letter of Notification of PPL Electric Utilities Corporation, which has been captioned and docketed to the above number.

May we have a report prepared by your Bureau for Public Meeting.

Attachment

cc: Law Bureau

jih

**DOCKETED** **DOCUMENT**  
MAY 07 2007 **FOLDER**



DOCUMENT FOLDER

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

ORIGINAL

John H. Isom

jisom@postschell.com
717-612-6032 Direct
File #: 2507-132676

May 11, 2007

VIA HAND DELIVERY

James J. McNulty
Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street, 2nd Floor North
PO Box 3265
Harrisburg, PA 17105-3265

RECEIVED
2007 MAY 11 AM 11:38
PENNSYLVANIA
SECRETARY'S BUREAU

RE: Letter of Notification of PPL Electric Utilities Corporation, filed pursuant to 52 Pa. Code Chapter 57, Subchapter G with Respect to the Relocation of a Portion of the Lycoming-Lock Haven # 3 Transmission Line in Wayne Township, Clinton County for the Clinton County Solid Waste Authority - Docket No. A-110500F0390

Dear Secretary McNulty:

Enclosed, for filing, are seven (7) copies of revised pages 1 and 2 to Exhibit "B" and a revised Map 1 for the above-referenced Letter of Notification. These documents have been revised and should replace the documents that were filed with the Letter of Notification on April 27, 2007.

These documents have been updated to reflect a revision to the engineering design of the line relocation. The fundamental change is that the redesigned line will continue to use the existing facilities to cross U.S. Route 220 with the exception of one new steel pole located on the east side of U.S. Route 220. Use of the existing facilities to cross U.S. Route 220 permits PPL Electric to reduce the number of existing wood poles that will be replaced. In addition, the right-of-way is being modified slightly to accommodate use of the existing US Route 220.

As indicated by the enclosed certificate of service, copies of this letter, revised pages 1 and 2 to Exhibit "B" and Map 1 to the above-referenced Letter of Notification are being served on all entities who received the original Letter of Notification.

Handwritten signature or initials

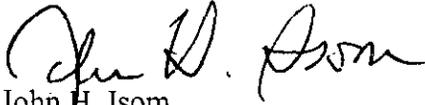
James J. McNulty

May 11, 2007

Page 2

If there are any questions concerning this matter, please contact me at the addresses or telephone numbers provided above.

Respectfully submitted,



John H. Isom

JHI/jl

Enclosures

cc: Certificate of Service

**EXHIBIT "B"**  
**LYCOMING-LOCK HAVEN #3 138/69 kV LINE RELOCATION**  
**ENGINEERING DESCRIPTION**

---

**A. DESCRIPTION OF PROPOSED PROJECT**

PPL EU proposes to relocate a section of the existing Lycoming-Lock Haven #3 138/69 kV transmission line to accommodate the Northside Expansion of the Wayne Township Landfill by the Clinton County Solid Waste Authority. This project involves the removal of approximately 0.73 mile of existing wood pole, 138/69 kV line and the installation of approximately 0.9 miles of new 138/69 kV transmission line. Both the existing and relocated transmission line sections are designed to accommodate the future installation of a second circuit. The proposed relocation is located in Wayne Township, Clinton County.

The proposed relocated line will consist of a combination of single and multi-pole, direct embedded, fabricated steel poles with guyed angles. Twelve existing wood pole structures will be replaced by approximately 14 new steel pole structures installed on average spans of 335 feet on the relocated line section. The new steel pole structures will on average extend 100 feet out of ground. Three 556.5 KCMIL, 24/7 strand, ACSR power conductors and one 3/8 inch high strength steel overhead ground wire will be installed on the relocated line section.

The relocated line will be designed according to and will generally exceed National Electrical Safety Code standards. Additional design criteria and safety rules practiced by PPL EU are included in Appendix A. The minimum conductor-to-ground clearance will be 30 feet. This minimum clearance occurs at a maximum thermal conductor temperature of 125°C. The design minimum conductor ground clearances and conductor thermal ratings are as follows:

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PPL  
SECRETARY'S BUREAU

**DESIGN MINIMUM CONDUCTOR CLEARANCES**  
**FOR 556.5 KCMIL 24/7 STRAND ACSR\***

<u>Condition</u>	<u>Double-Circuit Design Clearance-to-Ground</u>
Normal load, average weather (16°C ambient temperature)	33.6 feet
Predicted extreme thermal load (125°C conductor temperature)	30.0 feet
Predicted NESC Extreme wind load (16°C ambient temperature)	32.7 feet
Predicted extreme weather conditions (1-inch ice, 0 lbs. wind, -18°C)	30.3 feet

\*Clearances based on a maximum tension of 6,500 pounds at 1 inch ice, 0 lbs. wind, 0°F and a ruling span of 350 feet.

**CONDUCTOR THERMAL RATING**  
**556.5 KCMIL 24/7 ACSR**  
**(257°F) 125°C MAXIMUM CONDUCTOR TEMPERATURE**

<u>Condition</u>	<u>Ambient Temperature °C</u>	<u>Wind Speed Knots</u>	<u>Ampacity Amps</u>
Summer Normal	35	0	806
Winter Normal	10	0	1054
Summer Emergency	35	1.5	929
Winter Emergency	10	1.5	1187



## CERTIFICATE OF SERVICE

I hereby certify that a true and correct copies of the foregoing Letter of Notification (including the exhibits and appendices) have been served upon the following persons, in the manner indicated, in accordance with the requirements of § 1.54 (relating to service by a participant).

### VIA FIRST CLASS MAIL

PA Historical and Museum Commission  
Bureau for Historic Preservation  
Commonwealth Keystone Building, 2<sup>nd</sup> Floor  
400 North Street  
Harrisburg, PA 17120-0053  
ATTN: Douglas C. McLearn, Chief

PA Department of Transportation  
Commonwealth Keystone Building  
400 North Street, 8th Floor  
Harrisburg, PA 17120  
ATTN: Honorable Allen D. Biehler,  
P.E., Secretary

Department of Environmental Protection  
P.O. Box 2063  
Market Street State Office Building  
Harrisburg, PA 17105-2063  
ATTN: Office of Field Operations

Jay B. Alexander, General Manager  
Clinton County Solid Waste Authority  
PO Box 209  
McElhattan, PA 17748

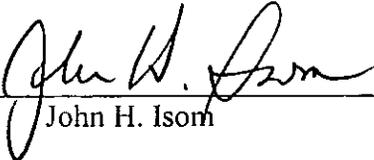
Richard Kyle, Commissioner  
Clinton County  
232 E. Main Street  
Lock Haven, PA 17745

Timothy Holladay, Director  
Clinton County Planning Department  
232 E. Main Street  
Lock Haven, PA 17745

James Maguire, Supervisor  
Wayne Township  
PO Box 217  
McElhattan, PA 17748

Miles Houseknecht, Chairman  
Wayne Township Planning Commission  
PO Box 217  
McElhattan, PA 17748

Date: May 11, 2007

  
\_\_\_\_\_  
John H. Isom

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

John H. Isom

jisom@postschell.com  
717-612-6032 Direct  
File #: 2507-132676

June 20, 2007

VIA HAND DELIVERY

DOCUMENT  
FOLDER

2007 JUL 20 PM 4:08  
SECRETARY'S OFFICE

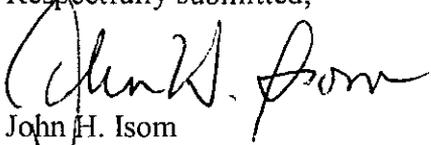
James J. McNulty  
Secretary  
Pennsylvania Public Utility Commission  
Commonwealth Keystone Building  
400 North Street, 2nd Floor North  
PO Box 3265  
Harrisburg, PA 17105-3265

**RE: Letter of Notification of PPL Electric Utilities Corporation, filed Pursuant to 52 Pa. Code Chapter 57, Subchapter G with Respect to the Relocation of a Portion of the Lycoming-Lock Haven # 3 Transmission Line in Wayne Township, Clinton County for the Clinton County Solid Waste Authority - Docket No. A-110500F0390**

Dear Secretary McNulty:

Enclosed, for filing, are an original and three (3) copies of the Proof of Publication from The Lock Haven Express, Lock Haven, PA regarding the above-referenced proceeding.

Respectfully submitted,

  
John H. Isom

JHMjl  
Enclosures

75

# Proof of Publication

SECRETARY'S BUREAU  
2007 JUL 120 PM 4:08

STATE OF PENNSYLVANIA } SS  
CLINTON COUNTY

Before me, a Notary in and for the County aforesaid, personally appeared Robert O. Rolley, Jr. who being duly sworn according to law, doth depose and say that he is Publisher of The Lock Haven Express, a general newspaper established on the First Day of March 1882, and published at Lock Haven, in Clinton County, Pennsylvania, and that the advertisement of which a copy is attached hereto, was published in the regular editions and issues of said newspaper on the following dates, May. 22. &. 29.,. 2007.....

And in all respects as ordered; and that the affiant is not interested in the subject matter of the notice and that all of the allegations of the statement as to the time, place and character of publication are true.

DOCUMENT  
FOLDER



.....Publisher

Sworn and subscribed before me this.....15th.....day of.....June..... A.D. 2007.

  
Notary Public

My Commission expires

NOTARIAL SEAL  
LINDA H. HINTON, Notary Public  
Lock Haven, Clinton County, PA  
My Commission Expires May 24, 2011

## PUBLIC NOTICE TRANSMISSION LINE RELOCATION

PPL Electric Utilities Corporation (PPL EU) proposes to relocate a section of the existing single circuit Lycoming-Lock Haven #3 138,000-volt transmission line in the Wayne Township Landfill; Clinton County. The relocation is required to accommodate the Northside Expansion of the Landfill by the Clinton County Solid Waste Authority.

If you would like more information on this project, please contact PPL's Donald E. Stringfellow, at (570) 340-5235.

On April 27, 2007 PPL EU filed an application with the Pennsylvania Public Utility Commission, which must approve the project before PPL can begin. A copy of the application is available for public inspection on weekdays during business hours at:

PPL Susquehanna Service Center  
4810 Lycoming Mall Drive  
Montoursville, PA 17754-8301

Wayne Township Municipal Building  
773 Pine Mountain Road  
McElhattan, PA 17748

DOCKETED  
JUL 5 - 2007

→ OVER

If you wish to participate in the PUC application process, you should contact within 15 days:

James J. McNulty, Esquire  
Prothonotary  
Pennsylvania Public Utility  
Commission  
PO Box 3265  
Harrisburg, PA 17105-3265

As a reference aid, be sure to include the project's "docket number," which is A-110500 F0390.

ORIGINAL

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

John H. Isom

jisom@postschell.com  
717-612-6032 Direct  
File #: 2507-132676

June 26, 2007

VIA HAND DELIVERY

James J. McNulty  
Secretary  
Pennsylvania Public Utility Commission  
Commonwealth Keystone Building  
400 North Street, 2nd Floor North  
PO Box 3265  
Harrisburg, PA 17105-3265

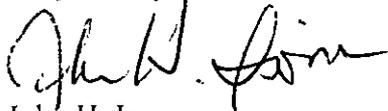
2007 JUL 26 PM 3:48  
SECRETARY'S BUREAU

**RE: Letter of Notification of PPL Electric Utilities Corporation, filed Pursuant to 52 Pa. Code Chapter 57, Subchapter G with Respect to the Relocation of a Portion of the Lycoming-Lock Haven # 3 Transmission Line in Wayne Township, Clinton County for the Clinton County Solid Waste Authority - Docket No. A-110500F0390**

Dear Secretary McNulty:

Enclosed, for filing, are an original and three (3) copies of the Proof of Publication from The Williamsport Sun-Gazette regarding the above-referenced proceeding.

Respectfully submitted,



John H. Isom

JHI/jl  
Enclosures

DOCUMENT  
FOLDER

22

ORIGINAL

State of Pennsylvania ( ( SS.  
County of Lycoming (

Before me, a Notary Public, duly commissioned in and for said county and state, personally appeared Helen Hyman for the Sun-Gazette Company of 252 West Fourth Street, Williamsport, Pennsylvania, publishers of the WILLIAMSPORT SUN-GAZETTE, a newspaper of general circulation, who being duly sworn according to law deposeth that the advertisement of PPL UTILITIES

appeared in the WILLIAMSPORT SUN-GAZETTE on May 22, 2007, May 29, 2007

Helen Hyman

Sworn to and subscribed before me this 15<sup>th</sup> day of June, 2007

Cathy A. Billey  
Notary Public

NOTARIAL SEAL  
CATHY A. BILLEY, Notary Public  
City of Williamsport, Lycoming County  
My Commission Expires May 15, 2011

2007 JUN 26 PM 3:48  
SECRETARY'S BUREAU