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September 14, 2012

**VIA First Class Mail**

Rosemary Chiavetta  
Secretary  
Pennsylvania Public Utility Commission  
Commonwealth Keystone Building  
2<sup>nd</sup> Floor, Room N201  
Harrisburg, PA 17120

**Re: Letter of Notification of PECO Energy Company Pursuant to 52 Pa. Code Chapter 57 Subchapter G With Respect to the Reconductoring and Reconfiguration of the Plymouth Meeting – Bryn Mawr 138 kV Transmission Line, Docket No. A-**

Dear Secretary Chiavetta:

Enclosed for filing pursuant to 52 Pa. Code § 57.74(a) are an original and six copies of PECO Energy Company's Letter of Notification in the above-referenced matter.

Please let me know if you have any questions.

Sincerely,



Ward L. Smith  
Assistant General Counsel

WLS

Attachments

cc: Service List

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**BEFORE THE  
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

**Letter of Notification of PECO Energy** :  
**Company Pursuant to 52 Pa. Code** :  
**Chapter 57 Subchapter G With Respect** : **Docket No. A-\_\_\_\_\_**  
**to the Reconductoring and** :  
**Reconfiguration of the Plymouth** :  
**Meeting – Bryn Mawr 138 kV** :  
**Transmission Line** :

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**LETTER OF NOTIFICATION**

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**I. INTRODUCTION AND OVERVIEW**

1. This Letter of Notification is filed pursuant to 52 Pa. Code §57.72(d)(1)(i) and (v) to request the approval of the Pennsylvania Public Utility Commission (“Commission”) to reconductor and reconfigure, build and modify, entirely on existing right-of-way and fee-owned, eased, or licensed land, approximately 6.5 miles of an existing 9.82 mile 138kV transmission line located in Plymouth, Upper Merion and Lower Merion Townships in Montgomery County and Radnor and Haverford Townships in Delaware County.<sup>1</sup> As more fully described hereafter, this transmission line work is necessary to maintain and improve the reliability of the interstate transmission grid. The need for transmission line modifications was identified in the 2008 Baseline Regional Transmission Planning Report (the “2008 Baseline RTEP Report”) prepared by the PJM Interconnection LLC (“PJM”), and affirmed in subsequent PJM analyses. PJM is the Independent System Operator (“ISO”) for the transmission system in the Mid-Atlantic region and NERC-registered Transmission Operator, Transmission Planner, Reliability Coordinator,

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<sup>1</sup> PECO will install optical ground wire, or “OPGW,” along the entire length of the Plymouth Meeting – Bryn Mawr line.

Transmission Provider, and Balancing Authority for the PECO transmission system. Subject to the Commission's siting approval, construction of the proposed transmission line modifications described herein is scheduled to begin in September 2012.

**II. THE APPLICANT AND ITS ATTORNEY(S)**  
**(52 Pa. Code § 52.72(c)(1) and (2))**

2. The applicant is PECO Energy Company ("PECO" or the "Company"), 2301 Market Street, Philadelphia, Pennsylvania 19103. PECO is a public utility that supplies light, heat, and power to the public, by means of electricity, in all or portions of six counties in southeastern Pennsylvania. PECO is a "public utility" and an Electric Distribution Company ("EDC"), as those terms are defined in Sections 102 and 2803 of the Public Utility Code (66 Pa. C.S. §§102 and 2803), and it is subject to the regulatory jurisdiction of the Commission.

3. PECO's attorney is:

Ward L. Smith  
Assistant General Counsel  
Exelon Business Services Company  
2301 Market Street, S23-1  
Philadelphia, PA 19103  
215 841-6863  
[ward.smith@exeloncorp.com](mailto:ward.smith@exeloncorp.com)

PECO's attorney is authorized to receive all notices and communications regarding this Letter of Notification.

**III. THE NEED FOR THE PROPOSED TRANSMISSION  
LINE MODIFICATIONS  
52 Pa. Code § 52.72 (c)(5)**

4. In the course of its ongoing review of the interstate transmission system, PJM Interconnection, LLC has determined that, beginning in the summer of 2013, if certain other transmission lines are out of service, then the Plymouth Meeting – Bryn Mawr 138 kV transmission line would exceed its safe operating capacity for the duration of such an outage. The need for this project was originally identified in the 2008 Baseline RTEP Report, which identified and lists this project as Baseline Upgrade b0727. The introduction to the 2008 Baseline RTEP Report (p. 1) describes why the projects identified by PJM must be done:

The purpose of this assessment is threefold:

- to identify areas where the system, as planned, does not meet the applicable reliability criteria and standards. The baseline system is assessed using the same criteria and analysis methods that is used for assessing the impact of proposed new interconnection projects. This will ensure that the need for system enhancement of the baseline system and enhancements due to interconnection projects are determined in a consistent and equitable manner.
  
- to develop and recommend facility expansion plans which will bring areas where the system does not meet performance requirements specified in an applicable standard into compliance. These plans include cost estimates and required in-service dates.
  
- to establish what will be included as baseline costs in the allocation of the costs of expansion for those generation and merchant transmission projects proposing to connect to the PJM system.

Each year, PJM refreshes its regional reliability planning analysis. PJM initially identified the need for the Plymouth Meeting – Bryn Mawr upgrade in the 2008 Baseline RTEP Report, and

has reiterated this need in each of its annual analyses since that time. (Relevant pages of the 2008, 2009, 2010, and 2011 Baseline RTEP Reports, each demonstrating that the Plymouth Meeting – Bryn Mawr upgrade remains a required PJM project, are attached as Exhibits A-D.)

5. Pursuant to Schedule 6, Section 1.7 of PJM’s Operating Agreement, which was approved by, and is on file with, the Federal Energy Regulatory Commission (“FERC”), once PJM has approved reliability modifications to the transmission system, PECO is required to make those modifications.

#### **IV. GENERAL DESCRIPTION OF THE LINE MODIFICATIONS**

##### **52 Pa. Code § 52.72 (c)(3)**

6. The Plymouth Meeting – Bryn Mawr line is an existing 138 kV circuit on an existing transmission corridor. A map showing the general location of the line is attached as (Exhibit E). The existing transmission corridor follows the following route, which is 9.82 miles long:

- The line begins at PECO’s Plymouth Meeting substation, which is located at 2001 Gallagher Road, Plymouth Township. The substation is located on PECO fee-owned property.
- From there, the line runs in a westerly direction just south of, and parallel to, the Pennsylvania Turnpike, crossing the Schuylkill River into Upper Merion Township. This portion of the corridor is PECO owned or eased land.
- The line then turns south and crosses over East Church Road and continues just east of, and parallel to, Horizon Drive and Renaissance Boulevard. This portion of the corridor is PECO owned or eased land.

- At Route 320, the line makes a turn to the west in front of Glaxo SmithKline before turning south again and crossing Balligomingo Road. This portion of the corridor is PECO owned or eased land.
- After a turn to the southeast, the line crosses the Schuylkill Expressway at the off-ramp for westbound Exit 330 and enters Lower Merion Township, where it runs between Rebel Hill Road and Timothy Court. This portion of the corridor is PECO owned or eased land.
- The line then meets up with SEPTA's Route 100 Norristown High Speed Line and parallels the tracks the rest of the way through Radnor and Haverford townships in Delaware County. This portion of the corridor is primarily on SEPTA property, pursuant to a PECO license from SEPTA, although at some places the corridor is on PECO owned or eased land. The SEPTA portion of the corridor is 4.89 miles long.
- The line ends at the Bryn Mawr Substation located at 305 Landover Road, Haverford Township, which is owned in fee by PECO.

The general line modification needed for this project is to reconductor 6.5 miles of the line with new conductors of higher capacity so that the projected load may safely and reliably be transmitted over the line in the event of a contingency outage on certain 138 kV transmission lines. The remaining 3.30 miles of the line already has conductors of sufficient capacity, and no work is needed on that portion of the line other than installation of OPWG. The transmission line currently has 118 transmission structures. The 6.5 mile portion of the line that requires new conductors contains 90 structures. The existing structures are comprised of H-frame wooden structures and wooden poles; the existing conductor configuration is both horizontal and vertical. Nine of the existing structures will be retained; 13 will be removed and the locations used by those structures will be left vacant. The remaining 68 existing structures do not have the structural capacity to carry the weight of the new conductors. These 68 structures will therefore be replaced in-kind by steel monopole structures with the transmission line, using a three-phase delta configuration at all but a few locations where vertical configurations will be used due to

design or spacing constraints. Where monopoles are used to replace existing H-frame structures, the new monopoles will have a smaller overall footprint than the H-frame structures that they replace, and will also typically have increased conductor height compared to the existing line. Where monopoles are used to replace existing wooden poles, the new monopole will typically have a slightly larger foundation and height than the existing pole. During the fall of 2012, the new monopoles will be constructed adjacent to the existing structures. In the spring of 2013 an outage will be taken on the Plymouth Meeting – Bryn Mawr line, and new conductors will be safely installed for the length of the reconducted line. The existing conductors and transmission structures will be removed and the transmission line will be re-energized prior to the June 2013 in-service date.

At the conclusion of the project, the corridor will have a single transmission circuit, comprised of 68 new steel monopoles and 37 existing structures. The location of each support structure (monopole/existing structure) will be within a few feet – typically 20 feet or less – of the existing structure that it replaces. All new support structures will be constructed in areas for which PECO has property ownership, easement rights, or a license from SEPTA. Materials demonstrating that PECO has rights (fee ownership, easement, or license) are available for Commission review on a confidential basis.

## **V. SAFETY CONSIDERATIONS**

### **52 Pa. Code § 52.72 (c)(6)**

8. The design criteria used for the transmission line work described herein is set forth in PECO's standards for transmission line construction. These design criteria meet or exceed the requirements of the National Electrical Safety Code ("NESC"). Furthermore, PECO

will construct, operate, and maintain the transmission facilities in a manner that satisfies or surpasses NESC standards.

9. PECO has evaluated the magnetic fields associated with this project. Magnetic fields are primarily affected by load on the line, design configuration of the conductors on the conductors, and distance from the line source.

As to loading on the line, little change is expected. As previously described, the purpose of this project is to allow the 130-35 line to operate safely during outage events on other lines; normal operations of the 130-35 line are not expected to change significantly after this project is complete. For example, average loads in 2011-12 were 471 amps; PECO expects average loads in 2015 to be 478 amps. Peak loads in 2011-12 were 850 amps; PECO expects peak loads in 2015 to be 863 amps. The primary change is in emergency maximum (thermal) loading, which increases from the existing 1037 amps to 1420 amps after the project. This loading level, however, is expected to be used only during outages on other lines – in some years it will not occur at all -- and to be of limited duration when it does occur. The loading factor is thus not expected to significantly change magnetic fields associated with the line.

As to configuration and distance, PECO expects those factors to result in significant reductions to magnetic fields along much of the length of the line. This is due to a number of factors. First, this corridor also contains PECO distribution facilities and, where possible, PECO will phase the transmission conductors to attain magnetic field cancellation between the transmission line and the distribution line. Second, where PECO installs new poles, it will

change the configuration of the line from the existing horizontal or vertical configuration to a delta configuration, which will also tend to increase electric and magnetic field cancellation. The poles will also have greater height than the existing structures, which will increase the distance from conductor to ground, thus decreasing the magnetic fields as compared to the existing structures.

Exhibit F – Magnetic Field Calculation Results – provides the existing and calculated future magnetic fields for four representative locations along the line, showing the effect of this combination of factors at various points along the line. As Exhibit F shows, the combination of all loading, configuration, and distance will mean that magnetic fields will remain unchanged for a portion of the line, and be significantly reduced along other areas of the line. For these reasons, PECO expects the overall magnetic fields from this line to decrease after this project.

## **VI. SITING AND ENVIRONMENTAL AND LAND USE IMPACTS**

10. The functional requirements of the project allow PECO to use existing rights-of-way and fee- or easement-owned or licensed land for all of the modifications for which approval is sought herein. This transmission line work will take place on an existing transmission line right-of-way, which has been used as a transmission and distribution line corridor for decades. The work will use some existing support structures; where new structures are installed they typically will be installed adjacent to the existing structure and then the existing structure will be removed. Before it performs construction work, PECO will conduct an analysis of the presence/absence of wetlands for the project. Where wetlands are identified and access is required, they will be surveyed, marked in the field, and designated on drawings. Where access

over wetlands is necessary to perform the construction work, PECO will utilize temporary mats or other approved or permitted methods to avoid damage. As a consequence of all of these factors, the transmission line modifications proposed for approval herein will create minimal new environmental and land use impacts.

11. No communications towers, pipelines, or other utilities will be affected by the proposed transmission line modifications. Because the project involves the reconfiguration and reconductoring of existing transmission facilities, PECO has concluded that the proposed modifications will have no impact on any airports. However, if needed, PECO will perform all necessary notifications and obtain all necessary state and federal permits to comply with FAA and airport requirements.

12. The proposed transmission line modifications will have no significant environmental impacts. No unique geological, scenic or natural areas will be affected. All federal and state permits required for the construction and operation of this project will be obtained.

13. Because the project involves the reconfiguration and reconductoring of existing transmission facilities on an active transmission right-of-way, PECO generally concluded that no historical or archeological sites will be affected. Where any question has been raised as to whether the any portion of the existing transmission line corridor has historical or archeological significance, PECO has conferred with the Pennsylvania Historical and Museum Commission. To date, no such sites have been confirmed by the PHMC. If any such potential sites are raised,

PECO will then again confer with the PHMC and reconfirm the original determination and, if necessary, implement mitigation or avoidance measures at these locations.

**VII. COMMENCEMENT AND IN-SERVICE DATES**  
**52 Pa. Code § 52.72(d)(4)(ii)**

14. This project has a needed in-service date of June 1, 2013 in order to meet the requirements of the PJM 2008 Baseline Report. In order to meet this in-service date, PECO needs to commence construction in October 2012.

**VIII. THE SIZE, CHARACTER, DESIGN AND CONFIGURATION OF  
THE TRANSMISSION LINE MODIFICATION WILL NOT  
SUBSTANTIALLY ALTER THE RIGHTS-OF-WAY**  
**52 Pa. Code §52.72(d)(4)(iii)**

15. This Letter of Notification is filed pursuant to 52 Pa. Code §57.72(d)(1)(i) and (v). As explained in Section IV, above: (1) this project is a reconfiguration and reconductoring of an existing transmission line along an active PECO transmission right-of-way, using existing support structures and new poles mostly located adjacent to existing structures; (2) the existing structures that are replaced will be removed; and (3) PECO expects the magnetic fields associated with the transmission line to remain the same or, along some portions of the reconstructed line, to be decreased. Therefore, none of these modifications will substantially alter the rights-of-way on which the lines are located.

**IX. FILING DATE AND PUC PROCEDURES**  
**52 Pa. Code § 52.72(d)(4)(iv)**

16. This Letter of Notification is being filed on the date shown next to the signature block 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, PECO will then be approved to perform the proposed transmission line modifications 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, then the Commission's Order shall direct PECO to file for approval to construct the proposed project pursuant to the Commission's certification regulations for a full application.

## **X. SERVICE AND PUBLICATION**

17. PECO has already conducted significant public outreach to take public input on this project and to make certain that its construction plans are known by the local populace and government. To date, PECO has performed the following public outreach:

- In September 2011, PECO mailed a letter to each building within 500 feet on either side of the existing line with a fact sheet regarding the project and an invitation to attend an upcoming PECO open house to provide additional detail regarding the project. Approximately 1000 such letters were sent.
- In September 2011, PECO published notice in newspapers of local circulation inviting the public to PECO open houses and providing information about the project and project need.
- In September 2011, PECO contacted officials at all local municipalities to provide them with background information on the project and invite them to the PECO open houses.
- In September 2011, PECO did a manual walkdown of the corridor and knocked on the door of each residence immediately adjacent to the corridor. Project informational materials and an invitation to a PECO open house were left at all addresses; if the resident was home, PECO engaged in discussions regarding the project.

- On September 20, 2011, PECO held an open house in Delaware County to provide the public with additional information about the project.

- On September 22, 2011, PECO held an open house in Montgomery County to provide the public with additional information about the project.

- In October 2011, PECO sent followup letters to the 1000 or so local residents who had received its September 2011 letter.

- In January 2012, PECO began its field work to identify access points and routes for work. During this work PECO personnel interacted with numerous local residents regarding access and other issues.

- In February 2012, PECO received inquiries from two local residential areas, Rebel Hill in Montgomery County and Aldwyn Lane in Delaware County. PECO personnel met with residents and the homeowners' association as requested.

- On April 30, 2012, PECO held a separate open house to provide additional information on the project to residents of the Rebel Hill area. Project update letters were sent to open house participants between April 18 and May 1, 2012.

- On May 14, 2012, PECO held a separate open house to provide additional information on the project to residents of the Aldwyn Lane area.

- On June 11, 2012, PECO provided a written Q and A document to Aldwyn Lane residents, answering 30 questions (with subparts) that had been posed by Aldwyn Lane residents.

- Since that time, PECO has continued to meet with Aldwyn Lane residents to discuss access, location of fences and structures, and other construction issues.


18. As set forth above, PECO has engaged in extensive public outreach to hundreds of residents along the transmission line corridor and to all local government entities through which the transmission line corridor passes and informed them of the PUC process. PECO therefore recommends that additional newspaper notice of this Letter is not needed.

19. Copies of the Letter of Notification or Notices of Filing of the Letter of Notification are being served in accordance with 52 Pa. Code § 57.74, as evidenced by the Certificate of Service being filed along with this Letter of Notification.

20. As noted, prior to filing this Letter of Notification, PECO has had discussions with property owners along the right-of-way to discuss access, construction issues, and related matters. PECO will continue to have such discussions with nearby property owners throughout the project.

**WHEREFORE**, PECO Energy Company respectfully requests that the Commission approve the transmission line modifications as proposed and described herein and, for the reasons set forth above.

Respectfully submitted,

  
\_\_\_\_\_  
Attorney for PECO Energy Company

Dated: September 14, 2012

**PECO Letter of Notification  
Plymouth Meeting – Bryn Mawr 138 kV Line**

**Exhibit A**

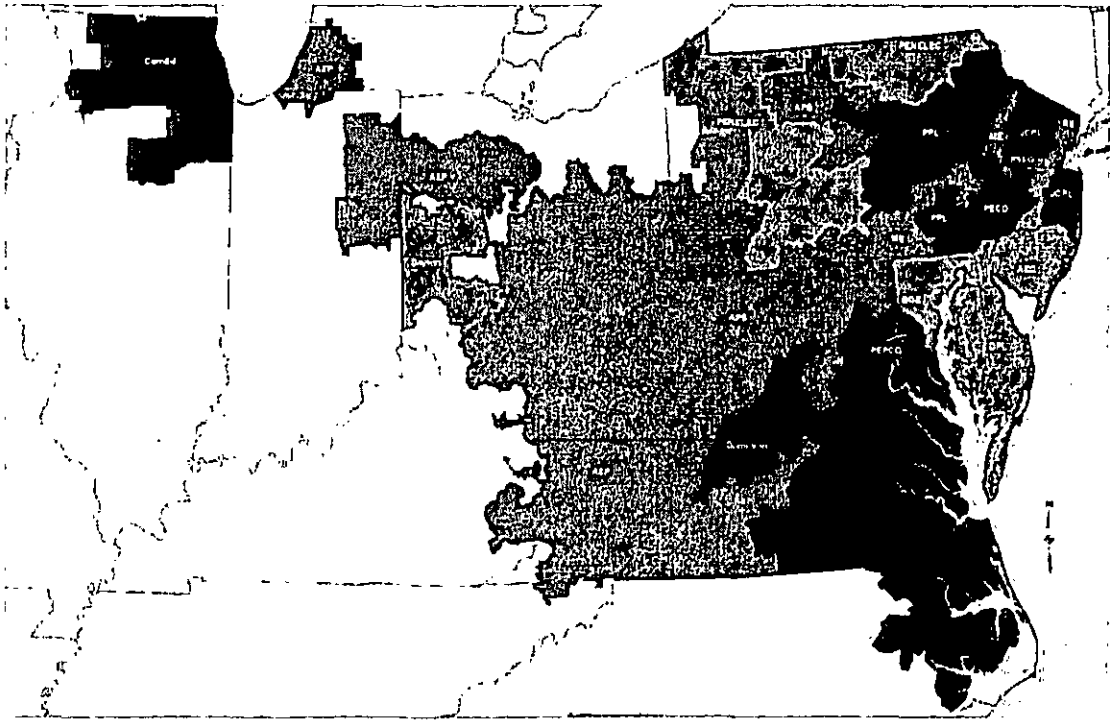
**PJM 2008 Baseline Report  
(Excerpts)**

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# 2008 BASELINE ASSESSMENT



For the 2009 - 2023 Period

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## **INTRODUCTION**

As a Federal Energy Regulatory Commission (FERC) approved Regional Transmission Organization (RTO), one of PJM's core functions encompasses regional transmission planning. PJM's Regional Transmission Expansion Plan (RTEP) identifies transmission upgrades and enhancements that are required to preserve the reliability of the transmission system. The PJM system is planned such that it can be operated to supply projected customer demands and projected firm transmission service over a range of forecast system demands under contingency conditions that have a reasonable probability of occurrence. PJM reliability planning encompasses a comprehensive series of detailed analysis that ensures reliability under the most stringent of the applicable NERC, Regional Entity (RFC or SERC as applicable), PJM and local criteria. To accomplish this each year, a comprehensive baseline assessment of all Bulk Electric System (BES) facilities over the near term (1-5 years) and long term (years 6 – 15) is completed.

The PJM RTEP process also requires that cost responsibility for facility enhancements be established. In order to establish a starting point for development of Regional Transmission Expansion Plans and determine cost responsibility for expansion facilities, a 'baseline' assessment of system adequacy and security is necessary. The purpose of this assessment is threefold:

- to identify areas where the system, as planned, does not meet the applicable reliability criteria and standards. The baseline system is assessed using the same criteria and analysis methods that is used for assessing the impact of proposed new interconnection projects. This will ensure that the need for system enhancement of the baseline system and enhancements due to interconnection projects are determined in a consistent and equitable manner.
- to develop and recommend facility expansion plans which will bring areas where the system does not meet performance requirements specified in an applicable standard into compliance. These plans include cost estimates and required in-service dates.
- to establish what will be included as baseline costs in the allocation of the costs of expansion for those generation and merchant transmission projects proposing to connect to the PJM system.

The system as planned is tested for its compliance with all applicable reliability standards to accommodate the forecast demand, committed resources, and commitments for firm transmission services for a specified time frame. Areas that are found to not meet applicable reliability criteria are identified and enhancement plans are developed to achieve compliance. The resulting as planned system is tested in aggregate to ensure that the individual enhancement plans are coordinated and full system compliance has been achieved.

The 'baseline' assessment and the resulting expansion plans serve as the base system for the conduct of Interconnection Feasibility Studies and Impact Studies.

This report details the results of the 'baseline' assessment from 2009 through 2023 for the PJM system as it existed in December 2008.

## EXECUTIVE SUMMARY

PJM has responsibility for the development of a Regional Transmission Expansion Plan (RTEP) for the PJM system that will meet the needs of the region in a reliable, economic and environmentally acceptable manner. The RTEP assesses the needs of the system in the near term (within five years) and over the longer term (15 years) to identify baseline transmission enhancements that require more time to implement. PJM also is responsible for recommending the assignment of any transmission expansion costs to the appropriate parties. In order to carry out these responsibilities, it is necessary to establish a starting point or 'baseline' from which the need and responsibility for enhancements can be determined.

In order to establish that baseline, PJM has defined the fifteen (15) year period from 2009 through 2023 as the 2008 "baseline" planning period. This assessment is inclusive of the previous years' baseline reports and required upgrades. As such, the existing system plus any planned modifications to the transmission system including reactive resources that are scheduled to be in service prior to the 2013 summer peak period was chosen as the base system. This ensures the system as planned remains compliant with reliability standards. In addition, assessments for delivery years prior to 2013 were updated with current assumptions to validate the on-going need for identified upgrades and to ensure continued compliance with reliability criteria. All new generation and merchant transmission projects in Queues A through S that executed a Facility Study Agreement were also included in this baseline system along with any associated transmission enhancements as identified in the Impact Studies. Any supplemental transmission enhancements independent of those associated with new generation or merchant transmission projects were also included. All firm transmission service currently committed for the period was represented.

PJM has conducted a comprehensive assessment of the ability of the PJM system to meet all applicable reliability planning criteria. The applicable reliability planning criteria are listed below:

- NERC Planning Standards  
( [http://www.nerc.com/~filez/standards/Reliability\\_Standards.html](http://www.nerc.com/~filez/standards/Reliability_Standards.html) )
- RFC Reliability Principles and Standards  
(<http://www.rfirst.org/Standards/ApprovedStandards.aspx>)
- PJM Reliability Planning Criteria as contained in Manual M14B Attachment G (<http://www.pjm.com/documents/manuals.aspx>)
- Transmission Owner Reliability Planning Criteria as filed in their respective FERC 715 filing.

*In completing this assessment, PJM has documented all conditions where the system did not meet applicable reliability criteria and identified the system reinforcements required to bring the system into compliance along with estimated cost and lead-time to implement them.*

Those areas that were found to not meet applicable reliability standards establish the need for reinforcement in those areas independent of any future interconnection projects not included in the baseline analysis. The resulting system with the identified

reinforcements to bring the system into compliance, will be used in evaluating the impact of the projects in Queues T,U1 and U2 that qualify and elect to proceed with the impact studies. The extent to which reinforcements identified in the baseline assessment are advanced, deferred, modified or eliminated will be used in determining cost responsibility for the final plans in the RTEP.

It should be recognized that the reinforcements proposed in this baseline analysis might be modified, advanced, deferred or eliminated as a result of generation or merchant transmission projects being added to or removed from the system. The development of the RTEP for PJM is an ongoing process, which will include the conduct of impact studies and development of plans to accommodate the new interconnection projects in Queues T,U1 and U2. Upon completion of the impact studies some projects may elect not to proceed. When it is determined which projects will commit to proceed, a new baseline RTEP will be developed to meet the needs of the region, including the accommodation of all new projects committed to connect, during the next 5 year period.

### **KEY FINDINGS**

Inclusive of the baseline upgrades identified in the Results Section of this assessment, PJM assesses its system as being compliant with the thermal, reactive, and stability requirements of all applicable standards including NERC Standards TPL-001, 2, 3, and 4 for each of the years 2009 through 2023.

The reinforcements required to achieve compliance which have an estimated cost of at least \$5 million are noted below. A complete list of projects along with detailed descriptions of the conditions that are driving the need for them, are reported in the Results section of this report. PJM staff from the Power System Coordination group will work with the transmission owners and generation or merchant transmission developers to establish project schedules and coordinate any required outage activities to ensure these reinforcements are completed by their required in-service dates. The cost estimates below are based on those provided at the September 17, 2008 and October 15, 2008 and November 5, 2008 TEAC meetings.

### **Mid-Atlantic Region System Upgrades**

- Baltimore Gas and Electric Transmission Zone
  - Rebuild the two Harford to Perryman 115 kV lines - \$ 8.0 M
  
- Delmarva Transmission Zone
  - Convert the 138 kV line from Vienna to Loretto to Piney Grove to 230 kV and add a 230/138 kV transformer at Loretto \$40 M
  - Add a second 230/138 kV transformer at Harmony - \$7.5 M
  - Build a new Indian River to Bishop 138 kV line - \$18 M
  - Upgrade the Glasgow to Mt. Pleasant 138 kV line - \$5.7 M
  - Add a third Steele 230/138 kV transformer - \$8.0 M
  
- MetEd Transmission Zone
  - Add a new 230/69 kV substation at Bernville - \$5.73 M
  
- PECO Transmission Zone
  - Rebuild the Bradford to Planebrook 220-02 230 kV line - \$7.0 M

## Executive Summary

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- Rebuild the Bradford to Planebrook 220-31 230 kV line - \$7.5 M
- Rebuild the Bryn Mawr to Plymouth Meeting 138 kV line - \$12.5 M
- Penelec Transmission Zone
  - Reconfigure the Glade 230 kV ring bus - \$5.64 M
- PEPCo Transmission Zone
  - Install a new 230/34 kV transformer at Bells Mill - \$ 10.7 M
  - Add a new 230/69 kV transformer at Benning \$ 54 M
  - Add shunt reactors to the Benning to Ritchie 230 kV underground lines - \$ 6.4 M
- PP&L Transmission Zone
  - Rebuild the Brunner Island – West Shore 230 kV line and add a parallel line - \$34 M
  - Rebuild the Eldred to Pine 69 kV line - \$10.2 M
  - Add a 230/138/69 kV transformer at Harwood - \$13.97 M
  - Add a Siegfried to Jackson 138 kV line - \$10.0 M
  - Rebuild the Siegfried to Quarry 69 kV line - \$5.0 M
  - Install a new Elroy to Hatfield 138/69 kV double circuit line and associated transformers at Elroy - \$38.42 M
  - Rebuild the Seidersville to Quakertown line and add a new 230/69 kV transformer at Hosensack - \$23.14 M
  - Add a new 230/69 kV substation at New Springfield - \$16.4 M
  - Rebuild the West Hempfield to South Manheim #3 69 kV line - \$5.66 M
  - Add a new Derry to Millville 69 kV line - \$9.35 M
  - Rebuild the Lackawanna to Edella 69 kV line - \$5.09 M
  - Add a 230/69 kV transformer at Stanton - \$5.9 M
  - Add a new Bohemia to Twin Lakes 69 kV line - \$18.53
  - Rebuild the Stanton to Old Forge 69 kV line - \$5.29 M
  - Add a new 69 kV line from Jackson to Lake Naomi - \$7.33 M
  - Add a new 69 kV line from Carlisle to West Carlisle - \$8.11 M
  - Add a new 69 kV line from Reeses Tap to Hershey - \$9.75 M
  - Rebuild the South Akron – South Manheim 69 kV lines at 138 kV and reconfigure existing South Akron – South Manheim 138 kV line - \$5.05 M
- PSEG Transmission Zone
  - Reconductor Branchburg – Flagtown 230 kV line - \$12 M
  - Reconductor Flagtown – Somerville 230 kV line - \$15 M
  - Reconductor Somerville – Bridgewater 230 kV line - \$9 M
  - Reconductor Hudson – South Waterfront 230 kV line - \$27 M
  - New Essex – Kearney 138 kV circuit and Kearney 138 kV bus tie - \$17 M
  - Build Branchburg to Roseland 500 kV - \$405.29 M
  - Build Roseland – Hudson 500 kV - \$342 M
  - Replace 138/13 kV XFMRs with 230/13 kV XFMRs as part of Branchburg – Hudson 500 kV project - \$34 M
  - Build Hudson 500 kV switching station - \$122 M
  - Build Roseland 500 kV switching station - \$70 M
  - Convert the E-1305/F-1306 to one 230 kV ckt - \$7.3 M
  - Build Hudson 230 kV transmission lines - \$7 M

- Install transformer at new Hudson 500 kV switching station and perform Hudson 230 kV and 345 kV station work - \$100 M
- Jersey Central Power and Light Transmission Zone
  - Add a new Boston Road and Hyson 34 kV substations - \$5.81 M

### Western Region System Upgrades

- American Electric Power
  - Build a new 69 kV line from Canal to Wooster and a new line from West Millersburg to Moreland Switch - \$ 27 M
  - Rebuild the West Millersport to Millersport 138 kV line - \$6.5 M
  - Rebuild the East Side Lima to Sterling 138 kV line - \$5.0 M
  - Rebuild the Albright to Mettiki to William to Parsons to Loughs Lane 138 kV line - \$14.7 M
- Allegheny Power System Transmission Zone
  - Add a fourth Cabot 500/138 kV transformer - \$8.07 M
  - Replace the Ringgold #3 transformer - \$5.8 M
  - Build a new 138 kV line from Osage to Whitely - \$13.3 M
  - Build a new 138 kV line from Sony to Yukon to Bethel Boro Tap - \$10.3 M
- Commonwealth Edison Transmission Zone
  - Rebuild the East Frankfort to Goodings Grove (Red) 345 kV line - \$15 M
  - Install two new 345/138 kV transformer at Plano (Red) - \$30 M
  - Install a new 345/138 kV transformer at Goodings Grove (Red) - \$15 M
  - Install a second East Frankfort 345/138 kV transformer and rebuild the Country Club to Matteson 138 kV line - \$11.25 M
  - Rebuild the Waukegan to Gurnee 138 kV lines - \$11.6 M
  - Install a 300 MVAR SVC at Elmhurst on the Blue system - \$32.5 M
  - Install a 300 MVAR SVC at Elmhurst on the Red system - \$32.5 M
  - Install a total of 1380 MVAR of shunt capacitors on at eight 138 kV stations - \$29.8 M

### Southern Region System Upgrades

- Dominion Virginia Power Transmission Zone
  - Build a new underground 230 kV line from Arlington to Ballston - \$80 M
  - Build a new 230 kV line from Hamilton to Middleburg - \$125 M
  - Install a new 500/115 kV transformer and associated circuit breakers at Chancellor - \$16 M
  - Install a second 230/115 kV transformer at Fredericksburg - \$ 5.5 M
  - Rebuild a section of the Possum Point to Minnieville 115 kV line - \$9.0 M
  - Build a second Dooms to Dupont to Waynesboro 115 kV line - \$6.0 M
  - Build a new Kitty Hawk to Nags Head 115 kV line - \$9.0 M
  - Rebuild the Chase City to Crewe 115 kV line - \$13.0 M
  - Rebuild the Moran DP to Crewe 115 kV line - \$5.0 M
  - Upgrade the Chase City to Twitty's Creek 115 kV line - \$7.0 M

## Executive Summary

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- Rebuild the Farmville to Pamplin 115 kV line - \$9.0 M
- Rebuild a Yorktown to Whealton 115 kV line - \$18.0 M
- Build a new 230 kV line from Old Church to Chickahominy - \$17.0 M
- Reconfigure the Idylwood to Arlington 230 kV line - \$25 M
- Upgrade a section of the Northern Neck to Harmony Village 115 kV line - \$5.5 M
- Rebuild the Trowbridge to Winfall 115 kV line - \$16.4 M
- Build a new Yorktown to Hayes 230 kV line - \$60.0 M

- Criteria test: Short Circuit
- Overview of Reliability Solution
  - Description of Upgrade: Replace Whitpain 230 kV breaker 145
  - Upgrade In-Service Date: June 1, 2011
  - Estimated Upgrade Cost: \$0.35 Million
  - Construction Responsibility: PECO

128) **Baseline Upgrade b0789**

- Overview of Reliability Problem
  - Criteria Violation: Bradford – Planebrook 230 kV Ckt.220-02
  - Contingency: Loss of other Bradford – Planebrook 230 kV line
  - Criteria test: (NERC TPL-002 Category B) Generator Deliverability
- Overview of Reliability Solution
  - Description of Upgrade: Reconductor the line to provide a normal rating of 677 MVA and an emergency rating of 827 MVA
  - Upgrade In-Service Date: June 2013
  - Estimated Upgrade Cost: \$7.0 Million
  - Construction Responsibility: PECO

129) **Baseline Upgrade b0790**

- Overview of Reliability Problem
  - Criteria Violation: Bradford – Planebrook 230 kV Ckt.220-31
  - Contingency: Loss of Bradford – Planebrook 230 kV and Bradford CB 220 breaker failure
  - Criteria test: (NERC TPL-003 Category C) Generator Deliverability
- Overview of Reliability Solution
  - Description of Upgrade: Reconductor the Bradford – Planebrook 230 kV Ckt. 220-31 to provide a normal rating of 677 MVA and emergency rating of 827 MVA
  - Upgrade In-Service Date: June 2013
  - Estimated Upgrade Cost: \$7.5 Million
  - Construction Responsibility: PECO

130) **Baseline Upgrade b0727**

- Overview of Reliability Problem
  - Criteria Violation: Bryn Mawr – Plymouth Meeting 138 kV overload (CV1 and CV2)
  - Contingency: Loss of Llanerch – Eddystone 138 kV Ckt.130-42 with basecase; or Loss of Llanerch – Eddystone 138 kV Ckt.130-42 and Llanerch – Eddystone 138 kV Ckt. 130-45
  - Criteria test: (NERC TPL-003 Category C) N-2
  - Criteria Violation Overload Amount

Criteria Violation	Overload (MW)
CV1	6.734
CV2	73.9

- Overview of Reliability Solution
  - Description of Upgrade: Rebuild Bryn Mawr – Plymouth Meeting 138 kV line
  - Upgrade In-Service Date: June 2013
  - Estimated Upgrade Cost: \$12.5 Million

- Construction Responsibility: PECO

131) **Baseline Upgrade b0654**

- Overview of Reliability Problem
  - Criteria Violation: Cambria Slope 115/46 kV transformer overload and other various overloads in 46 kV area
  - Contingency: Fault on the Wilmore Junction 115 kV 3-terminal line and failure of Cambria Slope SPS
  - Criteria test: NERC TPL-003 Category C
- Overview of Reliability Solution
  - Description of Upgrade: Reconfigure the Cambria Slope 115 kV and Wilmore Junction 115 kV stations to eliminate Wilmore Junction 115 kV 3-terminal line
  - Upgrade In-Service Date: June 1, 2010
  - Estimated Upgrade Cost: \$1.5 Million
  - Construction Responsibility: Penelec

132) **Baseline Upgrade b0655**

- Overview of Reliability Problem
  - Criteria Violation: Voltage collapse
  - Contingency: Forest 230 kV circuit breaker fault causing loss of Forest – Glade Tap 230 kV
  - Criteria test: NERC TPL-002 Category B
- Overview of Reliability Solution
  - Description of Upgrade: Reconfigure and expand the Glade 230 kV ring bus to eliminate the Glade Tap 230 kV 3-terminal line
  - Upgrade In-Service Date: June 1, 2010
  - Estimated Upgrade Cost: \$3.9 Million
  - Construction Responsibility: Penelec

133) **Baseline Upgrade b0656**

- Overview of Reliability Problem
  - Criteria Violation: Altoona 230/46 kV transformer #1 overload
  - Contingency: Loss of Altoona – Raystown 230 kV and Altoona 230/46 kV transformer #2
  - Criteria test: NERC TPL-003 Category C
- Overview of Reliability Solution
  - Description of Upgrade: Add three breakers to form a ring bus at Altoona 230 kV
  - Upgrade In-Service Date: June 1, 2010
  - Estimated Upgrade Cost: \$6.45 Million
  - Construction Responsibility: Penelec

134) **Baseline Upgrade b0746**

- Overview of Reliability Problem
  - Criteria Violation: Station H – Quince Orchard 230 kV overload
  - Contingency: Loss of Dickerson – Quince Orchard DCTL
  - Criteria test: (NERC TPL-002 Category B) Generator Deliverability
- Overview of Reliability Solution
  - Description of Upgrade: Upgrade circuit to 3,000 amps using the ACCR
  - Upgrade In-Service Date: June 2013
  - Estimated Upgrade Cost: \$6.252 Million

**PECO Letter of Notification  
Plymouth Meeting – Bryn Mawr 138 kV Line**

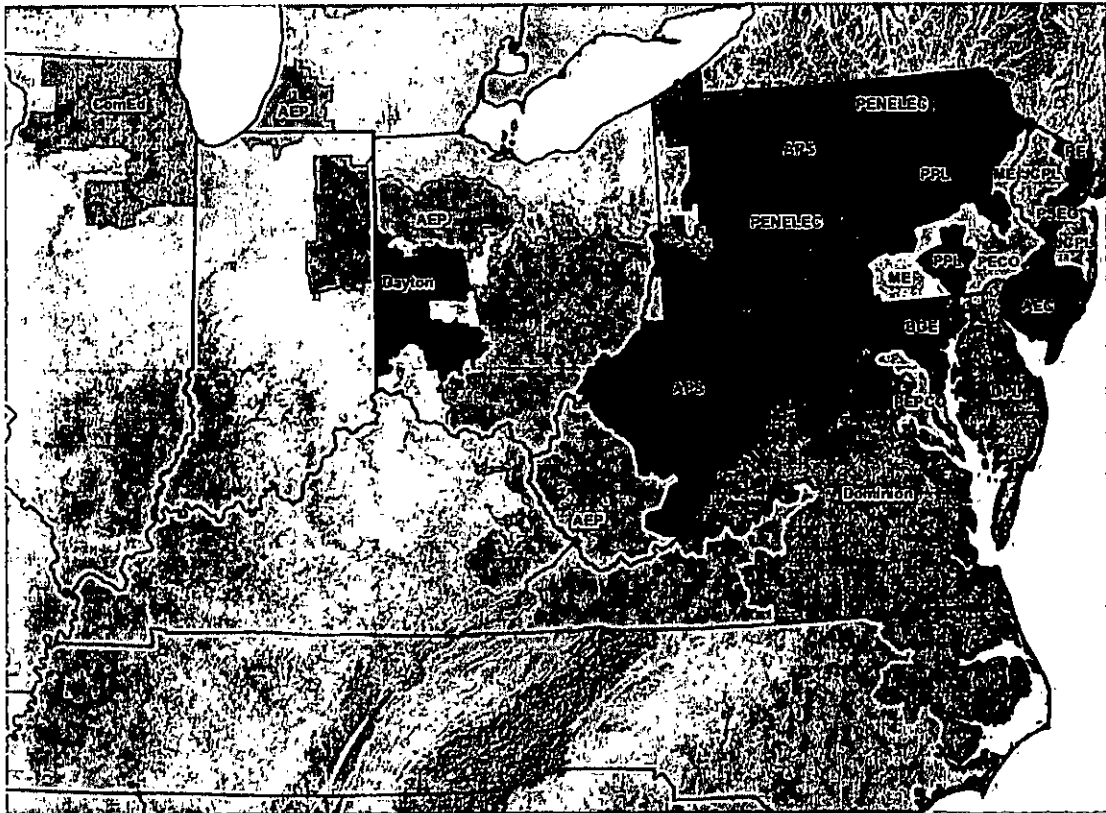
**Exhibit B  
PJM 2009 Baseline Report  
(Excerpts)**

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# 2009 PJM BASELINE RELIABILITY ASSESSMENT



For the 2010 - 2024 Period

## Appendix A – Previously Identified Baseline Upgrades

b0704	Install a 4th Cabot 500/138kV autotransformer	6/1/2011
b0705	New 69 kV Derry-Millville Line	11/30/2010
b0707	New 12.5 Mile Bohemia-Twin Lakes 138/69kV S/C Line and Install New 10.8 MVAR, 69kV Capacitor Bank Near Bohemia Substation	11/30/2013
b0708	New Double Circuit 138/69 kV Line from Jackson to Lake Naomi Tap: 4 Miles	11/30/2013
b0709	Install New Double Circuit 138/69 kV Tie Line between Carlisle and West Carlisle Substations: 2.5 Miles	11/30/2012
b0710	Install Third 138/69 kV Line from Reese's Tap to Hershey Substation	5/31/2012
b0711	New 138/69 kV Single Circuit Line from West Shore-Cumberland #1 69 kV Line to Whitehill Substation: 1.7 Miles I	11/30/2013
b0712	Construct new 69kV Line Between Strassburg Tap and the Millwood-Engleside #1 69kV Line: 5 Miles	11/30/2009
b0713	Construct a new 138kV Double Circuit Tie Line between Dillersville Tap and the W.Hempfield - Prince 138kV Double Circuit Line: 0.15 Mile	5/31/2010
b0714	Prepare Roseville Tap for 138 kV Conversion	11/30/2010
b0715	Transfer South Akron-South Manheim #1 & #2 from the South Akron 69kV Yard and to the South Akron 138 kV Yard. Install switches on S.Akron-S.Manheim #1 & #2 138 kV lines.	11/30/2012
b0716	South Akron-Morgantown 69 kV Line: Add Second 69 kV Circuit from Morgantown to Twin Valley	11/30/2011
b0717	Rebuild existing Brunner Island-West Shore 230 kV line and add a 2nd Brunner Island-West Shore 230 kV line	6/1/2013
b0718	SPS scheme to drop 69 kV load at West Shore & Cumberland	6/1/2010
b0719	SPS scheme at Jenkins to open the Stanton #1 & Stanton #2 230 kV breakers	6/1/2013
b0720	Upgrade terminal equipment on Quince Orchard - Bells Mill Road 028 & 030 230 kV lines	6/1/2012
b0721	Upgrade Oak Grove - Ritchie 23061 230 kV line	6/1/2013
b0722	Upgrade Oak Grove - Ritchie 23058 230 kV line	6/1/2013
b0723	Upgrade Oak Grove - Ritchie 23059 230 kV line	6/1/2013
b0724	Upgrade Oak Grove - Ritchie 23060 230 kV line	6/1/2013
b0725	Add a 3rd Steele 230/138 kV transformer	6/1/2013
b0726	Add a 2nd Raritan River 230/115 kV transformer	6/1/2013
b0727	Rebuild Bryn Mawr-Plymouth Meeting 138 kV line (130-35 Line)	6/1/2013
b0729	Construct a two breaker bay at Perryman. Extend two new lines from Perryman to intercept Harford lines	6/1/2012
b0730	Add slow oil circulation to the 4 Bells Mill Road-Bethesda 138 kV lines & also to the 2 Buzzard Point-Southwest 138 kV lines	6/1/2013
b0731	SPS to automatically shed load on the 34 kV Bells Mill Road bus for N-2 condition	6/1/2013
b0732	Rebuild Vaugh-Wells 69 kV line	6/1/2013
b0733	Add a 2nd Harmony 230/138 kV transformer	6/1/2013
b0737	Build a new Indian River-Bishop 138 kV line	6/1/2013
b0738	Add 115.2 MVAR capacitor at Bedford Park 138 kV "Red"	6/1/2013
b0739	Add 115.2 MVAR capacitor at Bedford Park 138 kV "Blue"	6/1/2013
b0740	Add 57.6 MVAR capacitor at Wolfs 138 kV "Blue"	6/1/2013
b0744	Upgrade a strand bus at Mill 138 Kv	6/1/2013

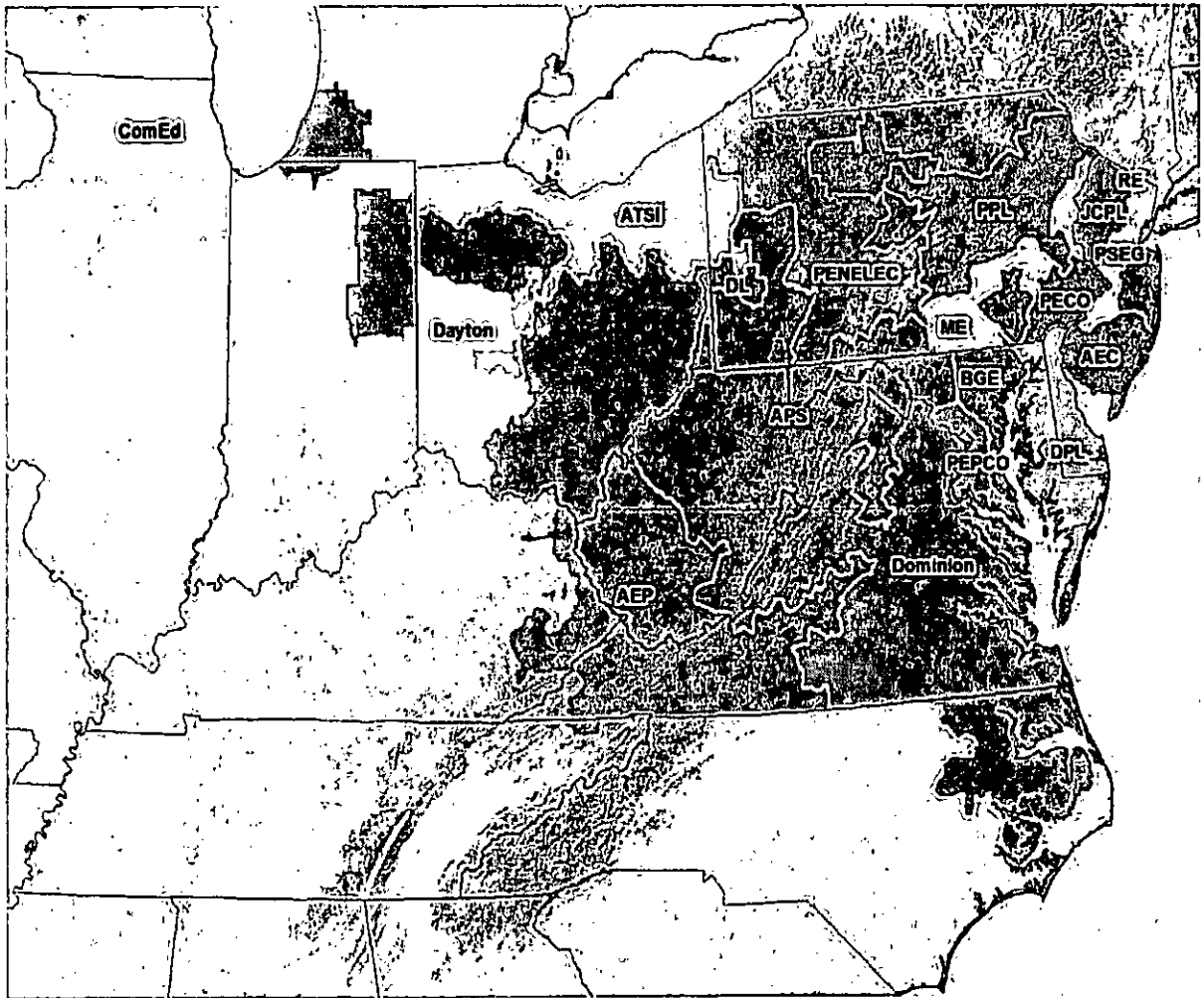
**PECO Letter of Notification  
Plymouth Meeting – Bryn Mawr 138 kV Line**

**Exhibit C**

**PJM 2010 Baseline Report  
(Excerpts)**

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# 2010 PJM BASELINE RELIABILITY ASSESSMENT



For the 2011 - 2025 Period

## Appendix A – Previously Identified Baseline Upgrades

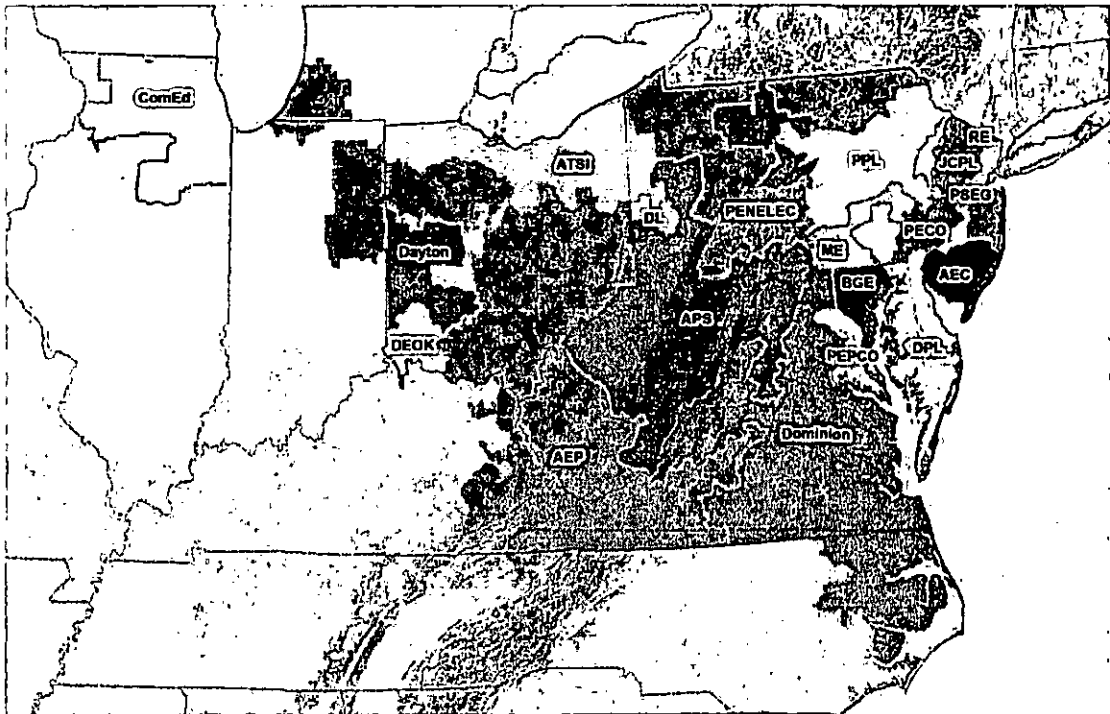
b0714	Prepare Roseville Tap for 138 kV Conversion	11/30/2010
b0715	Transfer South Akron-South Manheim #1 & #2 from the South Akron 69kV Yard and to the South Akron 138 kV Yard. Install switches on S.Akron-S.Manheim #1 & #2 138 kV lines.	11/30/2012
b0716	South Akron-Morgantown 69 kV Line: Add Second 69 kV Circuit from Morgantown to Twin Valley	11/30/2011
b0717	Rebuild existing Brunner Island-West Shore 230 kV line and add a 2nd Brunner Island-West Shore 230 kV line	6/1/2013
b0719	SPS scheme at Jenkins to open the Stanton #1 & Stanton #2 230 kV breakers	6/1/2013
b0720	Upgrade terminal equipment on Quince Orchard - Bells Mill Road 028 & 030 230 kV lines	6/1/2012
b0721	Upgrade Oak Grove - Ritchie 23061 230 kV line	6/1/2013
b0722	Upgrade Oak Grove - Ritchie 23058 230 kV line	6/1/2013
b0723	Upgrade Oak Grove - Ritchie 23059 230 kV line	6/1/2013
b0724	Upgrade Oak Grove - Ritchie 23060 230 kV line	6/1/2013
b0725	Add a 3rd Steele 230/138 kV transformer	6/1/2013
b0726	Add a 2nd Raritan River 230/115 kV transformer	6/1/2013
b0727	Rebuild Bryn Mawr-Plymouth Meeting 138 kV line (130-35 Line)	6/1/2013
b0729	Construct two 2 breaker 115kV bays at Perryman. Extend two new lines from Perryman to intercept Harford lines	6/1/2012
b0730	Add slow oil circulation to the 4 Bells Mill Road-Bethesda 138 kV lines & also to the 2 Buzzard Point-Southwest 138 kV lines	6/1/2013
b0731	SPS to automatically shed load on the 34 kV Bells Mill Road bus for N-2 condition	6/1/2013
b0732	Rebuild Vaugh-Wells 69 kV line	6/1/2013
b0733	Add a 2nd Harmony 230/138 kV transformer	6/1/2013
b0737	Build a new Indian River-Bishop 138 kV line	6/1/2013
b0738	Add 115.2 MVAR capacitor at Lombard 138 kV "Red"	6/1/2013
b0739	Add 115.2 MVAR capacitor at Lombard 138 kV "Blue"	6/1/2013
b0740.1	Add 57.6 MVAR capacitor at Wolfs 138 kV "Blue"	6/1/2013
b0744	Upgrade a strand bus at Mill 138 Kv	6/1/2013
b0748	Establish a new 69 kV circuit between the Canal Road and East Wooster Stations, establish a new 69 kV circuit between the West Millersburg and Moreland Swtich stations (via Shreve)	12/1/2011
b0749	Riverside 230kV, replace breaker & CT's on 2345 line; replace 2345 line dead-end structures at multiple buses	6/1/2013
b0750	Convert 138 kV network path from Vienna – Loretto – Piney Grove to 230 kV, add 230/138 kV transformer to Loretto 230 kV	6/1/2013
b0751	Add two additional breakers at Keeney 500 kV	6/1/2013
b0752	Reybold - Lums Pond 138 kV: Replace two circuit breakers to bring the emergency rating up to 348 MVA	6/1/2013
b0753	Add a second Loretto 230/138 kV transformer	6/1/2014
b0754	Rebuild 10 miles of Glasgow to Mt. Pleasant 138 kV line to bring the normal rating to 298 MVA and the emergency rating to 333 MVA	6/1/2013
b0756	(Option D) Install a second 500/115 kV autotransformer at Chancellor 500 kV	6/1/2013
b0756.1	Install two 500 kV breakers at Chancellor 500 kV	6/1/2013
b0757	Reconductor one mile of Chesapeake – Reeves Avenue 115 kV line	6/1/2013
b0758	Install a second Fredericksburg 230/115 kV autotransformer	6/1/2013
b0759	Build a second Doooms – Dupont – Waynesboro 115 kV line	6/1/2013

**PECO Letter of Notification  
Plymouth Meeting – Bryn Mawr 138 kV Line**

**Exhibit D**

**PJM 2011 Baseline Report  
(Excerpts)**

# 2011 PJM BASELINE RELIABILITY ASSESSMENT



For the 2012 - 2026 Period

## Appendix A – Previously Identified RTEP Baseline Upgrades

b0711	New 138/69 kV Single Circuit Line from West Shore-Cumberland #1 69 kV Line to Whitehill Substation: 1.7 Miles I	11/30/2013
b0715	Transfer South Akron-South Manheim #1 & #2 from the South Akron 69kV Yard and to the South Akron 138 kV Yard. Install switches on S.Akron-S.Manheim #1 & #2 138 kV lines.	11/30/2012
b0716	South Akron-Morgantown 69 kV Line: Add Second 69 kV Circuit from Morgantown to Twin Valley	11/30/2009
b0717	Rebuild existing Brunner Island-West Shore 230 kV line and add a 2nd Brunner Island-West Shore 230 kV line	6/1/2013
b0719	SPS scheme at Jenkins to open the Stanton #1 & Stanton #2 230 kV breakers	6/1/2013
b0720	Upgrade terminal equipment on Quince Orchard - Bells Mill Road 028 & 030 230 kV lines	6/1/2012
b0721	Upgrade Oak Grove - Ritchie 23061 230 kV line	6/1/2013
b0722	Upgrade Oak Grove - Ritchie 23058 230 kV line	6/1/2013
b0723	Upgrade Oak Grove - Ritchie 23059 230 kV line	6/1/2013
b0724	Upgrade Oak Grove - Ritchie 23060 230 kV line	6/1/2013
b0725	Add a 3rd Steele 230/138 kV transformer	6/1/2013
b0726	Add a 2nd Raritan River 230/115 kV transformer	6/1/2013
b0727	Rebuild Bryn Mawr-Plymouth Meeting 138 kV line (130-35 Line)	6/1/2013
b0729	Construct two 2 breaker 115kV bays at Perryman. Extend two new lines from Perryman to intercept Harford lines	6/1/2013
b0731	SPS to automatically shed load on the 34 kV Bells Mill Road bus for N-2 condition	6/1/2013
b0732	Rebuild Vaugh-Wells 69 kV line	6/1/2013
b0733	Add a 2nd Harmony 230/138 kV transformer	6/1/2013
b0737	Build a new Indian River-Bishop 138 kV line	6/1/2013
b0738	Add 115.2 MVAR capacitor at Lombard 138 kV "Red"	6/1/2013
b0739	Add 115.2 MVAR capacitor at Lombard 138 kV "Blue"	6/1/2013
b0740.1	Add 57.6 MVAR capacitor at Wolfs 138 kV "Blue"	6/1/2013
b0740.2	Add additional 57.6 MVAR capacitor at Wolfs "Blue"	6/1/2014
b0748	Establish a new 69 kV circuit between the Canal Road and East Wooster Stations, establish a new 69 kV circuit between the West Millersburg and Moreland Swtich stations (via Shreve)	12/1/2011
b0749	Riverside 230kV, replace breaker & CT's on 2345 line; replace 2345 line dead-end structures at multiple buses	6/1/2013
b0750	Convert 138 kV network path from Vienna – Loretto – Piney Grove to 230 kV, add 230/138 kV transformer to Loretto 230 kV	6/1/2013
b0751	Add two additional breakers at Keeney 500 kV	6/1/2013
b0752	Reybold - Lums Pond 138 kV: Replace two circuit breakers to bring the emergency rating up to 348 MVA	6/1/2013
b0753	Add a second Loretto 230/138 kV transformer	6/1/2013
b0754	Rebuild 10 miles of Glasgow to Mt. Pleasant 138 kV line to bring the normal rating to 298 MVA and the emergency rating to 333 MVA	6/1/2013
b0756	(Option D) Install a second 500/115 kV autotransformer at Chancellor 500 kV	6/1/2013
b0756.1	Install two 500 kV breakers at Chancellor 500 kV	6/1/2013
b0757	Reconductor one mile of Chesapeake – Reeves Avenue 115 kV line	6/1/2013
b0758	Install a second Fredericksburg 230/115 kV autotransformer	6/1/2013
b0759	Build a second Dooms – Dupont – Waynesboro 115 kV line	6/1/2013
b0763	Rebuild 17.5 miles of the Yorktown - Whealton 115kV line for a new summer rating of 262 MVA	6/1/2009

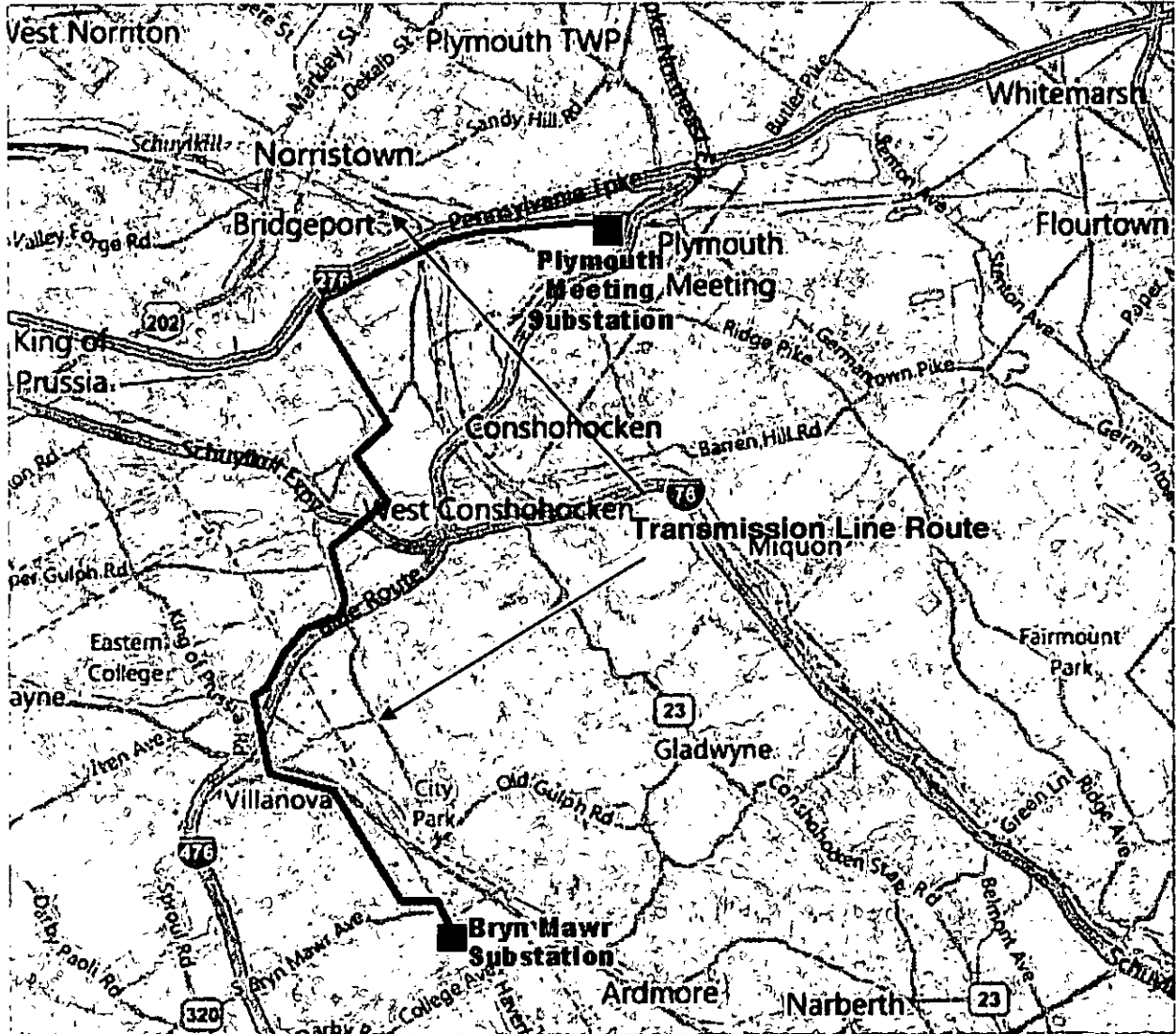
**PECO Letter of Notification  
Plymouth Meeting – Bryn Mawr 138 kV Line**

**Exhibit E**

**Map Showing General Location of Line**

Exhibit E

Plymouth Meeting – Bryn Mawr 138 kV Reconstruction and Reconductoring  
Map of Project Area



- - Transmission Line Route where new structures will not be needed
- - - - - Transmission Line Route where new structures will be needed

**PECO Letter of Notification  
Plymouth Meeting – Bryn Mawr 138 kV Line**

**Exhibit F**

**Magnetic Field Calculation Results**

## Magnetic Field Table 1:

### Magnetic Fields, Span 8-10 to 8-11 (Adjacent to Aldwyn Lane)

Note: Aldwyn Lane residences are on side of line designated with negative distances from centerline

Current and future magnetic fields, in milligauss (mG)									
Feet from current center line	2011/12 Average (471 amps)	2015 Average (478 amps)	Change	2011/12 Peak (850 amps)	2015 Peak (863 amps)	Change	2011/12 Emer. Max. (1037 amps)	2015 Emer. Max. (1420 amps)	Change
100	5.4	3.2	-2.2	8.7	6.4	-2.3	10.4	11.1	+0.7
90	6.5	3.7	-2.8	10.5	7.5	-3	12.5	13.1	+0.6
80	7.9	4.6	-3.3	12.8	8.9	-2.9	15.3	15.5	+0.2
70	9.8	5.4	-4.4	16.0	10.7	-5.3	19.1	18.7	-0.4
60	12.4	6.7	-5.7	20.4	13.2	-7.2	26.4	22.8	-3.6
50	16.0	8.4	-7.6	26.5	16.3	-10.2	31.8	28.1	-2.3
40	20.9	10.7	-10.2	35.1	20.4	-14.7	42.2	34.9	-7.3
30	27.6	13.8	-13.8	46.8	20.6	-26.2	56.3	43.5	-12.8
20	35.1	17.8	-14.3	60.6	31.9	-28.7	73.4	53.5	-19.9
10	41.0	22.5	-18.5	72.1	38.5	-33.6	87.8	63.3	-24.5
0	41.7	27.2	-14.5	73.8	43.6	-30.2	90.1	70	-20.1
-10	38.4	30.5	-7.9	64.8	44.9	-19.9	78.8	69.9	-8.9
-20	37.2	31	-6.2	54.8	40.9	-13.9	64.8	61.5	-3.3
-30	37.2	27.6	-9.6	49	33	-16	56	48.3	-7.7
-40	33.3	21.5	-11.8	42.7	24.6	-18.1	48	36.5	-11.5
-50	26.5	15.3	-11.2	34.3	18.1	-16.2	38.5	28.3	-10.2
-60	20.1	10.8	-9.3	26.5	13.9	-11.7	29.9	22.7	-7.2
-70	15.3	7.8	-7.5	20.5	10.9	-9.6	23.2	18.6	-4.6
-80	11.8	5.9	-5.9	16.1	5.9	-10.2	18.3	15.4	-2.9
-90	9.4	4.6	-4.8	12.9	4.6	-8.3	14.8	12.9	-1.9
-100	7.6	3.7	-3.9	10.6	3.7	-6.9	12.1	10.9	-1.2

## Magnetic Field Table 2:

### Magnetic Fields, Span 4-6 to 4-7

Current and future magnetic fields, in milligauss (mG)									
Feet from current center line	2011/12 Average (471 amps)	2015 Average (478 amps)	Change	2011/12 Peak (850 amps)	2015 Peak (863 amps)	Change	2011/12 Emer. Max. (1037 amps)	2015 Emer. Max. (1420 amps)	Change
100	8.1	5.7	-2.4	14.7	10.3	-4.4	17.9	17.1	-0.8
90	10.0	7.0	-3.0	18.0	12.7	-5.3	21.9	20.8	-1.1
80	12.4	8.7	-3.7	22.4	15.8	-6.6	27.4	26.0	-1.4
70	15.8	11.1	-4.7	28.6	20.0	-8.6	34.9	32.9	-2.0
60	20.7	14.3	-6.4	37.3	25.9	-11.4	45.5	42.5	-3.0
50	27.5	18.8	-8.7	49.7	34.0	-15.7	60.6	55.9	-4.7
40	37.0	24.9	-12.1	66.7	45.0	-21.7	81.4	74.0	-7.4
30	48.5	32.5	-16.0	87.5	58.7	-18.8	106.7	96.5	-10.2
20	59.0	40.0	-19.0	106.4	72.3	-34.1	129.9	119.0	-10.9
10	64.0	44.8	-19.2	115.5	80.8	-34.7	140.9	132.9	-8.0
0	61.7	44.2	-17.5	111.3	79.7	-31.6	135.8	131.2	-4.6
-10	53.4	38.7	-14.7	96.4	69.8	-26.6	117.6	114.9	-2.7
-20	42.4	31.0	-11.4	76.6	56.0	-20.6	93.4	92.2	-0.8
-30	32.1	23.9	-8.2	58.0	43.2	-14.8	70.7	71.1	+0.4
-40	24.0	18.4	-5.6	43.3	33.1	-10.2	52.9	54.5	+1.6
-50	18.2	14.2	-4.0	32.8	25.7	-7.1	40.0	42.3	+2.3
-60	14.0	11.2	-2.8	25.2	20.3	-4.9	30.8	33.4	+2.6
-70	11.0	9.0	-2.0	19.9	16.3	-3.6	24.2	26.8	+2.6
-80	8.8	7.4	-1.4	16.0	13.3	-2.7	19.5	22.0	+2.5
-90	7.2	6.2	-1.0	13.0	11.1	-1.9	15.9	18.3	+2.4
-100	6.0	5.2	-0.8	10.8	9.3	-1.5	13.2	15.4	+2.2

### Magnetic Field Table 3:

#### Magnetic Fields, Span 5-6 to 5-7

Current and future magnetic fields, in milligauss (mG)									
Feet from current center line	2011/12 Average (471 amps)	2015 Average (478 amps)	Change	2011/12 Peak (850 amps)	2015 Peak (863 amps)	Change	2011/12 Emer. Max. (1037 amps)	2015 Emer. Max. (1420 amps)	Change
100	8.1	4.8	-3.3	14.6	8.7	-5.9	17.9	14.3	-3.6
90	9.7	5.6	-4.1	17.4	10.2	-7.4	21.4	16.8	-4.6
80	11.8	6.6	-5.2	21.0	12.1	-8.9	25.8	19.9	-5.9
70	14.3	7.9	-6.4	25.6	14.5	-11.1	31.4	23.8	-7.6
60	17.5	9.5	-8.0	31.3	17.4	-13.9	38.3	28.6	-9.7
50	21.2	11.4	-6.8	38.0	20.9	-17.1	46.6	34.3	-12.3
40	25.3	13.6	-11.7	45.3	24.9	-20.4	55.5	40.9	-14.6
30	29.0	15.9	-13.1	52.1	29.2	-22.9	63.8	48.0	-15.8
20	31.5	18.0	-13.4	56.7	33.1	-23.6	69.3	54.3	-15.0
10	32.1	19.6	-12.5	57.7	35.7	-22.0	70.5	56.7	-13.8
0	30.4	20.1	-10.3	54.9	36.5	-18.4	66.9	60.0	-6.9
-10	27.0	19.7	-7.3	49.0	35.3	-13.7	59.6	58.0	-1.6
-20	22.8	18.7	-4.1	41.5	32.7	-8.8	50.3	53.9	+3.6
-30	18.9	18.1	-0.8	34.0	29.9	-4.1	41.4	49.5	+8.1
-40	17.5	19.3	+1.8	28.5	28.4	-0.1	36.5	47.6	+9.1
-50	24.2	25.4	+1.2	30.2	30.7	+0.5	45.7	52.8	+7.1
-60	43.7	39.1	-4.6	47.4	38.9	-8.5	79.4	69.1	-10.3
-70	49.5	41.6	-7.9	53.5	39.2	-14.3	89.9	70.2	-19.7
-80	29.5	25.3	-4.2	33.2	26.0	-7.2	54.2	45.8	-8.4
-90	16.4	14.8	-1.6	19.7	16.0	-3.7	30.7	29.4	-1.3
-100	10.2	9.7	-0.5	13.4	12.4	-1.0	19.7	21.1	+0.4

**Magnetic Field Table 4:**

**Magnetic Fields, Span 8-14 to 9-1**

Current and future magnetic fields, in milligauss (mG)									
Feet from current center line	2011/12 Average (471 amps)	2015 Average (478 amps)	Change	2011/12 Peak (850 amps)	2015 Peak (863 amps)	Change	2011/12 Emer. Max. (1037 amps)	2015 Emer. Max. (1420 amps)	Change
100	6.1	5.5	-0.6	10.9	9.2	-1.7	13.4	15.3	+1.9
90	7.5	6.5	-1.0	13.3	10.9	-2.4	16.3	18.0	+1.7
80	9.2	7.7	-1.5	16.4	13.0	-3.4	20.2	21.6	+1.4
70	11.7	9.3	-2.4	20.7	15.7	-5.0	25.5	26.0	+0.5
60	15.1	11.3	-3.8	26.7	19.1	-7.6	32.9	31.7	-1.2
50	20.0	13.9	-6.1	35.3	23.5	-11.8	43.6	38.9	-4.7
40	27.2	17.1	-10.1	47.8	29.1	-18.7	59.2	48.2	-11.0
30	37.4	21.1	-16.3	65.4	36.0	-29.4	81.2	59.5	-21.7
20	50.3	25.5	-24.8	87.5	43.6	-33.9	109.0	72.2	-27.8
10	62.4	29.5	-32.9	107.9	50.7	-57.2	134.9	83.8	-41.1
0	68.1	31.9	-36.2	116.8	54.7	-62.1	146.6	90.3	-56.3
-10	66.1	32.4	-33.7	111.5	53.9	-57.6	141.1	89.2	-51.9
-20	60.5	34.3	-26.2	97.4	51.6	-45.8	126.6	86.1	-40.5
-30	55.7	40.0	-15.7	82.5	53.1	-29.4	112.5	90.1	-22.4
-40	50.0	43.3	-6.7	68.8	54.7	-14.1	98.2	93.5	-4.7
-50	40.7	39.0	-1.7	54.5	49.1	-5.4	79.2	84.2	+5.0
-60	30.4	30.6	+0.2	40.8	39.2	-1.6	59.2	67.1	+7.9
-70	22.1	23.0	+0.9	30.3	30.2	-0.1	43.3	51.5	+8.2
-80	16.3	17.4	+1.1	22.9	23.4	+0.5	32.2	39.8	+7.6
-90	12.4	13.5	+1.1	17.8	18.5	+0.6	24.7	31.4	+6.7
-100	9.7	10.7	+1.0	14.3	15.0	+0.7	19.5	25.4	+5.9

**AFFIDAVIT**

COMMONWEALTH OF PENNSYLVANIA )

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SS

COUNTY OF PHILADELPHIA )

)

Richard G. Webster, states that he is Vice-President, Regulatory Policy and Strategy of PECO Energy Company; that he is authorized to and does make this verification for it; and that the facts set forth above are true and correct to the best of his knowledge, information and belief and he expects PECO Energy Company to be able to prove the same if required.

*Richard G. Webster*

**BEFORE THE  
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

**Letter of Notification of PECO Energy** :  
**Company Pursuant to 52 Pa. Code** :  
**Chapter 57 Subchapter G With Respect** : **Docket No. A-\_\_\_\_\_**  
**to the Reconductoring and** :  
**Reconfiguration of the Plymouth** :  
**Meeting – Bryn Mawr 138 kV** :  
**Transmission Line** :

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**Certificate of Service**

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Pursuant to 52 Pa. Code § 57.74, copies of this Letter of Notification will be served upon the entities listed below, registered or certified mail, return receipt requested:

Department of Environmental Resources,  
Attention: Bureau of Environmental Planning;  
Post Office Box 2357, 101 S. Second Street,  
Harrisburg, Pennsylvania 17120

Plymouth Township  
700 Belvoir Road  
Plymouth Meeting, PA 19462  
Attn: Chief Executive Officer  
Governing Body  
Land Use Agency

Upper Merion Township  
175 W Valley Forge Road  
King of Prussia, PA 19406  
Attn: Chief Executive Officer  
Governing Body  
Land Use Agency

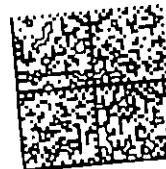
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**PA P.U.C.**  
**SECRETARY'S BUREAU**

Lower Merion Township  
Township Administration Building  
75 East Lancaster Avenue  
Ardmore, PA 19003  
Attn: Chief Executive Officer  
Governing Body  
Land Use Agency

Radnor Township  
301 Iven Avenue  
Wayne, PA 19087  
Attn: Chief Executive Officer  
Governing Body  
Land Use Agency

Haverford Township  
2325 Darby Road  
Havertown, PA 19083  
Attn: Chief Executive Officer  
Governing Body  
Land Use Agency

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**Exelon<sup>SM</sup>**

Exelon Business Services Company  
Legal Department  
2301 Market St./S23-1  
P.O. Box 8699  
Philadelphia, PA 19101-8699

Business Services  
Company

To: Rosemary Chavetta, Secretary  
Pennsylvania PUC  
Commonwealth Keystone Bldg.  
400 North St., 2nd Fl.  
Harrisburg, PA 17120