Penelec®
A FirstEnergy Company

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March 1, 2017

VIA FED EX OVERNIGHT

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

Re: Petition of Pennsylvania Electric Company for Approval of Modification of its Long-Term Infrastructure Improvement Plan;
Docket No. P-2015-2508936

Dear Secretary Chiavetta:

Enclosed for filing is the *Petition of Pennsylvania Electric Company for Approval of Modification of its Long-Term Infrastructure Improvement Plan* ("Petition"). A copy of Pennsylvania Electric Company's modified Long-Term Infrastructure Improvement Plan accompanies its Petition as Penelec Exhibit No. 1.

Penelec's Long-Term Infrastructure Improvement Plan was approved by the Commission by Order entered February 11, 2016, at Commission Docket No. P-2015-2508936.

Copies of the enclosed Petition and Penelec Exhibit No. 1 have been served on the persons and in the manner shown on the enclosed Certificate of Service, as required by 52 Pa. Code §121.4(b). This filing is made by express delivery and is deemed filed today.

Respectfully submitted,

John L. Munsch

Enclosures

cc: Per Certificate of Service
Chairman Gladys M. Brown (w/encl.)
Vice Chairman Andrew Place (w/encl.)
Honorable John F. Coleman, Jr. (w/encl.)
Honorable Robert F. Powelson (w/encl.)
Honorable David W. Sweet (w/encl.)

Bohdan Pankiw, Chief Counsel (w/encl.)
Paul T. Diskin, Director, Office of Technical Utility Services (w/encl.)

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Electric Company Petition	:	
For Approval of Modification of its Long-	:	**Docket No. P-2015-2508936**
Term Infrastructure Improvement Plan	:	

Pennsylvania Electric Company Petition for Approval of Modification of its Long-Term Infrastructure Improvement Plan

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Pennsylvania Electric Company ("Penelec" or the "Company") files this Petition for Modification of its Long-Term Infrastructure Improvement Plan ("LTIIP"), pursuant to Section 1352 of the Pennsylvania Public Utility Code ("Code"),[1] pursuant to Pennsylvania Public Utility Commission's ("PUC" or the "Commission") regulations relating to LTIIP,[2] and pursuant to the Commission's Final Implementation Order[3] and Supplemental Implementation Order[4] concerning LTIIPs. The LTIIP Modification accompanies this Petition as Penelec Exhibit No. 1 ("LTIIP Modification"). As set forth in its LTIIP Modification, Penelec proposes to increase the total estimated cost of the LTIIP by more than 20%. Such a modification is considered a "*major modification*" as defined in Commission regulations concerning LTIIPs and requires that "the utility shall file a separate petition for modification."[5]

The primary reason for Penelec's LTIIP Modification is the enactment and the effect of Pennsylvania's Act No. 40,[6] 66 Pa.C.S. §1301.1, which became effective August 11, 2016. Act 40 terminated the practice of making a "consolidated tax adjustment" in calculating a

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[1] 66 Pa.C.S. § 1352.
[2] 52 Pa. Code §121.1 *et seq.*
[3] *Implementation of Act 11 of 2012*, Docket No. M-2012-2293611, entered August 2, 2012.
[4] *Supplemental Implementation Order*, Docket No M-2012-2293611, entered September 15, 2016.
[5] 52 Pa. Code §121.5(a).
[6] Act of June 12, 2016, P.L. 332, No. 40.

utility's Federal income taxes for ratemaking purposes. Act 40 provides that any "differential" accruing to the public utility shall be applied "fifty percent to support reliability or infrastructure related to the rate-base eligible capital investment as determined by the commission... ." Act 40 applies to "all cases where the final order is entered after the effective date of this section" (*i.e.* August 11, 2016), and, therefore, Act 40 applies to the most recent Penelec distribution base rate proceeding.[7] Penelec seeks to apply the portion of its "differential" to reliability and infrastructure improvements through its LTIIP Modification for recovery through its approved Distribution System Improvement Charge ("DSIC") tariff. The annual incremental amount as a result of Act 40, by which the Company's LTIIP will be increased for each of the remaining years, is approximately $3.32 million.[8] In its recent base rate case the Company acknowledged that it would amend its LTIIP to apply its Act 40 differential.[9] The LTIIP modification constitutes such amendment.

Upon approval of its LTIIP Modification, Penelec will incorporate the new costs reflected in the LTIIP Modification on an ongoing basis through Penelec's DSIC. Penelec's current DSIC was approved by the Commission in an Opinion and Order entered June 9, 2016, at Docket No. P-2015-2508936.[10]

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[7] *Pa.P.U.C. v. Pennsylvania Electric Company*, Docket No. R-2016-2537352 (Final Order entered January 19, 2017).

[8] *See* Met-Ed/Penelec/Penn Power/West Penn Statement No. 2-S, the Supplemental Testimony of Richard D'Angelo, page 6 lines 24 and 25, Docket No. R-2016-2537352.

[9] Id, page 7.

[10] Penelec's Petition for Approval of DSIC at Docket No. P-2015-2508936, was approved by the Commission in an Order entered June 9, 2016. Certain issues in the proceeding were referred to the Office of Administrative Law Judge. The DSIC proceedings of Penelec's affiliate distribution companies, West Penn Power Company, Metropolitan Edison Company and Pennsylvania Power Company, were also referred to the same proceedings which were consolidated by the Presiding Officer. On February 2, 2017, the affiliates and other parties to the proceeding submitted a Joint Settlement Petition to the Presiding Officer. On January 19, 2017, in its Order in Penelec's base rate proceeding, the Commission referred a separate issue to the Office of Administrative Law Judge concerning the application of accumulated deferred income tax ("ADIT").

The LTIIP Modification will allow Penelec to continue to strengthen, upgrade and modernize its distribution system through various infrastructure improvement initiatives described in detail in Appendix A of the LTIIP Modification. As also explained below, Penelec's LTIIP Modification contains all of the elements required by Section 1352(a)(1)-(6) of the Code and 52 Pa. Code § 121.3 and, therefore, satisfies all of the requirements for Commission approval set forth in Section 1352(a)(7) of the Code and 52 Pa. Code § 121.4(e)(1)-(4). Accordingly, Penelec respectfully requests that the Commission approve this Petition and approve the LTIIP Modification submitted as Penelec Exhibit No. 1 to this Petition.

I. INTRODUCTION AND BACKGROUND

1. Penelec provides electric distribution service to approximately 584,000 customers in a certificated service territory encompassing all or portions of thirty-one counties in Pennsylvania. Penelec is a "public utility" and an "electric distribution company" ("EDC") as those terms are defined in the Code.[11] Penelec, together with Metropolitan Edison Company, Pennsylvania Power Company and West Penn Power Company, is one of four subsidiaries of FirstEnergy Corp. that furnish electric distribution service as public utilities and EDCs in Pennsylvania.

2. The names and addresses of Penelec's attorneys authorized to receive all notices and communications regarding this filing are as follows:

[11] *See* 66 Pa.C.S. §§ 102 and 2803.

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3. On February 14, 2012, former Governor Corbett signed into law Act 11 of 2012 ("Act 11"), which amended the Public Utility Code in several respects, including the addition of Subchapter B to Chapter 13 (66 Pa.C.S. §§1350-1360), which authorizes the Commission to approve DSIC petitions filed by EDCs and other types of utilities. In addition, Subchapter B sets forth various requirements that must be satisfied by a qualifying utility in order to establish a DSIC and recover the fixed costs of DSIC-eligible property. Section 1351 defines "eligible property" in general as "[p]roperty that is part of a distribution system and eligible for repair, improvement and replacement of infrastructure under this subchapter" and provides further:

> (1) For electric distribution companies, eligible property shall include:
>
> (i) Poles and towers.
> (ii) Overhead and underground conductors.
> (iii) Transformers and substation equipment.
> (iv) Any fixture or device related to eligible property under subparagraphs (i), (ii) and (iii), including insulators, circuit breakers, fuses, reclosers, grounding wires, crossarms and brackets, relays, capacitors, converters and condensers.
> (v) Unreimbursed costs related to highway relocation projects where an electric distribution company must relocate its facilities.
> (vi) Other related capitalized costs.

4. Section 1352 of the Public Utility Code requires that a utility submit an LTIIP "in order to be eligible to recover costs under section 1353 (relating to distribution system

improvement charge)." In addition, Section 1352 provides that an LTIIP should include the following information:

> (1) Identification of the types and age of eligible property owned or operated by the utility for which the utility would seek recovery under this subchapter.
>
> (2) An initial schedule for the planned repair and replacement of eligible property.
>
> (3) A general description of the location of the eligible property.
>
> (4) A reasonable estimate of the quantity of eligible property to be improved.
>
> (5) Projected annual expenditures to implement the plan and measures taken to ensure that the plan is cost effective.
>
> (6) The manner in which the replacement of aging infrastructure will be accelerated and how the repair, improvement or replacement will ensure and maintain adequate, efficient, safe, reliable and reasonable service.

5. On August 2, 2012, the Commission entered the Final Implementation Order to explain how it intended to implement the provisions of Subchapter B. In particular, the Final Implementation Order sets forth the Commission's expectation with regard to the contents of an LTIIP by reference to the six elements specifically identified in Section 1352(a) of the Code. The Final Implementation Order also provides guidance to utilities for meeting the Commission's standards for LTIIP approval and discusses the procedures the Commission would follow in reviewing petitions seeking approval of proposed LTIIPs. In that regard, the Commission: (a stated that an LTIIP would be assigned to the Bureau of Technical Utility Services ("TUS") for analysis and a recommendation to the Commission;[12] (b) provided that interested parties may file

[12] Final Implementation Order, p. 20.

comments within 20 days of the filing of an LTIIP;[13] and (c) established a period of 120 days for review of each proposed LTIIP.[14]

6. On May 27, 2014, the Commission entered a Final Order adopting the LTIIP regulations that are set forth at 52 Pa. Code §§ 121.1-121.8.[15] The LTIIP regulations adopt and expand upon the requirements set forth in the Final Implementation Order by providing that an LTIIP should include the following eight major elements, as stated in Section 121.3(a):

(1) Identification of types and age of eligible property owned and operated by the utility for which it is seeking DSIC recovery;

(2) An initial schedule for planned repair and replacement of eligible property;

(3) A general description of the location of the eligible property;

(4) Reasonable estimate of the quantity of eligible property to be improved or repaired;

(5) Projected annual expenditures and means to finance the expenditures;

(6) A description of the manner in which infrastructure replacement will be accelerated and how repair, improvement or replacement will maintain adequate, efficient, safe, reliable and reasonable service to customers;

(7) A workforce management and training program designed to ensure that the utility will have access to a qualified workforce to perform work in a cost-effective, safe and reliable manner;

(8) A description of a utility's outreach and coordination activities with other utilities, Department of Transportation and local governments regarding their planned maintenance/construction projects and roadways that may be impacted by the LTIIP.

7. In Section 121.4(e) of the LTIIP regulations, the Commission provided the criteria it would use to review LTIIPs submitted for its approval, as follows:

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[13] *Id.* The review period of 20 days stated in the Final Rulemaking Order was subsequently expanded to 30 days in the LTIIP regulations. *See* 52 Pa. Code § 121.4(c).

[14] *Id.*

[15] *Review of Long-Term Infrastructure Improvement Plan – Final Rulemaking Order*, Docket No. L-2012-2317274, (May 23, 2014). The LTIIP regulations became effective upon publication in the *Pennsylvania Bulletin* on December 20, 2014. *See* 44 Pa.B. 7856.

(e) The Commission will review the filed LTIIP and determine if the LTIIP:

(1) Contains measures to ensure that the projected annual expenditures are cost-effective.
(2) Specifies the manner in which it accelerates or maintains an accelerated rate of infrastructure repair, improvement or replacement.
(3) Is sufficient to ensure and maintain adequate, efficient, safe, reliable and reasonable service.
(4) Meets the requirements of § 121.3 (relating to LTIIP).

8. Section 121.5 of the LTIIP regulation covers modifications of an LTIIP. It provides that if a utility elects to modify a Commission-approved LTIIP during its term to incorporate a major modification of any of the elements in §121.3(a) (relating to LTIIP), the utility shall file a separate petition for modification. Section 121.5(a) provides that parties shall have 30 days to file comments to the petition. A "major modification" is defined at 52 Pa. Code §121.2 as a change to a utility's previously approved LTIIP which meets at least one of the following criteria:

(i) Eliminates a category of eligible property from the LTIIP.
(ii) Extends the schedule for repair, improvement or replacement of a category of eligible property by more than 2 years.
(iii) Increases the total estimated cost of the LTIIP by more than 20%.
(iv) Otherwise reflects a substantial change to the current Commission-approved LTIIP.

Penelec's LTIIP modification increases its estimated LTIIP cost by more than 20% and is a "major modification" for the purposes of filing a LTIIP modification.

II. PENELEC'S LONG-TERM INFRASTRUCTURE IMPROVEMENT PLAN AND DISTRIBUTION SYSTEM IMPROVEMENT CHARGE

9. On October 19, 2015, at Docket No. P-2015-2508936, Penelec petitioned the Commission for approval of its current LTIIP. Penelec's LTIIP was approved by the Commission on February 11, 2016. The Commission determined that the Company's LTIIP met the

requirements of Section 1352 of the Code and contained the eight major elements set forth in Section 121.3(a) of the Commission's LTIIP regulations.

10. On February 16, 2016, Penelec filed its Petition to establish and implement a DSIC Rider into the Company's tariff with an effective date of July 1, 2016. The filing was made pursuant to 66 Pa. C.S. §1353, and was docketed at the continuing docket of the LTIIP filing, P-2015-2508936. The DSIC tariff was approved by Order entered June 9, 2016, and the DSIC tariff was implemented July 1, 2016. The Commission's Order assigned certain remaining issues to the Office of Administrative Law Judge for possible hearing and preparation of a Recommended Decision. The DSIC proceedings of the other FirstEnergy companies, with identical issues, were also assigned to the Office of Administrative Law Judge where the four companies' DSIC proceedings were consolidated. The parties to the assigned consolidated proceedings have reached a Joint Settlement concerning the assigned issues and, on February 2, 2017, the parties submitted a Joint Settlement and Statements in Support to the Presiding Officer. The Joint Settlement as submitted to the Presiding Officer will not result in refunds or recoupments to or from customers. On January 19, 2017, in its Order in Penelec's base rate proceeding, the Commission referred a separate issue to the Office of Administrative Law Judge concerning the application of accumulated deferred income tax ("ADIT").[16]

III. DESCRIPTION OF LTIIP MODIFICATION

11. Penelec completed the first year of its current LTIIP in 2016. The experience gained from the first year's LTIIP, as well as the completion of additional engineering and design analysis, indicates that Penelec should increase the cost allocation in a number of program areas.

[16] *Pa.P.U.C. v. Pennsylvania Electric Company*, Docket No. R-2016-2537352 (Final Order entered January 19, 2017).

The increase in cost is due to items such as increased scope, equipment costs and labor costs, as explained in the LTIIP Modification, Appendix A. A comparison of the original versus the modified LTIIP is shown in Figure 1 and Figure 2, below. The LTIIP programs are described in more detail in Appendix A.

Figure 1. Penelec's previously approved LTIIP

Annual Expenditures (in millions of dollars)				
Previously Approved LTIIP	**2017**	**2018**	**2019**	**2020**
	$11.23	**$12.25**	**$11.20**	**$11.17**

Figure 2. Penelec's proposed revised LTIIP

Annual Expenditures (in millions of dollars)				
Proposed Modified LTIIP	**2017**	**2018**	**2019**	**2020**
	$14.69	**$15.82**	**$14.52**	**$14.42**

12. The programs that included in Penelec's LTIIP were those designed to have the greatest impact on reliability. In most cases, the programs included in the LTIIP were chosen to reduce the number of outages caused by aging equipment and lessen unplanned work and operation and maintenance costs. Ongoing projects have been prioritized to maximize the reliability and operating benefits to Penelec's customers. The effectiveness of the projects and programs of the LTIIP have been reviewed periodically. Reliability and equipment failure trends have been analyzed on an ongoing basis to assess the impact of future investments. As stated in its current LTIIP, the Company may re-prioritize, alter completion dates, and add or remove projects based on ongoing engineering analyses to maximize the reliability and operating benefits to the affected circuits, while taking into consideration the overall impact to reliability and operational improvement and the costs and benefits to customers.

13. Penelec's current LTIIP covered 17 categories of distribution-related equipment and facilities, as follows:

- Install Protective Devices
- Create Circuit Ties and Loops
- Porcelain Cutout Replacement
- Line Rehabilitation
- Install Supervisory Control and Data Acquisition (SCADA) Devices
- Install Advanced Distribution Protection Devices
- Wood Pole Replacement
- Wood Pole Reinforcement (C-Trussing)
- Unreimbursed Highway Relocation
- Split Large Circuits
- Switch and Gang Operated Air Brakes (GOAB) Replacement
- Wood Pole Substation Retirement
- Substation Breaker Replacement
- Substation Relay Replacement
- Cap and Pin Insulator Replacement
- Network Rehabilitation
- Customer Service Improvement (CSI)

The LTIIP Modification covers the same 17 categories of infrastructure improvements covered in Penelec's original, approved LTIIP. An exception is the Network Rehabilitation Program which is expanded from the original program to include general underground network rehabilitation as well as the original project of vault rehabilitation.

14. For each of the 17 asset categories Penelec provides in the LTIIP Modification, Appendix A, estimates of the number of replacements, reinforcements, conversions or other improvements that will be made, by year, over the LTIIP's four remaining years, 2017 to 2020. Penelec also provides the following:

- A description of the program and its purpose;
- A description of how the Company identifies equipment for replacement within each asset category and the appropriate course of action for implementing the replacements;
- The scope of the program, including a reasonable estimate of the amount of property to be improved, where such a quantification is applicable;
- The location of planned replacements, where improvements are to be achieved by replacing existing property; and
- The total amount projected to be spent by the Company annually and over the life of the LTIIP.

15. Because the LTIIP Modification is a blueprint for investments that will be made over the course of four years, individual elements of the proposed initiatives that will be implemented in each asset category will be subject to some degree of change as more detailed analysis and planning takes place and better estimates of the cost and time to complete each project are developed. Additionally, some projects included in the LTIIP Modification depend upon third-party actions or decisions, such as permitting, access to public rights-of-way, contractor or equipment availability or, in the case of highway relocations, construction plans by state, county and municipal governments that may not yet be developed or are subject to change. These factors may affect the allocation of investment funds within or between the stated asset categories and may affect the timing or prioritization of investments within the 2017-2020 term of the LTIIP Modification.

A. Identification of Types and Age of Property to be Improved, Repaired and Replaced

16. Section 121.3(a)(1) of the LTIIP regulations calls for the identification of the types and ages of the eligible property covered by the Plan. The descriptions in each asset category in Appendix A identify the type and age of the eligible property in that category. For example, the largest category, by cost, to change in Penelec's LTIIP Modification as opposed to the current LTIIP, is the category of Substation Breaker Replacement. Appendix A indicates that the average age of breakers being replaced depends on the type of breaker, with Square-D breakers having been installed between 1985 and 1997, and with hydraulic breakers having been installed in the late 1960s through 1985.

B. Initial Schedule for Planned Repair and Replacement of Eligible Property

17. In accordance with Section 121.3(a)(2) of the LTIIP regulations, Penelec's LTIIP Modification includes schedules reflecting estimates, based on current information, of the expected years when planned repairs and replacements of eligible property will be completed. The schedules are described on an individual program basis in Appendix A. Using Penelec's Substation Breaker Replacement program as an example, 15 replacements are planned for 2017, 15 replacements are planned for 2018, 14 replacements are planned for 2019, and 14 replacements are planned for 2020, for a total of 58 replacements during the entire period from 2017 through 2020.

C. General Description of the Location of Eligible Property

18. The individual program or project descriptions identify the location of the affected eligible property by its location within an operating area demarcated by the applicable Company Operations Center. Penelec's program to install SCADA Devises, for example, shows a total of 33 projects among seven specific Operations Centers.

D. Estimate of Quantity of Eligible Property

19. The individual program or project descriptions also identify the quantity of the affected eligible property, with the degree of specificity that is possible and practical for the nature of the work involved, by each Company operating area, demarcated by its respective Operations Center.

E. Projected Annual Expenditures

20. Appendix A to Penelec's LTIIP Modification contains a table of "Summary Cost by Year" showing the projected annual expenditures over the four-year term of the LTIIP Modification. The table shows cumulative projected annual and total expenditures for all eligible distribution property. Information about expenditures for individual programs is also included in the sections describing those programs.

F. Acceleration of Infrastructure Improvement and Maintenance of Customer Service

21. Section 121.3(6) of the LTIIP regulations provides that an LTIIP should describe "the manner in which infrastructure replacement will be accelerated and how repair, improvement or replacement will ensure and maintain adequate, efficient, safe, reliable, and reasonable service to customers." Penelec's LTIIP Modification reflects the Company's advancement and acceleration of its infrastructure repair and replacement programs designed to address aging infrastructure, and the Company expects to continue its investment in infrastructure at that accelerated pace over the four years of the LTIIP Modification's term. The LTIIP Modification explains why projects are being undertaken in terms of possible improvements that they are designed to make in customer service and reliability. For example, line rehabilitation is designed to help the Company improve reliability on circuits where outages could impact significant

numbers of customers. Penelec will prioritize the circuits to be rehabilitated based on their ranking within the category of worst performing circuits.

22. In order to analyze the cost-effectiveness of individual programs, Penelec expects to review the effectiveness of its programs based on their expected impact on System Average Interruption Duration Index ("SAIDI"), System Average Interruption Frequency Index ("SAIFI") and Customer Average Interruption Duration Index ("CAIDI"), and their potential to reduce outage response costs, and will compare the value of those expected benefits to the costs of the program and/or individual projects within a program. The repair, reinforcement and replacement of aging distribution equipment and facilities covered by Penelec's LTIIP Modification are designed to help the Company to reduce the frequency and duration of customer outages resulting from equipment failure, which otherwise would increase as the age of its infrastructure increases.

G. Workforce Management and Training Plan for Performance of Work in Cost Effective, Safe and Reliable Manner

23. Section 121.3(a)(7) of the LTIIP regulations requires utilities to include a workforce management and training plan as a part of an LTIIP. A comprehensive description of Penelec's programs for ensuring a qualified workforce is set forth in its LTIIP Modification. For purposes of providing the information required for its LTIIP Modification, Penelec's workforce is considered to include employees of Penelec and employees of various contractors that will be retained to work on LTIIP projects.

H. Description of the Utility's Outreach and Coordination Activities with Third Parties

24. In accordance with Section 121.3(a)(8) of the regulations, the LTIIP Modification describes how the Company plans to reach out to, and coordinate with, other utilities, the Pennsylvania Department of Transportation and local governments with respect to work to be

performed pursuant to the LTIIP that might affect or implicate those entities' roadways or other property and their construction and maintenance schedules.

I. Estimated Implementation of Penelec's DSIC

25. In accordance with the Supplemental Implementation Order entered September 21, 2016, the Company reset the DSIC rate to zero simultaneously with the effective date of new base rates on January 27, 2017. Since the Company's rates are based on using a fully projected future test year ending December 31, 2017, which includes the LTIIP project costs for 2016 and 2017, the new base rates provide for the prospective recovery of the property the Company will place in service and that was previously eligible for recovery under the Company's DSIC mechanism.

26. In its Supplemental Implementation Order the Commission outlined the procedure for recommencing a DSIC upon the conclusion of a base rate case. The Commission directed that "the total aggregate costs that are associated with the DSIC-eligible property projected to be in service and used to set the base rates for the utility should be specified in the final order issued in the proceeding to establish the utility's new rates, whether the final order results from a litigated proceeding or "black box" settlement." In Penelec's recently concluded base rate case the parties agreed that the baseline for restarting charges under the Company's DSIC rider would be based on gross plant balances as of December 31, 2017, as reported in base case Exhibit RAD-46 which includes Commission-approved 2016 and 2017 LTIIP plant total investment for Penelec of $22.12 million.

27. Accordingly, the Company anticipates that, following Commission approval of is LTIIP Modification, and surpassing the gross plant balances reflected in the Company's base rates, the Company will restart the DSIC to recover the fixed costs of the property placed in service pursuant to its LTIIP Modification, all of which constitutes "eligible property" as defined in

Section 1351 of the Code. The Company anticipates approval of the LTIIP Modification within the 120-day review period established in the Final Implementation Order.

IV. CONCLUSION

WHEREFORE, for the reasons set forth above, Pennsylvania Electric Company requests that the Commission enter an order by the end of the 120-day review period finding and determining that its LTIIP Modification: (1) satisfies all of the criteria set forth at 52 Pa. Code § 121.4(e)(1)-(4); (2) meets the legal standard set forth in Section 1352(a)(7) for approval of an LTIIP; and (3) therefore, should be approved without revision and without the need to refer this matter to the Office of Administrative Law Judge.

Additionally, if the Commission were to determine that comments, if any, submitted with respect to Penelec's LTIIP Modification present material factual issues that merit assigning this case to the Office of Administrative Law Judge pursuant to the procedure outlined in the Final Implementation Order, the Company further requests that the Commission, at the time of such assignment, authorize Penelec to file written direct testimony to address such issues and other matters deemed relevant.

Respectfully submitted,

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Dated: March 1, 2017

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Pennsylvania Electric Company

Exhibit No. 1

Long-Term Infrastructure Improvement Plan

Table of Contents

I. Introduction

Pennsylvania Electric Company ("Penelec" or "Company") submitted a petition for approval of its Long-Term Infrastructure Improvement Plan ("LTIIP") on October 19, 2015.[1] The Pennsylvania Public Utility Commission ("PUC" or the "Commission") found that Penelec's LTIIP, and the manner in which it was filed, conformed to the requirements of the Final Implementation Order for Implementation of Act 11 of 2012, entered August 2, 2012, at Docket No. M-2012-2293611, and the Commission's regulations at 52 Pa. Code §§ 121.1-121.8. Penelec's LTIIP was therefore accepted in a Final Order issued on February 11, 2016.

Penelec implemented its approved LTIIP in 2016 and completed the first year of the five-year plan. However, due to the passage of Act 40, Penelec is requesting a modification to its approved LTIIP for the remaining four years of the currently approved plan, which encompasses 2017 through 2020. This proposed modification is considered a "*major modification*", as defined at 52 Pa. Code §§ 121.2, due to the fact that the Company's total estimated cost of its LTIIP will be increased by more than 20%. A modification of this nature requires that "the utility shall file a separate petition for modification".[2] Penelec therefore respectfully submits its modified LTIIP for approval by the Commission.

Act 40 originated as House Bill No. 1436. It was passed and signed by the House of Representatives and the Senate on May 23 and 30, 2016, respectively; was presented to Governor Wolf on June 1, 2016; and became law without the Governor's signature on June 12, 2016. Act 40 adds Section 1301.1 to the Public Utility Code, which specifies how the Commission is to compute income tax expense for ratemaking purposes. Specifically, Section 1301.1(a) states:

> If an expense or investment is allowed to be included in a public utility's rates for ratemaking purposes, the related income tax deductions and credits shall also be included in the computation of current or deferred income tax expense to reduce rates. If an expense or investment is not allowed to be included in a public utility's rates, the related income tax deductions and credits, including tax losses of the public utility's parent or affiliated companies, shall not be included in the computation of income tax expense to reduce rates. The deferred income taxes used to determine the rate base of a public utility for ratemaking purposes shall be based solely on the tax deductions and credits received by the public utility and shall not include any deductions or credits generated by the expenses or investments of a public utility's parent or any affiliated entity. The income tax expense shall be computed using the applicable statutory income tax rates.

In summary, Section 1301.1(a) terminates the practice of making a "consolidated tax adjustment" ("CTA") when calculating a utility's Federal income taxes for ratemaking purposes

[1] *Petition of Pennsylvania Electric Company for Approval of their Long-Term Infrastructure Improvement Plan*, Docket No. P-2015-2508936.
[2] 52 Pa. Code §§ 121.5(a)

in Pennsylvania and goes on to state in Section 1301.1(b), the differential that is accrued as a result of applying the revised ratemaking method shall be used as follows:

> (1) fifty percent to support reliability or infrastructure related to the rate base eligible capital investment as determined by the commission; and
> (2) fifty percent for general corporate purposes.

Act 40 applies to "all cases where the final order is entered after the effective date of this section" (*i.e.* August 11, 2016), and therefore applies to the most recent Penelec Distribution Base Rate Filing.[3] The annual incremental amount as a result of Act 40, by which the Company's LTIIP will be increased for each of the remaining years, is approximately $3.32 million.[4] With these additions to its LTIIP, Penelec will continue to provide reliability advancements, customer service improvements, and meet the needs and demands of its customers into the future.

II. Requirements of the LTIIP

Pursuant to 52 Pa. Code § 121.3(a), a utility seeking to implement a distribution system improvement charge ("DSIC") mechanism or to continue a previously-approved DSIC mechanism must file an LTIIP. The LTIIP must include the eight elements listed in that regulation. The required elements and the locations within Penelec's modified LTIIP where they are addressed are set forth below:

52 Pa. Code § 121.3(a)(1). The descriptions of the 17 infrastructure improvement initiatives set forth in Appendix A identify the types and ages of DSIC-eligible property in subsections captioned "Description" and "Age of Infrastructure."

52 Pa. Code § 121.3(a)(2). The table at the front of Appendix A, captioned "Summary Cost by Year," shows the planned expenditures, by year, for the period 2017-2020, as well as the total for that period, for each of the infrastructure improvement initiatives discussed in Appendix A.

52 Pa. Code § 121.3(a)(3). The descriptions of each infrastructure improvement initiative in Appendix A set forth the general location of eligible property relating to each initiative in subsections titled "Anticipated Locations."

52 Pa. Code § 121.3(a)(4). Reasonable estimates of the quantity of eligible property to be improved or repaired are provided in the subsection titled "Schedule" in the description of each infrastructure improvement initiative in Appendix A.

52 Pa. Code § 121.3(a)(5). The projected annual expenditures and the manner in which Penelec expects to finance those expenditures are addressed in Section V, below. Additional detail

[3] Joint Petition for Partial Settlement of Rate Investigation, *Pa. Pub. Util. Comm'n v. Pennsylvania Electric Co.*, Docket No. R-2016-2537352 (Final Order entered January 19, 2017).
[4] *See* Met-Ed/Penelec/Penn Power/West Penn Statement No. 2-S, the Supplemental Testimony of Richard D'Angelo, page 6 lines 24 and 25, Docket No. R-2016-2537352.

concerning the expenditures by year is provided in Appendix A within the description of each infrastructure improvement initiative.

52 Pa. Code § 121.3(a)(6). A description of the manner in which the infrastructure repair, improvement or replacement will be accelerated and how repair, improvement or replacement will ensure and maintain adequate, efficient, safe, reliable and reasonable service to customers is addressed in Sections III, V, and VIII, below.

52 Pa. Code § 121.3(a)(7). The workforce management and training programs in place for Penelec that are designed to ensure that it will have access to a qualified workforce to perform work under its LTIIP in a cost-effective, safe and reliable manner is described in Section VII, below.

52 Pa. Code § 121.3(a)(8). A description of how Penelec expects to reach out to, and coordinate with, other utilities, the Pennsylvania Department of Transportation and local governments regarding their planned maintenance/construction projects and roadways that may be impacted by the LTIIP is provided in Section VI, below.

III. Distribution Reliability

If the modified LTIIP is approved, it is expected to support reliability improvement by upgrading and modernizing the distribution system and, in that way, enhancing service to customers and augmenting Penelec's approved LTIIP. The Company continues to work towards the goal of achieving benchmark-level performance in System Average Interruption Frequency Index ("SAIFI"), Customer Average Interruption Duration Index ("CAIDI"), and System Average Interruption Duration Index ("SAIDI") by year-end 2018.[5]

IV. The Need for the LTIIP

Penelec's approved LTIIP, accepted in a final order issued on February 11, 2016, was borne out of the need to address increasing equipment and line failures and to improve the performance of the system as measured by SAIFI, CAIDI, and SAIDI. The Company's modification to its LTIIP provides a clear demonstration of its plan to meet the obligations of Act 40, as described in Section I above, while further supporting Penelec's initiative to reduce equipment and line failures as well as improve system performance.

V. Implementation of the LTIIP

Penelec's modification to its LTIIP encompasses the remaining four-year period from 2017 through 2020 and includes projects that are incremental to its approved LTIIP. Penelec plans to finance the increased capital through internal generation of cash and timely recovery of invested funds through the DSIC mechanism.

[5] Penelec has also committed to achieving benchmark-level reliability performance in the Implementation Plan for the Focused Management Audit of Pennsylvania Electric Company, Docket No. D-2013-2365992.

The acceleration of Penelec's capital investment will occur by implementing projects or programs above and beyond its approved LTIIP, which has already been found to be an acceleration of capital investment. The comparison of the approved versus the modified LTIIP is shown in Figure 1 and Figure 2, below. The LTIIP programs are described in more detail in Appendix A.

Figure 1. Penelec's approved LTIIP

Annual Expenditures (in millions of dollars)				
Approved LTIIP	2017	2018	2019	2020
	$11.23	$12.25	$11.20	$11.17

Figure 2. Penelec's modified LTIIP

Annual Expenditures (in millions of dollars)				
Modified LTIIP	2017	2018	2019	2020
	$14.69	$15.82	$14.52	$14.42

For the most part, the programs that were considered for inclusion in Penelec's LTIIP are those designed to have the greatest impact on reliability (in terms of positive effect on customer service) per dollar spent. Additionally, in most cases, the programs included in the LTIIP were chosen to reduce the number of outages caused by aging equipment and lessen unplanned work and operation and maintenance costs. On an ongoing basis, projects will be prioritized to maximize the reliability and operating benefits to Penelec's customers. The effectiveness of the projects and programs that comprise the LTIIP will be reviewed periodically to ensure that they remain prudent and cost-effective. Reliability and equipment failure trends will be analyzed on an ongoing basis as well to assess the impact of future investments. Thus, the Company will continuously review its plan and will assess the effectiveness of the identified projects and programs in relation to actual performance results. The Company may re-prioritize, alter completion dates, and add or remove projects based on engineering analyses to maximize the reliability and operating benefits to the affected circuits, while taking into consideration the overall impact to reliability and operational improvements and the costs and benefits to customers.

VI. Outreach and Coordination with Other Entities

Penelec communicates and coordinates with the Pennsylvania Department of Transportation ("PennDOT"), local governments, local municipalities, and other utilities and entities with regard to work that is scheduled to be performed that may affect the operations of those entities. Examples of communication and coordination efforts include press releases, public meetings, contact with local officials, and communication to customers who will experience a planned outage due to construction within the service area. However, most of the work that will be performed under Penelec's LTIIP will likely have minimal impact on these entities' work schedules. Because the possible impacts depending on the circumstances at the time work is actually being performed, specific project outreach plans are not currently available.

VII. Access to a Qualified Workforce

A. Penelec Workforce

The Company created Power Systems Institute ("PSI"), which is a unique, two-year program that combines classroom learning with the hands-on training needed to open the door to opportunities in the electric industry. The program was created as a way to help replace retiring line and substation employees. Upon completing the program, graduates will have a total of 1,280 hours of hands-on technical training as well as 60 hours of academic college credits. Graduates will earn an associate's degree and are classified as a mid-level line or substation worker. Qualified graduates are offered positions with the Company subject to the Company's standard hiring process.

It is the Company's practice to size its workforce to accommodate a steady state workload that includes day-to-day activity and a reasonable level of storm response as projected from historical averages. For those times when workload increases above steady-state levels, the Company is able to supplement its own resources by accessing a portfolio of affiliated resources[6] that may be able to move into the area to assist on a temporary basis. The Company also employs contractors to supplement regular status employees, particularly during construction of large capital projects.

In regard to training for qualified electrical workers, the Company adheres to the Occupational Safety and Health Administration ("OSHA") Regulation 29 CFR 1910.269 Electrical Power Generation, Transmission, and Distribution standard, American National Standards Institute, American Society for Testing Materials, and Institute of Electrical and Electronics Engineers standards. Training material leverages FirstEnergy work practices, procedures, construction standards, and the Accident Prevention Handbook.

Formal training is provided by the Workforce Development ("WFD") team. This group consist of full time instructors supplemented by contracted instructors who are generally retired craft workers. WFD develops, conducts, and evaluates knowledge and skills training for apprentices and incumbents.

Training is provided through varying methods, which consist of hands-on, classroom and on-the-job training. The curriculum is designed to support the employee's progression and includes a formalized skills demonstration program that allows for practice to gain proficiency in critical tasks. Finally, employees are required to complete progressive testing in a controlled setting to demonstrate skill proficiency prior to advancing within the craft line.

Formal and annual regulatory training mandated by agencies such as OSHA, the Department of Transportation, and the Environmental Protection Agency is managed within WFD, which ensures that all employees complete the required training within the applicable timeframes.

[6] FirstEnergy Corp.'s portfolio of operating companies includes not only those four located within the Commonwealth of Pennsylvania, but an additional six operating in other jurisdictions. The consistency in standards and work practices employed across all ten of these operating companies enables streamlined resource sharing in a way that promotes both safety and cost efficiency for those companies under this umbrella.

Interpretation of training revisions is managed with the assistance of FirstEnergy and FirstEnergy Utilities Safety Division. WFD maintains the integrity of all training materials and tracks completion to ensure compliance. All training adheres to FirstEnergy policies and procedures to ensure quality, consistency and accuracy.

B. Contractor Workforce

In the event that resources are necessary to supplement the Company's workforce, FirstEnergy's Utilities Sourcing Department employs its Contractor of Choice Program to ensure FirstEnergy secures a skilled labor force and specialized equipment in order to complete projects on schedule and at competitive market pricing. Under the Contractor of Choice Guidelines the FirstEnergy Utilities Sourcing Department will issue a Request for Proposal ("RFP") to a list of contractors who have a history of successfully completing projects safely, on schedule and at competitive market pricing. After a thorough bid clarification process with the contractors the responses to the RFP are evaluated by Engineering, Project Management and Supply Chain. A contractor is selected based on available manpower and equipment resources, understanding of project scope, constructability, management and safety oversight and pricing. A contractor is required to:

- Employ only persons known by the contractor to be experienced, qualified, reliable and trustworthy.
- Have in writing a series of safe work practices, procedures and programs pertinent to the work being done.

Upon completion of the work, a designated representative of the Company will evaluate the work performed by the contractor before final acceptance.

Supplier diversity is a core value inherent to all of the Company's business operations. Supporting diversity is an essential element to locating sources of materials and services, selecting suppliers and managing supplier and contractor relationships.

VIII. Summary

The modified LTIIP is expected to enhance reliability by further supporting Penelec's efforts to accelerate its rate of infrastructure repair, improve on its distribution system and respond to equipment and line failures. These improvements should also better enable Penelec to achieve work efficiencies by focusing on planned work instead of reacting to unplanned work. Penelec's LTIIP contains all of the elements required by 52 Pa. Code § 121.3(a). Accordingly, Penelec's LTIIP satisfies the criteria for Commission approval set forth in 52 Pa. Code § 121.4(e).

Appendix A

Summary Cost by Year

Infrastructure Improvement Initiative	Actual/Planned Annual Expenditures (in millions of dollars)					
	2016*	2017	2018	2019	2020	Total
Total	**$10.94**	**$14.69**	**$15.82**	**$14.52**	**$14.42**	**$70.39**
Cap and Pin Insulator Replacement	$-	$0.50	$0.50	$0.46	$0.47	**$1.93**
Create circuit Ties and Loops	$1.17	$0.40	$3.03	$1.00	$1.00	**$6.60**
Customer Service Improvement ("CSI")	$0.19	$0.33	$0.33	$0.33	$0.33	**$1.51**
Install Advanced Distribution Protection Devices	$-	$0.40	$1.15	$-	$0.50	**$2.05**
Install SCADA	$1.12	$2.71	$1.41	$0.57	$0.97	**$6.78**
Line Rehabilitation	$1.76	$2.42	$2.79	$0.93	$0.81	**$8.71**
Network Rehabilitation	$-	$1.00	$0.75	$1.63	$1.65	**$5.03**
Porcelain Cutout Replacement	$2.86	$3.44	$0.86	$-	$-	**$7.16**
Review Coordination - Install Protective Devices	$1.08	$0.15	$0.06	$-	$-	**$1.29**
Split Large Circuits	$-	$0.40	$2.13	$-	$-	**$2.53**
Substation Breaker Replacement	$-	$1.50	$1.50	$1.39	$1.39	**$5.78**
Substation Relay Replacement	$-	$-	$-	$1.24	$1.24	**$2.48**
Switch and GOAB Replacement	$-	$-	$-	$1.92	$1.00	**$2.92**
Unreimbursed Highway Relocation	$2.76	$1.44	$1.31	$1.31	$1.31	**$8.13**
Wood Pole Reinforcement (C-Trussing)	$-	$-	$-	$0.30	$0.30	**$0.60**
Wood Pole Replacement	$-	$-	$-	$2.97	$2.97	**$5.94**
Wood Pole Substation Retirement	$-	$-	$-	$0.47	$0.48	**$0.95**

*Actuals

Cap and Pin Insulator Replacement

Description
Replace aging substation cap and pin insulators.

Identification and Justification
The brown porcelain cap and pin style substation insulators are older units that are prone to failure. This program will identify substations in need of the reinsulating and replace units with new post style insulators. Candidates for replacement will be chosen by general condition of the substation insulation as well as by locations exhibiting poor historical performance and greatest potential customer impact and are prioritized based on customer impact (SAIFI) from an insulator failure which causes a loss of the bus. This program will reduce failed insulator caused outages and damage to adjacent equipment caused by the failed insulator.

Age of Infrastructure
The insulator equipment targeted for replacement in this program is over 40 years old.

Schedule

Actual/Planned Insulator Replacements						
	2016	**2017**	**2018**	**2019**	**2020**	**Total**
Approved	-	-	-	15	15	**30**
Actual/Modified	-	15	15	15	15	**60**

Actual/Planned Annual Expenditures (in millions)

	2016	**2017**	**2018**	**2019**	**2020**	**Total**
Approved	$-	$-	$-	$0.46	$0.47	**$0.93**
Actual/Modified	$-	$0.50	$0.50	$0.46	$0.47	**$1.93**

Anticipated Locations (2017 - 2020)

Operations Center	**Total**
Altoona	7
Clearfield	10
Erie	10
Johnstown	2
Oil City	20
Lewistown	1
Towanda	7
Warren	3
Total	**60**

Comments
This program has been expanded into 2017 and 2018 as compared to the Company's approved LTIIP.

Create Circuit Ties and Loops

Description
Create tie points and loops between radial sections of distribution circuits.

Identification and Justification
Although some of the distribution circuits have ties back to other circuits, there are circuits or portions of circuits that are radial in nature. During an outage, customers served by radial circuits, remain out of service until repairs are made. This project will build distribution ties between radial sections of the circuits to allow for circuit switching during outages and is designed to enable faster service restoration for customer served by radial circuits. This project will also allow customers to be back fed during periods of planned outages. Both manual and SCADA switches will be used to accomplish the switching. Projects will be prioritized using the following criteria:

- Reliability history of the circuit (SAIFI and CAIDI)
- Number of customers served radially without a tie

Age of Infrastructure
The work encompassed by this initiative involves the installation of new equipment designed to enhance or modernize service to customers. The infrastructure targeted for enhancement is not chosen based on age or condition but by reliability performance. However, the average age of the circuits that will be upgraded is 81 years old.

Schedule

Actual/Planned Circuit Ties or Loops						
	2016	**2017**	**2018**	**2019**	**2020**	**Total**
Approved	1	-	1	-	-	**2**
Actual/Modified	1	1	1	1	1	**5**

Actual/Planned Annual Expenditures (in millions)

	2016	**2017**	**2018**	**2019**	**2020**	**Total**
Approved	$0.81	$-	$3.03	$-	$-	**$3.84**
Actual/Modified	$1.17	$0.40	$3.03	$1.00	$1.00	**$6.60**

Anticipated Locations (2017 - 2020)

Operations Center	Total
Altoona	1
Johnstown	1
Oil City	1
Towanda	1
Total	**4**

Comments
This program has been expanded into 2017, 2019 and 2020 as compared to the Company's approved LTIIP.

Customer Service Improvement ("CSI")

Description
Reliability improvements that focus on clusters of customers that experience frequent or repeated outages as well as other issues such as low voltage or momentary outages. These projects are typically initiated from customer complaints.

Identification and Justification
This program not only aims to enhance system performance, but it also provides a means to reduce frequency of outages at the customer level that might not be otherwise addressed when targeting overall system metrics. Examples of projects that may be completed include replacing overhead conductor, reclosers, cutouts, or transformers, or installing fuses or animal guards. Items that have been historically addressed include sustained outages, momentary outages, over voltage, low voltage, stray voltage, and flickering lights.

Age of Infrastructure
In general, the age of the infrastructure will not be known until specific projects are identified.

Schedule

Actual/Planned Improvement Projects						
	2016	**2017**	**2018**	**2019**	**2020**	**Total**
Approved	64	64	64	64	64	**320**
Actual/Modified	26	30	30	30	30	**146**

Actual/Planned Annual Expenditures (in millions)

	2016	**2017**	**2018**	**2019**	**2020**	**Total**
Approved	$0.33	$0.33	$0.33	$0.33	$0.33	**$1.65**
Actual/Modified	$0.19	$0.33	$0.33	$0.33	$0.33	**$1.51**

Anticipated Locations (2017 - 2020)
Locations for the program will be determined by specific clusters of customers that experience frequent or repeated outages.

Comments
Using an updated average number of customer complaints, Penelec has reduced the number of planned improvement projects, however, it has kept the budgetary allotment the same in order to allow larger projects to be completed.

Install Advanced Distribution Protective Devices

Description
Review subtransmission and distribution circuits for opportunities to upgrade and enhance circuit performance.

Identification and Justification
This program will provide for the installation of electronically controlled reclosers and switches with modernized communication, which will allow for additional protection coordination with downstream devices and enhance the line protection. Circuits will be selected on past reliability performance and number of customers served. Reliability improvements should be realized by reducing customers affected per incident (SAIFI) and the reduction in the number of circuit lockouts.

Age of Infrastructure
The work encompassed by this initiative involves the installation of new equipment designed to enhance or modernize service to customers. The infrastructure targeted for enhancement is not chosen based on age or condition but by reliability performance. However, the average age of the circuits that will be upgraded is 79 years old.

Schedule

Actual/Planned Number of Circuits						
	2016	**2017**	**2018**	**2019**	**2020**	**Total**
Approved	-	-	4	-	-	**4**
Actual/Modified	-	1	3	-	1	**5**

Actual/Planned Annual Expenditures (in millions)

	2016	**2017**	**2018**	**2019**	**2020**	**Total**
Approved	$-	$-	$2.15	$-	$-	**$2.15**
Actual/Modified	$-	$0.40	$1.15	$-	$0.50	**$2.05**

Anticipated Locations (2017 - 2020)

Operations Center	**Total**
Clearfield	1
Erie	1
Oil City	1
Towanda	1
Warren	1
Total	**5**

Comments

This program has been expanded into 2017 and 2020 as compared to the Company's approved LTIIP. Additionally, in 2018, the scope has been reduced to three circuits, instead of four.

Install SCADA

Description
Install additional distribution supervisory control and data acquisition ("SCADA") devices at new locations where circuit conditions and system performance warrant.

Identification and Justification
This program is designed to reduce both SAIFI and CAIDI, while improving the reliability performance of the circuits. These devices better enable dispatchers to restore customers during outages, and will also allow dispatchers to pinpoint the location of faulted sections more quickly, saving crew time for actual repair. The following guidelines will be used to prioritize the installation of the new devices:

- Circuits that are operated at 34.5 kV or 23 kV that provide a source to another distribution substation
- Circuits that are operated radially at any voltage that can provide a redundant source to an adjacent circuit
- Substations can be sectionalized and fed from other source remotely
- Circuits with significant SAIFI and CAIDI numbers

Age of Infrastructure
The work encompassed by this initiative involves the installation of new equipment designed to enhance or modernize service to customers. The infrastructure targeted for enhancement is not chosen based on age or condition but by reliability performance. However, the average age of the circuits that will be upgraded is 70 years old.

Schedule

Actual/Planned Circuits* for SCADA Installation						
	2016	**2017**	**2018**	**2019**	**2020**	**Total**
Approved	9	7	7	-	-	**23**
Actual/Modified	14	17	13	6	10	**57**

* The original filing was submitted using a unit decription of "devices" but the units should have been described as "circuits".

Actual/Planned Annual Expenditures (in millions)

	2016	**2017**	**2018**	**2019**	**2020**	**Total**
Approved	$0.74	$0.59	$0.59	$-	$-	**$1.92**
Actual/Modified	$1.12	$2.71	$1.41	$0.57	$0.97	**$6.78**

Anticipated Locations (2017 - 2020)

Operations Center	Total
Altoona	7
Dubois	1
Erie	14
Johnstown	6
Lewistown	1
Oil City	7
Towanda	7
Total	**43**

Comments
This program has been expanded for years 2017 through 2020 as compared to the Company's approved LTIIP.

Line Rehabilitation

Description
Refurbish zone one and zone two[7] of targeted distribution circuits that have high SAIFI performance. Focus will be on circuits that have high rates of equipment and line failures and weather caused outages.

Identification and Justification
Large impact distribution outages are caused when a fault occurs on a distribution circuit that has a significant number of customers. Faults can affect components including but not limited to cutouts, lightning arresters, crossarms, capacitors, reclosers, insulators, transformers, and connectors. To prevent these faults, circuit reviews will identify any equipment deficiencies and other opportunities to prevent outages. The number of items identified for replacement will vary based on circuit size and condition. Projects will be prioritized using the following criteria:

- Reliability history of the circuit (SAIDI, SAIFI, and CAIDI)
- Worst performing circuit status
- Field inspections

Age of Infrastructure
The components of these circuits have an average age of 45 to 55 years, though some components may have been installed in the late 1920s. In general, the age of the specific equipment that will be replaced will not be known until it is identified through the inspection process.

Schedule

Actual/Planned Circuits for Rehabilitation						
	2016	**2017**	**2018**	**2019**	**2020**	**Total**
Approved	2	2	3	2	2	**11**
Actual/Modified	15	4	5	2	2	**28**

Actual/Planned Annual Expenditures (in millions)

	2016	**2017**	**2018**	**2019**	**2020**	**Total**
Approved	$0.78	$1.37	$1.79	$0.93	$0.81	**$5.68**
Actual/Modified	$1.76	$2.42	$2.79	$0.93	$0.81	**$8.71**

[7] Zone one is defined as the portion of the circuit from the substation breaker to the first protective device. Zone two is defined as the three phase conductor and devices after the first protective device.

Anticipated Locations (2017 - 2020)

Operations Center	Total
Erie	5
Philipsburg	3
DuBois	1
Johnstown	1
Towanda	2
Oil City	1
Total	**13**

Comments
This program has been expanded in 2017 and 2018 as compared to the Company's approved LTIIP.

Network Rehabilitation (Includes Network Vault Rehabilitation)

Description
This category is new and combines both network rehabilitation along with the program for network vault rehabilitation inlcuded in the approved LTIIP.

Replace aging infrastructure in the underground network system. The replacements will be broken into the following categories: primary and secondary conductors, secondary cable limiters, primary switches, transformer high side switches, transformers, transformer protectors, and vault condition items (vault lids, structure, and water removal systems).

Identification and Justification
Penelec operates and maintains three underground networks in its service territory. Some of the equipment is nearing the end of its effective life. Growth on the network is controlled by serving new customers from non-network circuits whenever possible. This program will accelerate the replacement of aging network equipment such as primary and secondary conductors, secondary cable limiters, primary switches, transformer high side switches, transformers, transformer protectors, and vault condition items (vault lids, structure, and water removal systems). This program is designed to improve safety, operational flexibility, reliability, and customer service. Work will be prioritized based on overall condition, specialty trades availability, and contractor availability.

Age of Infrastructure
The equipment targeted for replacement in this program is more than 40 years old.

Schedule

Actual/Planned Rehabilitation Projects						
	2016	**2017**	**2018**	**2019**	**2020**	**Total**
Approved	-	-	-	23	23	**46**
Actual/Modified	-	3	3	26	26	**58**

Actual/Planned Annual Expenditures (in millions)

	2016	**2017**	**2018**	**2019**	**2020**	**Total**
Approved	$-	$-	$-	$0.88	$0.90	**$1.78**
Actual/Modified	$-	$1.00	$0.75	$1.63	$1.65	**$5.03**

Anticipated Locations (2017 - 2020)

Operations Center	Total
Altoona	19
Erie	19
Johnstown	20
Total	**58**

Comments

This category is new and combines a new category of work for network rehabilitation along with the approved LTIIP program for network vault rehabilitation.

Porcelain Cutout Replacement

Description
Replace porcelain cutouts located in zone one or zone two on overhead distribution circuits.

Identification and Justification
Porcelain cutouts have been failing at Penelec at an accelerated rate, causing lockouts of reclosers and circuit breakers, pole fires and other damage. These failures lead to long duration outages and drive up SAIFI and SAIDI. Replacing porcelain cutouts with new, industry standard polymer cutouts should reduce the number of lockouts and unplanned outages. Projects will be prioritized using the following criteria:

- Reliability history of the circuit (SAIDI, SAIFI, and CAIDI)
- Worst performing circuit status

Age of Infrastructure
Cutouts are a relatively small piece of equipment the age of which is not typically tracked. From the records Penelec does have for these particular circuits, the cutouts were installed in the 1970s throughout the 1990s. The Company fully transitioned to installing only polymer cutouts in late 2006.

Schedule

Actual/Planned Number of Circuits						
	2016	**2017**	**2018**	**2019**	**2020**	**Total**
Approved	68	78	57	-	-	**203**
Actual/Modified	69	80	57	-	-	**206**

Actual/Planned Annual Expenditures (in millions)

	2016	**2017**	**2018**	**2019**	**2020**	**Total**
Approved	$6.67	$3.44	$0.86	$-	$-	**$10.97**
Actual/Modified	$2.86	$3.44	$0.86	$-	$-	**$7.16**

Anticipated Locations (2017 - 2020)

Operations Center	Total
Clearfield	6
Dubois	14
Erie	20
Oil City	32
Towanda	41
Warren	24
Total	**137**

Comments
The only change to this program is a slight revision to the number of units in 2017.

Review Coordination - Install Protective Devices

Description
Construct and implement fuse protection and coordination recommendations from full circuit coordination studies completed by the planning and protection engineers.

Identification and Justification
The selected circuits are based on overall performance and by the protection needs. These circuits are on the 34.5 kV distribution system, which statistically benefit more from a coordination study. Circuits are programmatically reviewed by a protection engineer. By installing additional protective devices, fewer customers will be affected during an outage therefore reducing Penelec's SAIFI performance.

Age of Infrastructure
Various protective devices are a relatively small pieces of equipment of which age is not tracked. Many of the existing protective devices were replaced or installed in the 1970s through the 1990s.

Schedule

Actual/Planned Number of Circuits						
	2016	**2017**	**2018**	**2019**	**2020**	**Total**
Approved	6	6	2	-	-	**14**
Actual/Modified	21	6	2	-	-	**14**

Actual/Planned Annual Expenditures (in millions)

	2016	**2017**	**2018**	**2019**	**2020**	**Total**
Approved	$0.12	$0.15	$0.06	$-	$-	**$0.33**
Actual/Modified	$1.08	$0.15	$0.06	$-	$-	**$1.29**

Anticipated Locations (2017 - 2020)

Operations Center	**Total**
Altoona	1
Erie	3
Johnstown	2
Towanda	2
Total	**8**

Comments
This program has not changed as compared to Penelec's approved LTIIP.

Split Large Circuits

Description
This program is designed to divide large distribution circuits into smaller circuits.

Identification and Justification
This program is designed to reduce both SAIFI and CAIDI on the circuits, while improving the reliability performance of the circuits. When an outage occurs, fewer customers should be impacted and the time to locate the problem will be reduced because the circuit is smaller. The following guidelines will be used to prioritize circuits for this program:

- Circuits with significant SAIFI and CAIDI numbers
- Considered worst performing circuits
- Other programs already implemented
- A reduction of exposure is warranted to correct worst performing circuit status

Age of Infrastructure
The work encompassed by this initiative involves the installation of new equipment designed to enhance or modernize service to customers. The infrastructure targeted for enhancement is not chosen based on age or condition but by reliability performance. However, the average age of the circuits that will be upgraded is 82 years old.

Schedule

Actual/Planned Number of Circuits						
	2016	**2017**	**2018**	**2019**	**2020**	**Total**
Approved	-	1	1	-	-	**2**
Actual/Modified	-	1	1	-	-	**2**

Actual/Planned Annual Expenditures (in millions)

	2016	**2017**	**2018**	**2019**	**2020**	**Total**
Approved	$-	$3.91	$2.13	$-	$-	**$6.04**
Actual/Modified	$-	$0.40	$2.13	$-	$-	**$2.53**

Anticipated Locations (2017 - 2020)

Operations Center	**Total**
Johnstown	1
Oil City	1
Total	**2**

Comments

This category has been revised to remove the substation originally planned for Philipsburg circuit 162-22. Instead in 2017, Penelec will instead complete the following: SCADA installation on seven circuits, cap and pin insulator replacement on 15 substations, line rehabilitation on circuit 282-65 and the creation of a circuit tie line between the Salix and Scalp substations.

Substation Breaker Replacement

Description
Identify and replace aging, unreliable, obsolete circuit breakers, or reclosers.

Identification and Justification
Replace distribution 34.5 kV SF6 Square-D breakers, hydraulic reclosers and associated relaying equipment. The breaker/recloser replacements are prioritized based on the SAIFI impact from a breaker failure or failure to operate. Also considered are breakers that are located at critical points within the system where a failure would cause operational difficulties of the system. New circuit breakers and reclosers with associated relaying will be installed to improve reliability, correct chronic corrective maintenance and operational issues, improve protection, reduce maintenance, and provide post-fault event logs.

Age of Infrastructure
The Square-D breakers targeted in this program were installed between 1985 and 1997. The hydraulic reclosers targeted in this program were installed in the late 1960s thru 1985.

Schedule

Actual/Planned Breaker/Recloser Replacements						
	2016	**2017**	**2018**	**2019**	**2020**	**Total**
Approved	-	-	-	10	10	**20**
Actual/Modified	-	15	15	14	14	**58**

Actual/Planned Annual Expenditures (in millions)

	2016	**2017**	**2018**	**2019**	**2020**	**Total**
Approved	$-	$-	$-	$0.39	$0.39	**$0.78**
Actual/Modified	$-	$1.50	$1.50	$1.39	$1.39	**$5.78**

Anticipated Locations (2017 - 2020)
Locations for the program will be determined using the methodology detailed above.

Comments
This program has been expanded in all four remaining years as compared the Company's approved LTIIP.

Substation Relay Replacement

Description
Upgrade aging electromechanical, static relays, microprocessor-based relays and other antiquated relay equipment.

Identification and Justification
This program will replace substation relays that are less reliable or are at the end of the usable life. This includes the replacement of electromechanical directional and transformer differential relays with new microprocessor based platforms that employ oscillography and fault recording capabilities. Replacements are prioritized based on customer impact (SAIFI) from a breaker failure or failure to trip and will improve circuit protection and fault clearing analysis capabilities.

Age of Infrastructure
The relays targeted for replacement are an obsolete style of overcurrent relays which were installed from the 1960s through the early 1990s.

Schedule

Actual/Planned Relay Replacements						
	2016	**2017**	**2018**	**2019**	**2020**	**Total**
Approved	-	-	-	50	50	**100**
Actual/Modified	-	-	-	50	50	**100**

Actual/Planned Annual Expenditures (in millions)

	2016	**2017**	**2018**	**2019**	**2020**	**Total**
Approved	$-	$-	$-	$1.24	$1.24	**$2.48**
Actual/Modified	$-	$-	$-	$1.24	$1.24	**$2.48**

Anticipated Locations (2017 - 2020)
Locations for the program will be determined using the methodology detailed above.

Comments
This program has not changed as compared to compared to Penelec's approved LTIIP.

Switch and GOAB Replacement

Description
This program will replace older switches and gang operated air brakes ("GOAB") on the distribution lines and at substations.

Identification and Justification
This program is designed to reduce both CAIDI and SAIDI, while improving the reliability performance of the circuits. The following guidelines will be used to prioritize the installation of the new devices:

- Accessibility of switch location and frequency of operations
- Reliability history of the circuit (SAIDI, SAIFI, and CAIDI)

Age of Infrastructure
Many of the switches scheduled to be replaced are more than 40 years old.

Schedule

Actual/Planned Switch or GOAB Replacements						
	2016	**2017**	**2018**	**2019**	**2020**	**Total**
Approved	-	-	-	118	118	**236**
Actual/Modified	-	-	-	118	59	**177**

Actual/Planned Annual Expenditures (in millions)

	2016	**2017**	**2018**	**2019**	**2020**	**Total**
Approved	$-	$-	$-	$1.92	$1.97	**$3.89**
Actual/Modified	$-	$-	$-	$1.92	$1.00	**$2.92**

Anticipated Locations (2017 - 2020)
Locations for the program will be determined using the methodology detailed above.

Comments
This program has been modified in 2020 as compared to the Company's approved LTIIP in order to shift funds to the SCADA program.

Unreimbursed Highway Relocation

Description
Recover the unreimbursed costs of distribution facility relocations in support of highway and bridge construction projects.

Identification and Justification
Highway and bridge relocation and construction projects occur throughout the year and across the Penelec service territory. These projects are sponsored by PennDOT as well as individual counties and municipalities. Reimbursement amounts are calculated based on PennDOT DM-5 manual guidelines. Historically Penelec collects 22% of the overall relocation costs from the entity making the request for equipment relocation.

Age of Infrastructure
The infrastructure targeted for relocation is not chosen based on age or condition but merely by its location. Despite that fact, replacement of infrastructure with newer equipment may result in reliability improvement.

Schedule

Actual/Average Number of Projects						
	2016	**2017**	**2018**	**2019**	**2020**	**Total**
Approved	25-60	25-60	25-60	25-60	25-60	**125-300**
Actual/Modified	42	25-60	25-60	25-60	25-60	**142-282**

Actual/Planned Annual Expenditures (in millions)

	2016	**2017**	**2018**	**2019**	**2020**	**Total**
Approved	$1.44	$1.44	$1.31	$1.31	$1.31	$6.81
Actual/Modified	$2.76	$1.44	$1.31	$1.31	$1.31	$8.13

Anticipated Locations (2017 - 2020)
The location of the work varies and is driven by the construction schedules of PennDOT and other government entities.

Comments
This program has not changed as compared to Penelec's approved LTIIP.

Wood Pole Reinforcement (C-Trussing)

Description
Steel reinforcement of distribution poles to maintain the poles' original strength characteristics.

Identification and Justification
This program bolsters the longevity and reliable service of the distribution wood pole fleet as well as contributes to maintaining public and employee safety. Reinforcements are performed by a qualified distribution wood pole inspection and repair contractor. Penelec inspects approximately 42,000 poles per year, from which a historical trend suggests that 2.4% of inspected poles will qualify for reinforcement.

Age of Infrastructure
In general, the age of the poles that will be reinforced will not be known until they are identified through the inspection process. The average age of the reinforced poles across Penelec is 58 years old.

Schedule

Actual/Planned Pole Reinforcements						
	2016	**2017**	**2018**	**2019**	**2020**	**Total**
Approved	-	-	-	500	500	**1,000**
Actual/Modified	-	-	-	500	500	**1,000**

Actual/Planned Annual Expenditures (in millions)

	2016	**2017**	**2018**	**2019**	**2020**	**Total**
Approved	$-	$-	$-	$0.30	$0.30	**$0.60**
Actual/Modified	$-	$-	$-	$0.30	$0.30	**$0.60**

Anticipated Locations (2017 - 2020)
Project locations are directly linked to the distribution pole inspection plan and are identified yearly.

Comments
This program has not changed as compared to Penelec's approved LTIIP.

Wood Pole Replacement

Description
Replacement of poles identified as non-restorable during the annual Penelec distribution pole inspection process.

Identification and Justification
This program is the systematic replacement of wood poles that have been identified by a qualified inspector to have degraded beyond restorable condition (cannot be reinforced). These poles are identified during annual inspections of the distribution network. The program ultimately contributes to storm hardening efforts, and aims to improve public and employee safety as well as contribute to service reliability. Penelec inspects approximately 42,000 poles per year, from which a historical trend indicated a 1.6% rejection rate.

Age of Infrastructure
In general, the age of the poles that will be replaced will not be known until they are identified through the inspection process. The average age of the reinforced poles across Penelec is 58 years old.

Schedule

Actual/Planned Pole Replacements						
	2016	**2017**	**2018**	**2019**	**2020**	**Total**
Approved	-	-	-	500	500	**1,000**
Actual/Modified	-	-	-	500	500	**1,000**

Actual/Planned Annual Expenditures (in millions)

	2016	**2017**	**2018**	**2019**	**2020**	**Total**
Approved	$-	$-	$-	$2.97	$2.97	**$5.94**
Actual/Modified	$-	$-	$-	$2.97	$2.97	**$5.94**

Anticipated Locations (2017 - 2020)
Project locations are directly linked to the distribution pole inspection plan and are identified yearly. Penelec will endeavor to combine construction activities with other programs identified elsewhere in this infrastructure improvement plan with wood pole replacements in order to maximize efficiencies and crew utilization.

Comments
This program has not changed as compared to Penelec's approved LTIIP.

Wood Pole Substation Replacement

Description
Replace aging substation wood pole structures which support distribution padmounted transformers.

Identification and Justification
Penelec owns, inspects, and operates distribution substations that are framed using wood poles. This program seeks to identify and mitigate, through total replacement, the structural concerns surrounding wood pole substations. This project evaluates wood pole constructed substations for condition items that warrant the rebuild of the station.

Age of Infrastructure
The substation wood pole structures that will be targeted are approximately 60 to 70 years old.

Schedule

Actual/Planned Wood Pole Substation Replacements						
	2016	**2017**	**2018**	**2019**	**2020**	**Total**
Approved	-	-	-	1	1	**2**
Actual/Modified	-	-	-	1	1	**2**

Actual/Planned Annual Expenditures (in millions)

	2016	**2017**	**2018**	**2019**	**2020**	**Total**
Approved	$-	$-	$-	$0.47	$0.48	**$0.95**
Actual/Modified	$-	$-	$-	$0.47	$0.48	**$0.95**

Anticipated Locations (2017 - 2020)

Operations Center	**Total**
Clearfield	1
Erie	1
Total	**2**

Comments
This program has not changed as compared to Penelec's approved LTIIP.

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Re: Petition of Pennsylvania Electric Company for Approval of Modification of its Long-Term Infrastructure Improvement Plan; Docket No. P-2015-2508936

VERIFICATION

Linda L. Moss, President, Pennsylvania Operations, FirstEnergy Service Company, hereby states that the facts set forth in the above-referenced Petition are true and correct to the best of her knowledge, information and belief and that she expects the Company to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. § 4904.

Date: March 1, 2017

Linda L. Moss

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Petition of Pennsylvania Electric Company For Approval of Modification of its Long-Term Infrastructure Improvement Plan	: : :	**Docket No. P-2015-2508936**

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing **Petition** has been served upon the following persons, in the manner indicated, in accordance with the requirements of 52 Pa. Code § 1.54 (relating to service by a participant).

VIA FEDEX OVERNIGHT

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Date: March 1, 2017

John L. Munsch

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FIRST
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GREENSBURG, PA 15601
UNITED STATES US

SHIP DATE: 01MAR17
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CAD: 8924375/INET3850

BILL SENDER

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