

October 1, 2025

VIA ELECTRONIC FILING

Matthew Homsher, Secretary
Pennsylvania Public Utility Commission
400 North Street
Harrisburg, PA 17120

**RE: Biennial Inspection, Maintenance, Repair and Replacement Plan for
FirstEnergy Pennsylvania Electric Company for the period of January 1, 2027 –
December 31, 2028
Docket No.: M-2009-2094773**

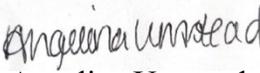
Dear Secretary Homsher:

In accordance with 52 Pa. Code § 57.198, enclosed for filing by FirstEnergy Pennsylvania Electric Company (“FE PA” or the “Company”) on behalf of Met-Ed Rate District (“Met-Ed”), Penelec Rate District (“Penelec”), Penn Power Rate District (“Penn Power”), and West Penn Rate District (“West Penn”) is the Biennial Inspection, Maintenance, Repair and Replacement Plan (the “Plan”) for the period January 1, 2027, through December 31, 2028.

This Plan is designed consistent with the guidelines established by the National Electric Safety Code, the Codes and Practices of the Institute of Electrical and Electronic Engineers, Federal Energy Regulatory Commission regulations, and the American National Standards Institute, Inc. The Plan also has been designed to reduce the risk of outages on FE PA’s system and form the basis of its inspection and maintenance goals and objectives as outlined in FE PA’s annual and quarterly reliability reports filed with the Pennsylvania Public Utility Commission (“Commission”).

FE PA respectfully requests that the Commission accept its Biennial Inspection, Maintenance, Repair and Replacement Plan. If you have any questions, please contact me or Bret Young at (330) 436-1386.

Sincerely yours,


Angelina Umstead

AU/dml
Enclosure

cc: Dan Searfoorce, Bureau of Technical Utility Services
John Van Zant, Bureau of Technical Utility Services



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**Biennial Inspection, Maintenance, Repair and
Replacement Plan for FirstEnergy Pennsylvania Electric
Company
For the period of January 1, 2027 – December 31, 2028**



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Introduction

Pursuant to 52 Pa. Code § 57.198(a), every two years an electric distribution company shall file with the Pennsylvania Public Utility Commission (“Commission”) a biennial plan for the periodic inspection, maintenance, repair and replacement of its facilities. FirstEnergy Pennsylvania Electric Company (“FE PA,” or “Company”) hereby submits its Biennial Inspection, Maintenance, Repair and Replacement Plan (“I&M Plan”) for the period January 1, 2027, through December 31, 2028, in accordance with the relevant parts of 52 Pa. Code § 57.198.

System Assessment

The Company serves nearly 2.1 million Pennsylvania customers, and the service territory covers more than 32,000 square miles. From the physical field employees up to and including top management, the Company is committed to providing customers with safe and reliable electric service. Methods to improve the efficiency, adequacy, and reliability of the distribution system are a continual focus and every employee has an investment in each of the Company’s respective reliability metrics. In addition to the I&M Plan, the Company utilizes core programs to support cost-effective and reliable service. These programs include, but are not limited to:

- Vegetation Management
 - In response to the damage caused by the Emerald Ash Borer (“EAB”) infestation, the Company implemented an EAB Response Plan in an effort to minimize the impact of this invasive species within the service territory. A key component of the Company’s EAB Response Plan is to identify and remove ash trees to reduce EAB population and slow its spread. Although the plan has resulted in the removal of thousands of ash trees over the years, the EAB Response Plan remains in effect as the Company continues to remove ash trees as needed.
 - Post-storm vegetation circuit patrols target the areas with high tree-related outages. These patrols identify trees damaged in a storm that may eventually lead to a future outage. Once identified, the tree is removed. In addition, damaged equipment identified as a part of the patrol is repaired or replaced. Patrols are assigned to circuits likely to have storm damage on or adjacent to the corridor, not all circuits are patrolled.
- Customers Experiencing Multiple Interruptions (“CEMI”)
 - The purpose of the CEMI program is to reduce frequent or repeated outages for affected clusters of customers or frequently operated devices.
- Load Forecasting and Distribution Planning

- The load forecasting application is used to estimate future substation and circuit loading based upon historical load data, and the planning criteria guidelines are then used to provide a consistent approach for planning the safe, reliable, orderly, and economic expansion of the distribution system.
- Circuit Protection
 - The circuit protection practice is intended to provide a safe, secure distribution system, maximize distribution system reliability performance, protect equipment and facilities from overcurrent risks that may result in damage, and establish a consistent process and application standard for distribution system protection.
- Long-Term Infrastructure Improvement Plans (“LTIIIP”)
 - The Company first began to execute its LTIIIP programs in 2016. These plans include expenditures and programs designed to adequately maintain and improve the efficiency, safety, adequacy, and reliability of the distribution system. In 2019, the Company’s four predecessor companies¹ filed their second LTIIIP, covering the period 2020 through 2024. In 2024, the Company filed its third LTIIIP plan covering the period 2025 through 2029.

Plan Revisions

On September 29, 2023, the four predecessor companies filed I&M Plans for the period January 1, 2025, through December 31, 2026. The PUC’s Bureau of Technical Utility Services (“TUS”) Staff issued the predecessor Pennsylvania operating companies information requests regarding its 2025-2026 I&M Plans on November 2, 2023. On December 28, 2023, a secretarial letter was issued finding that the majority of the 2025-2026 I&M Plans generally complied with 52 Pa. Code § 57.198 but directed the Predecessor Companies to refile their I&M Plans to modify the inspection interval for overhead distribution transformer and overhead distribution line from five years to one to two years. Additionally, TUS Staff directed the Predecessor Companies to consider re-evaluating and reviewing the effectiveness of the Vegetation Management portion of the FE PA I&M Plan.

Accordingly, the 2025 – 2026 I&M Plan reflects the interval inspection changes directed by the Commission, incorporates changes in the Vegetation Management plan section including a four or five-year cycle, and reflects the 2024 unification of the four Predecessor Companies into one company, FE PA

¹ Metropolitan Edison Company, Pennsylvania Electric Company, Pennsylvania Power Company, and West Penn Power Company (“Predecessor Companies”).



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Plan Consistency

Section 57.198(b). Plan Consistency. *The plan must be consistent with the National Electrical Safety Code, Codes and Practices of the Institute of Electrical and Electronic Engineers, Federal Energy Regulatory Commission Regulations and the provisions of the American National Standards Institute, Inc.*

The Company's I&M Plan and associated inspection activities are performed in accordance with the Occupational Safety and Health Administration's rules and regulations, National Electrical Safety Code ("NESC"), Codes and Practices of the Institute of Electrical and Electronic Engineers, Federal Energy Regulatory Commission Regulations and the provisions of the American National Standards Institute, Inc., as applicable.

Record Keeping

Section 57.198(m). Record Keeping. *An electric distribution company ("EDC") must maintain records of inspection and maintenance activities sufficient to demonstrate compliance with its distribution facilities inspection, maintenance, repair and replacement programs.*

In order to demonstrate compliance with its distribution facilities inspection, maintenance, repair and replacement programs, the Company will maintain inspection and maintenance records either electronically or in hard copy as required by state law.

Vegetation Management

Section 57.198(n)(1). Vegetation Management. *The statewide minimum inspection and treatment cycle for vegetation management is between 4 – 8 years for distribution facilities. An EDC shall submit a condition-based plan for vegetation management for its distribution system facilities explaining its treatment cycle.*

Program Description

The Company performs vegetation management on its distribution circuits in order to promote the continued safe and reliable operation of its distribution system. The vegetation management program specification is designed to support line reliability, maintain access, make repairs, or restore service and to support safe and reliable service. The vegetation management program specification prunes vegetation to achieve the required cycle clearance, which includes removing selected incompatible trees within the clearing zone corridor; removing certain defective limbs that are overhanging primary conductors; controlling selected incompatible brush mechanically or using herbicide, or both; relieving limbs causing mechanical strain on secondary/service lines; and removing targeted off-corridor priority trees.

Priority trees are a particular emphasis within the Company's vegetation management program. Priority trees are trees that are likely to fail before the next maintenance cycle and, should they fail, pose a risk to circuit reliability. Priority trees can be tree species at a particular risk, like ash trees within the EAB infestation zone, or unhealthy trees that are dead, dying, diseased, declining, structurally defective, or significantly encroaching into the corridor. Priority trees are the leading cause of vegetation-related outages, representing the greatest vegetation risk to the system performance, so it is critical they are controlled effectively.

The Company also continues to utilize and investigate emerging technologies that could lead to distribution system reliability enhancements or improving customer experience. The Company is also exploring emerging technologies that may suggest effective vegetation management strategies for circuit and cycle work models through remote sensing and analytics. Modernizing the vegetation management program by integrating this emerging technology allows the Company's vegetation management program to better identify and target risk in order to drive improved performance. These new tools allow for future developments to the vegetation management plan by utilizing reliability metrics and circuit system conditions to determine a more appropriate clearance cycle length than an arbitrary length of time. The Company's inspection and treatment cycle for vegetation management may vary but will remain in compliance with Section 57.198(n)(1) and will generally continue on the established four or five-year cycle length for distribution facilities depending on circuit risk and needs.

Portions of a circuit that experience high customer interruption minutes due to vegetation-caused outages may be targeted to include the removal of certain healthy limbs which overhang primary conductors based on tree species and condition.

The Company's program relies upon a proactive circuit risk assessment and an inspection/identification process to target selective vegetation removal for continued reliable system operation. This may include the extension of a cycle not to exceed a total of eight years. This process involves inspection of the vegetation to evaluate the extent of potential for vegetation to interfere with energized conductors. Factors to consider in the evaluation are the voltage and height of the conductor, the type of tree, its growth rate and branching habit. Trees that will impact safety or reliability will be maintained pursuant to the vegetation management program specification.

Methods used to manage and control vegetation include manual control methods using hand-operated tools and mechanical control using equipment-mounted saws, mowers, or other devices. Aerial saws are utilized where practicable, which are a safe and cost-effective method to achieve ground to sky trimming on corridor edge. Removing incompatible vegetation may also include various herbicide application techniques such as high-volume foliage application, low-volume foliage application, basal-herbicide applications, stump applications, frill application, aerial application, bare-soil treatment application, and cut-stubble applications. All herbicides shall be applied in accordance with all state, local, and federal laws governing the use of herbicides.

Further detailed information regarding the Company's vegetation management program may be found in the Vegetation Management Distribution Specifications.

Section 57.198(c). Time frames. *The plan must comply with the inspection and maintenance standards in subsection (n). A justification for the inspection and maintenance time frames selected shall be provided, even if the time frame falls within the intervals prescribed in subsection (n). However, an EDC may propose a plan that, for a given standard, uses intervals outside the Commission standard, provided that the deviation can be justified by the EDC's unique circumstances or a cost/benefit analysis to support an alternative approach that will support the level of reliability required by law.*

Program Justification

In addition to complying with the provisions in Section 57.198(b), distribution vegetation management activities are performed in accordance with the Pennsylvania Pesticide Control Act, the Pennsylvania Administrative Code, and the Utility Arborist Association's Field Guide to Closed Chain of Custody for Herbicides in the Utility Vegetation Management Industry. All vegetation management activities are designed to achieve cycle-length clearances, regardless of the method employed. The vegetation management

program specification seeks to maintain and control all vegetation in the space defined as the distribution clearing zone. The distribution clearing zone is the right-of-way corridor measured at a horizontal distance of fifteen feet on either side of the pole line or the established large tree edge. The corridor is measured vertically to fifteen feet above the highest conductor attached to the pole or structure. The Company has also applied a specific vegetation management approach to select line sections. This practice involves the removal of overhanging limbs outside the corridor as well as aggressive mitigation of hazardous trees, with the intent of improving tree-related reliability on the selected line sections.

The Company’s professional vegetation management staff performs inspections and approves all work conducted by vegetation management contractors. The forestry personnel maintain an understanding of current and emerging techniques by attending industry trade conferences and maintaining memberships in industry trade organizations, such as Utility Arborist Association and the International Society of Arboriculture. The goal of the vegetation management department is to manage distribution corridors in a way that provides safe and reliable electricity while simultaneously working to make a sustainable habitat system on the Company’s corridors.

As part of the Company’s approach to improving tree-related reliability, the Company continues to analyze circuit electrical protection schemes and gives added attention to select line sections, such as those that serve high numbers of customers. Three distinct line sections have been identified and defined under existing protection schemes, as shown in the table below.

| Zone 1 | Zone 2 | Zone 3 |
|-------------------------------------------------------------------------------|----------------------------------------------------------|---------------------------------------------|
| Three-phase circuitry from the circuit breaker to the first protective device | Three-phase circuitry beyond the first protective device | Single-phase and two-phase circuitry |
| Serves entire customer load | Serves a large percentage of customer load | Serves smallest percentage of customer load |

In addition to the Company’s Distribution Vegetation Management Program, there are other distribution equipment inspection programs (e.g., Distribution Pole Inspections, Distribution Overhead Line Inspections, Distribution Transformer Inspections, and Recloser Inspections) that allow trained utility personnel multiple opportunities to observe conditions on the distribution system. These conditions may include vegetation management situations that warrant further investigation.



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Inspection Plan

The total number of circuit miles to be trimmed in 2027 and 2028 is based on the current system configuration (as of 2025) and previous cycle length and thus is subject to change by the time the 2027 and 2028 plans commence.

| Inspections and Treatments Planned Circuit Miles | | | |
|-------------------------------------------------------------|---------------|---------------|---------------|
| | 2027 | 2028 | Total |
| Met-Ed Rate District | 2,668 | 2,973 | 5,641 |
| Penelec Rate District | 4,042 | 3,367 | 7,409 |
| Penn Power Rate District | 1,205 | 1,045 | 2,250 |
| West Penn Rate District | 4,978 | 4,090 | 9,068 |
| FE PA Total | 12,893 | 11,475 | 24,368 |

Distribution Pole Inspections

Section 57.198(n)(2). Pole Inspections. *Distribution poles shall be inspected at least as often as every 10 – 12 years except for the new southern yellow pine creosoted utility poles which shall be initially inspected within 25 years, then within 12 years annually after the initial inspection. Pole inspections must include:*

- i. Drill tests at and below ground level*
- ii. A shell test*
- iii. Visual inspection for holes or evidence of insect infestation*
- iv. Visual inspection for evidence of unauthorized backfilling or excavation near the pole*
- v. Visual inspection for signs of lightning strikes*
- vi. A load calculation*

Program Description

The Company shall visually inspect distribution wood poles on a twelve-year cycle. The purpose for inspecting distribution wood poles is to identify and repair unsafe conditions or conditions that may adversely affect service reliability or system performance, and to comply with the state regulatory agencies and the NESC.

This preventative maintenance inspection for wood poles will include a visual inspection as well as hammer-sounding as needed. The inspection consists of the recording of abnormal conditions from the groundline to the top of the pole including but not limited to the following:

- Damage – broken or leaning;
- Equipment – crossarms, insulators, conductors, oil leaking;
- Testing for decayed internal wood.

In addition to the visual inspection, poles showing incipient decay or poles that are thirty-five years old or older will be manually bored or inspected by the use of a resistograph. The resistograph is a sophisticated electronically controlled drill that provides increased accuracy, when compared to manual drilling, in measuring the relative density of wood in timber structures. Driven by a drill motor, a long, thin needle is inserted into the wood pole in order to assess its density, structural integrity, and shell thickness. Either manual boring or the resistograph will be used at FE PA's discretion.

Serviceable poles that pass the visual, sound, and bore testing may be treated for life extension. Serviceable and reinforced poles shall also be treated. Three different types of treatments may get used depending on the need determined during inspection. External treatments are applied as a preservative paste after decay is scraped off. Internal preventative treatments are for protection against fungal decay and insects and to interrupt

degradation. Internal void treatments are used where decay pockets exist. The selected treatment method will be based on the best available information at the time.

Further detailed information regarding the Company's inspection of wood poles may be found in the Distribution Inspection & Maintenance Practice – Wood Pole Groundline.

Section 57.198(n)(3). Inspection Failure. *If a pole fails the groundline inspection and shows dangerous conditions that are an immediate risk to public or employee safety or conditions affecting the integrity of the circuit, then the pole shall be replaced within 30 days of the date of inspection.*

Corrective Maintenance

Wood poles and supporting structures with recorded defects that the Company could expect to create an immediate risk to public or employee safety or affect the integrity of the circuit shall be repaired or replaced within thirty days. All remaining deficiencies will be evaluated and prioritized on a case-by-case basis.

The Distribution Pole Corrective Action Plan has been completed as of year-end 2024. As of January 1, 2025, the Company maintains a backlog of no more than two years.²

Section 57.198(c). Time frames. *The plan must comply with the inspection and maintenance standards set forth in subsection (n). A justification for the inspection and maintenance time frames selected shall be provided, even if the time frame falls within the intervals prescribed in subsection (n). However, an EDC may propose a plan that, for a given standard, uses intervals outside the Commission standard, provided that the deviation can be justified by the EDC's unique circumstances or a cost/benefit analysis to support an alternative approach that will support the level of reliability required by law.*

² There are fifteen Met-Ed poles that remain due to factors outside of the Company's control.

Program Justification

The Company's twelve-year inspection cycle for wood poles is based on accepted electric utility practices. The NESC Rule 12.121.A states, “[e]lectric equipment shall be inspected and maintained at such intervals as experience has shown to be necessary.” Twelve years between inspections allows enough time for proper planning and remediation prior to any problems negatively impacting personal safety, equipment integrity or service reliability.

In addition to the Company's Distribution Pole Inspection Program, there are other distribution equipment inspection programs (e.g., Distribution Vegetation Management, Distribution Overhead Line Inspections, Distribution Transformer Inspections, and Recloser Inspections) that allow trained utility personnel multiple opportunities to observe conditions on the distribution system. These conditions may include distribution pole situations that warrant further investigation.

Pole Loading Calculation

As a part of the I&M Plan for the period January 1, 2023, through December 31, 2024, the Commission previously exempted the Company from conducting pole loading calculations as a part of its pole inspections. The Company requests a continuation of the exemption for the currently proposed period.

Rather than conducting load calculations as part of each pole inspection, the Company follows the practice of creating base line designs using FirstEnergy's Distribution Line Construction Standards and Distribution Engineering Practices (“Construction Standards” or “Engineering Practices”). FirstEnergy's Construction Standards are based on NESC Heavy Loading Standards and are updated each time those standards are revised. The majority of the Company's service territory lies within the heavy loading zone. NESC Heavy Loading Standards provide basic guidance for most designs encountered by distribution line design personnel. All new facilities are designed consistent with NESC Heavy Loading Standard NESC C2-2012, Section 250. The Engineering Practices provide detailed guidance for both guying and pole loading, and additional engineering support is available to designers when more complex calculations are needed. Per the NESC, both resources include safety factors such that the deterioration of poles in service shall not reduce the strength capability of the pole below the required strength. Further, as the Company receives requests from other entities to attach their facilities to the Company poles, an assessment, ranging from a visual inspection to a full-strength analysis, is performed based on pole-attachment guidelines, experience, and the situation encountered.



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Inspection Plan

The total number of poles to be inspected in 2027 and 2028 is based on the current system configuration (as of 2025) and thus is subject to change by the time the 2027 and 2028 plans commence.

| Pole Inspections Planned Number of Poles | | | |
|-----------------------------------------------------|----------------|---------------|----------------|
| | 2027 | 2028 | Total |
| Met-Ed Rate District | 18,728 | 15,042 | 33,770 |
| Penelec Rate District | 33,849 | 31,585 | 65,434 |
| Penn Power Rate District | 12,295 | 11,573 | 23,868 |
| West Penn Rate District | 45,667 | 24,255 | 69,922 |
| FE PA Total | 110,539 | 82,455 | 192,994 |

Distribution Overhead Line Inspections

Section 57.198(n)(4). Distribution overhead line inspections. *Distribution lines shall be inspected by ground patrol a minimum of once every 1 – 2 years. A visual inspection must include checking for:*

- i. Broken insulators*
- ii. Conditions that may adversely affect operation of the overhead transformer*
- iii. Other conditions that may adversely affect operation of the overhead distribution line*

Program Description

Beginning in 2025, the Company transitioned its distribution overhead lines and equipment inspection cycles from a five-year to a two-year inspection cycle. The purpose for inspecting overhead lines and equipment is to identify and repair unsafe conditions or conditions that may adversely affect service reliability, and to comply with the requirements of state regulatory agencies and the NESC. This program shall be limited to overhead facilities.

Circuits are inspected on a two-year cycle to comply with the regulation and will consist of a visual inspection and recording of abnormal conditions including but not limited to the following types of overhead circuit equipment:

- Conductors (wire and cable) – excessive slack, condition, damage, clearances;
- Supporting structures (wood poles) – deteriorated condition, sustained damage (lightning, vehicle, woodpecker holes);
- Pole hardware (including insulators) – condition, damage;
- Guying – condition, damage;
- Pole-mounted distribution equipment (including overhead transformers) – condition, damage;
- Switches; and
- Sectionalizers.

Further detailed information regarding the Company’s inspection of Distribution Overhead Lines may be found in the Distribution Inspection & Maintenance Practice – Overhead Circuits and Equipment.

Section 57.198(n)(5). Inspection Failure. *If critical maintenance problems are found that affect the integrity of the circuits, they shall be repaired or replaced no later than 30 days from discovery.*

Corrective Maintenance

Supporting structures with recorded defects that the Company could reasonably expect to affect the integrity of the circuit shall be repaired or replaced within thirty days. All remaining deficiencies will be evaluated and prioritized on a case-by-case basis.

***Section 57.198(c). Time frames.** The plan must comply with the inspection and maintenance standards in subsection (n). A justification for the inspection and maintenance time frames selected shall be provided, even if the time frame falls within the intervals prescribed in subsection (n). However, an EDC may propose a plan that, for a given standard, uses intervals outside the Commission standard, provided that the deviation can be justified by the EDC’s unique circumstances or a cost/benefit analysis to support an alternative approach that will support the level of reliability required by law.*

Program Justification

In addition to the Company’s Distribution Overhead Line Inspection Program, there are other distribution equipment inspection programs (e.g., Distribution Vegetation Management, Distribution Pole Inspections, Distribution Transformer Inspections, and Recloser Inspections) that allow trained utility personnel multiple opportunities to observe conditions on the distribution system. Further, field personnel perform circuit assessments to address specific reliability concerns and to assess worst-performing circuit performance. Lastly, the Company may use infrared thermography on an as-needed basis on certain worst performing circuits or while performing circuit rehabilitation.

Inspection Plan

The total number of circuits to be inspected in 2027 and 2028 is based on the current system configuration (as of 2025) and thus is subject to change by the time the 2027 and 2028 plans commence.

| Overhead Line Inspections Planned | | | |
|------------------------------------------|--------------|--------------|--------------|
| Number of Circuits | | | |
| | 2027 | 2028 | Total |
| Met-Ed Rate District | 408 | 388 | 796 |
| Penelec Rate District | 618 | 618 | 1,236 |
| Penn Power Rate District | 99 | 103 | 202 |
| West Penn Rate District | 425 | 425 | 850 |
| FE PA Total | 1,550 | 1,534 | 3,084 |

Distribution Transformer Inspections

Section 57.198(n)(6). Distribution transformer inspections. *Overhead distribution transformers shall be visually inspected as part of the distribution line inspection every 1 – 2 years. Above-ground pad-mounted transformers shall be inspected at least as often as every 5 years and below-ground transformers shall be inspected at least as often as every 8 years. An inspection must include checking for:*

- i. Rust, dents or other evidence of contact*
- ii. Leaking oil*
- iii. Installation of fences or shrubbery that could adversely affect access to and operation of the transformer*
- iv. Unauthorized excavation or changes in grade near the transformer*

Program Description

The Company inspects overhead distribution transformers on a two-year inspection cycle to comply with the regulation and to align with the overhead line inspections. The Company inspects overhead distribution transformers as part of the overhead line inspection. Below-ground and pad-mount transformers are inspected on a five-year cycle. The purpose for inspecting distribution transformers is to identify and repair unsafe conditions or conditions that may adversely affect service reliability, and to comply with the requirements of state regulatory agencies and the NESC.

Overhead distribution transformers – visual inspection and recording of abnormal conditions including but not limited to the following:

- Equipment condition – oil leakage, arresters, rust, dents or evidence of contact.

Above-ground pad-mounted equipment (transformers and switchgear) – inspection and recording of abnormal conditions including but not limited to the following:

- Equipment condition – oil leakage, cabinet damage, holes, washout;
- Security – locking mechanisms;
- Accessibility – as required for operation and maintenance purposes, including the installation of fences or shrubbery that could adversely affect access to and operation of the transformer and unauthorized excavation or changes in grade near the transformer;
- Warning labels – electrical hazard warning label and landscaping instructions notice.

Below-ground transformers – visual inspection and recording of abnormal conditions including but not limited to the following:

- Accessibility – verify cover is secured;
- Equipment condition – visually inspect baffle.

Further detailed information regarding the Company’s inspection of distribution transformers may be found in the Distribution Inspection & Maintenance Practice – Underground Equipment.

Section 57.198(c). Time frames. The plan must comply with the inspection and maintenance standards in subsection (n). A justification for the inspection and maintenance time frames selected shall be provided, even if the time frame falls within the intervals prescribed in subsection (n). However, an EDC may propose a plan that, for a given standard, uses intervals outside the Commission standard, provided that the deviation can be justified by the EDC’s unique circumstances or a cost/benefit analysis to support an alternative approach that will support the level of reliability required by law.

Program Justification

In addition to the Company’s Distribution Transformer Inspections Program, there are other distribution equipment inspection programs (e.g., Distribution Vegetation Management, Distribution Pole Inspections, and Recloser Inspections) that allow trained utility personnel multiple opportunities to observe conditions on the distribution system. These conditions may include distribution transformer situations that warrant further investigation.

Inspection Plan

The total number of distribution transformers to be inspected in 2027 and 2028 is based on the current system configuration (as of 2025) and thus is subject to change by the time the 2027 and 2028 plans commence.



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| Transformer Inspections Planned Number of Transformers | | | | |
|-------------------------------------------------------------------|---------------------------------|----------------|----------------|----------------|
| | Transformer Type | 2027 | 2028 | Total |
| Met-Ed Rate District | Overhead | 62,459 | 61,078 | 123,537 |
| | Above-Ground Pad-Mounted | 5,362 | 12,544 | 17,906 |
| | Below-Ground | 170 | 339 | 509 |
| Penelec Rate District | Overhead | 87,964 | 83,561 | 171,525 |
| | Above-Ground Pad-Mounted | 14,316 | 14,031 | 28,347 |
| | Below-Ground | 612 | 736 | 1,348 |
| Penn Power Rate District | Overhead | 26,303 | 25,617 | 51,920 |
| | Above-Ground Pad-Mounted | 813 | 1,591 | 2,404 |
| | Below-Ground | 0 | 0 | 0 |
| West Penn Rate District | Overhead | 142,206 | 136,127 | 278,333 |
| | Above-Ground Pad-Mounted | 23,238 | 25,529 | 48,767 |
| | Below-Ground | 0 | 0 | 0 |
| FE PA Total | Overhead | 318,932 | 306,383 | 625,315 |
| | Above-Ground Pad-Mounted | 43,729 | 53,695 | 97,424 |
| | Below-Ground | 782 | 1,075 | 1,857 |

Recloser Inspections

Section 57.198(n)(7). Recloser inspections. *Three-phase reclosers shall be inspected on a cycle of 8 years or less. Single-phase reclosers shall be inspected as part of the EDC’s individual distribution line inspection plan.*

Program Description

The Company visually inspects hydraulic distribution line reclosers annually. The purpose for inspecting distribution line reclosers is to identify and repair unsafe conditions or conditions that may adversely affect service reliability or system performance, and to comply with the requirements of state regulatory agencies and the NESC.

The annual preventative maintenance consists of counter readings and field inspection. The counter readings are obtained to assess system performance based on the number of operations. The field inspection includes but is not limited to the following:

- Type of recloser and current rating;
- Counter reading;
- Condition – rust, dents, physical damage, leaks, lightning damage;
- Equipment – surge arresters, tank-ground connections, by-pass switches, control battery, pole;
- Grounds – damage, condition.

Further detailed information regarding the Company’s inspection of reclosers may be found in the Distribution Inspection & Maintenance Practice – Line Reclosers.

Section 57.198(c). Time frames. *The plan must comply with the inspection and maintenance standards in subsection (n). A justification for the inspection and maintenance time frames selected shall be provided, even if the time frame falls within the intervals prescribed in subsection (n). However, an EDC may propose a plan that, for a given standard, uses intervals outside the Commission standard, provided that the deviation can be justified by the EDC’s unique circumstances or a cost/benefit analysis to support an alternative approach that will support the level of reliability required by law.*

Program Justification

The Company’s annual inspection cycle for reclosers is based on accepted electric utility practices and the experience of the Company. The NESC Rule 12.121.A states “*Electric equipment shall be inspected and maintained at such intervals as experience has shown to be necessary.*” One year between inspection cycles has proven to be successful in monitoring operations, which can support system planning. Visual inspections can also

identify other conditions, allowing problems to be addressed in a timely manner, allowing for proper planning and remediation prior to the problem negatively impacting personal safety, equipment integrity, or service reliability.

New, electronic reclosers such as Vipers that the Company is installing can be remotely monitored for alarms, thereby eliminating the main driver for an annual visual inspection.

In addition to the Company’s Recloser Inspections Program, there are other distribution equipment inspection programs (e.g., Distribution Vegetation Management, Distribution Pole Inspections, Distribution Overhead Line Inspections, and Distribution Transformer Inspections) that allow trained utility personnel multiple opportunities to observe conditions on the distribution system. These conditions may include recloser equipment situations that warrant further investigation.

Inspection Plan

The total number of recloser units to be inspected in 2027 and 2028 is based on the current system configuration (as of 2025) and thus is subject to change by the time the 2027 and 2028 plans commence.

| Recloser Inspections Planned | | | | |
|-------------------------------------|----------------------|--------------|--------------|---------------|
| Number of Reclosers | | | | |
| | Recloser Type | 2027 | 2028 | Total |
| Met-Ed Rate District | Single Phase | 244 | 244 | 488 |
| | Three Phase | 57 | 57 | 114 |
| Penelec Rate District | Single Phase | 792 | 792 | 1,584 |
| | Three Phase | 81 | 81 | 162 |
| Penn Power Rate District | Single Phase | 386 | 386 | 772 |
| | Three Phase | 1 | 1 | 2 |
| West Penn Rate District | Single Phase | 4,150 | 4,150 | 8,300 |
| | Three Phase | 31 | 31 | 62 |
| FE PA Total | Single Phase | 5,267 | 5,267 | 10,534 |
| | Three Phase | 870 | 870 | 1,740 |

Substation Inspections

Section 57.198(n)(8). Substation inspections. *Substation equipment, structures and hardware shall be inspected on a cycle of 5 weeks or less.*

Program Description

The Company inspects its distribution substations twelve times annually. The purpose of these monthly inspections of the distribution substations is to ensure that any developing substation problems are identified and addressed in a timely manner in support of system reliability and electrical safety.

There are three types of preventative maintenance inspections that are performed at Company substations during a twelve-month period. The chart below illustrates the type of inspection performed each month³:

| Inspection Type | Month | | | | | | | | | | | |
|--------------------------------------------------------------------------------------------------------------------------------------|-------|---|---|---|---|---|---|---|---|----|----|----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| Safety and Security of Facilities/Visual Equipment Inspection/Reporting and Recording of Deficiencies and Relay Operations (Class C) | X | X | X | X | X | X | X | X | X | X | X | X |
| Safety/Security, Visual Equipment Inspection and Record Readings (Class B) | | | X | | | X | | | X | | | X |
| Seasonal Maintenance (Class A) | | | X | | | | | | X | | | |

The following is a summary of each type of inspection that is conducted at the Company substations:

1. *Safety and Security of Facilities and Visual Equipment Inspection of Electrical Equipment and Reporting/Recording Identified Deficiencies and Relay Operations (Class C).* Monthly visual inspection of substation equipment, structures and hardware that also includes the recording of abnormal conditions or deficiencies. This inspection may include, but is not limited to, the following:
 - General condition – read and record ambient temperature;
 - Perimeter fence inspection (gate locks, fence and gate grounds, warning signs;

³ For illustrative purposes only.

- Yard and facility inspection (equipment grounds, vegetation condition, general yard condition, equipment condition, oil levels and leaks, structure/hardware condition, hotspots, conductors/switches/connections);
 - Building inspection (security, integrity, indication lights);
 - Visual inspection of major equipment (power transformers, circuit breakers, instrument transformers, etc.);
 - Relays, electronic controls, and panel meters for alarms and targets;
 - Batteries and chargers.
2. *Safety and Security, Visual Equipment Inspection and Record Readings (Class B).* In addition to the safety and security and visual equipment inspection that is performed monthly, every three months an additional visual inspection that includes the recording of readings is performed. This inspection may include, but is not limited to, all items listed under the Class C inspection as well as the following types of substation equipment:
- Recording of amps and load readings;
 - Recording of counter and gauge readings;
 - Inspection/test of carrier communication equipment;
 - Inspection of microwave/radio sites and engine generators – generator alarms and battery.
3. *Seasonal Maintenance - Summer and Winter Readiness (Class A).* In addition to the monthly and three-month inspections, every six months a more comprehensive inspection of the substation and substation equipment is performed. This inspection may include, but is not limited to, all items listed under the Class C and B inspections as well as the following types of substation equipment:
- Servicing fire protection equipment;
 - Servicing eye wash stations;
 - Yard lighting;
 - Servicing filters and HVAC systems;
 - Servicing of equipment cabinet heaters;
 - Servicing engine generators.

Further detailed information regarding the Company's inspection of substations may be found in Section 20P – Substation Patrol Inspection of the Substation Maintenance Practice and Methods.

Section 57.198(c). Time frames. *The plan must comply with the inspection and maintenance standards in subsection (n). A justification for the inspection and maintenance time frames selected shall be provided, even if the time frame falls within the intervals prescribed in subsection (n). However, an EDC may propose a plan that, for a given standard, uses intervals outside the Commission standard, provided that the*

deviation can be justified by the EDC's unique circumstances or a cost/benefit analysis to support an alternative approach that will support the level of reliability required by law.

Program Justification

Patrol inspections of distribution substations are performed on a monthly, quarterly, and semi-annual basis, with a tiered approach to preventative maintenance. This tiered approach has proven effective in addressing emerging problems and allows for proper planning and remediation prior to the problem negatively impacting personal safety, equipment integrity or service reliability.

Monthly inspections ensure a trained, physical presence within the substation. Frequent in-person inspections have been effective in detecting the degradation of facilities not always captured by existing local and remote surveillance and monitoring tools. In addition to visual inspections, load and counter readings are recorded every three months to allow local engineering to conduct planning and load studies. Finally, an intensive inspection is conducted two times a year, in spring and fall.

Advancements in technology have refined how substation equipment inspections are performed, and those advancements have been leveraged to ensure the highest levels of safety and reliability of the substation and substation equipment. For example, results from equipment and patrol inspections are captured by field personnel on site and entered directly into the maintenance database where they can be tracked. Through the use of historical inspection data and enhanced software, the Company is able to target specific equipment and trigger maintenance based on equipment condition. For example, counter readings that are obtained during the three-month inspection cycle are used to trigger condition-based maintenance. Both predictive and condition-based programs extend the operating life of the equipment. They also optimize the necessary maintenance interval, improve service reliability, and reduce downtime that is typically experienced when equipment is taken offline which reduces exposure of the grid, all with consistency and efficiency.

Inspection Plan

The total number of substations to be inspected in 2027 and 2028 is based on the current system configuration (as of 2025) and thus is subject to change by the time the 2027 and 2028 plans commence.



Met-Ed • Penelec • Penn Power • West Penn Power

| Substation Inspections Planned Number of Substations | | | |
|-----------------------------------------------------------------|---------------|---------------|---------------|
| | 2027 | 2028 | Total |
| Met-Ed Rate District | 2,508 | 2,508 | 5,016 |
| Penelec Rate District | 4,668 | 4,668 | 9,336 |
| Penn Power Rate District | 888 | 888 | 1,776 |
| West Penn Rate District | 5,616 | 5,616 | 11,232 |
| FE PA Total | 13,680 | 13,680 | 27,360 |