PennPower
A FirstEnergy Company

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January 18, 2019

VIA FEDEX 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 Power Company for Approval of Modification of its Long-Term Infrastructure Improvement Plan;
Docket No. ~~M-2018-3000948~~

Dear Secretary Chiavetta:

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

Penn Power's Long-Term Infrastructure Improvement Plan was approved by the Commission by Order entered February 11, 2016, at Commission Docket No. P-2015-2508931, and a Petition for Modification of the Plan was approved by Commission Order entered June 14, 2017 at the same docket.

Copies of the enclosed Petition and Penn Power 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
Daniel Searfoorce, Office of Technical Utility Services (w/encl.)
Paul T. Diskin, Director, Office of Technical Utility Services (w/encl.)

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Petition of Pennsylvania Power Company Petition for Approval of Modification of its Long-Term Infrastructure Improvement Plan	:	**Docket No. ~~M-2018-3000948~~ P-2015-2508931**

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

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Pennsylvania Power Company ("Penn Power" or the "Company") files this Petition for Modification of its Long-Term Infrastructure Improvement Plan ("LTIIP") in response to the Opinion and Order of the Pennsylvania Public Utility Commission ("PUC" or "Commission") entered September 20, 2018 ("LTIIP Review Order") at the above docket. The LTIIP Review Order directed Penn Power to file a modified or new LTIIP addressing issues outlined in the LTIIP Review Order. This Petition is filed pursuant to Section 1352 of the Pennsylvania Public Utility Code ("Code"),[1] pursuant to Commission regulations relating to LTIIPs,[2] and pursuant to the Commission's Final Implementation Order[3] and Supplemental Implementation Order[4] concerning LTIIPs. The proposed LTIIP modifications accompany this Petition as Penn Power Exhibit No. 1 ("Second Revised LTIIP"). As set forth in its Second Revised LTIIP, Penn Power proposes a substantial change to its current Commission-approved LTIIP which constitutes a "*major*

[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.

modification" as defined in Commission regulations concerning LTIIPs and requires that "the utility shall file a separate petition for modification."[5]

In its LTIIP Review Order the Commission determined that the Company is substantially adhering to the schedule and expenditures outlined in its LTIIP and meeting or exceeding plan goals, in terms of projects completed, in a reasonable and effective manner. The Commission further determined, however, that the Company's LTIIP is not designed to adequately maintain and improve the efficiency, safety, adequacy and reliability of the Company's distribution system, and should be modified to improve storm hardening, system resiliency, and reliability. The Commission further proposed actions that the Company may consider in modifying the LTIIP. Consistent with these directives, the Second Revised LTIIP will allow Penn Power to continue to strengthen, upgrade and modernize its distribution system through various infrastructure improvement initiatives described in detail in Appendix A of the Second Revised LTIIP.

As explained below, Penn Power's Second Revised LTIIP 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, Penn Power respectfully requests that the Commission approve the Second Revised LTIIP submitted as Penn Power Exhibit No. 1 to this Petition.

[5] 52 Pa. Code § 121.5(a)

I. INTRODUCTION AND BACKGROUND

1. Penn Power provides electric distribution service to approximately 166,000 customers in a certificated service territory encompassing all or portions of six counties in western Pennsylvania. Penn Power is a "public utility" and an "electric distribution company" ("EDC") as those terms are defined in the Code.[6] Penn Power, Metropolitan Edison Company, Pennsylvania Electric Company, and West Penn Power Company (collectively, the "Companies") are the four subsidiaries of FirstEnergy Corp. that furnish electric distribution service as public utilities and EDCs in Pennsylvania.

2. The name and address of the Company's attorney authorized to receive all notices and communications regarding this filing follows:

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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 petitions for implementation of a distribution system improvement charge ("DSIC") filed by EDCs and other types of utilities. 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:

[6] *See* 66 Pa.C.S. §§ 102 and 2803.

(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;[7] (b) provided that interested parties may file comments within 20 days of the filing of an LTIIP;[8] and (c) established a period of 120 days for review of each proposed LTIIP.[9]

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.[10] 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;

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[7] Final Implementation Order, p. 20.

[8] *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).

[9] *Id.*

[10] *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.

(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:

> (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.

The Company's Second Revised LTIIP is a substantial change to the Commission-approved LTIIP and constitutes a "major modification" for the purposes of filing an LTIIP modification.

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

9. On October 19, 2015, at Docket No. P-2015-2508942, Penn Power petitioned the Commission for approval of its current LTIIP. Penn Power'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. The Company requested approval of a modification of its LTIIP by Petition dated March 1, 2017, to reflect changes in the calculation of taxes for ratemaking purposes resulting from Pennsylvania's Act 40, 66 Pa.C.S. § 1301.1, which terminated the practice of making a "consolidated tax adjustment" in Federal taxes for ratemaking purposes and allows any differential accruing to the public utility to be applied "fifty (50) percent to support reliability or infrastructure." The modification was approved by Commission Order entered June 14, 2017, at Docket No. P-2015-2508931 ("First Revised LTIIP").

10. On February 16, 2016, Penn Power 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-2015-2508931. The DSIC tariff was approved by Order entered June 9, 2016, and the DSIC tariff was implemented effective July 1, 2016.

III. LTIIP REVIEW ORDER DIRECTING NEW OR MODIFIED LTIIP

11. In its LTIIP Review Order the Commission determined that the Company has substantially adhered to the schedule and expenditures outlined in its Commission-approved LTIIP. The Commission further determined, however, that the Company's LTIIP is not designed adequately to maintain and improve the efficiency, safety, adequacy and reliability of the Company's distribution system.

12. Pursuant to 52 Pa. Code § 121.7(d) the Commission directed the Company to file a modified or new LTIIP including expenditures and programs designed to adequately maintain and improve the efficiency, safety, adequacy and reliability of the distribution system. Further, the Order included a list of proposed methods and actions that the Commission suggested the Company consider when developing its modified or new LTIIP. The Commission also suggested extending the term of the modified LTIIP beyond the current term which concludes with year-end 2020.

IV. DESCRIPTION OF THE COMPANY'S SECOND REVISED LTIIP

13. The Company's Second Revised LTIIP, prepared by the Company to address the Commission's concerns expressed in the LTIIP Review Order, is contained in Penn Power Exhibit 1 hereto. As described in the Second Revised LTIIP, the Companies assembled a team of reliability engineers to consider and formulate LTIIP modifications. Augmenting the existing, ongoing internal review of the Company's LTIIP projects, expenditures, and reliability performance, the Companies developed strategies for long-term reliability maintenance and improvement. The Companies also engaged an independent consultant, PA Consulting Group, Inc., to help ascertain the most meaningful adjustments to each of the Companies' plans to

accomplish the result envisioned in the Commission's proposed methods and actions outlined in its LTIIP Review Order.

14. For 2019 and beyond, Penn Power proposes to take a two-fold approach to address the Commission's concerns, proposed methods and actions of the LTIIP Review Order. First, the Company is proposing modifications to its First Revised LTIIP for the year 2019. The LTIIP modifications will increase overall spending in 2019 by transferring the capital expenditures currently planned for 2020 into 2019 and supplementing those amounts with additional capital in 2019. Second, as anticipated by Section 121.5(c) of the Commission's regulations,[11] the Company currently plans to formulate and submit for Commission approval no later than 120 days prior to the expiration of the Second Revised LTIIP a new LTIIP spanning the five-year period of 2020 through 2024 which will include programs and expenditures designed to maximize sustained reliability over the long-term.

15. In the short-term, this strategy will allow Penn Power to accelerate the realization of reliability improvements from the additional capital spend in 2019, and establish a foundation for long-term, sustainable infrastructure improvements. With this strategy, Penn Power will continue to provide reliability advancements, customer service improvements, and meet the needs and demands of its customers into the future.

16. A comparison of annual expenditures of the First Revised LTIIP as compared to the proposed Second Revised LTIIP is shown in Figures 3 and 4 of Section V of the Second Revised LTIIP. As shown in Figures 3 and 4, which are illustrated below, the modification of the LTIIP will result in an increase in 2019 expenditures in the approximate amount of $15.3 million.

[11] 52 Pa. Code § 121.5(c).

Figure 3. Penn Power's First Revised LTIIP

Annual Expenditures (in millions of dollars)						
Approved LTIIP	2016	2017	2018	2019	2020	Total
	$10.55	$18.56	$11.75	$10.73	$10.73	$62.32

Figure 4. Penn Power's proposed Second Revised LTIIP

Annual Expenditures (in millions of dollars)						
Actual/Modified LTIIP	2016[12]	2017[13]	2018[14]	2019	2020	Total
	$10.55	$17.85	$20.32	$26.06	TBD[15]	$74.78

17. Programs targeted for accelerated capital investment are those designed to have the greatest impact on reliability per dollar spent. The projected reliability benefit of the Second Revised LTIIP is illustrated in Figure 5 of Section V of the Second Revised LTIIP. Figure 5 projects anticipated benefits of improvements in SAIDI and SAIFI for each of the Company's LTIIP programs. Programs will be prioritized to maximize the reliability and operating benefits to the Company's customers. The effectiveness of the projects and programs that compose 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. 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 improvement and the costs and benefits to customers.

[12] Actuals
[13] Actuals
[14] Preliminary actuals to be finalized with Penn Power's Annual Asset Optimization Plan to be filed by March 1, 2019.
[15] The Company currently plans to formulate and submit for Commission approval no later than 120 days prior to the expiration of the Second Revised LTIIP, a new LTIIP for the five-year period spanning 2020 through 2024 with programs and expenditures designed to maximize sustained reliability over the long-term. 2020 capital expenditures and units will be determined as part of the 2020 to 2024 plan.

18. In Section V of the Second Revised LTIIP, the Company responds sequentially to the Commission's concerns and proposed actions contained in the Commission's 2018 Order.

19. The Company's Second Revised LTIIP covers 10 categories of infrastructure improvements. The categories of distribution-related equipment and facilities and costs are shown in Appendix A of the Second Revised LTIIP. The Program categories are as follow:

- Create Circuit Ties and Loops and Add New Sources
- Install SCADA Devices
- Line Sectionalizing
- Remote Sectionalizing
- Replace Overhead Conductor
- Replace Substation Equipment
- URD Cable Replacement
- Unreimbursed Highway Relocation
- Upgrade Lateral Protection
- Wood Pole Replacement/reinforcement

20. For each of the asset categories Penn Power provides estimates of the number of replacements, reinforcements, conversions or other improvements that will be made over the modified LTIIP's final year. Penn Power 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 remaining life of the LTIIP.

21. Individual elements of the proposed initiatives that will be implemented in each asset category will be subject to some degree of change as contemporaneous 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 Second Revised LTIIP 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 remaining term of the Second Revised LTIIP.

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

22. 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 to the extent that age is a relevant or identifiable factor. For example, the largest category, by cost, in Penn Power's Second Revised LTIIP is the category of "Create Circuit Ties and Loops and Add New Sources." Appendix A indicates that the infrastructure targeted for enhancement in this program is not based on age or condition, but on reliability performance. However, the average age of the circuits that will be upgraded is approximately 80 years old.

B. Schedule for Planned Repair and Replacement of Eligible Property

23. In accordance with Section 121.3(a)(2) of the LTIIP regulations, Penn Power's Second Revised LTIIP includes schedules of the timing of planned repairs and replacements of eligible property. The schedules are described on an individual program basis in Appendix A.

C. General Description of the Location of Eligible Property

24. 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. Penn Power's SCADA program to create circuit ties and loops, for example, shows a total of 11 projects in specific Operations Centers.

D. Estimate of Quantity of Eligible Property

25. 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

26. Appendix A to Penn Power's Second Revised LTIIP contains a table of "Cost Summary by Year" showing the projected annual expenditures over the remaining term of the Second Revised LTIIP. 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

27. 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." Penn Power's Second Revised LTIIP reflects the Company's advancement and acceleration of its infrastructure repair and replacement programs designed to address the LTIIP Review Order. The Second Revised LTIIP explains why projects are being undertaken in terms of possible improvements in customer service and reliability. For example, Penn Power's SCADA program will enable allow dispatchers to pinpoint the location of faults more quickly, improving SAIDI, SAIFI and CAIDI.

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

28. 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 Penn Power's programs for ensuring a qualified workforce is set forth in its Second Revised LTIIP. For purposes of providing the information required for its Second Revised LTIIP, Penn Power's workforce is considered to include employees of Penn Power 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

29. In accordance with Section 121.3(a)(8) of the regulations, the Second Revised LTIIP 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. Implementation of Company's DSIC

30. Upon approval of its Second Revised LTIIP, Penn Power will recover the fixed costs of eligible property placed in-service pursuant to its Second Revised LTIIP through the

DSIC. Penn Power's current DSIC was approved by the Commission in an Opinion and Order entered June 9, 2016 at Docket No. P-2015-2508931.

IV. CONCLUSION

WHEREFORE, for the reasons set forth above, Pennsylvania Power Company requests that the Commission enter an order by the end of the 120-day review period finding and determining that its Second Revised LTIIP: (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, therefore (3) 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 Penn Power's Second Revised LTIIP 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 Penn Power to file written direct testimony to address such issues and other matters deemed relevant.

Respectfully submitted,

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(PA Attorney I.D. No. 31489)
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Greensburg, PA 15601
(724) 838-6210

Attorney for
Pennsylvania Power Company

Dated: January 18, 2019

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Re: Petition of Pennsylvania Power Company for Approval of Modification of its Long-Term Infrastructure Improvement Plan; Docket No. ~~M-2018-3000948~~
P-2015-2508931

VERIFICATION

Linda L. Moss, President, Pennsylvania Operations, FirstEnergy Service Company, hereby states that the facts set forth 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. The statements herein are made subject to the penalties of 18 Pa. C.S. § 4904.

Date: January 18, 2019

Linda L. Moss

Pennsylvania Power Company

Exhibit No. 1

Second Revised Long-Term Infrastructure Improvement Plan

Docket No. ~~M-2018-3000948~~
P-2015-2508931

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PA PUBLIC UTILITY COMMISSION
SECRETARY'S BUREAU

Table of Contents

I. Introduction

Pennsylvania Power Company ("Penn Power" or the "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 "Commission") found that Penn Power'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. Penn Power's LTIIP was therefore approved in a Final Order entered February 11, 2016.

In 2016, Penn Power commenced the first year of its approved five-year LTIIP. On June 12, 2016, Act 40[2] was passed into law. In summary, Section 1301.1(a) of Act 40 terminated the practice of making a "consolidated tax adjustment" when calculating a utility's Federal income taxes for ratemaking purposes in Pennsylvania. Section 1301.1(b) of Act 40 provides that fifty percent of the differential that is accrued as a result of applying the revised ratemaking method shall be applied to support reliability or infrastructure related to the rate-base eligible capital investment as determined by the Commission. As a result, Penn Power submitted a petition for approval of a modification to its approved LTIIP for the remaining four years (2017-2020) of the approved plan on March 1, 2017[3] to increase its LTIIP spending amount by approximately $2.45 million[4] for each of the remaining years (the "First Revised LTIIP"). Penn Power's First Revised LTIIP was approved by the Commission by Opinion and Order entered June 14, 2017 at Docket No. P-2015-2508931.

The Commission initiated its periodic review of Penn Power's LTIIP, as modified, consistent with the Commission's regulations at 52 Pa. Code § 121.7(a)[5] via a Secretarial Letter issued on April 10, 2018. On September 20, 2018, the Commission entered an Opinion and Order following this review ("LTIIP Review Order")[6] in which it determined that the Company has substantially adhered to the schedule and expenditures outlined in its LTIIP; however, the Commission further determined that the Company's current LTIIP is not designed adequately to ensure and maintain safe, adequate and reliable service. As such, the Commission directed the Company to file a modified or new LTIIP, to include expenditures and programs designed to adequately maintain and improve the efficiency, safety, adequacy and reliability of the distribution system. Further, the Order included proposed methods and actions the Company is encouraged to consider when developing its modified or new LTIIP. The Commission also

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[1] *Petition of Pennsylvania Power Company for Approval of their Long-Term Infrastructure Improvement Plan*, Docket No. P-2015-2508931.

[2] 66 Pa.C.S.§1301.1

[3] *Petition of Pennsylvania Power Company for Approval of Modification of its Long-Term Infrastructure Improvement Plan*, at Docket No. P-2015-2508931.

[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-2016-2537355.

[5] Commission Secretarial Letter issued April 10, 2018 at Docket No. M-2018-3000948.

[6] Opinion and Order entered September 20, 2018 at Docket Nos. M-2018-3000943, M-2018-3000947, M-2018-2018-3000948 and M-2018-3000949.

suggested extending the term of the modified LTIIP beyond the current term, which concludes at year-end 2020. The Company was specifically directed to file a new or modified LTIIP within sixty days of the entry of the Order, or November 19, 2018.

A reliability team comprised of reliability engineers from Metropolitan Edison Company, Pennsylvania Electric Company, Penn Power and West Penn Power Company (collectively, "the Companies") was formed to augment the ongoing internal review of the Companies' LTIIP projects, expenditures, and reliability performance, and to develop an overarching strategy for long-term reliability maintenance and improvement for all the Companies. Additionally, an independent consultant, PA Consulting Group, Inc., was retained to help ascertain the most meaningful alterations to the Companies' plans and to drive end results that also addressed the Commission's proposed methods and actions. To support the timeline for a detailed analysis of its proposed projects, proposed expenditures, and the resulting effect on reliability, and to develop comprehensive and coordinated plans, the Company requested, and was granted by Secretarial Letter issued on November 1, 2018, a sixty-day extension for filing a new or modified LTIIP.

For 2019 and beyond, Penn Power proposes to take a two-fold approach to address the Commission's concerns, proposed methods and actions of the LTIIP Review Order. First, the Company is proposing modifications to its First Revised LTIIP for the year 2019. The LTIIP modifications will increase overall spending in 2019 by transferring the capital expenditures currently planned for 2020 into 2019, and supplementing those amounts with additional capital in 2019. This will allow Met-Ed to accelerate selected existing planned projects into 2019, while adding new projects that are expected to sustain and improve reliability. Second, pursuant to the timeframe anticipated by 52 Pa. Code §121.5(c), the Company currently plans to formulate and submit for Commission approval no later than 120 days prior to the expiration of the Second Revised LTIIP, a new LTIIP for the five-year period spanning 2020 through 2024, which will include programs and expenditures designed to maximize sustained reliability over the long-term.

In the short-term, this strategy will provide for Penn Power an acceleration of the realization of reliability improvements from its LTIIP programs and establish a foundation for long-term, sustainable infrastructure improvements. With this strategy, Penn Power will continue to provide reliability advancements, customer service improvements, and meet the needs and demands of its customers into the future.

II. Distribution Reliability

Penn Power remains actively engaged and diligently committed to continuing to perform in a manner that results in satisfactory and cost-effective reliability performance for its customers as measured by Commission-established reliability indices such as System Average Interruption Duration Index ("SAIDI"), System Average Interruption Frequency Index ("SAIFI"), and Customer Average Interruption Duration Index ("CAIDI").

The Company utilizes a multi-faceted and comprehensive approach to maintain and improve reliability of its distribution system and to minimize customer impact due to outages. This strategy is accomplished by following the FirstEnergy Distribution Inspection & Maintenance Practices[7] designed to assist in determining the need for, and prioritization of, the repair or replacement of system components and facilities; following FirstEnergy Substation Practices and Methods to ensure the reliability and integrity of substation equipment; employing other routine programs such as the ongoing initiative to sectionalize the Company's system to reduce the number of customers impacted by local system events, and the Customers Experiencing Multiple Interruptions ("CEMI") program to reduce frequent or repeated outages for affected clusters of customers; and employing vegetation management practices to reduce the frequency of tree-related outages. Reliability improvement is also achieved through upgrading and modernizing the distribution system as outlined in and promoted through the Company's Second Revised LTIIP.

Penn Power achieved its twelve-month reliability performance standard in all three reliability indices throughout 2016 and in the first quarter of 2017, and benchmark performance in SAIDI and SAIFI from the second quarter of 2016 through the first quarter of 2017. The Company continued to work toward sustained benchmark performance with targeted key focus areas to maintain and improve SAIDI and SAIFI including circuit tie, loop, or new source creation; 69 kilovolt ("kV") transmission line rehabilitation; supervisory control and data acquisition ("SCADA") switch installations; underground residential distribution ("URD") cable replacements; and wood pole replacements and refurbishments.

In 2017, Penn Power continued to experience the benefit from the addition of circuit ties installed in 2015 and 2016 that resulted in an approximate 50% decrease in customer minutes of interruption ("CMI"). Also, installation of SCADA controlled devices resulted in a 74% decrease in 23kV CAIDI minutes compared to 2016. However, Penn Power experienced an approximate 158% increase in tree-related outages from 2016 to 2017. Also, in May 2017, Penn Power experienced weather-related outages for which restoration activities were both delayed and extended significantly due to proactive steps taken to ensure Penn Power line worker safety following an employee fatality that occurred immediately prior to the weather event. Despite this, in 2017, Penn Power achieved its benchmark, three-year and twelve-month reliability performance standards in SAIFI and its three-year and twelve-month reliability performance standards in SAIDI. To address the shortfall in achieving the benchmark reliability performance standards, Penn Power targeted $9.7 million of combined capital and maintenance to its vegetation management program in 2018. The Company also increased total infrastructure improvement spending by accelerating approximately $7 million of its Commission-approved LTIIP funding from 2019 and 2020 into 2018 for circuit, substation, and SCADA programs. The

[7] Pursuant to 52 Pa. Code- § 57.198(a) every two years an electric distribution company shall file with the Commission a biennial plan for the periodic inspection, maintenance, repair and replacement of its facilities. Penn Power submitted its Biennial Inspection, Maintenance, Repair and Replacement Plan for the period January 1, 2019 through December 31, 2020 on September 29, 2017, which was deemed approved pursuant to -52 Pa. Code § 57.198(i).

accelerated funding contributed primarily to substation equipment replacements and SCADA device installations.

In 2018, the Company's progress in achieving SAIDI and SAIFI benchmark levels was challenged by a winter storm in March that resulted in approximately 16.67 minutes of SAIDI, 313.24 minutes of CAIDI, and a 0.05 SAIFI impact. Also, the Company has experienced an increased number of sustained single-phase and two-phase outages caused by off right-of-way trees. However, the Company achieved the rolling twelve-month SAIFI benchmark for the first, second and fourth quarters of 2018, and the rolling twelve-month standard in the second. Also, the rolling twelve-month SAIDI standard was met in the last three quarters of 2018. Figures 1 and 2 show Penn Power's twelve-month and three-year SAIDI and SAIFI performance from 2014 through 2018, respectively.

Figure 1: Historical SAIDI performance

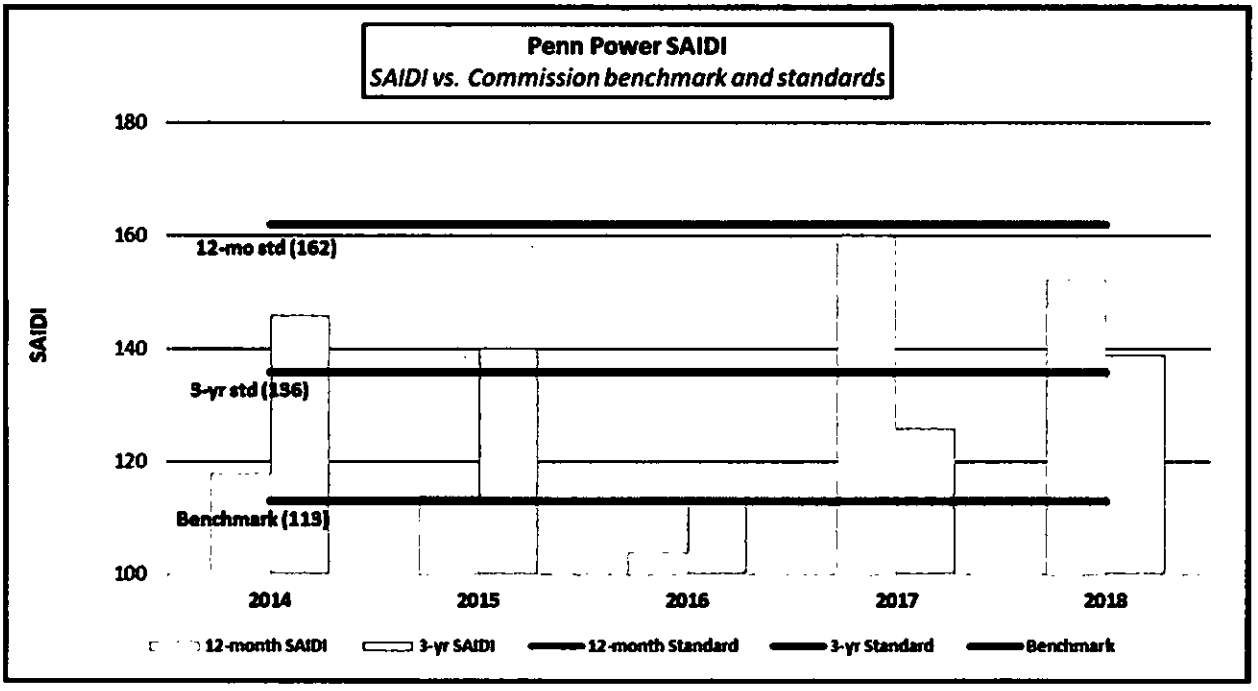
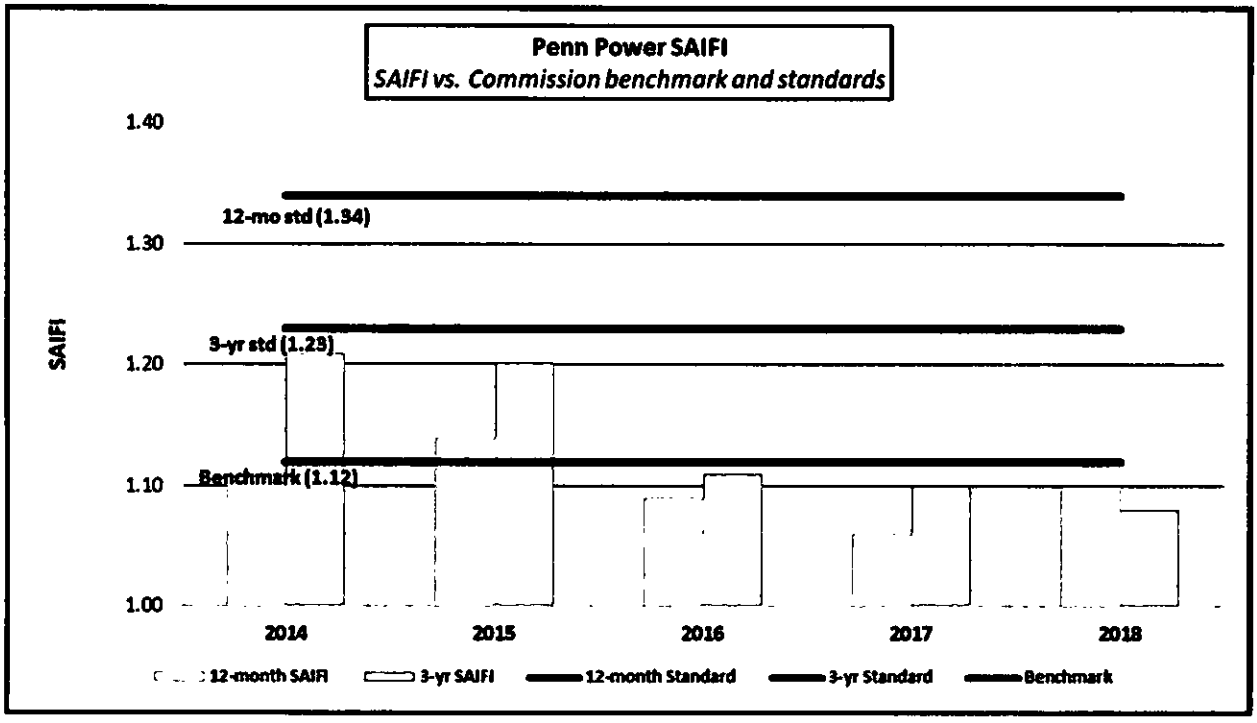


Figure 2: Historical SAIFI performance



As part of the independent consultant's review of the Company's historical results and forward-looking plans, the methodology used to calculate the SAIFI, SAIDI, and CAIDI benefits was evaluated and determined to be appropriate and reasonable. However, the time periods historically selected to establish baseline performance and to evaluate the reliability impacts of LTIIP projects were considered insufficient to overcome typical the randomness of outages and equipment failures, thereby leading to reliability performance results which appeared to vary from the originally projected benefits. On the basis that reliability results are not always apparent immediately upon completion of LTIIP projects, and that sufficient time is required to observe the true impact of the projects, two key opportunities were identified that have the potential to improve Company's methodology and execution going forward. The first opportunity is to increase the period used to establish the historical performance baseline. The second is to increase the post-implementation observation period used to evaluate benefits. These factors have been considered in the benefit calculation review process and in the development of the short-term and long-term LTIIP strategies.

If the Second Revised LTIIP is approved, it is expected to yield continued reliability improvement through the accelerated expenditure for projects having the highest probability to maintain and improve SAIDI, SAIFI and CAIDI performance.

III. 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 Penn Power's Second Revised LTIIP where they are addressed are set forth below:

52 Pa. Code § 121.3(a)(1): The descriptions of the ten 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 "Cost Summary by Year," shows the planned expenditures for 2019, as well as the total for the period of 2016-2019, 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 Penn Power expects to finance those expenditures are addressed in Section V, below. Additional detail 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 Section V below.

52 Pa. Code § 121.3(a)(7): The workforce management and training programs in place for Penn Power 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 Penn Power expects to reach out to, and coordinate with, other utilities, the Pennsylvania Department of Transportation ("PennDOT") and local governments regarding their planned maintenance/construction projects and roadways that may be impacted by the LTIIP is provided in Section VI, below.

IV. LTIIP Periodic Review Recommendations

The Commission's LTIIP Review Order included the following proposed methods and actions recommended for consideration by the Company in the development of its new or modified LTIIP:[8]

Review the LTIIP SAIFI and SAIDI benefit results to determine why goals were not met.

In response, Penn Power's SAIFI and SAIDI benefit results were reviewed and the challenges to reliability performance are described in Section II.

Review the methodology used to calculate the SAIFI and SAIDI benefit projections to ensure more accurate predictions.

The methodology Penn Power uses to calculate the SAIFI and SAIDI benefit projections was reviewed by the independent consultant. The Company's approach was found to be sound, and the methodology reasonable. Benefit projections calculated using this methodology are provided in Section V.

Following the reviews in 1 and 2, above, increase expenditures on the projects that should result in the highest SAIFI and SAIDI benefits.

LTIIP projects were reviewed internally by Penn Power, the reliability team and the Company's independent consultant to identify those projects expected to offer the highest SAIFI and/or SAIDI benefits to both reliability sustainability and improvement, and to accelerate expenditures for these projects. The acceleration of LTIIP expenditures is summarized in Section V.

Increase overall spending on infrastructure improvement initiatives and accelerate existing planned projects for infrastructure repair and replacement.

The acceleration of LTIIP expenditures is summarized in Section V.

Maximization of the 5% DSIC cap. Assuming no overearning or base rate cases, the FirstEnergy Companies should strive to efficiently and effectively utilize the full capacity of the DSIC mechanism, as capped at 5% by statute or otherwise capped by the Commission via waiver.

The Company's proposed modified LTIIP includes an increase in planned capital investment.

Consider tree and storm hardening methods, such as more resilient aerial cable.

[8] LTIIP Review Order, p. 19

The Companies employ a variety of mitigating strategies to reduce tree and storm-related outages, including: cycle-based and enhanced tree trimming; removal of incompatible trees, defective overhanging limbs, and off right-of-way hazard trees; wood pole reinforcements and replacements; and line rehabilitation and relocation projects. As part of Penn Power's Remote Sectionalizing LTIIP program, storm hardening is achieved where circuit work such as conductor, pole and associated hardware upgrades will be completed to support and strengthen transfer capability. Aerial cable is an available option that may be incorporated where it provides a net benefit to reliability and operational flexibility. As an example, aerial cable may be considered where it is impractical to maintain reasonable overhead clearance. Penn Power's LTIIP infrastructure improvement initiatives are described in Appendix A.

Consider selective undergrounding for areas with continuing storm-related reliability issues.

In residential zones, undergrounding is seldom used as an option due to the potential for objectionably high costs to customers if upgrades to internal and external structures and facilities are necessary to meet code requirements. Rocky soil conditions, which add to excavation costs and the expense of customer service conversions, have kept wider scale projects from being cost effective. Undergrounding inherently reduces operational flexibility with failures resulting in longer outages due to longer troubleshooting and repair times. However, selective undergrounding is an available option where it supports effective implementation of infrastructure improvement initiatives and will be used in conjunction with those infrastructure improvement initiatives, as appropriate. For example, selective undergrounding may be utilized as part of circuit tie and loop projects in specific situations, such as areas prone to vehicle accidents.

Consider usage of additional smart field devices and SCADA (supervisory control and data acquisition) technologies to reduce customer density per circuit section.

Penn Power's actual expenditures for installation of SCADA devices exceeded the First Revised LTIIP for 2016 and 2017. Penn Power also accelerated expenditures for its SCADA device installation program in 2018. In the Second Revised LTIIP, SCADA devices installations are included in the Remote Sectionalizing program. Infrastructure improvement initiatives and expenditures for 2019 are provided in Appendix A.

Consider additional investment in enhanced technology and sacrificial components.

Enhanced technology is considered during the development and implementation of infrastructure improvement initiatives. SCADA devices, microprocessor-driven reclosers, and enhanced sectionalizing devices, such as TripSavers, are a few examples of enhanced technology that is being installed on the Company's network. Also, the Company employs a robust fusing strategy under which every transformer is fused and the number of customers affected is kept relatively small. Sacrificial components such as metal anodes

that provide cathodic protection to metal piping and conduit are not typically applicable or used in the protection of electric distribution facilities.

Prior to LTIIP, Penn Power added hundreds of lateral and transformer fuses to act as sacrificial components and minimize the number of customers interrupted. To further modernize the system, some of these lateral fuse locations will now be upgraded to smart fuses. As part of the Upgrade Lateral Protection LTIIP program, existing cutouts on rural single-phase laterals will be replaced with enhanced sectionalizing devices, such as TripSavers, that will have the capability to reduce the number of sustained outages due to animals, birds, and trees.

Consider extending the timeline of the modified LTIIP, if necessary and if not filing a new LTIIP.

With the Second Revised LTIIP, the Company is proposing modifications to its LTIIP for the year 2019 in order to increase overall spending in 2019 by transferring the capital expenditures currently planned for 2020 into 2019, and supplementing those amounts with additional capital in 2019. This will allow Penn Power to accelerate selected existing planned projects into 2019, while adding new projects that are expected to improve reliability. Second, the Company currently plans to formulate and submit for Commission approval, no later than 120 days prior to the expiration of the Second Revised LTIIP,[9] a new LTIIP for the five-year period spanning 2020 through 2024, which will include programs and expenditures designed to maximize sustained reliability over the long-term.

V. Implementation of the LTIIP

Reducing outage exposure and improving restoration speed will be the focus of the 2019 LTIIP and will be accomplished through aggressive vegetation management, a move towards distribution automation and continued infrastructure improvement. For example, remote sectionalizing projects planned for 2019 will target circuits that have large customer counts and high historical CMI. Also, installation of smart fuses will eliminate sustained outages resulting from temporary faults. Details of all Penn Power's LTIIP programs are provided in Appendix A.

The proposed modifications to the First Revised LTIIP for 2019 include increasing overall spending in 2019, accelerating selected existing planned projects into 2019, and adding new projects that yield reliability benefits. The comparison of the First Revised versus the Second Revised LTIIP is shown in Figures 3 and 4, below.

[9] As provided for under Section 121.5(c) of the Commission's regulations, 52 Pa. Code § 121.5(c).

Figure 3. Penn Power's First Revised LTIIP

Annual Expenditures (in millions of dollars)						
Approved LTIIP	2016	2017	2018	2019	2020	Total
	$10.55	$18.56	$11.75	$10.73	$10.73	$62.32

Figure 4. Penn Power's Second Revised LTIIP

Annual Expenditures (in millions of dollars)						
Actual/Modified LTIIP	2016[10]	2017[11]	2018[12]	2019	2020	Total
	$10.55	$17.85	$20.32	$26.06	TBD[13]	$74.78

The table at the front of Appendix A, captioned "Cost Summary by Year," shows the planned expenditures for 2019, as well as the total for the period of 2016-2019, for each of the infrastructure improvement initiatives discussed in Appendix A.

Priority will be given to programs having the potential to have the highest positive impact on SAIDI and/or SAIFI, including reliability sustainability and improvement, per dollar spent. The projected reliability benefit of the modified LTIIP is illustrated in Figure 5.

[10] Actuals
[11] Actuals
[12] Preliminary actuals to be finalized with Penn Power's Annual Asset Optimization Plan to be filed by March 1, 2019.
[13] The Company currently plans to formulate and submit for Commission approval no later than 120 days prior to the expiration of the Second Revised LTIIP, a new LTIIP for the five-year period spanning 2020 through 2024 with programs and expenditures designed to maximize sustained reliability over the long-term. 2020 capital expenditures and units will be determined as part of the 2020 to 2024 plan.

Figure 5. Penn Power's Second Revised LTIIP Reliability Benefits[14]

Program	2019 PROJECTED SAIDI BENEFIT	2019 PROJECTED SAIFI BENEFIT
Create Circuit Ties and Loops and Add New Sources	0.007	0.000
Install SCADA Devices	0.019	0.000
Line Sectionalizing	----	----
Remote Sectionalizing	7.010	0.003
Replace Overhead Conductor	0.011	0.000
Replace Substation Equipment	0.038	0.000
URD Cable Replacement	0.061	0.000
Unreimbursed Highway Relocation[15]		
Upgrade Lateral Protection	4.476	0.035
Wood Pole Replacement/Reinforcement	1.951	0.015
Total	13.573	0.053

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

Penn Power communicates and coordinates with 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 in their service area. However, most of the work that will be performed under Penn Power's Second Revised LTIIP is expected to have minimal impact on these entities' work schedules, and project-specific outreach plans are not expected to be required.

[14] The SAIDI and SAIFI impacts cannot be used to calculate overall system reliability as the LTIIP investment initiatives are a sub-set of the Company's overall portfolio. Blank entries indicate no units planned for completion in 2019.

[15] The infrastructure targeted for relocation is not chosen based on age or condition but merely by its location and may or may not provide reliability benefits.

VII. Access to a Qualified Workforce

A. Penn Power 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 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[16] 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.

With 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; 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, web-based 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.

[16] FirstEnergy Corp.'s ("FirstEnergy") affiliated operating companies include not only those four distribution operating companies 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.

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. 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; and
- 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.

VIII. Summary

This Second Revised LTIIP was designed to meet the recommendations and requirements of the Commission's LTIIP Review Order by providing for accelerated capital investment in projects and programs designed to adequately maintain and improve the efficiency, safety, adequacy and reliability of the Company's distribution system and are projected to result in the highest SAIFI and/or SAIDI benefits. Penn Power's Second Revised LTIIP also contains all of the elements required by 52 Pa. Code § 121.3(a).

Appendix A

Cost Summary by Year

Infrastructure Improvement Initiative	Actual/Planned Annual Expenditures (in millions of dollars)					
	2016[17]	2017[18]	2018[19]	2019	2020[20]	Total
Total	**$10.55**	**$17.85**	**$20.32**	**$26.06**	**TBD**	**$74.78**
Create Circuit Ties and Loops and Add New Sources	$7.82	$11.18	$9.53	$0.23	TBD	**$28.76**
Install SCADA Devices	$1.85	$1.14	$3.95	$0.48	TBD	**$7.42**
Line Sectionalizing	$-	$0.28	$0.87	$-	TBD	**$1.15**
Remote Sectionalizing	$-	$-	$-	$22.10	TBD	**$22.10**
Replace Overhead Conductor	$-	$1.17	$2.24	$0.26	TBD	**$3.67**
Replace Substation Equipment	$-	$2.24	$1.06	$0.46	TBD	**$3.76**
URD Cable Replacement	$-	$1.19	$1.05	$0.59	TBD	**$2.83**
Unreimbursed Highway Relocation	$0.14	$0.10	$1.10	$0.80	TBD	**$2.14**
Upgrade Lateral Protection	$-	$-	$-	$0.85	TBD	**$0.85**
Wood Pole Replacement/Reinforcement	$0.74	$0.55	$0.52	$0.29	TBD	**$2.10**

[17] Actuals
[18] Actuals
[19] Preliminary actuals to be finalized with Penn Power's Annual Asset Optimization Plan to be filed by March 1, 2019.
[20] The Company currently plans to formulate and submit for Commission approval no later than 120 days prior to the expiration of the Second Revised LTIIP, a new LTIIP for the five-year period spanning 2020 through 2024 with programs and expenditures designed to maximize sustained reliability over the long-term. 2020 capital expenditures and units will be determined as part of the 2020 to 2024 plan.

Create Circuit Ties and Loops and Add New Sources

Description
Create tie points and loops between radial circuits and build new substations.

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 customers served by radial circuits. The scope also includes building three new substations. These new substations will provide a new source to feed customers as well as provide additional capacity. 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 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 approximately 80 years.

Schedule

Actual/Planned Circuit Ties, Loops, or Substations						
	2016	**2017**	**2018**	**2019**	**2020**	**Total**
Approved	13	10-12	10-12	2	2	**33-37**
Actual/Modified	13	10	14	1	TBD	**38**

Actual/Planned Annual Expenditures (in millions)

	2016	**2017**	**2018**	**2019**	**2020**	**Total**
Approved	$7.82	$12.75	$6.33	$0.50	$0.50	**$27.90**
Actual/Modified	$7.82	$11.18	$9.53	$0.23	TBD	**$28.76**

Anticipated Locations (2019)

Operations Center	Total
Mercer	0
New Castle	1
Zelienople	0
Total	**1**

Comments
Expenditures were accelerated from future years into 2018 to address reliability performance.

Install SCADA Devices

Description
Install additional SCADA devices on distribution, subtransmission and substation locations where circuit conditions and system performance warrant. Install adaptive relaying capability to selected substations.

Identification and Justification
This program is designed to reduce SAIFI, CAIDI, and SAIDI, while improving the reliability performance of the circuits. These devices better enable dispatchers to restore customers during outages and allow dispatchers to pinpoint the location of faulted sections more quickly, saving crew time for actual repair and reduce the length of the outages. Adaptive relaying functionality minimizes fuse operations caused by lightning and wind during storms and improves the speed of restoration after storms. The following guidelines will be used to prioritize the installation of the new devices:

- Number of substations tapped on the line
- Number of customers on the circuit
- Number of lock-out operations on the circuit
- Accessibility of switch location and frequency of operations
- Reliability history of the circuit (SAIDI, SAIFI, and CAIDI)
- 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 substations that will be upgraded is approximately 80 years.

Schedule

Actual/Planned SCADA Devices						
	2016	**2017**	**2018**	**2019**	**2020**	**Total**
Approved	5	14	1	2	2	**24**
Actual/Modified	5	14	35	2	TBD	**56**

Actual/Planned Annual Expenditures (in millions)

	2016	**2017**	**2018**	**2019**	**2020**	**Total**
Approved	$1.85	$0.97	$0.38	$0.70	$0.70	**$4.60**
Actual/Modified	$1.85	$1.14	$3.95	$0.48	TBD	**$7.42**

Anticipated Locations (2019)

Operations Center	Total
Mercer	0
New Castle	2
Zelienople	0
Total	**2**

Comments
Expenditures were accelerated from future years into 2018 to address reliability performance.

Line Sectionalizing

Description
Increase sectionalizing capability on overhead distribution circuits.

Identification and Justification
This program is designed to improve reliability performance (*i.e.* SAIFI and CAIDI) on unprotected overhead distribution circuits by installing switches and fuses for improved sectionalizing capability, thereby reducing the scope of an outage and allowing for quicker isolation and restoration. This initiative also includes replacing or installing the following equipment as deemed necessary for proper line sectionalizing: poles, reclosers, fuses, arresters, fault indicators, animal guards and other types of line equipment (*e.g.* porcelain cutouts). Projects will be prioritized using the following criteria:

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

Age of Infrastructure
The work encompassed by this initiative involves the installation of new equipment such as cutouts, switches and arresters designed to enhance service to customers. Any infrastructure identified for replacement is chosen based on condition and impact on reliability performance.

Schedule

Actual/Planned Circuits						
	2016	**2017**	**2018**	**2019**	**2020**	**Total**
Approved	-	6	6	15	15	**42**
Actual/Modified	-	6	13	-	TBD	**19**

Actual/Planned Annual Expenditures (in millions)

	2016	**2017**	**2018**	**2019**	**2020**	**Total**
Approved	$-	$0.15	$0.15	$0.38	$0.38	**$1.06**
Actual/Modified	$-	$0.28	$0.87	$-	TBD	**$1.15**

Anticipated Locations (2019)
No locations anticipated.

Comments
Penn Power has refined its reliability strategy after reviewing actual reliablity benefits from previously completed work. Future work will focus on projects with the greatest reliability benefits given the updated strategy.

Remote Sectionalizing

Description
Upgrade distribution circuits and associated substation equipment to allow for remote sectionalizing using SCADA.

Identification and Justification
The installation and/or replacement of existing breakers, reclosers and switches with units having communication capabilities for remote operation will allow for quicker isolation and restoration. Circuit work to strengthen transfer capacity; such as conductor, pole and associated hardware upgrades, and regulator installations, will also be performed on each targeted circuit and associated tie circuits. Selective undergrounding and resilient aerial cable installation will be considered as conditions warrant. Circuits are prioritized using 3-year average CMI and customer counts.

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 reliability performance. However, the average age of the circuits that will be upgraded is approximately 75 years.

Schedule

Actual/Planned Circuits						
	2016	**2017**	**2018**	**2019**	**2020**	**Total**
Approved	-	-	-	-	-	-
Actual/Modified	-	-	-	12-15	TBD	**12-15**

Actual/Planned Annual Expenditures (in millions)

	2016	**2017**	**2018**	**2019**	**2020**	**Total**
Approved	$-	$-	$-	$-	$-	$-
Actual/Modified	$-	$-	$-	$22.10	TBD	**$22.10**

Anticipated Locations (2019)

Operations Center	**Total**
Mercer	10-12
New Castle	1-2
Zelienople	1
Total	**12-15**

Comments
This is a new program.

Replace Overhead Conductor

Description
Replace aging small overhead conductor and in some cases upgrade single- and two-phase conductor to three phases.

Identification and Justification
This type of conductor limits the ability to transfer load between substations due to their low ampacity ratings and/or the high rate at which voltage drops across them when transferring load from distant substations. The smaller conductor is also generally older and more likely to be in poor condition. Replacing the conductor is designed to improve energy efficiency, increase capacity, improve operation flexibility, as well as improve condition. This program aims to improve CAIDI and SAIDI. The following guidelines will be used to prioritize the conductor replacement:

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

Age of Infrastructure
The average age of overhead conductor in Penn Power is approximately 50 years, with the smaller conductor being older than this average age.

Schedule

Actual/Planned Miles of Conductor Replacement						
	2016	**2017**	**2018**	**2019**	**2020**	**Total**
Approved	-	2	2	11	11	**26**
Actual/Modified	-	4.3	10	0.7	TBD	**15**

Actual/Planned Annual Expenditures (in millions)

	2016	**2017**	**2018**	**2019**	**2020**	**Total**
Approved	$-	$0.50	$0.50	$2.81	$2.81	**$6.62**
Actual/Modified	$-	$1.17	$2.24	$0.26	TBD	**$3.67**

Anticipated Locations (2019)

Operations Center	Total
Mercer	0
New Castle	0
Zelienople	0.7
Total	**0.7**

Comments
Expenditures were accelerated from future years into 2018 to address reliability performance.

Replace Substation Equipment

Description
Replace obsolete or poor condition substation equipment, such as circuit breakers, station transformers, or regulators, and auxiliary equipment such as arresters, insulators, switches, bus or conductors.

Identification and Justification
This program is designed to improve SAIDI, SAIFI, and CAIDI by preventing an in-service equipment failure, which could result in a long duration outage. In some instances, spare parts are no longer manufactured for older pieces of equipment. If a failure were to occur, the equipment would need to be replaced, which may result in a longer duration outage than if it were able to be repaired. Additionally, certain substation equipment has reached a condition where it may have a higher probability of failure. Replacing these types of devices with new equipment improves reliability of the substation and reduces the probability of equipment failure. Auxiliary equipment such as switches, insulators, busses and conductors within the station will be reviewed to determine if the condition warrants upgrade and replacement for improved station reliability. With equipment replacement, higher capacity replacements will also be considered providing greater load carrying, and transfer capability to pick-up additional load from adjoining feeders and stations at times of their outage, reducing outage duration to customers. The following guidelines will be used to prioritize the replacements:

- Reliability history of the station and feeders (SAIDI, SAIFI, and CAIDI)
- Field inspections
- Maintenance records
- Reliability/failure records of similar type equipment in the system

Age of Infrastructure
The age of the equipment is not the determining factor for replacement. The condition, track record of failures of similar equipment in the system, maintenance issues and ability to obtain spare parts for failures are key considerations for determining the replacements.

Schedule

Actual/Planned Units of Equipment						
	2016	**2017**	**2018**	**2019**	**2020**	**Total**
Approved	-	6-10	8-12	12-16	12-16	**38-54**
Actual/Modified	-	33	25	1	TBD	**59**

Actual/Planned Annual Expenditures (in millions)

	2016	2017	2018	2019	2020	Total
Approved	$-	$0.90	$1.34	$2.07	$2.07	**$6.38**
Actual/Modified	$-	$2.24	$1.06	$0.46	TBD	**$3.76**

Anticipated Locations (2019)

Operations Center	Total
Mercer	0
New Castle	1
Zelienople	0
Total	**1**

Comments
Expenditures were accelerated from future years into 2018 to address reliability performance.

URD Cable Replacement

Description
Replace bare concentric neutral primary voltage cable that was manufactured prior to 1986.

Identification and Justification
The targeted type of cable was manufactured without an insulating jacket around the concentric neutral wires that are on the outside perimeter of the cable. The neutral conductors corrode and fail prematurely. The corrosion results in poor voltage quality and underground primary faults caused by unevenly stressed cable insulation. Replacement of this cable should reduce the length of customer outages since the Company will no longer have to spend the extra time to locate a fault and make repairs to the degraded neutral conductors. The following guidelines will be used to prioritize the cable replacement:

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

Age of Infrastructure
The URD cable which will be targeted for replacement in this program was installed prior to 1986.

Schedule

Actual/Planned Feet of Cable Replacement						
	2016	**2017**	**2018**	**2019**	**2020**	**Total**
Approved	-	25,000	20,000	39,600	39,600	**124,200**
Actual/Modified	-	25,021	25,190	7,900	TBD	**58,111**

Actual/Planned Annual Expenditures (in millions)

	2016	**2017**	**2018**	**2019**	**2020**	**Total**
Approved	$-	$1.20	$0.96	$2.18	$2.18	**$6.52**
Actual/Modified	$-	$1.19	$1.05	$0.59	TBD	**$2.83**

Anticipated Locations (2019)

Operations Center	**Total**
Mercer	0
New Castle	0
Zelienople	7,900
Total	**7,900**

Comments

Penn Power has refined its reliability strategy after reviewing actual reliablity benefits from previously completed work. Future work will focus on projects with the greatest reliability benefits given the updated strategy.

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 Penn Power 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 Penn Power collects 38% 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/Planned Projects						
	2016	**2017**	**2018**	**2019**	**2020**	**Total**
Approved	6	6-10	6-10	6-10	6-10	**30-46**
Actual/Modified	6	12	13	20-24	TBD	**51-55**

Actual/Planned Annual Expenditures (in millions)

	2016	**2017**	**2018**	**2019**	**2020**	**Total**
Approved	$0.14	$0.71	$0.71	$0.71	$0.71	**$2.98**
Actual/Modified	$0.14	$0.10	$1.10	$0.80	TBD	**$2.14**

Anticipated Locations (2019)

Operations Center	**Total**
Mercer	4-5
New Castle	6-7
Zelienople	10-12
Total	20-24

Comments
Updated for revised quantities and budget based on expected reliability benefits to be gained.

Upgrade Lateral Protection

Description
Replace existing cutouts with enhanced devices.

Identification and Justification
Install enhanced sectionalizing devices on rural single-phase laterals to eliminate sustained outages due to temporary faults caused by animals, birds and trees. Device installation will be prioritized by temporary fault frequency, length of radial line and customers per mile.

Age of Infrastructure
The age of the equipment is not the determining factor for replacement. The work encompassed by this initiative involves the installation of new equipment designed to enhance service to customers. Any infrastructure identified for replacement is chosen based on condition and impact on reliability performance.

Schedule

Actual/Planned Devices						
	2016	**2017**	**2018**	**2019**	**2020**	**Total**
Approved	-	-	-	-	-	-
Actual/Modified	-	-	-	120	TBD	**120**

Actual/Planned Annual Expenditures (in millions)

	2016	**2017**	**2018**	**2019**	**2020**	**Total**
Approved	-	-	-	-	-	-
Actual/Modified	-	-	-	$0.85	TBD	**$0.85**

Anticipated Locations (2019)

Operations Center	**Total**
Mercer	70
New Castle	17
Zelienople	33
Total	**120**

Comments
This is a new program.

Wood Pole Replacement/Reinforcement

Description
Replacement of poles identified as non-restorable and reinforcement of poles identified as restorable during the annual Penn Power distribution pole inspection process.

Identification and Justification
This program is the systematic replacement/reinforcement of wood poles that have been identified as either non-restorable (degraded beyond restorable condition) or restorable (able to be steel reinforced to meet original strength characteristics), by a qualified inspector. 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. Penn Power inspects approximately 10,700 poles per year, from which a historical trend indicated a 2.5% rejection rate.

Age of Infrastructure
In general, the age of the poles that will be replaced or reinforced will not be known until they are identified through the inspection process. The average age of all poles across Penn Power is approximately 40 years.

Schedule

Actual/Planned Pole Replacements						
	2016	**2017**	**2018**	**2019**	**2020**	**Total**
Approved	171	270	270	270	270	**1,251**
Actual/Modified	171	564	285	300	TBD	**1,320**

Actual/Planned Annual Expenditures (in millions)

	2016	**2017**	**2018**	**2019**	**2020**	**Total**
Approved	$0.74	$1.38	$1.38	$1.38	$1.38	**$6.26**
Actual/Modified	$0.74	$0.55	$0.52	$0.29	TBD	**$2.10**

Anticipated Locations (2019)

Operations Center	**Total**
Mercer	181
New Castle	49
Zelienople	70
Total	**300**

Comments
Updated for revised quantities and budget based on expected reliability benefits to be gained.

RE: Periodic Review of Pennsylvania Power Company's Long-Term Infrastructure Improvement Plan; PaPUC Docket No. ~~M-2018-3000948~~ P-2015-2508931

CERTIFICATE OF SERVICE

I hereby certify and affirm that I have this day served copies of Pennsylvania Power Company's Petition for Approval of Modification of its Long-Term Infrastructure Improvement Plan on the following persons in the manner specified below, in accordance with the requirements of 52 Pa. Code § 1.54:

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