



2800 Pottsville Pike
P.O. Box 16001
Reading, PA 19612-6001

October 3, 2011

Rosemary Chiavetta, Secretary
Pennsylvania Public Utility Commission
P.O. Box 3265
Harrisburg, PA 17120

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**PA PUBLIC UTILITY COMMISSION
SECRETARY'S BUREAU**

M-2009-2094773

RE: Biennial Inspection, Maintenance, Repair and Replacement Plan – West Penn Power Company for the period January 1, 2013 – December 31, 2014

Dear Secretary Chiavetta:

In accordance with 52 Pa. Code § 57.198, enclosed for filing on behalf of West Penn Power Company is an original and three (3) copies of its Biennial Inspection, Maintenance, Repair and Replacement Plan ("Plan") for the period January 1, 2013 – December 31, 2014.

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 West Penn Power's system and form the basis of its inspection and maintenance goals and objectives as outlined in West Penn Power's annual and quarterly reliability reports filed with this Commission.

West Penn Power Company respectfully requests that the Pennsylvania Public Utility Commission accept its Biennial Inspection, Maintenance, Repair and Replacement Plan. If you have any questions, please contact me or Eric Dickson at 330-384-5970.

Sincerely,

Douglas S. Elliott
President, Pennsylvania Operations
(610) 921-6060
elliottd@firstenergycorp.com

**Biennial Inspection, Maintenance, Repair and Replacement Plan
of West Penn Power Company (“West Penn Power”)**

For the period of January 1, 2013 – December 31, 2014

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**PA PUBLIC UTILITY COMMISSION
SECRETARY'S BUREAU**

**Submitted by:
Douglas S. Elliott
President, Pennsylvania Operations
2800 Pottsville Pike
Reading, PA 16001
Phone: (610) 921-6060
Email: elliottd@firstenergycorp.com**

Dated: October 3, 2011



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Revisions to Approved Plan

The Commission previously accepted West Penn Power's (West Penn) Biennial Inspection, Maintenance, Repair and Replacement Plan for 2011 & 2012. The table below illustrates, in summary fashion, the proposed changes to the 2013 & 2014 plan.

West Penn Power 2011 – 2012 Plan	West Penn Power 2013 – 2014 Plan
Vegetation Management	
<p>Program based on conditional assessment of tree trimming needs. The extent of the vegetation work to be performed on a given section of a scheduled circuit is determined by the reliability impact of that section of line.</p> <p>Urban circuits – vegetation work is performed on a 4-year cycle to maintain reliability in heavily populated areas and to reduce adverse impact of excessive trimming of urban areas.</p> <p>Rural circuits – prioritized based on CMI, number of customers on the circuit and time since circuit last trimmed. At no time will a rural circuit go more than 8 years without having vegetation conditions addressed.</p>	<p>Standard specification – prune to achieve 5 years of clearance.</p> <p>Portions of a circuit that experience high customer interruption minutes due to tree-caused outages may be targeted to receive the Standard Specification as well as enhanced removal techniques.</p> <p>A proactive Inspect/Maintain process will be utilized for portions of a circuit that have not experienced significant reliability issues – this may include extension of a cycle which will not exceed 8 years.</p>
Distribution Overhead Line Inspections	
Visual inspection on a 6-year cycle	Adopt Penn Power, Penelec and Met-Ed program and elimination of AIM program
Distribution Transformer Inspections	
<p>Overhead transformers – inspect as part of overhead line inspection (6-year cycle)</p> <p>Above-ground transformers – inspect on a 6-year cycle</p>	<p>Overhead transformers – adopt Penn Power, Penelec and Met-Ed program, no change to cycle</p> <p>Above-ground transformers – change to 6 year cycle to align with overhead transformer and line inspections</p>
Recloser Inspections	
<p>Inspection done in conjunction with 6-year overhead line inspection.</p> <p>Replacement to occur as soon as practical after inspection</p>	Visually inspect reclosers annually. The annual inspection will consist of counter readings and the field inspection.
Substation Inspections	
Inspect all substations 12 times annually	<p>Inspections will consist of three components:</p> <ol style="list-style-type: none"> 1. Monthly Safety & Security Inspection 2. Quarterly Safety and Security Inspection with Readings 3. Every Six Months Safety and Security Inspection with Full Inspection

In addition, pursuant to 52 Pa. Code § 57.198(l), West Penn Power will be submitting a request as an addendum to its quarterly reliability report that will be filed on November 1, 2011 to modify the programs as set forth above with an effective date of January 1, 2012. The addendum will contain a discussion of the reasons for the revisions to its existing approved plan. Therefore, the changes being proposed to the 2013 - 2014 plan will be consistent with those modifications to the 2012 plan that will be filed on November 1, 2011.

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

West Penn Power performs vegetation management to help ensure the continued safe and reliable operation of the distribution system. The Standard Specification for vegetation management is designed to support line reliability, maintain access, make repairs, or restore service and to support safe and reliable service. The Standard vegetation specification provides vegetation to be pruned to achieve five (5) years of clearance, removal of selected incompatible trees within the clearing zone corridor, removal of certain defective limbs that are overhanging primary conductors, controlling selected incompatible brush mechanically and/or using herbicide, and removal of off-corridor priority trees that are dead, dying, diseased, and leaning or significantly encroaching the corridor.

Portions of a circuit that experience high customer interruption minutes due to vegetation-caused outages may be targeted to receive the Standard Specification as well as enhanced vegetation removal techniques, which includes removal of certain healthy limbs, based on tree species and condition, which overhang primary conductors.

For portions of a circuit that have not experienced significant reliability issues due to vegetation-caused outages, a proactive Inspect/Maintain process will target selective vegetation removal for continued reliable system operation. This may include the extension of a cycle which will not exceed eight (8) 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 to the Standard Specification.

Methods used to manage and control vegetation include manual control methods using hand-operated tools, mechanical control using equipment mounted saws, mowers or other devices, and various herbicide application techniques such as, selective basal herbicide applications, stem foliage applications and cut stubble applications.

Further detailed information regarding West Penn Power's vegetation management program may be found in FirstEnergy's [Vegetation Management Program Description](#)

Inspection Plan

Area	Inspections and Treatments Planned	
	Total Circuit Miles	
	2013	2014
Arnold Service Center	349	370
Boyce Service Center	105	100
Butler Service Center	321	330
Charleroi Service Center	346	320
Clarion Service Center	128	100
Hyndman Service Center	57	64
Jeannette Service Center	266	280
Jefferson Service Center	349	300
Kittanning Service Center	213	250
Latrobe Service Center	266	280
MCConnellsburg Service Center	190	206
McDonald Service Center	143	130
Pleasant Valley Service Center	239	270
St Mary's Service Center	292	320
State College Service Center	380	400
Uniontown Service Center	279	260
Washington Service Center	295	250
Waynesboro Service Center	264	276

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.*

Justification

Distribution vegetation management activities are performed in accordance with the following:

- Generally accepted industry practices
- All routine vegetation clearing work is performed in compliance with ANSI Z133.1 and A-300 Standards and according to the requirements given by OSHA and the National Electrical Safety Code (NESC)

Additional information and support for this change will be provided in a supplemental submission to the proposed 2013-2014 I&M Plan within 30 days. West Penn Power will also propose this change for 2012 as an addendum to its next quarterly reliability report pursuant to 52 Pa. Code § 57.195.

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

West Penn Power shall visually inspect distribution wood poles on a twelve (12) 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 National Electrical Safety Code.

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 (35) years old or older will be bored to further assess the condition of the pole. This inspection consists of the recording of tests performed and abnormal conditions detected including but not limited to the following:

- Boring – testing for internal decay
- Verification of shell thickness

Further detailed information regarding West Penn Power's inspection of wood poles may be found in the Distribution Inspection & Maintenance Practice – Wood Poles.

Inspection Plan

Area	Pole Inspections Planned (Number of Poles)	
	2013	2014
Arnold <i>42,498 total poles</i>	3,541	3,541
Boyce <i>12,411 total poles</i>	1,034	1,034
Butler <i>32,070 total poles</i>	2,672	2,672
Charleroi <i>43,828 total poles</i>	3,652	3,652
Clarion <i>11,539 total poles</i>	962	962
Hydman <i>5642 total poles</i>	470	470
Jeannette <i>34,808 total poles</i>	2,900	2,900
Jefferson <i>32,326 total poles</i>	2,694	2,694
Kittanning <i>20,266 total poles</i>	1,689	1,689
Latrobe <i>29,987 total poles</i>	2,499	2,499
McConnellsburg <i>18,223 total poles</i>	1,519	1,519
McDonald <i>15,830 total poles</i>	1,319	1,319
Pleasant Valley <i>28,874 total poles</i>	2,406	2,406
St. Marys <i>27,434 total poles</i>	2,286	2,286
State College <i>38,484 total poles</i>	3,207	3,207
Uniontown <i>34,931 total poles</i>	2,911	2,911
Washington <i>32,276 total poles</i>	2,690	2,690
Waynesboro <i>29,875 total poles</i>	2,490	2,490
West Penn Power <i>491,302 total poles</i>		

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 West Penn Power could reasonably expect to create an immediate risk to public or employee safety or conditions affecting the integrity of the circuit shall be repaired/replaced within 30 days. All remaining deficiencies will be prioritized on a case-by-case basis.

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.*

Justification

The practice of performing wood pole inspections on a twelve (12) year cycle is based on accepted electric utility practices. National Electrical Safety Code (NESC) Rule 12.121.A states "lines and equipment shall be inspected at such intervals as experience has shown to be necessary." A periodicity of twelve (12) years between inspections allows enough time for proper planning and remediation prior to any emergent problems having a negative impact on personal safety, equipment integrity or service reliability.

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 distribution line*
- iii. Other conditions that may adversely affect operation of the overhead distribution line*

Program Description

West Penn Power shall visually inspect overhead lines and equipment on a six-year 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 state regulatory agencies and the National Electrical Safety Code. This program shall be limited to overhead facilities.

Approximately one-sixth of all circuits will be inspected annually to levelize labor commitments and expenses. This preventative maintenance 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

Further information regarding West Penn Power's inspection of Distribution Overhead Lines may be found in the Distribution Inspection & Maintenance Practice – Overhead Circuits and Equipment.

Inspection Plan

	Area	Overhead Line Inspections Planned	
		Total Number of Circuits	
		2013	2014
West Penn Power 808 total Circuits	Arnold 74 total circuits	8	16
	Boyce 39 total circuits	7	4
	Butler 65 total circuits	8	12
	Charleroi 74 total circuits	11	14
	Clarion 17 total circuits	3	1
	Hyndman 5 total circuits	4	1
	Jeannette 69 total circuits	9	11
	Jefferson 37 total circuits	4	5
	Kittanning 29 total circuits	4	2
	Latrobe 38 total circuits	9	7
	McConnellsburg 24 total circuits	3	6
	McDonald 20 total circuits	2	4
	Pleasant Valley 40 total circuits	5	10
	St. Marys 53 total circuits	12	8
	State College 77 total circuits	9	5
	Uniontown 48 total circuits	6	6
	Washington 40 total circuits	5	4
Waynesboro 59 total circuits	10	2	

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 West Penn Power could reasonably expect to affect the integrity of the circuits shall be repaired/replaced within 30 days. All remaining deficiencies will be 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.*

Justification

The practice of performing overhead line inspections on a six-year cycle is based on accepted electric utility practices and the experience of West Penn Power. National Electrical Safety Code (NESC) Rule 12.121.A states "lines and equipment shall be inspected at such intervals as experience has shown to be necessary." A periodicity of six (6) years between inspections has historically been utilized and has proven to be successful in addressing emergent problems in a timely manner, allowing for proper planning and remediation prior to the emergent problem having a negative impact on personal safety, equipment integrity or service reliability. This experience does not justify the expense of an increased cycle.

In addition to an inspection every six years, there are many other opportunities for West Penn Power personnel to view the overhead line facilities and identify any potential issues. West Penn Power's overhead line inspection program coincides with other equipment inspections, such as the annual recloser inspections. In order to address specific reliability concerns and to assess some worst performing circuit performance, additional circuit assessments are performed in addition to West Penn Power's six-year inspection program. Any emergent priority overhead line problems identified during these other inspections are addressed in a timely manner.

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

West Penn Power inspects overhead distribution transformers as part of the overhead line inspection. Above-ground pad-mounted transformers are inspected on a six-year cycle and below-ground transformers are inspected on an eight-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 state regulatory agencies and the National Electrical Safety Code.

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 West Penn Power's inspection of distribution transformers may be found in the Distribution Inspection & Maintenance Practice – Underground Equipment.

Inspection Plan

Area	Type	Transformer Inspections Planned (Total Transformers)	
		2013	2014
Arnold	Overhead Transformers <i>23,833 total transformers</i>	3,372	6,344
	Above-Ground Pad-mounted <i>2242 total transformers</i>	374	374
Boyce	Overhead Transformers <i>9728 total transformers</i>	1,922	1,351
	Above-Ground Pad-mounted <i>3828 total transformers</i>	638	638
Butler	Overhead Transformers <i>20,003 total transformers</i>	2,304	3,680
	Above-Ground Pad-mounted <i>3759 total transformers</i>	627	627
Charleroi	Overhead Transformers <i>28,106 total transformers</i>	5,683	4,958
	Above-Ground Pad-mounted <i>2844 total transformers</i>	474	474
Clanton	Overhead Transformers <i>5,566 total transformers</i>	1,058	423
	Above-Ground Pad-mounted <i>608 total transformers</i>	101	101
Hyndman	Overhead Transformers <i>2,565 total transformers</i>	1,459	349
	Above-Ground Pad-mounted <i>206 total transformers</i>	34	34
Jeannette	Overhead Transformers <i>25,636 transformers</i>	3,276	5,347
	Above-Ground Pad-mounted <i>4948 total transformers</i>	825	825
Jefferson	Overhead Transformers <i>13,982 total transformers</i>	1,941	2,221
	Above-Ground Pad-mounted <i>619 total transformers</i>	103	103
Kittanning	Overhead Transformers <i>10,091 total transformers</i>	1,650	1,062
	Above-Ground Pad-mounted <i>742 total transformers</i>	124	124
Latrobe	Overhead Transformers <i>17,090 total transformers</i>	2,477	3,589
	Above-Ground Pad-mounted <i>2200 total transformers</i>	367	367
McConnellsburg	Overhead Transformers <i>7,193 total transformers</i>	1,504	1,709
	Above-Ground Pad-mounted <i>762 total transformers</i>	127	127
McDonald	Overhead Transformers <i>7,337 total transformers</i>	1,028	2,061
	Above-Ground Pad-mounted <i>1167 total transformers</i>	194	194
Pleasant Valley	Overhead Transformers <i>15,913 total transformers</i>	2,420	4,385
	Above-Ground Pad-mounted <i>1381 total transformers</i>	230	230

West Penn Power
40,317 total UG
transformers
270,523 total OH
transformers

Area	Type	Transformer Inspections Planned (Total Transformers)	
		2013	2014
St. Marys	Overhead Transformers 14,277 total transformers	2,489	2,816
	Above-Ground Pad-mounted 956 total transformers	159	159
State College	Overhead Transformers 18,686 total transformers	2,488	1,344
	Above-Ground Pad-mounted 5381 total transformers	897	897
Uniontown	Overhead Transformers 18,747 total transformers	2,220	3,543
	Above-Ground Pad-mounted 1692 total transformers	282	282
Washington	Overhead Transformers 16,691 total transformers	2,077	2,009
	Above-Ground Pad-mounted 2279 total transformers	380	380
Waynesboro	Overhead Transformers 15,029 total transformers	2,346	785
	Above-Ground Pad-mounted 4703 total transformers	784	784

West Penn Power
40,317 total UG
transformers
270,523 total OH
transformers.

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.

Justification

The practice of performing distribution overhead transformer as well as above-ground transformers on a six-year cycle and below-ground transformers on an eight-year cycle is based on accepted electric utility practices and the experience of West Penn Power. National Electrical Safety Code (NESC) Rule 12.121.A states "lines and equipment shall be inspected at such intervals as experience has shown to be necessary."

The aforementioned periodicity between inspections allows distribution overhead and above-ground transformers to be inspected in conjunction with the overhead circuit inspection which is on a 6-year cycle as well. The above periodicities between inspections have proven to be successful in addressing emergent problems in a timely manner, allowing for proper planning and remediation prior to the emergent problem having a negative impact on personal safety, equipment integrity or service reliability.

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

West Penn Power visually inspects 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 state regulatory agencies and the National Electrical Safety Code.

The annual preventative maintenance consists of counter readings and the 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 West Penn Power's inspection of reclosers may be found in the Distribution Inspection & Maintenance Practice – Line Reclosers.

Inspection Plan

Area	Recloser Inspections Planned	
	Total Number of Reclosers	
	2013	2014
Arnold 312 total reclosers	312	312
Boyce 268 total reclosers	268	268
Butler 324 total reclosers	324	324
Charleroi 273 total reclosers	273	273
Clarion 76 total reclosers	76	76
Hyndman 64 total reclosers	64	64
Jeannette 326 total reclosers	326	326
Jefferson 188 total reclosers	188	188
Kittanning 133 total reclosers	133	133
Latrobe 210 total reclosers	210	210
McConnellsburg 154 total reclosers	154	154
McDonald 163 total reclosers	163	163
Pleasant Valley 154 total reclosers	154	154
St. Marys 148 total reclosers	148	148
State College 165 total reclosers	165	165
Uniontown 225 total reclosers	225	225
Washington 281 total reclosers	281	281
Waynesboro 316 total reclosers	316	316
West Penn Power 3780 total 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.

Justification

The practice of performing annual recloser inspections is based on accepted electric utility practices and the experience of West Penn Power. National Electrical Safety Code (NESC) Rule 12.121.A states "lines and equipment shall be inspected at such intervals as experience has shown to be necessary." A periodicity of one year between inspections has proven to be successful in addressing emergent problems in a timely manner, allowing for proper planning and remediation prior to the emergent problem having a negative impact on personal safety, equipment integrity or service reliability.

The aforementioned practice is a Pennsylvania Power Company, Pennsylvania Electric Company and Metropolitan Edison Company program that is being adopted by West Penn Power as a result of the merger between Allegheny Energy and FirstEnergy Corp.

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

West Penn Power's substation inspection program consists of three components: monthly, quarterly and biannual inspections (Class C, B and A respectively). The purpose of these inspections is to verify the security of the substation, capture readings and to ensure that any developing substation problems are identified and addressed in a timely manner in support of system reliability and electrical safety.

These three components include:

1. Safety and Security Inspection (Class C) – monthly inspection and recording of abnormal conditions including but not limited to the following:
 - Substation control house (security breaches, roof integrity, fire protection equipment, general housekeeping)
 - Substation yard and perimeter (gate, fence, signage)
2. Safety and Security Inspection with Readings (Class B) – quarterly inspection and recording of abnormal conditions including but not limited to the following types of substation equipment:
 - Substation control house (security breaches, roof integrity, fire protection equipment, general housekeeping)
 - Substation yard and perimeter (gate, fence, signage)
 - Read and record currents, voltages, temperatures, pressures and operations counters on installed substation equipment
3. Safety and Security Inspection with Full Inspection (Class A) – a biannual visual inspection along with readings and a more comprehensive inspection and testing of the substation and including but not limited to the following types of substation equipment:
 - Substation control house (security breaches, roof integrity, fire protection equipment, general housekeeping)
 - Substation yard and perimeter (gate, fence, signage)
 - Read and record currents, voltages, temperatures, pressures and operations counters on installed substation equipment
 - Microwave/radio sites and engine generators, batteries and chargers
 - Relaying, power transformers, breakers, voltage regulators, capacitor banks, etc:

Further detailed information regarding West Penn Power's inspection of substations may be found in the Substation Patrol Inspections Manual.

Inspection Plan

	Area	Substation Inspections Planned	
		Number of Substations	
		2013	2014
	Arnold <i>53 substations</i>	636	636
	Boyce <i>21 substations</i>	252	252
	Butler <i>43 substations</i>	516	516
	Charleoi <i>48 substations</i>	576	576
	Cumberland <i>3 substations</i>	36	36
	Jeannette <i>29 substations</i>	87	87
	Jefferson <i>60 substations</i>	720	720
	Kittanning <i>28 substations</i>	336	336
	Latrobe <i>29 substations</i>	348	348
	Pleasant Valley <i>50 substations</i>	600	600
	St. Marys <i>40 substations</i>	480	480
	State College <i>37 substations</i>	444	444
	Washington <i>34 substations</i>	408	408
	Waynesboro <i>35 substations</i>	420	420
West Penn Power <i>510 total substations</i>			

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.*

Justification

The practice of performing substation inspections is based on accepted utility practices and the experience of West Penn Power. Providing a trained, physical presence within the substation on a regular, periodic basis has proven very successful in detecting the degradation of facilities not always captured by existing local and remote surveillance and monitoring tools. A periodicity of one month between inspections has proven to be successful in addressing emergent problems in a timely manner, allowing for proper planning and remediation prior to the emergent problem having a negative impact on person safety, equipment integrity or service reliability.

The aforementioned practice is a Pennsylvania Power Company, Pennsylvania Electric Company and Metropolitan Edison Company program that is being adopted by West Penn Power as a result of the merger between Allegheny Energy and FirstEnergy Corp.

