

October 18, 2024

VIA E-FILING

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

**Re: Petition of FirstEnergy Pennsylvania Electric Company for Approval of its
Long-Term Infrastructure Improvement Plan;
Docket No. P-2024-3050269**

Dear Secretary Chiavetta:

Enclosed please find FirstEnergy Pennsylvania Electric Company's discovery responses in connection with the above-referenced matter.

Please contact me if you have any questions regarding this matter.

Respectfully submitted,



Darsh Singh

DS/dml

Enclosures

cc: John Van Zant - PaPUC Bureau of Technical Utility Services (via electronic mail)
Dan Searfoorce - PaPUC Bureau of Technical Utility Services (via electronic mail)
Derek Ruhl - PaPUC Bureau of Technical Utility Services (via electronic mail)

TUS Data Request 1

Petition of FirstEnergy Pennsylvania Electric Company (FE PA) for Approval of its Long-Term Infrastructure Improvement Plan (LTIIIP)

Docket No. P-2024-3050269

1. Reference FE PA's LTIIIP Petition.

- a. Describe in detail the infrastructure to be installed on FE PA's distribution system that FE PA describes as modern or advanced technology in the Grid Modernization section (Page 14) of the LTIIIP.
- b. Reference Battery Storage: Provide the anticipated size in MW or kW, the number of customers that will benefit from each deployment, and the capabilities of the proposed battery energy storage systems.
- c. Reference Voltage Conversion: State why the West Penn Rate District is not scheduled for any conversion work/replacement for the 5-year LTIIIP period.
- d. Reference Pole Replacement: State why no poles are scheduled to be replaced in the Penn Power Rate District for the 5-year LTIIIP period.
- e. Reference Customers Experiencing Multiple Interruptions (CEMI): State if any of the CEMI projects will include circuits identified by FE PA as worst performing 5% of circuits (pursuant to 52 Pa. Code § 57.195(e)(3)) and provide the number of and the name of the circuit(s) that will be improved.
- f. Reference Contractor Workforce: Provide a sample copy of a request for proposal that FE PA would provide to a potential contractor utilized for its LTIIIP projects.

Response:

- a. FE PA anticipates installing advanced equipment such as Supervisory Control and Data Acquisition (SCADA) controlled reclosers and switches. These devices are remotely controlled by the FE PA distribution control centers. Additionally, these devices provide valuable system data to both operations and engineering. This data includes high accuracy three phase voltage, amperage, fault current, and fault indication. Beyond these SCADA devices, FE PA will be installing smart fuses such as the S&C TripSaver compact cutout mounted recloser. This device provides an additional level of transient protection, reducing the number of sustained outages compared to a traditional fuse.
- b. FE PA anticipates deploying two Battery Energy Storage System (BESS) projects. The BESS located within the West Penn Rate District is anticipated to be a 2.1MW/12MWh BESS and will benefit an estimated 360 customers. The BESS located within the Penelec Rate District will be a 1MW/7MWh BESS and will benefit an estimated 216 customers. BESS project locations were identified where customer reliability needs improved but traditional lines solutions are impractical. Initially, the main function of the system will be improving the reliability of these customers when an outage occurs upstream, by switching to the BESS when an

upstream outage occurs, resulting in reduced outage duration for the impacted customers. From a long-term perspective, installing these systems will allow FE PA to explore additional functionality, capabilities, and customer benefits to inform the deployment of BESS systems in other locations across the system.

- c. The West Penn Rate District has minimal lower voltage distribution in its service territory. Reliability benefits achieved by converting these sections would be negligible.
- d. The Pole Replacement Program helps to address the at-risk pole population for a Rate District. There are multiple factors in determining pole risk (e.g., age, condition, customers impacted by failure). Additionally, the size of the Pole Replacement Program is dependent on many factors, like amount of work performed in other programs, available budget, asset attributes, etc.

The table below shows the average age of poles by Rate District. As shown, the Penn Power Rate District has the lowest current average pole age prior to any of the proposed LTIP work. Taking into account the other LTIP work that will be addressing poles, FE PA determined that the West Penn, Penelec, and Met-Ed Rate Districts still need to proactively address pole populations through replacements via this program. For the Penn Power Rate District, however, FE PA decided that its pole population risk could be managed through the replacements performed under its typical pole inspection and replacement program, which identifies and addresses at-risk structures as necessary.

Rate District	Average Pole Age Prior to LTIP
West Penn	47
Penelec	45
Met-Ed	44
Penn Power	41

- e. CEMI projects are identified in a reactive manner after review of year-end reliability data and throughout the LTIP program. FE PA rarely conceptualizes CEMI projects proactively as the initiative responds to present day outages. In theory, CEMI projects would likely be more prevalent within worst performing circuits, however, the number and name of the circuits have not been identified at this time.
 - f. See *Appendix A*.
2. Refer to Table 15, Page 20.
- a. State if the Total SAIFI and SAIDI benefits are a weighted average of the FE PA rate districts and describe the basis for determining the weighting, e.g. number of customers, electric sales, etc.
 - b. State if the proposed LTIP Total SAIFI and SAIDI benefits would achieve the goals outlined in Section H 71. of the Joint Petition for Approval of Settlement of All Issues filed on September 13, 2024, at Docket No. R-2024-3047068.

- i. State if the weighted averages described in Section H 71.(c) are determined using the same methodology as those in Table 15. If they are not the same, describe the differences and how any differences may be rectified.
- c. Provide the LTIP projected SAIFI and SAIDI benefits by each individual Rate District.

Response:

- a. The total SAIFI and SAIDI benefits are weighted based on the number of customers in each Rate District.
- b. The goals outlined in Section H 71. of the Joint Petition for Approval of Settlement of All Issues filed on September 13, 2024, at Docket No. R-2024-3047068 are reflective of the increases in the vegetation management budget and did not take the benefits associated with LTIP into account, though the benefits associated with LTIP will assist in achieving those goals.
 - i. The weighted averages will be calculated as explained in 2a.
- c. The breakdown of LTIP projected SAIFI and SAIDI benefits by each individual Rate District is provided below.

Rate District	Projected SAIFI	Projected SAIDI	Customers Served
Met-Ed	0.108	17.07	574,433
Penn Power	0.020	0.67	173,936
Penelec	0.204	33.75	576,176
West Penn	0.170	43.58	723,023
Total	0.144	29.72	2,047,568

Appendix A

LTIP Project Name
Scope of Work

Project Information:

- PM:
- CSC:
- Work Request No:
- SAP No.:
- District:
- Operating Company:

Work Location:

- 29 Pole Replacements – LEBANON (29)
- Please refer to the CREWS work orders, pole list spreadsheet and Google Earth *.kmz file

Requirements for Bid:

1. The base bid price shall include any and all necessary traffic control to complete the project(s). This shall include, but not be limited to, flagging subcontractor, coordination with governmental agencies and providing local and/or state police as necessary.
2. The base bid shall include any and all necessary matting to complete the project(s).
3. The base bid shall include any and all necessary erosion and control measures and site restoration as required by the CREWS reports and design drawings.
4. Contractor shall provide a lump sum pricing as per the Price Breakdown Form to complete all work orders. Contractor shall submit a baseline schedule with bid that includes working 5-10's. Multiple crews (if necessary) should be proposed to complete work by construction completion date. Any outages or holdoffs (along with Duration and Start & Finish times) needed for work plan should also be included.
5. Weather Days

5.1. Weather Days: (NOAA website – avg. number of rain/snow days per month/year)

Weather days allowed for **Month are:** **x**

Weather days allowed for **Month are:** **x**

- 5.1.1. Contractor shall provide for 8 weather days within their Base Bid.
- 5.1.2. Weather includes but is not limited to rain, snow, extreme cold, extreme heat, high winds, etc.
- 5.1.3. Bidders shall assume that weather days will not be part of the available time to work and assume days listed per month in Section 5.1 are lost. This is a total of **x** cumulative days for the duration of the project.
- 5.1.4. If the weather days stay within the averages and the Contractor falls behind in schedule, they are required to either work some of the weather days (if safely executed), work additional OT (including weekends) or increase crew size in order to still meet the completion date.
- 5.1.5. The completion date will NOT be moved out for weather days NOR will the contractor be paid a change order to make-up this time at a later date. Furthermore, no Change Order will be approved for equipment on stand-by during weather days.
- 5.1.6. Show up time shall be accounted for in the bid, following all applicable union laws.
- 5.1.7. A Change Order will only be approved if the actual number of weather days exceeds the allowance or if the construction is moved to a different timeframe, only if OT or additional crews are required to complete on time.

- 5.1.8. The Contractor shall be responsible for all snow removal required to continue performance of the Work.
 - 5.1.9. The Contractor will not be entitled to an increase in the Agreement price or Schedule extension associated with snow removal except if project was not originally scheduled during the winter months.
6. In addition to the base bid, contractor shall provide allowances to the following items:
- 6.1. Rock Drilling/Excavation (only to be paid if rock is drilled):**
 - 6.1.1. PM shall determine an allowance dollar value for **xx** cy of rock excavation/drilling
 - 6.1.2. Contractor shall provide a unit price per cy of rock excavation/drilling on the Price Breakdown Form.
 - 6.1.3. Rock Excavation/Drilling is defined as anytime a rock auger or rock hammer is required to advance the excavation to design depths.
 - 6.1.4. Payment from the allowance will only be processed upon Contractor providing PM and CSC with documentation (pictures and quantity) and CSC/PM approval.
 - 6.1.5. Any quantities above the allowance, the Contractor will be paid as per the unit price stipulated on the Price Breakdown Form under a Change Order.
 - 6.2. Rock Anchors (only to be paid per rock anchor installed up to defined amount below):**
 - 6.2.1. PM shall determine an allowance dollar value for **xx** rock anchors.
 - 6.2.2. Contractor shall provide a unit price per rock anchor on the Price Breakdown Form.
 - 6.2.3. Payment from the allowance will only be processed upon Contractor providing PM and CSC with documentation (pictures and quantity) and CSC/PM approval.
 - 6.2.4. Any quantities above the allowance, the Contractor will be paid as per the unit price stipulated on the Price Breakdown Form under a Change Order.
 - 6.3. Hydrovac & Air Knifing:**
 - 6.3.1. PM shall determine an allowance dollar value for **xx** LF of hydrovac/air knifing.
 - 6.3.2. Contractor shall provide a unit price per LF on the Price Breakdown Form.
 - 6.3.3. Hydrovac/Air Knifing is defined as a soft-dig alternative to auger or excavation equipment for the purposes of protecting existing utilities/structure to advance the excavation to design depths.
 - 6.3.4. Payment from the allowance will only be processed upon Contractor providing PM and CSC with documentation (pictures and quantity) and CSC/PM approval.
 - 6.3.5. Any quantities above the allowance, the Contractor will be paid as per the unit price stipulated on the Price Breakdown Form under a Change Order.

Work By Others:

- Vegetation management will be performed by the Company if required.

Project Description:

- Please follow the construction order details as described in the CREWS report provided in the bid package.

Project Schedule:

- Pre-Bid questions due by xx/xx/xxxx at x:xx PM.
- Bids are due by xx/xx/xxxx at x:xx PM.
- Anticipated Bid Award Date is xx/xx/xxxx
- Construction is expected to begin xx/xx/xxxx and be completed by xx/xx/xxxx. Work shall be scheduled to meet construction complete dates as indicated in the project documents.

Project Clarifications:

- **Materials will be available for contractor pickup at District Stores on a weekly basis. Contractor shall prepare a weekly list of jobs and provide to PM and Stores Supervisor for material ordering purposes. This list shall be provided 1 week prior to desired material pickup date.**
- Customer outages shall be minimized and customers shall be notified in advance of any interruptions.
- Contractor shall provide the Company Project Manager with at least five days advance notice of the need for any service interruptions. Company will schedule corresponding IVRs.
- Any protection required to perform the work can only be submitted by a Company Representative. Contractor shall provide the Company Project Manager with at least five working days advance notice of the need for any clearances, hold-offs and info orders.

Additional Project Details:

- This Scope of Work Summary is intended to give a general summary of the scope of work and shall not be considered an itemized listing of each element of work required. The Contractor shall be responsible for the construction of complete facilities, conforming in all respects to the details and requirements of the specifications, construction drawings, and other applicable contract documents. Material supplied by Company is indicated in the Bill of Material included in the construction package. All additional material is to be furnished and installed by the contractor to provide a fully functional installation. All necessary tools and equipment shall be provided by the Contractor to perform the work in accordance with the Construction Drawings, Company Contract Documents, Company Construction Standards, and Specifications.
- Company will provide materials for construction as noted on the Bill of Materials.
- The Contractor is responsible for the installation/removal of all hardware and equipment attached to the pole and related guying.
- The Contractor shall be responsible for recording serialized numbers of equipment being installed/removed (i.e., transformers, regulators, capacitors, reclosers) documenting the information on the Construction Order Detail.
- All communications (telephone, fiber, cable TV, etc.) equipment/facilities/materials are to be transferred by others. Only the electrical facilities are to be transferred by the Contractor. Contractor shall be responsible for the removal of the old pole, if possible. If other utilities are still attached to the old pole, the pole shall be cut top down to the communications level.
- Contractor shall coordinate pole disposal with FirstEnergy's local Distribution Center storeroom to utilize the Wood Pole Diversion Program, presently managed by Blackwood.
- It is the Contractor's responsibility to provide qualified workforce, required tools and necessary equipment to complete the Scope of Work.
- **The successful Contractor is responsible for obtaining a site for use as a laydown area and providing a secure storage area for materials.**
- The Contractor is responsible for restoration of property impacted by construction, including the laydown area (i.e., landscaping, concrete, macadam, etc.).
- The Contractor is responsible to conform to all environmental rules and regulations pertaining to the job. Any environmental permits or plans not provided to the contractor by the Company are considered the responsibility of the Contractor. Please refer to the "General Erosion and Sediment Control Plan for FirstEnergy Corporation Applicable in Ohio – Maryland – Pennsylvania - Virginia - West Virginia" and the "General Environmental Requirements" provided within the bid package for additional information.

- The Contractor is responsible for safety and security in the work zone, including, but not limited to, digging permits, flagging, staging areas and issued material storage.
- Contractor shall pickup materials required to perform the work from appropriate District stores.
- Contractor shall unload, store, protect from damage, and from theft all Company furnished materials and equipment as shown on the Bill of Materials and outlined in the scope of work.
- Contractor to provide all appropriate traffic control. Traffic protection shall meet or exceed Penn DOT requirements. This includes, but is not limited to, contacting the traffic management center when altering traffic patterns on state routes when required.
- The Contractor is responsible for PA One Call.
- All work is to be performed according to Company design standards and specifications.
- Waste removal is the responsibility of the Contractor. Replaced equipment (i.e., transformers, etc.) and scrap wire are to be returned to the Stroudsburg COC for disposal.
- Contractor shall correct any and all defects in workmanship on the same day where notification has been made by Company.
- Any additional work will be offered on a unit price basis, which shall be approved in writing prior to commencement of any such activity.
- The contractor must comply with the Spotted Lantern Fly Quarantine Order requirements put into effect by the Dept of Agriculture dated on 5/26/18.
- The Contractor shall provide a weekly status update on the progress of the work and advise of any potential delays. This information shall be transmitted via e-mail to Matthew Hilerio (mhilerio@firstenergycorp.com) by the end of each Monday for the prior work week.

Bid Documents:

- ED Bidding Instructions.doc
- Price Breakdown Form.xls
- SOW.docx

Reference Documents:

- 006.1 General Environmental Requirements.pdf
- FE General ESC Plan REV1 20201203.pdf
- PA Access Road Standards.pdf

Design & Crews Reports:

SUPPLIER SYSTEM INSTRUCTIONS:

- 1 Save this file to your computer and edit that version. (Include your company name in the file name e.g. *company*)
- 2 You will only be allowed to enter values in the yellow-shaded cells.
- 3 Enter all your pricing detail in column C - D only.
- 4 When you've completed entering your pricing, save the workbook. Upload the completed worksheet using the price

Company Name:	
Date Completed:	

Service Scope

LTIIP POLE REPLACEMENTS - LEBANON 29

BASE BID

Activity	Labor	Equipment	Total Cost	Estimated # of Man Hours
Mobilization/Demobilization	\$ -	\$ -	\$ -	
Project Construction	\$ -	\$ -	\$ -	
Traffic Control	\$ -	\$ -	\$ -	
Conduit	\$ -	\$ -	\$ -	
Restoration of excavation path; lawn, landscaping, parking lots	\$ -	\$ -	\$ -	
Pole Installation	\$ -	\$ -	\$ -	
Hardware Installation	\$ -	\$ -	\$ -	
Wire Installation	\$ -	\$ -	\$ -	
Switching	\$ -	\$ -	\$ -	
Pole, Hardware and Wire Removal	\$ -	\$ -	\$ -	
Other 1 (Please Identify):	\$ -	\$ -	\$ -	
Other 2 (Please Identify):	\$ -	\$ -	\$ -	
Other 3 (Please Identify):	\$ -	\$ -	\$ -	
Base Bid Total:	\$ -	\$ -	\$ -	0

ALLOWANCES (APPLIED TO PROJECT ON AN AS-NEEDED BASIS)

In addition to the above base bid items, please provide Allowance and corresponding unit price for each of the items below if required by site/project conditions. Allowances shall be calculated per SOW document.	Allowance (To Be Calculated by PM)	Unit Price (Provided by Contractor)	UOM	Comments
Rock Drilling/Excavation	\$ -	\$ -	\$ per cubic yard	
Rock Anchors	\$ -	\$ -	\$ per unit	
Hydrovac & Air Knifing	\$ -	\$ -	\$ per linear foot	
De-Mobilization / Re-Mobilization	\$ -	\$ -	\$ per occurrence	

Notes:

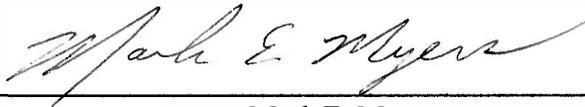
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BEFORE THE
PENNSYLVANIA PUBLIC UTILITY
COMMISSION

October 18, 2024, FirstEnergy of PA (FE) LTIP III Data Request

VERIFICATION

I, Mark E. Myers, hereby state that the facts set forth above are true and correct to the best of my knowledge, information, and belief and that I expect 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 (relating to unsworn falsification to authorities). Date: 10/18/2024



Mark E. Myers
Director Engineering

RE: Petition of FirstEnergy Pennsylvania Electric Company's Long-Term Infrastructure Improvement Plan; PaPUC Docket No. P-2024-3050269

CERTIFICATE OF SERVICE

I hereby certify and affirm that I have this day served copies of FirstEnergy Pennsylvania Electric Company's Discovery Responses 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:

VIA ELECTRONIC MAIL

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Darryl A. Lawrence, Esquire
Emily A. Farren, Esquire
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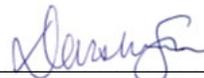
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Date: October 18, 2024



Darsh Singh