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February 1, 2018

M-2016-2522508

VIA UNITED PARCEL SERVICERosemary Chiavetta, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street, 2nd Floor
Harrisburg, PA 17120**RECEIVED**
FEB - 1 2018
PA PUBLIC UTILITY COMMISSION
SECRETARY'S BUREAU**Re: Joint 4th Quarter 2017 Reliability Report – Metropolitan Edison Company,
Pennsylvania Electric Company, Pennsylvania Power Company and West Penn
Power Company – Public Version**

Dear Secretary Chiavetta:

Pursuant to 52 Pa. Code § 57.195(d) and (e), enclosed for filing on behalf of Metropolitan Edison Company, Pennsylvania Electric Company, Pennsylvania Power Company and West Penn Power Company (collectively, the “Companies”) are two copies of the Joint 4th Quarter 2017 Reliability Report – Public Version (“Joint Report”). Please date stamp the additional copy and return it in the postage-prepaid envelope provided.

On December 22, 2004, the Companies filed an Application for Protective Order at Docket No. L-00030161. The Application was granted, allowing the Companies to file proprietary versions of the quarterly reliability reports. The Proprietary Version of this Joint Report is being filed under separate cover.

Please feel free to contact me if you have any questions or need additional information regarding this matter.

Sincerely,



Tori L. Giesler

Enclosures

- c: As Per Certificate of Service
D. Gill – Bureau of Technical Utility Services (via email and first class mail)
D. Searfoorce - Bureau of Technical Utility Services (via email and first class mail)
D. Washko – Bureau of Technical Utility Services (via email and first class mail)

Met-Ed
A FirstEnergy Company

Penelec
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PennPower
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**WestPenn
Power**
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PA PUBLIC UTILITY COMMISSION
SECRETARY'S BUREAU

Joint 2017 4th Quarter Reliability Report

Metropolitan Edison Company,
Pennsylvania Electric Company,
Pennsylvania Power Company, and
West Penn Power Company

Pursuant to 52 Pa. Code § 57.195(d) and (e)

**Joint 4th Quarter 2017 Reliability Report –
Metropolitan Edison Company (“Met-Ed”),
Pennsylvania Electric Company (“Penelec”),
Pennsylvania Power Company (“Penn Power”), and
West Penn Power Company (“West Penn”)**

Section 57.195(e)(1): A description of each major event that occurred during the preceding quarter, including the time and duration of the event, the number of customers affected, the cause of the event and any modified procedures adopted in order to avoid or minimize the impact of similar events in the future.¹

Major Event(s)

FirstEnergy Company	Customers Affected	Time and Duration of the Event		Cause of the Event	Commission Approval Status
Penn Power	19,298	Duration	47 hours, 24 minutes	Thunderstorms and high wind	Approved January 5, 2018
		Start Date/Time	November 5, 2017 18:56		
		End Date/Time	November 7, 2017 18:20		

¹ For purposes of this Joint Report, all reliability reporting is based upon the Pennsylvania Public Utility Commission’s definitions for momentary outages and major events pursuant to 52 Pa. Code § 57.192.

Section 57.195(e)(2): Rolling 12-month reliability index values (SAIFI, CAIDI, SAIDI, and if available MAIFI) for the EDC's service territory for the preceding quarter. The report shall include the data used in calculating the indices, namely the average number of customers served, the number of sustained customer interruptions, the number of customers affected, and the customer minutes of interruption. If MAIFI values are provided, the report shall also include the number of customer momentary interruptions.

Reliability Index Values

4Q 2017 (12-Mo Rolling)	Met-Ed			Penelec			Penn Power			West Penn		
	Benchmark	12-Month Standard	12-Month Actual	Benchmark	12-Month Standard	12-Month Actual	Benchmark	12-Month Standard	12-Month Actual	Benchmark	12-Month Standard	12-Month Actual
SAIFI	1.15	1.38	1.47	1.26	1.52	1.73	1.12	1.34	1.06 ²	1.05	1.26	1.29
CAIDI	117	140	147	117	141	138	101	121	150	170	204	166 ³
SAIDI	135	194	217	148	213	239	113	162	160	179	257	214
MAIFI⁴			1.29			3.76			.89			
Customers Served⁵	561,039			580,349			162,868			714,821		
Number of Sustained Interruptions	10,662			12,735			3,231			11,989		
Customers Affected	827,461			1,001,129			173,036			919,673		
Customer Minutes	121,882,261			138,523,052			26,001,026			152,701,813		
Number of Customer Momentary Interruptions	723,868			2,182,313			144,557					

² Penn Power's SAIFI achieved benchmark or better.

³ West Penn's CAIDI achieved benchmark or better.

⁴ MAIFI values are not available for West Penn.

⁵ Represents the average number of customers served during the reporting period.

Unique Events Occurring in 4Q 2017:

There are no unique outage events in 4Q 2017 to highlight.

Section 57.195(e)(3): Rolling 12-month reliability index values (SAIFI, CAIDI, SAIDI, and if available, MAIFI) and other pertinent information such as customers served, number of interruptions, customer minutes interrupted, number of lockouts, and so forth, for the worst performing 5% of the circuits in the system. An explanation of how the EDC defines its worst performing circuits shall be included.

Worst Performing Circuits – Reliability Indices

The methodology used to identify worst performing circuits is based on both System Average Interruption Frequency Index (“SAIFI”) and System Average Interruption Duration Index (“SAIDI”). The methodology consists of the following steps:

1. For each circuit calculate a circuit SAIFI using only distribution-caused outages.
2. Select the worst 20% of circuits based on the highest circuit SAIFI.
3. Rank the selected circuits based on SAIDI using only distribution-caused customer minutes.
4. Select 5% of the circuits based on the highest customer minutes. These circuits are then identified as the worst performing circuits.

Met-Ed, Penelec, Penn Power, and West Penn’s rankings of the 5% Worst Performing Circuits are provided in Attachment A to this report.

Section 57.195(e)(4): Specific remedial efforts taken and planned for the worst performing 5% of the circuits identified in paragraph (3).

Worst Performing Circuits – Remedial Actions

Met-Ed, Penelec, Penn Power, and West Penn's Remedial Actions for Worst Performing Circuits are provided in Attachment B to this report.

Section 57.195(e)(5): A rolling 12-month breakdown and analysis of outage causes during the preceding quarter, including the number and percentage of service outages, the number of customers interrupted, and customer interruption minutes categorized by outage cause such as equipment failure, animal contact, tree related, and so forth. Proposed solutions to identified service problems shall be reported.

Outages by Cause

Outages by Cause – Met-Ed

Outage by Cause				
4th Quarter 2017 12-Month Rolling	Met-Ed			
Cause	Customer Minutes	Number of Sustained Interruptions	Customers Affected	% Based on Number of Outages
Equipment failure	25,566,423	2,314	206,984	21.70%
Trees off ROW - tree	43,482,358	1,804	209,877	16.92%
Unknown	8,213,255	1,337	86,840	12.54%
Animal	2,075,311	1,323	24,233	12.41%
Line failure	11,623,489	716	82,551	6.72%
Bird	305,230	505	3,092	4.74%
Trees off ROW - limb	4,968,681	470	43,070	4.41%
Trees on ROW	6,443,276	445	17,990	4.17%
Forced outage	3,056,590	421	47,789	3.95%
Trees - sec/service	814,742	413	1,534	3.87%
Vehicle	9,659,696	336	63,917	3.15%
Lightning	2,359,694	303	14,024	2.84%
Human error - non-company	513,058	60	4,849	0.56%
Overload	351,884	42	4,433	0.39%
Object contact with line	936,886	36	6,018	0.34%
Previous lightning	30,869	29	147	0.27%
Human error - company	142,303	29	3,899	0.27%
UG dig-up	34,848	23	187	0.22%
Wind	1,007,491	15	3,663	0.14%
Customer equipment	9,619	15	46	0.14%
Fire	56,133	10	246	0.09%
Vandalism	1,820	7	13	0.07%
Other electric utility	33,418	5	360	0.05%
Other utility - non-electric	195,052	3	1,698	0.03%
Contamination	135	1	1	0.01%
Total	121,882,261	10,662	827,461	100.00%

Proposed Solutions – Met-Ed

Met-Ed analyzes its outage data to develop solutions for improving reliability. The following paragraphs identify the top outage causes for the rolling twelve-month period ending December 31, 2017, and associated actions designed to address these outage causes.

To reduce the likelihood of equipment-caused outages, Met-Ed follows Inspection and Maintenance (“I&M”) programs⁶ that set forth schedules for regular inspections of distribution and substation facilities. These programs are geared towards specific components such as capacitors, poles, circuits, transformers, radio-controlled switches, substations, and reclosers. Equipment identified is repaired or replaced as appropriate.

To address outages caused by trees, Met-Ed performs cycle-based tree trimming and enhanced tree trimming in select locations. Enhanced trimming removes overhanging limbs in Zones 1 and 2,⁷ controlling incompatible brush and clearing cross country rights-of-way with mowing in Zones 1 and 2. Trees identified as a potential cause of a future outage are removed to prevent an interruption of electrical service to Met-Ed’s customers.

Outages caused by unknown factors are patrolled by a troubleman and recorded as having an unknown cause. For certain unknown outages, engineering may conduct a post-outage circuit inspection as needed to determine if additional actions are necessary.

Generally speaking, there are a number of other reliability projects that have been identified to help reduce the number of, and limit the duration and impact of, interruptions to customers. These include:

- **Protective devices** – To ensure the adequate protection of circuits and ultimately minimize outage frequency and duration by reducing the scope of large outages, Met-Ed installs fuses on unprotected segments of distribution circuits.

⁶ Pursuant to 52 Pa. Code § 57.198, every two years an electric distribution company shall file, and receive approval from the Commission of, a biennial plan for the periodic inspection, maintenance, repair and replacement of its facilities. On December 30, 2013, Paul Diskin, Director, Technical Utility Services, issued a letter approving the Company’s biennial inspection, maintenance, repair, and replacement plan effective January 1, 2015 through December 31, 2016. Further, on March 4, 2016 an additional letter was issued approving the plans effective January 1, 2017 – December 31, 2018.

⁷ Zone 1 is defined as the portion of the circuit from the substation breaker to the first protective device. Zone 2 is defined as the three-phase conductor and devices after the first protective device.

- **Circuit ties and loops** – To address customers served by radial circuits, Met-Ed continues to build distribution ties and loops between radial sections of its circuits. This allows for circuit switching during outages and enables faster service restoration for customers.
- **Circuit rehabilitation** – Met-Ed continues to perform circuit rehabilitation on select circuits. Specifically, Met-Ed performs inspections to identify equipment replacement needs and then schedules and completes the work.
- **Installation of supervisory control and data acquisition (“SCADA”) devices** – Met-Ed continues to install SCADA to provide communication with circuit breakers, line switches, and reclosers. SCADA enables these devices to be operated remotely which reduces restoration time and ultimately reduces SAIDI, SAIFI, and CAIDI indices.
- **Underground Residential Distribution (“URD”) Cable Replacement** - Met-Ed’s URD Cable Replacement program targets the replacement of bare concentric neutral cable which was manufactured without an insulating jacket around the concentric neutral wires. This design often caused the cable to fail prematurely.
- **Porcelain cutout replacement** – Met-Ed continues to proactively replace porcelain cutouts with polymer cutouts. Failed porcelain cutouts ultimately cause lockouts of reclosers and circuit breakers, as well as other equipment damage.
- **Clusters of customers** – Met-Ed focuses on clusters of customers that experience frequent operations of line protection devices. In addition to enhancing system performance, this focus reduces the frequency of outages at the customer level.

Outages by Cause – Penelec

Outage by Cause				
4th Quarter 2017 12-Month Rolling	Penelec			
Cause	Customer Minutes	Number of Sustained Interruptions	Customers Affected	% Based on Number of Outages
Equipment failure	24,573,690	2,900	276,148	22.77%
Unknown	9,362,176	1,826	101,184	14.34%
Trees off ROW - tree	53,426,970	1,796	216,342	14.10%
Animal	2,671,076	1,285	29,814	10.09%
Line failure	14,972,803	1,106	118,998	8.68%
Forced outage	5,872,966	953	65,309	7.48%
Trees - sec/service	532,934	584	1,691	4.59%
Lightning	3,906,258	490	36,485	3.85%
Bird	1,190,443	432	18,024	3.39%
Trees off ROW - limb	3,717,818	390	22,959	3.06%
Vehicle	7,376,513	300	45,331	2.36%
Trees on ROW	666,038	142	3,274	1.12%
Human error - non-company	1,868,614	100	14,575	0.79%
Other electric utility	5,966,570	97	16,980	0.76%
Overload	625,166	60	11,686	0.47%
UG dig-up	56,603	58	378	0.46%
Human error - company	320,590	44	12,498	0.35%
Previous lightning	47,104	42	286	0.33%
Object contact with line	981,487	41	6,462	0.32%
Customer equipment	38,970	25	301	0.20%
Ice	101,869	17	628	0.13%
Wind	146,327	16	1,217	0.13%
Vandalism	4,908	13	17	0.10%
Fire	12,890	10	105	0.08%
Other utility - non-electric	81,978	5	433	0.04%
Contamination	291	3	4	0.02%
Total	138,523,052	12,735	1,001,129	100%

Proposed Solutions – Penelec

Penelec analyzes its outage data to develop solutions for improving reliability. The following paragraphs identify the top outage causes for the rolling twelve-month period ending December 31, 2017 and the associated actions designed to address these outage causes.

To reduce the likelihood of equipment-caused outages, Penelec follows I&M programs that set forth schedules for regular inspections of distribution and substation facilities. These programs are geared towards specific components such as capacitors, poles, circuits, transformers, radio-controlled switches, substations, and reclosers. Equipment identified is repaired or replaced as appropriate.

Outages caused by unknown factors are patrolled by a troubleman and recorded as having an unknown cause. For certain unknown outages, engineering may conduct a post-outage circuit inspection as needed to determine if additional actions are necessary.

To target outages caused by trees, Penelec performs cycle-based tree trimming, which includes the proactive removal of Ash trees that have been deemed a threat due to the Emerald Ash Borer, as well as additional tree trimming techniques.

Generally speaking, there are a number of other reliability projects that have been identified to help reduce the number of, and limit the duration and impact of, interruptions to customers. These include:

- **Protective devices** - Penelec continues to proactively install additional protective devices on its 34.5 kV circuits. Planning and protection engineers perform a full circuit coordination study to construct and implement fuse protection and coordination recommendations. By reviewing coordination and installing additional protective devices fewer customers will be affected during an outage, and ultimately reduces Penelec's SAIFI performance. The selected circuits are based on overall performance and protection needs.
- **Circuit ties and loops** – To address interruptions experienced by customers served by radial circuits, Penelec continues its plans to build distribution ties and loops between radial sections of its circuits. This allows for circuit switching during outages and enables faster service restoration for customers.

- **Circuit rehabilitation** – Penelec continues to perform circuit rehabilitation on select circuits. Specifically, Penelec performs inspections to identify equipment replacement needs and then schedules and completes the work.
- **Installation of SCADA devices** – Penelec continues to install SCADA to provide communication with circuit breakers and line switches. SCADA enables these devices to be operated remotely, reducing restoration time, and ultimately SAIDI, SAIFI, and CAIDI indices.
- **Porcelain cutout replacement** – Penelec continues to proactively replace porcelain cutouts with polymer cutouts. Failed porcelain cutouts ultimately cause lockouts of reclosers and circuit breakers, as well as other equipment damage.
- **Customer Service Improvement (“CSI”) program** – Penelec’s CSI program provides a means to reduce the frequency of outages at the customer level that might not be otherwise addressed when targeting overall system metrics. The CSI program continues to focus on customer complaints as a starting point to analyze clusters of customers that experience frequent or repeated outages. A thorough review and analysis of equipment on a customer’s line is performed by Company engineers to determine whether action is required.
- **Cap and Pin Insulator Replacement program** - Penelec’s Cap and Pin Insulator Replacement program replaces older, brown porcelain cap and pin style substation insulators that are prone to failure. Replacing older insulators improves reliability by reducing the number of outages caused by insulator failure and reduces damage to adjacent equipment when insulators fail.

Outages by Cause – Penn Power

Outage by Cause				
4th Quarter 2017 12-Month Rolling	Penn Power			
Cause	Customer Minutes	Number of Sustained Interruptions	Customers Affected	% Based on Number of Outages
Trees off ROW - tree	15,076,915	858	51,548	26.56%
Animal	1,114,960	423	11,635	13.09%
Bird	231,853	295	2,720	9.13%
Line failure	2,060,486	295	16,494	9.13%
Equipment failure	2,290,245	284	19,890	8.79%
Lightning	703,806	239	6,151	7.40%
Trees off ROW - limb	1,269,130	179	5,740	5.54%
Trees - sec/service	172,489	152	617	4.70%
Unknown	570,760	140	17,635	4.33%
Forced outage	349,918	105	11,773	3.25%
Vehicle	1,348,524	86	8,992	2.66%
Previous lightning	20,795	40	138	1.24%
Overload	106,272	24	656	0.74%
Human error - company	294,317	24	14,361	0.74%
Human error - non-company	250,882	23	3,669	0.71%
Trees on ROW	42,986	18	341	0.56%
Object contact with line	11,367	14	108	0.43%
UG dig-up	19,449	12	315	0.37%
Customer equipment	14,565	5	36	0.15%
Vandalism	7,532	4	20	0.12%
Fire	29,771	3	92	0.09%
Other utility - non-electric	1,814	2	9	0.06%
Other electric utility	1,325	2	25	0.06%
Wind	10,518	2	67	0.06%
Ice	160	1	1	0.03%
Contamination	187	1	3	0.03%
Total	26,001,026	3,231	173,036	100%

Proposed Solutions – Penn Power

Penn Power analyzes its outage data to develop solutions for improving reliability. The following paragraphs identify the top outage causes for the rolling twelve-month period ending December 31, 2017 and the associated actions designed to address these outage causes.

To address outages caused by trees, Penn Power performs cycle-based tree trimming and enhanced tree trimming that includes the removal of a large number of trees (healthy or not) located outside of the right-of-way.

To address outages caused by animals and birds, Penn Power installs animal guards on equipment that experiences a high frequency of animal and bird related outages. When possible, animal guards are installed at the time service is restored to prevent future outages caused by animals and birds.

Generally speaking, there are several other reliability projects that have been identified to help reduce the number of, and limit the duration and impact of, interruptions to customers. These include:

- **Circuit ties, loops and sources** – To improve reliability by reducing long duration outages, Penn Power continues to install new distribution circuit ties and loops and add new sources which create an alternate path from which power is provided to customers affected by an outage.
- **Circuit rehabilitation** - Penn Power continues the rehabilitation of its 69 kV transmission lines which includes the replacement of equipment such as poles, switches, crossarms, insulators and braces. This program targets the reduction of CAIDI and SAIDI.
- **Installation of SCADA devices** – SCADA provides communication with circuit breakers and line switches, and enables these devices to be operated remotely, reducing restoration time and ultimately reducing SAIDI, SAIFI, and CAIDI indices.
- **URD Cable Replacement** – Penn Power's URD Cable Replacement program targets the replacement of bare concentric neutral cable which was manufactured without an insulating jacket around the concentric neutral wires. This design often caused the cable to fail prematurely.

- **Clusters of customers** – Penn Power focuses on clusters of customers that experience frequent operations of line protection devices. In addition to enhancing system performance, it also provides a means to reduce the frequency of outages at the customer level that might not be otherwise addressed when targeting overall system metrics.

Outages by Cause – West Penn

Outage by Cause				
4th Quarter 2017 12-Month Rolling	West Penn			
Cause	Customer Minutes	Number of Sustained Interruptions	Customers Affected	% Based on Number of Outages
Trees off ROW - tree	71,974,544	3,214	288,641	26.81%
Equipment failure	23,853,845	2,192	165,373	18.28%
Unknown	11,226,760	1,816	93,926	15.15%
Animal	2,598,041	1,160	27,869	9.68%
Line failure	15,729,767	1,135	96,526	9.47%
Forced outage	3,943,063	578	69,286	4.82%
Trees on ROW	7,972,198	436	40,213	3.64%
Vehicle	7,363,233	342	60,658	2.85%
Trees - sec/service	350,477	316	1,981	2.64%
Bird	662,823	314	9,212	2.62%
Trees off ROW - limb	3,369,409	226	22,994	1.89%
Human error - non-company	1,132,279	65	10,687	0.54%
Lightning	932,996	43	6,556	0.36%
Human error - company	181,507	40	8,453	0.33%
UG dig-up	104,384	39	706	0.33%
Object contact with line	373,701	23	3,960	0.19%
Overload	306,474	13	5,889	0.11%
Other electric utility	372,009	9	1,652	0.08%
Customer equipment	3,078	7	9	0.06%
Fire	41,347	6	307	0.05%
Switching error	76,181	5	3,043	0.04%
Vandalism	8,380	3	73	0.03%
Other utility - non-electric	105,053	2	1,626	0.02%
Previous Lightning	6,049	2	24	0.02%
Contamination	260	2	4	0.02%
Wind	13,955	1	5	0.01%
Total	152,701,813	11,989	919,673	100%

Proposed Solutions – West Penn

West Penn analyzes its outage data to develop solutions for improving reliability. The following paragraphs identify the top outage causes for the rolling twelve-month period ending December 31, 2017, and the associated actions designed to address these outage causes.

To reduce outages caused by trees, West Penn performs cycle-based tree trimming and continues its program to accelerate the mitigation of trees subject to damage by the Emerald Ash Borer.

To reduce the likelihood of equipment-caused outages, West Penn follows I&M programs that set forth schedules for regular inspections of distribution and substation facilities. These programs are geared towards specific components such as capacitors, poles, circuits, transformers, substations, and reclosers. Equipment identified is repaired or replaced as appropriate.

Outages caused by unknown factors are patrolled by a troubleman and recorded as having an unknown cause. For certain unknown outages, engineering may conduct a post-outage circuit inspection as needed to determine if additional actions are necessary.

Generally speaking, there are a number of other reliability projects that have been identified to help reduce the number of, and limit the duration and impact of, interruptions to customers. These include:

- **Protective devices** – To ensure the adequate protection of circuits and ultimately minimize outage frequency and duration by reducing the scope of large outages, West Penn installs new fused cutouts on unprotected circuits.
- **Circuit rehabilitation** - West Penn continues to perform circuit rehabilitation on select circuits. Specifically, West Penn performs inspections to identify equipment replacement needs and then schedules and completes the work. This program focuses on strengthening Zones 1 and 2 by identifying equipment for replacement such as poles, switches, crossarms, insulators, braces, and cutouts.
- **Enhanced rehabilitation** - West Penn targets select Worst Performing Circuits for enhanced rehabilitation, which can include hardware rehabilitation, coordination review, installation of additional protective devices, or recloser installation.

- **Enhanced overcurrent protection and SCADA control** – The enhanced overcurrent protection program installs new electronic reclosers with SCADA control at targeted substations which limits the number of customers affected and allows for remote switching to restore customers more quickly. Adding SCADA control to electronic reclosers in select substations with existing SCADA capabilities provides additional monitoring and also allows for remote switching to restore customers at the circuit level more quickly.
- **Sub-transmission modernization and automation** – The sub-transmission modernization and automation program oversees the installation of SCADA controlled reclosers and switches on the sub-transmission system and also includes automatic air switch modernization. To provide enhanced sectionalizing for larger blocks of customers at the substation source level, West Penn installs electronic reclosers at the substation. This enables West Penn to restore large sections of customers more quickly.
- **URD Cable Replacement** - West Penn's URD Cable Replacement program targets the replacement of bare concentric neutral cable, which was manufactured without an insulating jacket around the concentric neutral wires. This design often caused the cable to fail prematurely.
- **Underground getaway replacement** – The underground getaway replacement program replaces select underground substation exits, also referred to as underground getaways. A getaway is a cable that leads out of the substation to the overhead lines. Specifically, this program targets underground getaways that were installed prior to 1988 and are known to be prone to failure. By replacing these getaways, West Penn will reduce the interruptions to a circuit associated with the cable as well as the long interruption times associated with the replacement.
- **Clusters of customers** - West Penn focuses on clusters of customers that experience frequent operations of line protection devices. This not only aims to enhance system performance, but it also provides a means to reduce frequency of outages at the customer level that might not be otherwise addressed when targeting overall system metrics.

Section 57.195(e)(6): Quarterly and year-to-date information on progress toward meeting transmission and distribution inspection and maintenance goals/objectives (for first, second and third quarter reports only).

Information is not required for the 4th Quarter report.

Section 57.195(e)(7): Quarterly and year-to-date information on budgeted versus actual transmission and distribution operation and maintenance expenditures in total and detailed by the EDC's own functional account code as available. (For first, second and third quarter reports only).

Information is not required for the 4th Quarter report.

Section 57.195(e)(8): Quarterly and year-to-date information on budgeted versus actual transmission and distribution capital expenditures in total and detailed by the EDC's own functional account code or FERC account code as available. (For first, second and third quarter reports only).

Information is not required for the 4th Quarter report.

Section 57.195(e)(9): Dedicated staffing levels for transmission and distribution operation and maintenance at the end of the quarter, in total and by specific category (for example, linemen, technician, and electrician).⁸

Staffing Levels

Met-Ed 2017												
Department	Position	Staffing Level				Staff Added in Quarter			Staff Lost in Quarter			Plan to Hire in 2018
		1Q	2Q	3Q	4Q	New Hire – Experienced	New Hire – PSI Student	Other ⁹	Retirement	Voluntary Separation	Other ¹⁰	
Distribution	Line Leader	53	50	52	50						2	
	Line Troubleshooter	30	36	40	37			4			7	
	Lineman	115	126	118 ¹¹	120			2				15
Substation	Substation Leader	16	14	15	15							
	Substation Employee	49	58	58	57			1			2	10
Transmission	Line Leader	1	2	2	2							
	Lineman	6	5	8 ¹²	8							
	Total	270	291	293	289			7			11	25

⁸ As ordered on March 30, 2015 at Docket Nos. D-2014-2365991, D-2014-2365992, D-2014-2365993, and D-2014-2365994, *Implementation Plan of the Focused Management Audit of Metropolitan Edison Company, Pennsylvania Electric Company, Pennsylvania Power Company, and West Penn Power Company* (Appendix A) (5): FirstEnergy is directed to provide additional detail as described below in the staff reporting section in the Quarterly Reliability Reports. For each staff member added, provide information on whether they were a new hire, if they are already at the journeyman, or other experienced level of training. For each staff member lost, provide the reason for the loss (retirement, voluntary separation, etc.). The number of staff in each category that the Company is planning to hire in the next calendar year.

⁹ Includes transfer and promotions

¹⁰ Includes transfers, involuntary separations and promotions

¹¹ The distribution lineman staffing level numbers decreased by 5 employees that should have been included in the transmission lineman counts

¹² The transmission lineman staffing level numbers increased by 5 employees that were incorrectly included in the distribution lineman counts

Penelec 2017												
Department	Position	Staffing Level				Staff Added in Quarter			Staff Lost in Quarter			Plan to Hire in 2018
		1Q	2Q	3Q	4Q	New Hire – Experienced	New Hire – PSI Student	Other ¹³	Retirement	Voluntary Separation	Other ¹⁴	
Distribution	Line Leader	77	70	70	72			3	1			
	Line Troubleshooter	63	61	62	66	1		3				
	Lineman	94	115 ¹⁵	109 ¹⁶	114	5		6		1	5	25
Substation	Substation Leader	30	30	31	33			2				
	Substation Employee	35	40	38	35				1		2	6
Transmission	Line Leader	2	3	3	3							
	Lineman	4	11	11	12	1						
	Total	305	330	324	335	7		14	2	1	7	31

¹³ Includes transfers and promotions

¹⁴ Includes transfers, involuntary separations and promotions

¹⁵ The lineman staffing level numbers decreased by four employees that should not have been included in the counts.

¹⁶ The lineman staffing level numbers decreased due to an employee retirement in 3Q that was processed after the quarter ended and four employees that should not have been included in the counts.

Penn Power 2017												
Department	Position	Staffing Level				Staff Added in Quarter			Staff Lost in Quarter			Plan to Hire in 2018
		1Q	2Q	3Q	4Q	New Hire – Experienced	New Hire – PSI Student	Other ¹⁷	Retirement	Voluntary Separation	Other ¹⁸	
Distribution	Line Leader	23	23	25	24						1	
	Line Troubleshooter	8	7	9	10			1				
	Lineman	40	50	46	43				1		2	8
Substation	Substation Leader	4	5	5	5							
	Substation Employee	14	16	15	15			1			1	5
Transmission	Line Leader	1	1	1	1							
	Lineman	4	4	4	5			1				
	Total	94	106	105	103			3	1		4	13

¹⁷ Includes transfers and promotions

¹⁸ Includes transfers, involuntary separations and promotions

West Penn 2017												
Department	Position	Staffing Level				Staff Added in Quarter			Staff Lost in Quarter			Plan to Hire in 2018
		1Q	2Q	3Q	4Q	New Hire – Experienced	New Hire – PSI Student	Other ¹⁹	Retirement	Voluntary Separation	Other ²⁰	
Distribution	Line Leader	62	65	65	66			1				
	Line Troubleshooter	68	67	65 ²¹	66			1				
	Lineman	85	99	99 ²²	95			19			23	28
Substation	Substation Leader	14	13	18	18							
	Substation Employee	64	70	63	62			8			9	9
Transmission	Line Leader	0	0	0	0							
	Lineman	2	2	2	2							
	Total	295	316	312	309			29			32	37

¹⁹ Includes transfers and promotions

²⁰ Includes transfers, involuntary separations and promotions

²¹ In 3Q 2017 a lineman transferred to a troubleshooter. As such, the Q3 2017 troubleshooter category number increased by 1 and the lineman category number decreased by 1. This change was processed in the system after the quarter ended.

²² In 3Q 2017 a lineman transferred to a troubleshooter. As such, the Q3 2017 troubleshooter category number increased by 1 and the lineman category number decreased by 1. This change was processed in the system after the quarter ended.

Section 57.195(e)(10): Quarterly and year-to-date information on contractor hours and dollars for transmission and distribution operation and maintenance.

Contractor Expenditures

Contractor expenses are billed on a lump sum basis and as such, hourly information is not available.

This portion of the report is confidential.

Section 57.195(e)(11): Monthly call-out acceptance rate for transmission and distribution maintenance workers presented in terms of both the percentage of accepted calls-out and the amount of time it takes the EDC to obtain the necessary personnel. A brief description of the EDC's call-out procedure should be included when appropriate.

Call-out Acceptance Rate

Call-out percentage is defined as the number of workers accepting to total call outs.

This portion of the report is confidential.

Call-out Response

This portion of the report is confidential.

Call-Out Procedure:

When an event occurs, Met-Ed, Penelec, Penn Power and West Penn²⁴ dispatch a troubleman to find and assess the cause of the outage. If the troubleman is unable to repair the damage and a crew is required, the troubleman will inform the Distribution Control Center (“DCC”). The DCC and/or the Customer Operations Center’s (“COC”) person on duty will then initiate the call-out process until desired staffing levels required to complete the restoration have been achieved.

The number of unique workers called for an outage event is recorded and represents the total calls, or opportunities, for an outage event. The number of unique workers who accept the opportunity is recorded and represents the workers accepting. The elapsed time is calculated by taking the date and time of the first employee called for an event minus the date and time of the last accepting employee for that event. The call-out results from all outages experienced during a particular month are added together to derive a total value for each field.

²⁴ West Penn utilizes its automated calling system to complete its call out process.

ATTACHMENT A

Worst Performing Circuits - Reliability Indices

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Met-Ed													
Circuit Rank	Substation	Circuit	District	Average Customers	Outages	Lockouts	Customer Minutes	Customers Affected	SAIDI Impact	SAIDI	SAIFI	CAIDI	MAIFI
1	S Nazareth	00809-3	Easton	3,167	55	3	3,324,388	13,571	5.93	1,050	4.29	245	4.19
2	Bath	00873-3	Easton	2,121	65	2	2,825,236	11,815	5.04	1,332	5.57	239	1.00
3	Yorkana	00715-4	York	1,800	74	0	1,933,478	3,077	3.45	1,074	1.71	628	0.65
4	Mountain	00744-4	Dillsburg	1,824	76	0	1,742,990	5,497	3.11	956	3.01	317	1.01
5	Lickdale	00625-2	Lebanon	1,001	92	1	1,675,871	3,175	2.99	1,674	3.17	528	1.00
6	Myerstown	00750-2	Lebanon	1,572	29	2	1,604,953	5,308	2.86	1,021	3.38	302	0.01
7	Orrtanna	00764-4	Gettysburg	1,730	59	1	1,537,153	3,227	2.74	889	1.87	476	10.70
8	Lynnville	00735-1	Hamburg	1,241	47	4	1,208,380	6,240	2.15	974	5.03	194	6.59
9	East Prospect	00765-4	York	1,865	61	3	1,193,840	5,674	2.13	640	3.04	210	0.73
10	Frystown	00701-2	Lebanon	1,166	61	1	1,191,986	8,804	2.12	1,022	7.55	135	1.22
11	Dillsburg	00748-4	Dillsburg	1,786	76	0	1,184,889	6,289	2.11	663	3.52	188	0.00
12	Birdsboro	00757-1	Reading	1,931	68	0	1,142,826	3,719	2.04	592	1.93	307	0.41
13	Flying Hills	00776-1	Reading	1,480	27	2	1,069,532	4,056	1.91	723	2.74	264	0.99
14	Birchwood	00624-3	Stroudsburg	2,024	30	3	1,063,503	9,298	1.90	525	4.59	114	8.36
15	Friedensburg	00769-1	Reading	2,053	62	3	1,003,633	9,341	1.79	489	4.55	107	0.00
16	Allen	00501-4	Dillsburg	1,986	50	3	992,091	7,089	1.77	500	3.57	140	2.00
17	Birchwood	00623-3	Stroudsburg	1,332	38	1	974,920	3,169	1.74	732	2.38	308	1.00
18	Swatara Hill	00764-2	Lebanon	1,437	41	2	916,503	5,635	1.63	638	3.92	163	7.18
19	Moselem	00779-1	Reading	1,785	24	3	834,409	6,011	1.49	467	3.37	139	0.00
20	Lynnville	00748-1	Hamburg	1,209	32	1	823,279	2,983	1.47	681	2.47	276	0.00
21	Bernville	00786-1	Hamburg	1,838	74	0	817,338	5,120	1.46	445	2.79	160	0.00
22	Hokes	00587-4	York	887	22	2	765,749	2,014	1.36	863	2.27	380	0.00
23	Newberry	00586-4	York	1,618	35	2	760,404	5,219	1.36	470	3.23	146	0.00
24	Shawnee	00822-3	Stroudsburg	3,392	51	2	754,127	12,896	1.34	222	3.80	58	2.75
25	Dillsburg	00749-4	Dillsburg	1,814	58	1	734,539	4,134	1.31	405	2.28	178	2.00
26	Hill	00737-4	York	2,264	29	0	730,728	7,139	1.30	323	3.15	102	0.97
27	Belfast	00849-3	Easton	2,076	13	2	699,947	9,865	1.25	337	4.75	71	1.00
28	Windsor	00795-4	York	1,023	91	1	691,669	3,161	1.23	676	3.09	219	1.60
29	Wind Gap	00600-3	Easton	1,712	37	1	679,461	2,816	1.21	397	1.64	241	1.00
30	Bairs	00571-4	York	2,344	63	0	673,517	3,791	1.20	287	1.62	178	0.29
31	Turf Club	00724-2	Lebanon	633	30	1	668,386	2,697	1.19	1,056	4.26	248	1.00
32	Birdsboro	00756-1	Reading	1,522	77	1	648,254	6,877	1.16	426	4.52	94	7.12
33	East Prospect	00766-4	York	712	24	1	635,954	2,289	1.13	893	3.21	278	0.00

Met-Ed													
Circuit Rank	Substation	Circuit	District	Average Customers	Outages	Lockouts	Customer Minutes	Customers Affected	SAIDI Impact	SAIDI	SAIFI	CAIDI	MAIFI
34	Glenside	00535-1	Reading	1,126	21	4	621,668	4,785	1.11	552	4.25	130	3.00
35	Lickdale	00626-2	Lebanon	2,065	47	1	620,091	3,480	1.11	300	1.69	178	1.00
36	Taxville	00575-4	York	2,188	30	2	598,840	4,658	1.07	274	2.13	129	1.00
37	Shawnee	00899-3	Stroudsburg	1,669	53	3	596,596	7,976	1.06	357	4.78	75	1.78
38	Glendon	00819-3	Easton	1,290	12	2	594,543	4,057	1.06	461	3.14	147	5.88
39	Shawnee	00895-3	Stroudsburg	3,791	69	2	584,943	8,229	1.04	154	2.17	71	6.38

Penelec													
Circuit Rank	Substation	Circuit	District	Average Customers	Outages	Lockouts	Customer Minutes	Customers Affected	SAIDI Impact	SAIDI	SAIFI	CAIDI	MAIFI
1	Warren South	00220-41	Warren	2,890	100	0	2,179,094	11,723	3.75	754	4.06	186	7.32
2	Brookville	00125-23	DuBois	622	30	0	1,524,821	4,442	2.63	2,451	7.14	343	4.12
3	Union City	00206-43	Eric	2,634	93	1	1,523,180	8,310	2.62	578	3.15	183	8.84
4	Springboro	00237-52	Meadville	2,792	93	1	1,491,736	9,841	2.57	534	3.52	152	3.14
5	Madera	00166-22	Philipsburg	2,140	80	0	1,378,864	6,454	2.38	644	3.02	214	4.76
6	Logan	00700-81	Lewistown	1,056	40	0	1,346,610	4,920	2.32	1,275	4.66	274	10.50
7	Thompson	00436-65	Montrose	1,075	51	0	1,183,904	4,161	2.04	1,101	3.87	285	11.61
8	East Hickory	00201-41	Warren	330	29	7	1,172,621	3,177	2.02	3,553	9.63	369	25.96
9	DuBois	00137-23	DuBois	2,819	96	0	1,147,118	10,512	1.98	407	3.73	109	3.28
10	Hooversville	00019-12	Somerset	1,478	38	0	1,125,655	7,116	1.94	762	4.81	158	4.72
11	Mansfield	00699-63	Mansfield	760	43	2	1,056,464	3,323	1.82	1,390	4.37	318	0.00
12	Tunkhannock	00533-65	Montrose	1,230	60	2	1,053,561	6,398	1.82	857	5.20	165	24.01
13	Pittsburgh Avenue	00524-31	Eric	1,615	37	2	1,031,361	4,498	1.78	639	2.79	229	0.05
14	Timblin	00103-23	DuBois	717	40	0	1,011,549	5,977	1.74	1,411	8.34	169	22.09
15	Tyrone North	00643-22	Philipsburg	1,479	14	0	1,011,337	3,314	1.74	684	2.24	305	25.89
16	Philipsburg	00162-22	Philipsburg	3,402	74	0	949,793	6,186	1.64	279	1.82	154	8.17
17	Green Garden	00536-31	Eric	944	36	2	938,014	3,568	1.62	994	3.78	263	4.15
18	Utica Junction	00318-51	Oil City	842	49	1	934,200	2,311	1.61	1,110	2.74	404	1.90
19	National Forge Sw Sta	00577-41	Warren	1,207	55	0	906,808	5,117	1.56	751	4.24	177	2.23
20	Union City	00207-43	Eric	566	32	2	902,659	2,173	1.56	1,595	3.84	415	12.41
21	Philipsburg	00164-22	Philipsburg	2,319	49	0	866,236	6,797	1.49	374	2.93	127	8.20
22	Two Mile	00127-42	Bradford	1,331	48	0	863,835	4,303	1.49	649	3.23	201	11.84
23	Tiffany	00440-65	Montrose	1,550	32	2	791,760	7,746	1.36	511	5.00	102	22.09
24	Marienville	00328-51	Oil City	1,197	55	0	782,706	2,193	1.35	654	1.83	357	21.07
25	Erie East	00234-31	Eric	1,300	71	0	781,289	3,929	1.35	601	3.02	199	9.49
26	Lawrenceville	00632-63	Mansfield	642	19	1	772,534	1,441	1.33	1,203	2.24	536	13.52
27	Union City	00208-43	Eric	1,754	77	1	759,310	4,717	1.31	433	2.69	161	19.17
28	Lawrenceville	00326-63	Mansfield	40	3	1	756,018	417	1.30	18,900	10.43	1,813	0.00
29	Brookville West	00121-23	DuBois	767	42	1	701,878	1,877	1.21	915	2.45	374	12.30
30	Grover	00527-63	Mansfield	1,070	83	0	693,452	2,957	1.19	648	2.76	235	22.73
31	Bradford South	00106-42	Bradford	1,184	34	0	689,884	3,566	1.19	583	3.01	193	0.98
32	Logan	00701-81	Lewistown	1,418	27	0	685,662	3,070	1.18	484	2.17	223	4.83
33	Mansfield	00559-63	Mansfield	510	29	3	672,777	4,056	1.16	1,319	7.95	166	21.70

Penelec													
Circuit Rank	Substation	Circuit	District	Average Customers	Outages	Lockouts	Customer Minutes	Customers Affected	SAIDI Impact	SAIDI	SAIFI	CAIDI	MAIFI
34	Erie South	00259-31	Erie	2,561	59	0	659,592	4,260	1.14	258	1.66	155	10.77
35	Brooklyn	00749-65	Montrose	502	12	1	584,538	1,014	1.01	1,164	2.02	576	2.98
36	Edgewood	00089-13	Indiana	874	34	0	566,031	2,837	0.98	648	3.25	200	11.10
37	Lake Como	00788-65	Montrose	631	27	0	534,775	1,794	0.92	848	2.84	298	39.22
38	Athens	00514-61	Towanda	748	36	0	534,690	3,819	0.92	715	5.11	140	6.44
39	Tionesta Junction Sw Sta	00498-51	Oil City	384	43	1	532,525	1,449	0.92	1,387	3.77	368	9.27
40	Pemberton	00096-82	Altoona	414	26	0	506,940	914	0.87	1,224	2.21	555	5.27
41	North Warren	00207-41	Warren	1,368	64	1	505,428	3,719	0.87	369	2.72	136	11.48
42	Emlenton	00121-51	Oil City	541	18	1	501,244	2,660	0.86	927	4.92	188	5.55
43	Lewis Run	00408-42	Bradford	1,178	34	1	499,303	2,583	0.86	424	2.19	193	5.24
44	Wyalusing	00532-62	Towanda	714	45	0	495,591	3,054	0.85	694	4.28	162	11.15
45	Blairsville East	00081-13	Indiana	1,468	21	2	487,202	4,222	0.84	332	2.88	115	9.89
46	Mansfield	00558-63	Mansfield	700	30	3	472,003	2,539	0.81	674	3.63	186	11.27
47	Youngsville	00256-41	Warren	376	24	3	460,339	1,531	0.79	1,224	4.07	301	4.89
48	Summit Hall	00500-31	Erie	470	18	1	446,767	1,713	0.77	951	3.64	261	12.37
49	North Meshoppen	00437-65	Montrose	737	26	0	437,897	2,214	0.75	594	3.00	198	6.35
50	DuBois Central	00119-23	DuBois	1,358	43	0	426,518	2,318	0.73	314	1.71	184	1.76
51	French Road	00219-31	Erie	1,047	11	1	419,151	3,119	0.72	400	2.98	134	1.35
52	Saxton	00631-73	Altoona	1,526	32	1	417,904	2,722	0.72	274	1.78	154	7.72
53	Church	00426-34	Erie	673	45	1	413,978	2,519	0.71	615	3.74	164	2.15
54	Hilltop	00040-11	Johnstown	1,339	25	1	411,119	2,944	0.71	307	2.20	140	12.53
55	East Sayre	00518-61	Towanda	1,268	50	0	407,516	2,792	0.70	321	2.20	146	3.22
56	Birmingham	00168-22	Philipsburg	1,075	65	0	401,604	2,005	0.69	374	1.87	200	4.40
57	Somerset	00030-12	Somerset	2,389	29	0	399,811	7,374	0.69	167	3.09	54	8.88
58	Somerset	00017-12	Somerset	1,373	33	0	397,643	2,778	0.69	290	2.02	143	1.27
59	Susquehanna	00280-65	Montrose	526	11	0	393,193	1,290	0.68	748	2.45	305	9.98
60	Greenwood	00041-71	Altoona	1,130	30	0	387,534	2,314	0.67	343	2.05	167	3.27
61	Fairview East	00242-34	Erie	1,454	50	0	374,776	2,606	0.65	258	1.79	144	4.18
62	Shawville	00153-21	Clearfield	1,054	25	0	373,658	2,313	0.64	355	2.19	162	12.61
63	DuBois	00131-23	DuBois	788	25	1	372,106	1,182	0.64	472	1.50	315	1.14

Penn Power													
Circuit Rank	Substation	Circuit	District	Average Customers	Outages	Lockouts	Customer Minutes	Customers Affected	SAIDI Impact	SAIDI	SAIFI	CAIDI	MAIFI
1	Camp Reynolds	W-134	Clark	1,740	83	1	1,384,713	3,336	8.50	796	1.92	415	0.00
2	Canal	W-101	Clark	1,483	44	0	1,093,215	2,443	6.71	737	1.65	447	0.00
3	Hadley	W-195	Clark	895	48	0	1,010,069	1,245	6.20	1,129	1.39	811	0.00
4	Leesburg	D-452	Clark	701	27	1	957,497	880	5.88	1,366	1.26	1,088	0.00
5	McDowell	W-120	Clark	1,054	37	2	632,205	2,765	3.88	600	2.62	229	0.00
6	Stoneboro	W-132	Clark	1,043	45	0	574,973	1,765	3.53	551	1.69	326	0.00
7	McDowell	W-121	Clark	701	31	1	548,774	1,697	3.37	783	2.42	323	0.00
8	Perry	W-156	Clark	1,058	54	0	547,610	1,821	3.36	518	1.72	301	0.04
9	Seneca	W701	Zelienople	2,012	44	1	540,854	2,734	3.32	269	1.36	198	0.00

West Penn Power ²⁴												
Circuit Rank	Substation	Circuit	District	Average Customers	Outages	Lockouts	Customer Minutes	Customers Affected	SAIDI Impact	SAIDI	SAIFI	CAIDI
1	Rutan	Bristoria	Jefferson	1,184	89	1	2,155,132	6,748	3.01	1,820	5.70	319
2	White Valley	Congruity	Jeannette	1,728	37	0	1,760,475	6,541	2.46	1,019	3.79	269
3	White Valley	Export	Jeannette	2,105	24	2	1,357,136	6,919	1.90	645	3.29	196
4	Smith	Florence	McDonald	804	56	2	1,274,971	4,740	1.78	1,586	5.90	269
5	North Fayette	Beechcliff	McDonald	2,161	26	0	1,238,876	6,116	1.73	573	2.83	203
6	Cooperstown	Twin Willows	Butler	1,482	31	2	1,208,154	5,123	1.69	815	3.46	236
7	Bethel Park	Dashwood	Boyce	2,156	26	3	1,145,439	7,395	1.60	531	3.43	155
8	White Valley	Borlands Rd	Jeannette	1,352	43	1	1,119,533	3,711	1.57	828	2.74	302
9	Mateer	Dime Rd	Arnold	1,200	60	0	1,088,350	3,727	1.52	907	3.11	292
10	Avella	W Middletown	Washington Pa	1,145	63	0	952,338	3,822	1.33	832	3.34	249
11	Vanceville	Vanceville	Charleroi	1,405	70	0	952,071	3,737	1.33	678	2.66	255
12	Piney Fork	Stoltz	Charleroi	2,157	25	2	945,951	5,278	1.32	439	2.45	179
13	Franklin	Rogersville	Jefferson	839	47	1	859,975	2,796	1.20	1,025	3.33	308
14	Saltsburg	Saltsburg	Arnold	1,403	50	1	851,192	4,449	1.19	607	3.17	191
15	Krendale	Meridian	Butler	1,457	22	2	784,270	4,545	1.10	538	3.12	173
16	Huntingdon	Shawtown	Jeannette	1,759	16	3	774,549	5,486	1.08	440	3.12	141
17	Piney Fork	Gillhall	Charleroi	2,131	27	1	773,932	4,733	1.08	363	2.22	164
18	Harwick	Harmar	Arnold	955	19	1	768,152	4,070	1.07	804	4.26	189
19	Peters	Venetia	Boyce	2,094	22	2	761,005	6,601	1.06	363	3.15	115
20	Dutch Fork	W Alexander	Washington Pa	1,175	65	0	750,466	2,109	1.05	639	1.79	356
21	Cecil	Bishop	Boyce	1,584	46	1	746,498	5,623	1.04	471	3.55	133
22	Fort Palmer	West Fairfield	Latrobe	973	70	0	739,064	4,313	1.03	760	4.43	171
23	Gobain	Pittsburgh Street	Arnold	1,045	26	2	738,647	3,760	1.03	707	3.60	196
24	Kiski Valley Distrib	Kittanning Rd	Arnold	1,781	31	1	738,170	3,257	1.03	414	1.83	227
25	Murrycrest	Sardis Road	Jeannette	1,564	27	3	734,523	5,990	1.03	470	3.83	123
26	Smith	Francis Mine	McDonald	1,439	31	0	705,066	3,691	0.99	490	2.56	191
27	Houston	McGovern	Washington Pa	1,583	53	0	701,027	3,755	0.98	443	2.37	187
28	Hickory	Fort Cherry	McDonald	1,036	43	1	700,582	2,017	0.98	676	1.95	347
29	Amity	Banetown	Washington Pa	1,498	52	0	699,340	2,738	0.98	467	1.83	255
30	Crossgates	Peters Twp	Boyce	1,061	31	1	697,878	2,989	0.98	658	2.82	233
31	Pangburn Hill	Pangburn Hill	Charleroi	747	32	0	693,716	2,609	0.97	929	3.49	266

²⁴ MAIFI Values not available for West Penn.

West Penn Power ²⁴												
Circuit Rank	Substation	Circuit	District	Average Customers	Outages	Lockouts	Customer Minutes	Customers Affected	SAIDI Impact	SAIDI	SAIFI	CAIDI
32	Bethlen	Darlington	Latrobe	1,242	68	1	692,725	3,601	0.97	558	2.90	192
33	Waterville	Waterville	State College	361	20	1	672,018	2,754	0.94	1,862	7.63	244
34	Emporium	Town Emporium	St Marys	1,860	22	2	670,822	4,977	0.94	361	2.68	135
35	Normalville	Mill Run	Pleasant Valley	577	14	3	670,532	2,418	0.94	1,162	4.19	277
36	Smithton	Smithton	Charleroi	981	29	1	668,841	2,709	0.94	682	2.76	247
37	Krendale	Unionville	Butler	1,278	35	1	665,922	2,361	0.93	521	1.85	282
38	Driftwood	Driftwood	St Marys	989	25	0	657,889	2,070	0.92	665	2.09	318
39	Saltsburg	Salina	Arnold	888	32	1	653,964	2,576	0.91	736	2.90	254
40	Westraver	Pittsburgh Coal	Charleroi	1,910	20	1	651,578	4,857	0.91	341	2.54	134

ATTACHMENT B

Worst Performing Circuits – Remedial Actions

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PA PUBLIC UTILITY COMMISSION
SECRETARY'S BUREAU

As ordered on March 30, 2015 at Docket Nos. D-2014-2365991, D-2014-2365992, D-2014-2365993, and D-2014-2365994, *Implementation Plan of the Focused Management Audit of Metropolitan Edison Company, Pennsylvania Electric Company, Pennsylvania Power Company, and West Penn Power Company* (Appendix A)(1): FirstEnergy is directed to provide additional detail in its reporting of the 5% of worst performing circuits in its Commission Quarterly Reliability Reports to highlight those circuits that appear multiple times on Quarterly Reliability Reports, but not necessarily in four quarters in a calendar year. For each Quarterly Reliability Report filed pursuant to 52 Pa. Code § 57.195, this additional detail shall include highlighting those worst performing circuits that have appeared in two or more Quarterly Reliability Reports in the past four quarters.

Met-Ed						
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work	Progress of Remedial Work or Date Completed	Appeared in 2 of 4 Quarters
1	S.Nazareth	00809-3	<i>Performance was driven by line failure (46%), and trees off ROW (43%).</i>			1Q 2017 2Q 2017 3Q 2017 4Q 2017
			Replace switch	Complete	Apr-17	
			Replace/repair high priority items identified during circuit assessment	Complete	Apr-17	
			Overhead circuit inspection	Complete	Jul-17	
			Replace/repair high priority items identified during circuit assessment	Complete	Oct-17	
			Replace polymer insulators identified on circuit	Complete	Oct-17	
			Install Supervisory Control and Data Acquisition (SCADA) switch	To be completed 2018	25%	
2	Bath	00873-3	<i>Performance was driven by an unknown outage (45%), equipment failure (23%) and vehicle accident (14%).</i>			1Q 2017 2Q 2017 3Q 2017 4Q 2017
			Replace crossarms from inspection	Complete	Oct-17	
			Targeted overhead inspection	Complete	Oct-17	
			Forestry to trim circuit	To be completed 2018	0%	
3	Yorkana	00715-4	<i>Performance was driven by trees off ROW (90%) and tree on ROW (5%).</i>			3Q 2017 4Q 2017
			On cycle tree trimming	Complete	Jan-17	
			Overhead circuit inspection	Complete	Jun-17	
			Replace pole identified during wood pole inspection	Complete	Nov-17	
			Replace/repair high priority items identified during overhead circuit patrol	To be completed 2018	0%	

Met-Ed						
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work	Progress of Remedial Work or Date Completed	Appeared in 2 of 4 Quarters
4	Mountain	00744-4	<i>Performance was driven by trees off ROW (88%).</i>			1Q 2017 2Q 2017 3Q 2017 4Q 2017
			Replace/repair high priority items identified during circuit patrol	Complete	Feb-17	
			Mid-cycle forestry inspection	Complete	Mar-17	
			Remove trees identified during mid-cycle forestry inspection	Complete	Apr-17	
			Remove trees identified during forestry inspection	Complete	Jun-17	
			Replace poles and repair damage caused by trees	Complete	Jul-17	
			Install Supervisory Control and Data Acquisition (SCADA) switch	To be completed 2018	0%	
			On cycle tree trimming	To be completed 2018	0%	
			Enhanced tree trimming	To be completed 2018	0%	
5	Lickdale	00625-2	<i>Performance was driven by trees off ROW (46%) and trees on ROW (31%).</i>			1Q 2017 2Q 2017 3Q 2017 4Q 2017
			Enhanced tree trimming	To be completed 2018	0%	
			On cycle tree trimming	To be completed 2018	0%	
6	Myerstown	00750-2	<i>Performance was driven by equipment failure (82%).</i>			
			Replace porcelain cutouts with polymer cutouts in lockout zone	To be completed 2018	0%	
			Targeted overhead inspection	To be completed 2018	0%	
7	Orrtanna	00764-4	<i>Performance was driven by trees off ROW (56%) and trees on ROW (33%).</i>			3Q 2017 4Q 2017
			Post storm circuit patrol	Complete	Jul-17	
			Targeted mainline circuit rehabilitation – replace/repair high priority items	To be completed 2018	0%	
			Enhanced tree trimming	To be completed 2018	0%	
8	Lynnville	00735-1	<i>Performance was driven by three outages during storms caused by a broken ridge pin, a broken insulator and a broken pole (78%).</i>			1Q 2017 2Q 2017 3Q 2017 4Q 2017
			Replace tap recloser	Complete	Feb-17	
			Overhead circuit inspection	Complete	Jun-17	
			Replace crossarms from inspection	Complete	Jun-17	
			Engineering Supervisory Control and Data Acquisition (SCADA) review	Complete	Sep-17	
			Replace crossarm from inspection	Complete	Nov-17	
			On cycle tree trimming	To be completed 2018	5%	
Replace pole identified during wood pole inspection	To be completed 2018	50%				

Met-Ed						
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work	Progress of Remedial Work or Date Completed	Appeared in 2 of 4 Quarters
9	East Prospect	00765-4	<i>Performance was driven by trees off ROW (55%), equipment failure (20%) and wind (13%).</i>			2Q 2017 3Q 2017 4Q 2017
			Repair equipment failure during storm	Complete	Feb-17	
			Post-storm patrol	Complete	Jun-17	
			Overhead circuit inspection	Complete	Jul-17	
			Post-storm patrol	Complete	Sep-17	
			On cycle tree trimming	Complete	Dec-17	
			Replace/repair high priority items identified during overhead circuit patrol	To be completed 2018	20%	
10	Frystown	00701-2	<i>Performance was driven by line failure (41%) and equipment failure (20%).</i>			1Q 2017 2Q 2017 3Q 2017 4Q 2017
			Corrected recloser operation	Complete	Mar-17	
			Install fault indicators	Complete	Mar-17	
			Replace a misoperating sectionalizer by a recloser	Complete	Jun-17	
			Install additional fuses	To be completed 2018	0%	
			Circuit reconfiguration due to new substation	To be completed 2018	0%	
			On cycle tree trimming	To be completed 2018	0%	
Overhead circuit inspection	To be completed 2018	0%				
11	Dillsburg	00748-4	<i>Performance was driven by trees off ROW (78%).</i>			2Q 2017 3Q 2017 4Q 2017
			Perform tree work identified during post storm forestry inspection	Complete	Jun-17	
			Post storm three phase forestry inspection	Complete	Jun-17	
			Post storm circuit patrol	Complete	Sep-17	
			Replace/repair high priority items identified during overhead circuit patrol	Complete	Oct-17	
			Install Supervisory Control and Data Acquisition (SCADA) switch	To be completed 2018	0%	
On cycle tree trimming	To be completed 2018	0%				

Met-Ed							
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work	Progress of Remedial Work or Date Completed	Appeared in 2 of 4 Quarters	
12	Birdsboro	00757-1	<i>Performance was driven by trees off ROW (88%).</i>				1Q 2017 2Q 2017 3Q 2017 4Q 2017
			Tap recloser replacement	Complete	Mar-17		
			Targeted overhead circuit inspection	Complete	Mar-17 ✓		
			Replace additional porcelain cutouts on circuit three phase with polymer cutouts	Complete	Jun-17		
			Enhanced three phase tree trimming	Complete	Oct-17		
			Targeted mainline circuit rehabilitation – replace/repair high priority items	Complete	Dec-17		
			Targeted mainline circuit rehabilitation – replace/repair high priority items	To be completed 2018	0%		
			Install additional Supervisory Control and Data Acquisition (SCADA) switches	To be completed 2018	25%		
			On cycle tree trimming	To be completed 2018	0%		
13	Flying Hills	00776-1	<i>Performance was driven by an outage caused by trees off ROW (65%) and an outage caused by vehicle accident (16%).</i>				2Q 2017 3Q 2017 4Q 2017
			Replace mainline arrester from overhead inspection	Complete	Mar-17		
			Repair/replace pole from inspection	Complete	Jun-17		
			Engineering Supervisory Control and Data Acquisition (SCADA) review	Complete	Sep-17		
			Targeted forestry inspection	Complete	Nov-17		
			Repair/replace poles from inspection	Complete	Nov-17		
			Install Supervisory Control and Data Acquisition (SCADA) switches	Complete	Dec-17		
			Construct circuit tie	Complete	Dec-17		
			Relocate mainline recloser	Complete	Dec-17		
						Enhanced tree trimming	
14	Birchwood	00624-3	<i>Performance was driven by vehicle accidents (45%), equipment failure (37%), and trees off ROW (16%).</i>				1Q 2017 2Q 2017 3Q 2017 4Q 2017
			Replace/repair high priority items identified during circuit assessment	Complete	Feb-17		
			Install additional Supervisory Control and Data Acquisition (SCADA) switches	Complete	Sep-17		
			Install additional Supervisory Control and Data Acquisition (SCADA) switches	Complete	Oct-17		
			Install Supervisory Control and Data Acquisition (SCADA) recloser	To be completed 2018	25%		
						On cycle tree trimming	

Met-Fd							
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work	Progress of Remedial Work or Date Completed	Appeared in 2 of 4 Quarters	
15	Friedensburg	00769-1	<i>Performance was driven by trees off ROW (48%), and outages caused by vehicle accident (26%).</i>				1Q 2017 2Q 2017 3Q 2017 4Q 2017
			Repair or replace pole top from inspection	Complete	Jan-17		
			Replace crossarms from inspection	Complete	Jan-17		
			Replace crossarms from inspection	Complete	Mar-17		
			Targeted forestry inspection	Complete	Mar-17		
			Upgrade mainline recloser	Complete	Mar-17		
			Targeted forestry inspection	Complete	Jul-17		
			Engineering Supervisory Control and Data Acquisition (SCADA) review	Complete	Sep-17		
			Install Supervisory Control and Data Acquisition (SCADA) switches #1	To be completed 2018	33%		
			Install Supervisory Control and Data Acquisition (SCADA) switches #2	To be completed 2018	33%		
			Install Supervisory Control and Data Acquisition (SCADA) switches #3	To be completed 2018	33%		
			Install Supervisory Control and Data Acquisition (SCADA) reclosers #1	To be completed 2018	33%		
			Install Supervisory Control and Data Acquisition (SCADA) reclosers #2	To be completed 2018	33%		
			On cycle tree trimming	To be completed 2018	0%		
16	Allen	00501-4	<i>Performance was driven by equipment failure (71%) and trees off ROW (18%).</i>				1Q 2017 2Q 2017 3Q 2017 4Q 2017
			Pole was replaced and equipment repaired	Complete	Mar-17		
			Replace/repair high priority items identified during underground circuit patrol	Complete	Mar-17		
			Replace/repair high priority items identified during overhead circuit patrol	Complete	Oct-17		
			Replace porcelain cutouts with polymer cutouts in lockout zone	To be completed 2018	0%		
			Enhanced tree trimming	To be completed 2018	0%		
17	Birchwood	00623-3	<i>Performance was driven by line failure (52%), and trees off ROW (28%).</i>				2Q 2017 3Q 2017 4Q 2017
			Install Supervisory Control and Data Acquisition (SCADA) switches	To be completed 2018	25%		
			Install Supervisory Control and Data Acquisition (SCADA) reclosers #1	To be completed 2018	25%		
			Install Supervisory Control and Data Acquisition (SCADA) reclosers # 2	To be completed 2018	25%		
			Install Supervisory Control and Data Acquisition (SCADA) reclosers #3	To be completed 2018	25%		
			Forestry to trim circuit	To be completed 2018	0%		

Met-Ed							
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work	Progress of Remedial Work or Date Completed	Appeared in 2 of 4 Quarters	
18	Swatara Hill	00764-2	<i>Performance was driven by equipment failure (19%), line failure (22%) and trees off ROW (48%).</i>				1Q 2017 2Q 2017 3Q 2017 4Q 2017
			Overhead circuit inspection	Complete	Feb-17		
			Enhanced three phase tree trimming	Complete	Sep-17		
			Tree trimming	Complete	Sep-17		
			Install Supervisory Control and Data Acquisition (SCADA) devices	Complete	Dec-17		
			Replace porcelain cutouts with polymer cutouts	Complete	Dec-17		
			Construct circuit tie	Complete	Dec-17		
			Mainline rehabilitation	Complete	Dec-17		
			On cycle tree trimming	To be completed 2018	0%		
			Overhead circuit inspection repairs	To be completed 2018	50%		
19	Moselem	00779-1	<i>Performance was driven by an outage caused by wind (82%).</i>				1Q 2017 2Q 2017 3Q 2017 4Q 2017
			Resag mainline conductor	Complete	Jan-17		
			Replace mainline poles	Complete	Feb-17		
			Replace substation equipment	Complete	Jun-17		
			Install additional mainline tap fusing	To be completed 2018	50%		
20	Lynnville	00748-1	<i>Performance was driven by trees off ROW (77%).</i>				3Q 2017 4Q 2017
			Overhead circuit inspection	Complete	Oct-17		
			Replace arrester on mainline switch from inspection	To be completed 2018	25%		
			Replace crossarms from inspection	To be completed 2018	25%		
			On cycle tree trimming	To be completed 2018	0%		

Met-Ed						
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work	Progress of Remedial Work or Date Completed	Appeared in 2 of 4 Quarters
21	Bernville	00786-1	<i>Performance was driven by outages caused by line & equipment failure (33%), trees off ROW (32%) and vehicle accident (25%).</i>			3Q 2017 4Q 2017
			Engineering Supervisory Control and Data Acquisition (SCADA) review	Complete	Oct-17	
			Overhead circuit inspection	Complete	Oct-17	
			On cycle tree trimming	Complete	Dec-17	
			Replace arrester on mainline switch from inspection	To be completed 2018	50%	
			Replace crossarms from inspection	To be completed 2018	25%	
			Replace cutout from inspection	To be completed 2018	25%	
			Install Supervisory Control and Data Acquisition (SCADA) switch #1	To be completed 2018	50%	
			Install Supervisory Control and Data Acquisition (SCADA) switch #2	To be completed 2018	50%	
22	Hokes	00587-4	<i>Performance was driven by trees off ROW (85%).</i>			3Q 2017 4Q 2017
			Post-storm patrol	Complete	Sep-17	
23	Newberry	00586-4	<i>Performance was driven by equipment and line failure (62%).</i>			
			Replace failed equipment	Complete	Nov-17	
			On cycle tree trimming	To be completed 2018	0%	
24	Shawnee	00822-3	<i>Performance was driven by equipment failure (44%) and trees off ROW (28%).</i>			1Q 2017 4Q 2017
			Enhanced three phase tree trimming	Complete	Jul-17	
			Targeted mainline circuit rehabilitation – replace/repair high priority items	Complete	Nov-17	
			Enhanced three phase tree trimming	Complete	Dec-17	
			Porcelain cutout replacement	To be completed 2018	0%	
25	Dillsburg	00749-4	<i>Performance driven by equipment failure (51%) and off ROW trees (39%).</i>			3Q 2017 4Q 2017
			Post storm circuit patrol	Complete	Jun-17	
			Replace/repair high priority items identified during overhead circuit patrol	Complete	Aug-17	
			On cycle tree trimming	To be completed 2018	0%	
			Enhanced tree trimming	To be completed 2018	0%	

Met-Ed						
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work	Progress of Remedial Work or Date Completed	Appeared in 2 of 4 Quarters
26	Hill	00737-4	<i>Performance was driven by trees off ROW (51%) and vehicle (27%).</i>			
			Mid-cycle targeted three phase forestry inspection	To be completed 2018	0%	
			Protection review	To be completed 2018	0%	
27	Belfast	00849-3	<i>Performance was driven by vehicle accident (56%) and line failure (39%).</i>			1Q 2017 2Q 2017 3Q 2017 4Q 2017
			On cycle tree trimming	Complete	Jan-17	
			Install Supervisory Control and Data Acquisition (SCADA) recloser	To be completed 2018	25%	
			Install Supervisory Control and Data Acquisition (SCADA) switches #1	To be completed 2018	25%	
			Install Supervisory Control and Data Acquisition (SCADA) switches #2	To be completed 2018	25%	
			Install Supervisory Control and Data Acquisition (SCADA) switches #3	To be completed 2018	25%	
28	Windsor	00795-4	<i>Performance was driven by human error-non-company/tree (33%), trees off ROW (26%) and equipment failure (28%).</i>			2Q 2017 3Q 2017 4Q 2017
			Repair damage due to human error (customer brought down tree)	Complete	Jun-17	
			Replace hydraulic recloser	Complete	Oct-17	
			Install additional Supervisory Control and Data Acquisition (SCADA) switches	Complete	Oct-17	
			Patrol backbone of circuit	Complete	Nov-17	
			On cycle tree trimming	Complete	Dec-17	
			Install additional Supervisory Control and Data Acquisition (SCADA) switches #1	To be completed 2018	25%	
			Install additional Supervisory Control and Data Acquisition (SCADA) switches #2	To be completed 2018	25%	
			Overhead circuit inspection	To be completed 2018	0%	
			Repair items from backbone inspection (2 arresters)	To be completed 2018	0%	
			Upgrade main line recloser with SCADA	To be completed 2018	5%	

Met-Ed						
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work	Progress of Remedial Work or Date Completed	Appeared in 2 of 4 Quarters
29	Wind Gap	00600-3	<i>Performance was driven by vehicle accident (67%) and animals (14%).</i>			2Q 2017 3Q 2017 4Q 2017
			Replace recloser	Complete	Mar-17	
			On cycle tree trimming	Complete	Dec-17	
30	Bairs	00571-4	<i>Performance was driven by vehicle accident (39%) and trees off ROW (41%).</i>			
			Replace SCADA switch batteries	To be completed 2018	5%	
			Circuit patrol	To be completed 2018	50%	
31	Turf Club	00724-2	<i>Performance was driven by trees off ROW (61%) and trees on ROW (12%).</i>			
			Targeted forestry inspection	To be completed 2018	0%	
32	Birdsboro	00756-1	<i>Performance was driven by trees off ROW (45%) and an outage caused by a broken crossarm (24%).</i>			3Q 2017 4Q 2017
			Enhanced three phase tree trimming	Complete	Oct-17	
			Install additional Supervisory Control and Data Acquisition (SCADA) switches	Complete	Dec-17	
			Construct circuit tie	Complete	Dec-17	
			Targeted mainline circuit rehabilitation – replace/repair high priority items	Complete	Dec-17	
			Targeted mainline circuit rehabilitation – replace/repair high priority items	To be completed 2018	0%	
			On cycle tree trimming	To be completed 2018	0%	
			Install new mainline switch	To be completed 2018	25%	
33	East Prospect	00766-4	<i>Performance was driven by trees off ROW (39%), unknown (21%), and trees on ROW (19%).</i>			3Q 2017 4Q 2017
			Overhead circuit inspection	Complete	Jul-17	
			Post-storm patrol	Complete	Sep-17	
			On cycle tree trimming	Complete	Dec-17	
			Replace/repair high priority items identified during overhead circuit patrol	To be completed 2018	14%	
34	Glenside	00535-1	<i>Performance was driven by a broken guy wire during wind event (43%), line failure (17%) and UG equipment failure caused by sinkhole (13%).</i>			1Q 2017 2Q 2017 3Q 2017 4Q 2017
			Upgrade mainline underground distribution cable and equipment	Complete	Jan-17	
			Repair mainline guy wire	Complete	Feb-17	
			Replace spacers in mainline spacer cable section	Complete	Dec-17	

Met-Ed						
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work	Progress of Remedial Work or Date Completed	Appeared in 2 of 4 Quarters
35	Lickdale	00626-2	<i>Performance was driven by vehicle accident (73%).</i>			
			On cycle tree trimming	To be completed 2018	0%	
			Targeted mainline rehabilitation	To be completed 2018	0%	
36	Taxville	00575-4	<i>Performance was driven by vehicle (51%) and trees off ROW (42%).</i>			2Q 2017 3Q 2017 4Q 2017
			Mainline rehabilitation patrol	Complete	Nov-17	
			Perform circuit protection review	Complete	Dec-17	
			On cycle tree trimming	To be completed 2018	0%	
			Mainline rehabilitation improvements	To be completed 2018	5%	
			Install Supervisory Control and Data Acquisition (SCADA) switches #1	To be completed 2018	5%	
			Install Supervisory Control and Data Acquisition (SCADA) switches#2	To be completed 2018	5%	
			Install Supervisory Control and Data Acquisition (SCADA) switches #3	To be completed 2018	5%	
Install Supervisory Control and Data Acquisition (SCADA) switches #4	To be completed 2018	5%				
37	Shawnee	00899-3	<i>Performance was driven by trees off ROW (76%).</i>			1Q 2017 2Q 2017 3Q 2017 4Q 2017
			Overhead circuit inspection	Complete	Apr-17	
			On cycle tree trimming	Complete	Nov-17	
			Install Supervisory Control and Data Acquisition (SCADA) switches #1	To be completed 2018	0%	
			Install Supervisory Control and Data Acquisition (SCADA) switches #2	To be completed 2018	0%	
			Install Supervisory Control and Data Acquisition (SCADA) switches #3	To be completed 2018	0%	
38	Glendon	00819-3	<i>Performance was driven by equipment failure (85%).</i>			2Q 2017 3Q 2017 4Q 2017
			Forestry Zone 1 aerial patrol	Complete	Jul-17	
			Replace crossarms	Complete	Oct-17	
			On cycle tree trimming	Complete	Dec-17	

Met-Ed						
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work	Progress of Remedial Work or Date Completed	Appeared in 2 of 4 Quarters
39	Shawnee	00895-3	<i>Performance was driven by trees off ROW (56%), and line failure (18%).</i>			1Q 2017 2Q 2017 3Q 2017 4Q 2017
			Overhead circuit inspection	Complete	May-17	
			Enhanced three phase tree trimming	Complete	Jul-17	
			Replace porcelain cutouts on circuit three phase with polymer cutouts	Complete	Nov-17	
			Targeted mainline circuit rehabilitation – replace/repair high priority items	Complete	Dec-17	
			Install additional Supervisory Control and Data Acquisition (SCADA) switches	Complete	Dec-17	
			Construct circuit tie	Complete	Dec-17	

Met-Ed					
Unranked circuits appearing 2 or more quarters in the last 4 quarters					
Substation	Circuit	1Q 2017	2Q 2017	3Q 2017	4Q 2017
Baldy	00736-1	X	X		
Baldy	00738-1	X	X		
Bernville	00787-1	X	X		
Birchwood	00622-3	X	X	X	
Clearfield	00631-3	X	X	X	
Germantown	00757-4	X	X	X	
Lynnville	00737-1	X	X	X	
Newberry	00576-4	X	X		
Northwood	00821-3	X	X		
South Hamburg	00741-1	X	X		
South Hamburg	00801-1	X	X	X	
Shawnee	00860-3	X	X	X	
South Lebanon	00780-2	X	X		
Windsor	00797-4	X	X		

Met-Ed				
Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work	Progress of Remedial Work or Date Completed
Annville	00743-2	Targeted mainline circuit rehabilitation – replace/repair high priority items	Complete	Dec-17
Baldy	00736-1	On cycle tree trimming	Complete	Oct-17
		Insulator repair from inspection	Complete	Dec-17
Barto	00705-1	Install Supervisory Control and Data Acquisition (SCADA) switches and reclosers	Complete	Nov-17
Belfast	00817-3	Install Supervisory Control and Data Acquisition (SCADA) on reclosers	Complete	Oct-17
		Install Supervisory Control and Data Acquisition (SCADA) switches	Complete	Oct-17
Bern Church	00789-1	Eliminate two off-road line sections	Complete	Dec-17
		Targeted mainline circuit rehabilitation – replace/repair high priority items	Complete	Dec-17
Bernville	00787-1	On cycle tree trimming	Complete	Dec-17
Clearfield	00631-3	On cycle tree trimming	Complete	Dec-17
		Install animal guarding	Complete	Aug-17
Collins	00761-2	Replace fuse with recloser	Complete	Dec-17
Fox Hill	00816-3	Install Supervisory Control and Data Acquisition (SCADA) switches and reclosers	Complete	Dec-17
Leesport	00811-1	Targeted mainline circuit rehabilitation – replace/repair high priority items	Complete	Apr-17
		Replace porcelain cutouts on circuit three phase with polymer cutouts	Complete	Nov-17
Lorane	00560-1	On cycle tree trimming	Complete	Dec-17
Lynnville	00737-1	Engineering Supervisory Control and Data Acquisition (SCADA) review	Complete	Oct-17
		Replace insulator from inspection	Complete	Oct-17
		Replace crossarm from inspection	Complete	Nov-17
Menges Mills	00543-4	On cycle tree trimming	Complete	Dec-17
Newberry	00576-4	Enhanced three phase tree trimming	Complete	Oct-17
		Targeted mainline circuit rehabilitation – replace/repair high priority items	Complete	Nov-17
North Bangor	00813-3	Targeted mainline circuit rehabilitation – replace/repair high priority items	Complete	Dec-17
North Bangor	00826-3	Enhanced three phase tree trimming	Complete	Dec-17
		Targeted mainline circuit rehabilitation – replace/repair high priority items	Complete	Dec-17

Met-Ed				
Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work	Progress of Remedial Work or Date Completed
North Cornwall	00610-2	Spot tree trimming	Complete	Nov-17
		Install fuses	Complete	Dec-17
		Repair equipment failure	Complete	Dec-17
Northwood	00821-3	Replace crossarms	Complete	Nov-17
Snydersville	00621-3	Targeted mainline circuit rehabilitation – replace/repair high priority items	Complete	Dec-17
South Hamburg	00741-1	Overhead circuit inspection	Complete	Oct-17
		Install additional mainline recloser	Complete	Dec-17
		Replace porcelain cutouts on circuit backbone with polymer cutouts	Complete	Dec-17
South Lebanon	00772-2	Inspection repairs	Complete	Sep-17
South Lebanon	00780-2	Circuit reconfiguration	Complete	Dec-17
Swatara Hill	00763-2	Overhead circuit inspection	Complete	Aug-17
		Construct circuit tie	Complete	Dec-17
Weisenberg	00602-1	Install additional tap fuses	Complete	Nov-17
		On cycle tree trimming	Complete	Nov-17
		Replace broken tap recloser	Complete	Nov-17
Windsor	00797-4	On cycle tree trimming	Complete	Dec-17
Yorkana	00708-4	Enhanced three phase tree trimming	Complete	Oct-17

Penelec							
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work Completed	Progress of Remedial Work or Date Completed	Appeared in 2 of 4 Quarters	
1	Warren South	00220-41	<i>Performance was driven by trees off ROW (50%), equipment failure (24%) and vehicle accident (12%).</i>				1Q 2017 2Q 2017 3Q 2017 4Q 2017
			Repair damage caused by vehicle	Complete	Jan-17		
			Repair damage caused by trees	Complete	Apr-17		
			Repair equipment failure	Complete	Jun-17		
			Install advanced distribution protective devices	To be completed 2018	0%		
			Porcelain cutout replacement	To be completed 2018	0%		
2	Brookville	00125-23	<i>Performance was driven by trees off ROW (78%) and equipment failure (14%).</i>				1Q 2017 2Q 2017 3Q 2017 4Q 2017
			Repair equipment failure	Complete	Jan-17		
			Repair damage caused by trees during a storm	Complete	Feb-17		
			Repair damage caused by trees during a storm	Complete	Mar-17		
			Repair damage caused by trees during a storm	Complete	Aug-17		
			Circuit inspection	To be completed 2018	0%		
			Replace cap & pin insulators	To be completed 2018	0%		
3	Union City	00206-43	<i>Performance was driven by trees off ROW (87%).</i>				1Q 2017 2Q 2017 3Q 2017 4Q 2017
			Repair damage caused by trees during a storm	Complete	Mar-17		
			Repair equipment failure	Complete	Jun-17		
			Repair damage caused by trees during a storm	Complete	Nov-17		
			Replace substation breaker	To be completed 2018	0%		

Penelec							
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work Completed	Progress of Remedial Work or Date Completed	Appeared in 2 of 4 Quarters	
4	Springboro	00237-52	<i>Performance was driven by trees off ROW (77%), line failure (10%) and equipment failure (7%).</i>				1Q 2017 2Q 2017 3Q 2017 4Q 2017
			Repair equipment failure	Complete	Mar-17		
			Targeted circuit rehabilitation	Complete	Apr-17		
			Repair damage caused by trees during a storm	Complete	Jun-17		
			Repair damage caused by trees during a storm	Complete	Nov-17		
			Repair line failure during a storm	Complete	Dec-17		
5	Madera	00166-22	<i>Performance was driven by trees off ROW (60%), equipment failure (14%) and line failure (8%).</i>				2Q 2017 3Q 2017 4Q 2017
			Repair line failure	Complete	Apr-17		
			Repair damage caused by lightning	Complete	Jun-17		
			Repair damage caused by trees during a storm	Complete	Jun-17		
			Repair damage caused by trees during a storm	Complete	Aug-17		
			Porcelain cutout replacement	To be completed 2018	0%		
6	Logan	00700-81	<i>Performance was driven by trees off ROW (87%).</i>				1Q 2017 2Q 2017 3Q 2017 4Q 2017
			Repair damage caused by trees	Complete	Mar-17		
			Repair damage caused by trees	Complete	Sep-17		
			Porcelain cutout replacement	To be completed 2018	0%		
7	Thompson	00436-65	<i>Performance was driven by trees off ROW (64%) and equipment failure (34%).</i>				1Q 2017 3Q 2017 4Q 2017
			Repair equipment failure	Complete	Feb-17		
			Repair damage caused by trees during a storm	Complete	Mar-17		
			Repair damage caused by trees	Complete	Aug-17		
			Repair damage caused by trees during a storm	Complete	Nov-17		
			Repair equipment failure	Complete	Nov-17		

Penelec							
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work Completed	Progress of Remedial Work or Date Completed	Appeared in 2 of 4 Quarters	
8	East Hickory	00201-41	<i>Performance was driven by trees off ROW (92%).</i>				1Q 2017 2Q 2017 3Q 2017 4Q 2017
			Repair line failure	Complete	Feb-17		
			Repair damage caused by trees during a storm	Complete	Mar-17		
			Repair damage caused by trees	Complete	May-17		
			Repair damage caused by trees during a storm	Complete	Jun-17		
			Repair damage caused by trees during a storm	Complete	Oct-17		
			Replace substation breaker	To be completed 2018	0%		
9	DuBois	00137-23	<i>Performance was driven by vehicle accident (39%), trees off ROW (31%) and equipment failure (14%).</i>				1Q 2017 2Q 2017 3Q 2017 4Q 2017
			Repair damage caused by trees during a storm	Complete	Mar-17		
			Restore recloser operation of unknown cause	Complete	Jun-17		
			Repair damage caused by trees	Complete	Jun-17		
			Repair damage caused by vehicle accident	Complete	Jul-17		
			Repair damage caused by trees	Complete	Aug-17		
			Repair equipment failure	Complete	Aug-17		
			Targeted circuit rehabilitation	To be completed 2018	0%		
10	Hooversville	00019-12	<i>Performance was driven by trees off ROW (63%) and equipment failure (34%).</i>				3Q 2017 4Q 2017
			Repair damage caused by trees during a storm	Complete	Mar-17		
			Repair damage caused by trees during a storm	Complete	Jul-17		
			Repair damage caused by trees during a storm	Complete	Aug-17		
			Repair equipment failure	Complete	Oct-17		
			Repair damage caused by trees	Complete	Oct-17		

Penelec							
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work Completed	Progress of Remedial Work or Date Completed	Appeared in 2 of 4 Quarters	
11	Mansfield	00699-63	<i>Performance was driven by trees off ROW (44%) and line failure (43%).</i>				1Q 2017 2Q 2017 3Q 2017 4Q 2017
			Repair equipment failure	Complete	Jan-17		
			Repair line failure	Complete	Apr-17		
			Repair line failure	Complete	Jul-17		
			Repair damage caused by trees during a storm	Complete	Jul-17		
			Circuit inspection	To be completed 2018	0%		
12	Tunkhannock	00533-65	<i>Performance was driven by non-company human error (48%), unknown (15%) equipment failure (13%) and lightning (10%).</i>				1Q 2017 2Q 2017 3Q 2017 4Q 2017
			Repair damage caused by non-company human error	Complete	Jan-17		
			Repair damage caused by non-company human error	Complete	Feb-17		
			Install new radio controlled recloser	Complete	Apr-17		
			Circuit inspection	Complete	May-17		
			Targeted circuit rehabilitation	Complete	Jun-17		
			Repair damage caused by lightning	Complete	Aug-17		
			Repair equipment failure	Complete	Sep-17		
			Restore recloser operation of unknown cause	Complete	Oct-17		
13	Pittsburgh Avenue	00524-31	<i>Performance was driven by trees off ROW (70%) and lightning (16%).</i>				
			Repair damage caused by lightning	Complete	Aug-17		
			Repair damage caused by trees during a storm	Complete	Nov-17		
			Circuit inspection	To be completed 2018	0%		

Penelec							
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work Completed	Progress of Remedial Work or Date Completed	Appeared in 2 of 4 Quarters	
14	Timblin	00103-23	<i>Performance was driven by trees off ROW (68%) and equipment failure (20%).</i>				1Q 2017 2Q 2017 3Q 2017 4Q 2017
			Repair damage caused by trees during a storm	Complete	Feb-17		
			Repair damage caused by trees during a storm	Complete	Feb-17		
			Repair damage caused by trees	Complete	Feb-17		
			Repair equipment failure	Complete	Jun-17		
			Repair damage caused by trees during a storm	Complete	Nov-17		
			Targeted circuit rehabilitation	Complete	Dec-17		
			Circuit inspection	To be completed 2018	0%		
15	Tyrone North Sub	00643-22	<i>Performance was driven by trees off ROW (84%) and non-company human error (14%).</i>				3Q 2017 4Q 2017
			Repair damage caused by non-company human error	Complete	Feb-17		
			Repair damage caused by trees during a storm	Complete	Aug-17		
			Repair damage caused by trees during a storm	Complete	Aug-17		
16	Philipsburg	00162-22	<i>Performance was driven by trees off ROW (65%), vehicle accident (10%) and equipment failure (10%).</i>				3Q 2017 4Q 2017
			Repair equipment failure	Complete	Aug-17		
			Repair damage caused by trees during a storm	Complete	Aug-17		
			Repair damage caused by vehicle	Complete	Sep-17		
			Upgrade recloser controls	Complete	Sep-17		
			On cycle tree trimming	Complete	Dec-17		
			Targeted circuit rehabilitation	To be completed 2018 ²⁵	10%		
			Install advanced distribution protective devices	To be completed 2018	0%		

²⁵ The targeted circuit rehabilitation project will carry into 2018. Penelec experienced delays outside of its control due to environmental/permit requirements in the wetlands.

Penelec							
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work Completed	Progress of Remedial Work or Date Completed	Appeared in 2 of 4 Quarters	
17	Green Garden	00536-31	<i>Performance was driven by trees off ROW (72%) and line failure (14%).</i>				
			Repair line failure	Complete	Jun-17		
			Repair damage caused by trees during a storm	Complete	Nov-17		
			Circuit inspection	To be completed 2018	0%		
			Replace cap & pin insulators	To be completed 2018	0%		
18	Utica Junction	00318-51	<i>Performance was driven by trees off ROW (96%).</i>				1Q 2017 2Q 2017 3Q 2017 4Q 2017
			Repair damage caused by trees during a storm	Complete	Mar-17		
			Repair damage caused by trees	Complete	Jun-17		
			Repair damage caused by trees during a storm	Complete	Nov-17		
			Replace cap & pin insulators	To be completed 2018	0%		
19	Natl Forge Sw Sta	00577-41	<i>Performance was driven by trees off ROW (82%).</i>				1Q 2017 2Q 2017 3Q 2017 4Q 2017
			Repair damage caused by trees	Complete	Feb-17		
			Repair damage caused by trees during a storm	Complete	Jun-17		
			Repair damage caused by trees during a storm	Complete	Jun-17		
			Repair damage caused by trees	Complete	Jul-17		
20	Union City	00207-43	<i>Performance was driven by vehicle accident (68%) and breaker operation of unknown cause (18%).</i>				
			Repair damage caused by vehicle	Complete	Oct-17		
			Restore breaker operation of unknown cause during a storm	Complete	Dec-17		
21	Philipsburg	00164-22	<i>Performance was driven by equipment failure (53%), line failure (22%) and trees off ROW (7%).</i>				1Q 2017 2Q 2017 3Q 2017 4Q 2017
			Repair equipment failure	Complete	Mar-17		
			Repair line failure	Complete	Mar-17		
			Repair equipment failure	Complete	Jun-17		
			Repair damage caused by trees during a storm	Complete	Aug-17		
			On cycle tree trimming	To be completed 2018	0%		

Penelec							
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work Completed	Progress of Remedial Work or Date Completed	Appeared in 2 of 4 Quarters	
22	Two Mile	00127-42	<i>Performance was driven by lightning (37%), trees off ROW (23%), line failure (19%) and equipment failure (16%).</i>				3Q 2017 4Q 2017
			Repair damage caused by trees during a storm	Complete	Feb-17		
			Repair damage caused by lightning	Complete	Apr-17		
			Repair line failure	Complete	Jul-17		
			Repair equipment failure	Complete	Jul-17		
			Repair damage caused by trees during a storm	Complete	Aug-17		
23	Tiffany	00440-65	<i>Performance was driven by equipment failure (83%).</i>				1Q 2017 2Q 2017 3Q 2017 4Q 2017
			Repair equipment failure	Complete	Jan-17		
			Repair equipment failure	Complete	Feb-17		
			Repair equipment failure	Complete	Mar-17		
			Circuit inspection	To be completed 2018	0%		
24	Marienville	00328-51	<i>Performance was driven by trees off ROW (88%).</i>				1Q 2017 2Q 2017 3Q 2017 4Q 2017
			Repair damage caused by trees during a storm	Complete	Mar-17		
			Repair damage caused by trees during a storm	Complete	May-17		
			Repair damage caused by trees	Complete	Jun-17		
			Install new radio-controlled switch	Complete	Sep-17		
			Porcelain cutout replacement	To be completed 2018	0%		
25	Erie East	00234-31	<i>Performance was driven by trees off ROW (77%) and line failure (7%).</i>				1Q 2017 2Q 2017 3Q 2017 4Q 2017
			Repair line failure	Complete	Jan-17		
			Repair damage caused by trees	Complete	Mar-17		
			Repair damage caused by trees during a storm	Complete	Jun-17		
			Circuit inspection	Complete	Sep-17		
			On cycle tree trimming	Complete	Sep-17		
			Repair damage caused by trees	Complete	Dec-17		
			Replace substation breaker	To be completed 2018	0%		

Penelec						
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work Completed	Progress of Remedial Work or Date Completed	Appeared in 2 of 4 Quarters
26	Lawrenceville	00632-63	<i>Performance was driven by trees off ROW (92%).</i>			3Q 2017 4Q 2017
			Repair damage caused by trees	Complete	Mar-17	
			Repair damage caused by trees during a storm	Complete	Jul-17	
			Replace substation recloser	To be completed 2018	0%	
27	Union City	00208-43	<i>Performance was driven by trees off ROW (66%) and fuse operation of unknown cause (14%).</i>			1Q 2017 2Q 2017 3Q 2017 4Q 2017
			Porcelain cutout replacement	Complete	Jan-17	
			Repair damage caused by trees during a storm	Complete	Mar-17	
			Restore fuse operation of unknown cause	Complete	Aug-17	
			Repair damage caused by trees	Complete	Sep-17	
			On cycle tree trimming	To be completed 2018	0%	
			Targeted circuit rehabilitation	To be completed 2018	0%	
Install advanced distribution protective devices	To be completed 2018	0%				
28	Lawrenceville	00326-63	<i>Performance was driven by trees off ROW (100%).</i>			3Q 2017 4Q 2017
			Repair damage caused by trees during a storm	Complete	Jul-17	
29	Brookville West	00121-23	<i>Performance was driven by equipment failure (74%) and trees off ROW (24%).</i>			3Q 2017 4Q 2017
			Repair equipment failure	Complete	Aug-17	
			Repair damage caused by trees	Complete	Aug-17	
			Repair equipment failure during a storm	Complete	Nov-17	
			On cycle tree trimming	To be completed 2018	0%	
30	Grover	00527-63	<i>Performance was driven by trees off ROW (49%), animal contact (24%) and vehicle accident (11%).</i>			
			Repair damage caused by animal contact	Complete	May-17	
			Repair damage caused by trees during a storm	Complete	Oct-17	
			Repair damage caused by vehicle	Complete	Dec-17	

Penelec						
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work Completed	Progress of Remedial Work or Date Completed	Appeared in 2 of 4 Quarters
31	Bradford South	00106-42	<i>Performance was driven by trees off ROW (53%) and equipment failure (41%).</i>			1Q 2017 2Q 2017 3Q 2017 4Q 2017
			Repair equipment failure	Complete	Jan-17	
			Repair equipment failure	Complete	Jan-17	
			Repair damage caused by trees during a storm	Complete	Mar-17	
			Repair damage caused by trees during a storm	Complete	Sep-17	
			Porcelain cutout replacement	To be completed 2018	0%	
32	Logan	00701-81	<i>Performance was driven by trees off ROW (88%).</i>			1Q 2017 3Q 2017 4Q 2017
			Repair damage caused by trees during a storm	Complete	Jul-17	
			Repair damage caused by trees during a storm	Complete	Aug-17	
			Repair damage caused by trees	Complete	Sep-17	
33	Mansfield	00559-63	<i>Performance was driven by equipment failure (77%) and trees off ROW (10%).</i>			1Q 2017 2Q 2017 3Q 2017 4Q 2017
			Repair damage caused by trees during a storm	Complete	Jan-17	
			Repair equipment failure	Complete	Mar-17	
			Repair equipment failure	Complete	Mar-17	
			Repair equipment failure	Complete	May-17	
			Repair damage caused by trees during a storm	Complete	Jul-17	
			Repair equipment failure	Complete	Aug-17	
			On cycle tree trimming	To be completed 2018	0%	
			Targeted circuit rehabilitation	To be completed 2018	0%	

Penelec							
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work Completed	Progress of Remedial Work or Date Completed	Appeared in 2 of 4 Quarters	
34	Erie South	00259-31	<i>Performance was driven by trees off ROW (40%), equipment failure (20%), line failure (14%) and fuse operation of unknown cause (10%).</i>				2Q 2017 3Q 2017 4Q 2017
			Repair damage caused by trees during a storm	Complete	Mar-17		
			Restore fuse operation of unknown cause	Complete	Mar-17		
			Repair line failure	Complete	Apr-17		
			Repair damage caused by trees	Complete	Apr-17		
			Repair equipment failure	Complete	Apr-17		
			On cycle tree trimming	To be completed 2018	0%		
			Install advanced distribution protective devices	To be completed 2018	0%		
35	Brooklyn	00749-65	<i>Performance was driven by line failure (55%) and vehicle accident (43%).</i>				1Q 2017 4Q 2017
			Circuit inspection	Complete	May-17		
			Repair line failure during a storm	Complete	Aug-17		
			Repair damage caused by vehicle	Complete	Oct-17		
36	Edgewood	00089-13	<i>Performance was driven by trees off ROW (53%) and line failure (33%).</i>				1Q 2017 2Q 2017 3Q 2017 4Q 2017
			Repair damage caused by trees during a storm	Complete	Feb-17		
			Repair line failure	Complete	Feb-17		
			Repair damage caused by trees during a storm	Complete	Mar-17		
			Repair line failure during a storm	Complete	Jun-17		
			On cycle tree trimming	Complete	Jun-17		

Penelec							
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work Completed	Progress of Remedial Work or Date Completed	Appeared in 2 of 4 Quarters	
37	Lake Como	00788-65	<i>Performance was driven by vehicle accident (32%), trees off ROW (25%), line failure (18%) and recloser operation of unknown cause (13%).</i>				3Q 2017 4Q 2017
			Repair damage caused by trees during a storm	Complete	Jun-17		
			Repair damage caused by trees during a storm	Complete	Jul-17		
			Repair line failure	Complete	Aug-17		
			Install new radio-controlled switch	Complete	Nov-17		
			Repair damage caused by trees during a storm	Complete	Nov-17		
			Restore recloser operation of unknown cause	Complete	Dec-17		
			Repair damage caused by vehicle	Complete	Dec-17		
			Replace substation recloser	To be completed 2018	0%		
38	Athens	00514-61	<i>Performance was driven by line failure (34%), vehicle accident (34%) and fuse operation of unknown cause (14%).</i>				2Q 2017 3Q 2017 4Q 2017
			Repair line failure	Complete	Jun-17		
			Restore fuse operation of unknown cause	Complete	Jun-17		
			Repair damage caused by vehicle	Complete	Jul-17		
			Targeted circuit rehabilitation	Complete	Sep-17		
			Replace substation breaker	To be completed 2018	0%		
			Replace cap & pin insulators	To be completed 2018	0%		
39	Tionesta Jct Sw Sta	00498-51	<i>Performance was driven by trees off ROW (68%) and line failure (17%).</i>				1Q 2017 2Q 2017 3Q 2017 4Q 2017
			Repair damage caused by trees during a storm	Complete	Jun-17		
			Repair damage caused by trees during a storm	Complete	Jun-17		
			Repair damage caused by trees	Complete	Sep-17		
			Circuit inspection	Complete	Oct-17		
			Targeted circuit rehabilitation	Complete	Nov-17		
			Repair line failure	Complete	Dec-17		

Penelec						
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work Completed	Progress of Remedial Work or Date Completed	Appeared in 2 of 4 Quarters
40	Pemberton	00096-82	<i>Performance was driven by trees off ROW (96%).</i>			1Q 2017 2Q 2017 3Q 2017 4Q 2017
			Repair damage caused by trees	Complete	Jan-17	
			Repair damage caused by trees during a storm	Complete	Mar-17	
			Repair damage caused by trees during a storm	Complete	Aug-17	
41	North Warren	00207-41	<i>Performance was driven by trees off ROW (59%) and line failure (27%).</i>			1Q 2017 2Q 2017 3Q 2017 4Q 2017
			Repair line failure	Complete	Feb-17	
			Repair damage caused by trees during a storm	Complete	Mar-17	
			Repair damage caused by trees during a storm	Complete	Jun-17	
			Replace substation recloser	To be completed 2018	0%	
42	Emlenton	00121-51	<i>Performance was driven by trees off ROW (75%) and breaker operation of unknown cause (14%).</i>			2Q 2017 3Q 2017 4Q 2017
			Restore breaker operation of unknown cause	Complete	Jan-17	
			Repair damage caused by trees during a storm	Complete	Mar-17	
			Repair damage caused by trees during a storm	Complete	Jun-17	
			Circuit inspection	To be completed 2018	0%	
43	Lewis Run	00408-42	<i>Performance was driven by trees off ROW (87%).</i>			
			Repair damage caused by trees	Complete	Jun-17	
			Repair damage caused by trees during a storm	Complete	Jun-17	
			Repair damage caused by trees during a storm	Complete	Sep-17	
			Replace substation breaker	To be completed 2018	0%	
44	Wyalusing Sub	00532-62	<i>Performance was driven by trees off ROW (45%) and equipment failure (40%).</i>			1Q 2017 2Q 2017 4Q 2017
			Repair equipment failure during a storm	Complete	Jan-17	
			Repair damage caused by trees during a storm	Complete	Jun-17	
			Targeted circuit rehabilitation	Complete	Jul-17	
			Circuit inspection	Complete	Jul-17	
			Repair damage caused by trees during a storm	Complete	Oct-17	

Penelec							
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work Completed	Progress of Remedial Work or Date Completed	Appeared in 2 of 4 Quarters	
45	Blairsville East	00081-13	<i>Performance was driven by trees off ROW (55%), line failure (22%) and animal contact (20%).</i>				1Q 2017 2Q 2017 3Q 2017 4Q 2017
			Repair line failure	Complete	Feb-17		
			Circuit inspection	Complete	May-17		
			Repair damage caused by trees	Complete	May-17		
			Repair damage caused by trees	Complete	Jul-17		
46	Mansfield	00558-63	<i>Performance was driven by line failure (65%) and trees off ROW (22%).</i>				2Q 2017 3Q 2017 4Q 2017
			Repair line failure	Complete	Jan-17		
			Repair line failure	Complete	Apr-17		
			Circuit inspection	Complete	Jun-17		
			Repair line failure	Complete	Jul-17		
			Repair damage caused by trees during a storm	Complete	Aug-17		
47	Youngsville	00256-41	<i>Performance was driven by trees off ROW (84%).</i>				
			Repair damage caused by trees	Complete	Oct-17		
			Repair damage caused by trees during a storm	Complete	Oct-17		
48	Summit Hall	00500-31	<i>Performance was driven by line failure (50%) and trees off ROW (47%).</i>				1Q 2017 2Q 2017 3Q 2017 4Q 2017
			Repair line failure	Complete	Mar-17		
			Repair damage caused by trees during a storm	Complete	Mar-17		
			Repair damage caused by trees during a storm	Complete	Aug-17		
49	N Meshoppen Tran	00437-65	<i>Performance was driven by vehicle accident (66%) and line failure (25%).</i>				1Q 2017 2Q 2017 3Q 2017 4Q 2017
			Repair line failure	Complete	Jan-17		
			Repair damage caused by vehicle	Complete	Feb-17		
			Repair damage caused by vehicle	Complete	Jun-17		

Penelec							
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work Completed	Progress of Remedial Work or Date Completed	Appeared in 2 of 4 Quarters	
50	Dubois Central	00119-23	<i>Performance was driven by vehicle accident (44%), equipment failure (31%) and fuse operation of unknown cause (16%).</i>				3Q 2017 4Q 2017
			Repair equipment failure	Complete	Jun-17		
			Repair equipment failure	Complete	Jul-17		
			Repair damage caused by vehicle	Complete	Aug-17		
			Restore fuse operation of unknown cause	Complete	Sep-17		
51	French Road	00219-31	<i>Performance was driven by line failure (68%) and vehicle accident (26%).</i>				
			Repair damage caused by vehicle accident	Complete	Jan-17		
			Repair line failure during a storm	Complete	Nov-17		
			Replace substation breaker	To be completed 2018	0%		
52	Saxton	00631-73	<i>Performance was driven by trees off ROW (71%) and equipment failure (27%).</i>				3Q 2017 4Q 2017
			Repair damage caused by trees	Complete	Aug-17		
			Repair damage caused by trees	Complete	Aug-17		
			Repair equipment failure	Complete	Aug-17		
			Circuit inspection	To be completed 2018	0%		
53	Church	00426-34	<i>Performance was driven by trees off ROW (44%) and equipment failure (38%).</i>				
			Repair damage caused by trees during a storm	Complete	Jan-17		
			Repair damage caused by trees	Complete	Feb-17		
			Repair equipment failure	Complete	Jul-17		
			Repair damage caused by trees	Complete	Oct-17		
			Replace substation recloser	To be completed 2018	0%		
54	Hilltop	00040-11	<i>Performance was driven by trees off ROW (79%) and vehicle accident (14%).</i>				3Q 2017 4Q 2017
			Repair damage caused by trees	Complete	Aug-17		
			Repair damage caused by vehicle	Complete	Oct-17		

Penelec							
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work Completed	Progress of Remedial Work or Date Completed	Appeared in 2 of 4 Quarters	
55	East Sayre	00518-61	<i>Performance was driven by line failure (47%), trees off ROW (34%) and equipment failure (12%).</i>				
			Repair damage caused by trees during a storm	Complete	Mar-17		
			Repair equipment failure	Complete	Apr-17		
			Repair line failure	Complete	May-17		
			Repair line failure	Complete	Dec-17		
			Targeted circuit rehabilitation	To be completed 2018	0%		
			Replace substation breaker	To be completed 2018	0%		
56	Birmingham	00168-22	<i>Performance was driven by vehicle accident (44%), trees off ROW (30%) and fuse operation of unknown cause (15%).</i>				1Q 2017 2Q 2017 4Q 2017
			Repair damage caused by trees	Complete	Apr-17		
			Restore fuse operation of unknown cause	Complete	Aug-17		
			Repair damage caused by vehicle accident	Complete	Nov-17		
57	Somerset	00030-12	<i>Performance was driven by trees off ROW (50%) and equipment failure (36%).</i>				1Q 2017 2Q 2017 3Q 2017 4Q 2017
			Repair damage caused by trees during a storm	Complete	Feb-17		
			Repair damage caused by trees during a storm	Complete	Feb-17		
			Repair equipment failure	Complete	Apr-17		
			Repair line failure	Complete	Jun-17		
			On cycle tree trimming	Complete	Dec-17		
			Porcelain cutout replacement	To be completed 2018	0%		
58	Somerset	00017-12	<i>Performance was driven by equipment failure (52%), trees off ROW (21%) and vehicle accident (9%).</i>				1Q 2017 3Q 2017 4Q 2017
			Repair damage caused by trees during a storm	Complete	Mar-17		
			Repair damage caused by vehicle	Complete	Mar-17		
			On cycle tree trimming	Complete	Jun-17		
			Repair equipment failure	Complete	Jul-17		
			Install advanced distribution protective devices	To be completed 2018	0%		

Penelec						
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work Completed	Progress of Remedial Work or Date Completed	Appeared in 2 of 4 Quarters
59	Susquehanna	00280-65	<i>Performance was driven by line failure (65%) and fuse operation of unknown cause (25%).</i>			3Q 2017 4Q 2017
			Repair line failure	Complete	Jun-17	
			Restore fuse operation of unknown cause	Complete	Aug-17	
			Repair line failure	Complete	Aug-17	
60	Greenwood	00041-71	<i>Performance was driven by non-company human error (48%) and trees off ROW (42%).</i>			2Q 2017 4Q 2017
			Repair damage caused by trees	Complete	Apr-17	
			Repair damage caused by non-company human error	Complete	May-17	
			On cycle tree trimming	Complete	Aug-17	
			Repair damage caused by trees during a storm	Complete	Oct-17	
61	Fairview East	00242-34	<i>Performance was driven by trees off ROW (57%), animal contact (21%) and line failure (10%).</i>			2Q 2017 4Q 2017
			Repair damage caused by trees during a storm	Complete	Jan-17	
			Repair equipment failure	Complete	Jan-17	
			Repair damage caused by animal contact	Complete	May-17	
			Repair damage caused by animal contact	Complete	May-17	
			Repair line failure	Complete	Nov-17	
			On cycle tree trimming	To be completed 2018	0%	
62	Shawville	00153-21	<i>Performance was driven by equipment failure (50%), trees off ROW (28%) and vehicle accident (11%).</i>			2Q 2017 4Q 2017
			Repair equipment failure during a storm	Complete	Mar-17	
			Repair damage caused by trees	Complete	Jun-17	
			Repair equipment failure	Complete	Jun-17	
			Repair damage caused by vehicle accident	Complete	Dec-17	
63	Dubois	00131-23	<i>Performance was driven by trees off ROW (89%).</i>			3Q 2017 4Q 2017
			Repair damage caused by trees during a storm	Complete	Mar-17	
			Repair damage caused by trees during a storm	Complete	Jul-17	
			orcelain cutout replacement	Complete	Oct-17	

Penelec					
Unranked circuits appearing 2 or more quarters in the last 4 quarters					
Substation	Circuit	1Q 2017	2Q 2017	3Q 2017	4Q 2017
Boyer	00583-31	X	X	X	
Cambridge Springs	00462-52	X	X		
Cochranton	00496-52		X	X	
Crown	00320-51	X	X	X	
Curryville	00644-71		X	X	
Dubois	00124-23	X	X		
Dubois	00134-23	X	X		
East Hickory	00200-41	X	X		
East Pike	00096-13	X	X	X	
Fairview East	00216-34	X	X		
Falls	00297-65	X	X		
Grandview	00354-51	X	X		
Knox	00323-51	X	X	X	
Monroeton	00716-62	X	X		
Mount Union	00154-82	X	X	X	
North Towanda	00521-62	X	X		
Osceola	00318-63	X	X	X	
Punxsutawney	00118-23	X	X	X	
Russell Hill	00282-65	X	X		
Sykesville	00726-23	X	X	X	

Penelec				
Unranked circuits with remedial actions scheduled to be or recently completed				
Substation	Circuit	Remedial Action Planned	Status of Remedial Work	Progress of Remedial Work
Abex	00493-52	Circuit inspection	Complete	Oct-17
Crown	00319-51	On cycle tree trimming	Complete	Oct-17
Lake Como	00787-65	Install new radio-controlled switch	Complete	Nov-17
Mercer Pike	00473-52	Circuit inspection	Complete	Oct-17
Punxsutawney	00625-23	On cycle tree clearing	Complete	Oct-17
Titusville sub	00514-51	Circuit inspection	Complete	Oct-17
		Targeted circuit rehabilitation	Complete	Nov-17
Utica Junction	00331-51	Circuit inspection	Complete	Oct-17

Penn Power						
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work	Progress of Remedial Work or Date Completed	Appeared in 2 of 4 Quarters
1	Camp Reynolds	W-134	<i>Performance was driven by trees on/off ROW (91%) and equipment failure (6%).</i>			2Q 2017 3Q 2017 4Q 2017
			Repair damage caused by trees during a storm	Complete	May-17	
			Patrol entire circuit for Off ROW hazard trees (mid-cycle addition to 2018 tree trimming cycle)	To be completed 2018	0%	
2	Canal	W-101	<i>Performance was driven by trees on/off ROW (89%) and equipment failure (4%).</i>			3Q 2017 4Q 2017
			Repair damage caused by trees during a storm	Complete	May-17	
3	Hadley	W-195	<i>Performance was driven by trees on/off ROW (92%) and equipment failure (5%).</i>			2Q 2017 3Q 2017 4Q 2017
			Repair damage caused by trees during a storm	Complete	May-17	
			Patrol entire circuit for Off ROW hazard trees (mid-cycle addition to 2018 tree trimming cycle)	To be completed 2018	0%	
4	Leesburg	D-452	<i>Performance was driven by trees on/off ROW (98%).</i>			2Q 2017 3Q 2017 4Q 2017
			Repair damage caused by trees during a storm	Complete	May-17	
5	McDowell	W-120	<i>Performance was driven by trees on/off ROW (45%), equipment failure (30%) and unknown (20%).</i>			1Q 2017 2Q 2017 4Q 2017
			No cause found, restored circuit	Complete	Feb-17	
			No cause found, restored circuit	Complete	Feb-17	
			Repair damage caused by trees during a storm	Complete	May-17	
			Repair damage caused by trees during a storm	Complete	May-17	
Repair Equipment Failure.	Complete	Oct-17				
6	Stoneboro	W-132	<i>Performance was driven by trees on/off ROW (86%) and line failure (10%).</i>			1Q 2017 2Q 2017 3Q 2017 4Q 2017
			Repair line failure	Complete	Mar-17	
			Repair damage caused by trees during a storm	Complete	May-17	
			Patrol entire circuit for Off ROW hazard trees (mid-cycle addition to 2018 tree trimming cycle)	To be completed 2018	0%	

Penn Power						
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work	Progress of Remedial Work or Date Completed	Appeared in 2 of 4 Quarters
7	McDowell	W-121	<i>Performance was driven by trees on/off ROW (76%), vehicle (10%) and human error (9%).</i>			2Q 2017 3Q 2017 4Q 2017
			Repair damage caused by trees during a storm	Complete	May-17	
			Repair damage due to human error (jumpers were cut)	Complete	Sep-17	
			Repair damage caused by vehicle	Complete	Nov-17	
			Patrol entire circuit for Off ROW hazard trees (mid-cycle addition to 2018 tree trimming cycle).	To be completed 2018	0%	
8	Perry	W-156	<i>Performance was driven by trees on/off ROW (69%), line failure (11%) and animal (8%).</i>			1Q 2017 2Q 2017 3Q 2017 4Q 2017
			Reliability job to install fuses	Complete	Jan-17	
			Repair damage caused by animal contact	Complete	Apr-17	
			Repair damage caused by trees during a storm	Complete	May-17	
			Repair line failure	Complete	Jun-17	
			Repair damage caused by tree	Complete	Jul-17	
			Patrol entire circuit for Off ROW hazard trees (mid-cycle addition to 2018 tree trimming cycle).	To be completed 2018	0%	
9	Seneca	W701	<i>Performance was driven by vehicle (83%) and trees on/off ROW (10%).</i>			1Q 2017 2Q 2017 3Q 2017 4Q 2017
			Repair damage caused by tree	Complete	Mar-17	
			Repair damage caused by a vehicle	Complete	Mar-17	
			Repair damage cause by tree	Complete	Aug-17	

Penn Power					
Unranked circuits appearing 2 or more quarters in the last 4 quarters					
Substation	Circuit	1Q 2017	2Q 2017	3Q 2017	4Q 2017
Hermitage	W-260	X	X		

Penn Power				
Unranked circuits with remedial actions scheduled to be or recently completed				
Substation	Circuit	Remedial Action Planned	Status of Remedial Work	Progress of Remedial Work
Penn Power has no unranked circuits with remedial actions scheduled to be or recently completed.				

West Penn Power							
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work Completed	Progress of Remedial Work or Date Completed	Appeared in 2 of 4 Quarters	
1	Rutan	Bristoria	<i>Performance was driven by trees off ROW (79%).</i>				1Q2017 2Q2017 3Q2017 4Q2017
			Repair damage caused by a tree during a storm	Complete	Feb-17		
			Repair damage caused by a tree during a storm	Complete	Mar-17		
			Repair damage caused by a tree during a storm	Complete	May-17		
			Repair equipment failure during a storm	Complete	Jun-17		
			Repair equipment failure during a storm	Complete	Jun-17		
			Repair damage caused by a tree during a storm	Complete	Jul-17		
			Repair damage caused by a tree during a storm	Complete	Aug-17		
			Repair damage caused by a tree	Complete	Oct-17		
			Repair damage caused by a vehicle accident	Complete	Nov-17		
			Repair damage caused by a tree	Complete	Dec-17		
			On cycle tree trimming	Complete	Dec-17		
2	White Valley	Congruity	<i>Performance was driven by trees off ROW (77%).</i>				3Q2017 4Q2017
			Repair damage caused by a tree during a storm	Complete	Aug-17		
			Repair damage caused by a tree during a storm	Complete	Aug-17		
			Repair line failure	Complete	Sep-17		
			Reliability job to install fuses	Complete	Oct-17		
			Repair damage caused by a tree	Complete	Oct-17		
			Repair line failure	Complete	Dec-17		
Repair line failure	Complete	Dec-17					

West Penn Power							
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work Completed	Progress of Remedial Work or Date Completed	Appeared in 2 of 4 Quarters	
3	White Valley	Export	<i>Performance was driven by trees on ROW (66%) and trees off ROW (17%).</i>				3Q2017 4Q2017
			Reliability job to install fuses	Complete	Mar-17		
			Repair line failure	Complete	Aug-17		
			Repair damage caused by a tree during a storm	Complete	Aug-17		
			Repair damage caused by a tree during a storm	Complete	Aug-17		
			Repair equipment failure	Complete	Nov-17		
			Repair damage caused by a tree	Complete	Nov-17		
			Repair damage caused by a tree during a storm	Complete	Dec-17		
4	Smith	Florence	<i>Performance was driven by trees off ROW (44%), unknown (24%), and trees on ROW (19%).</i>				1Q2017 2Q2017 3Q2017 4Q2017
			Repair damage caused by a tree	Complete	Jan-17		
			Repair damage caused by a tree during a storm	Complete	Mar-17		
			Repair damage caused by a tree	Complete	May-17		
			Repair damage caused by a tree	Complete	May-17		
			Repair line failure	Complete	Jun-17		
			Repair damage caused by a tree during a storm	Complete	Jul-17		
			Restore unknown outage	Complete	Oct-17		
			Restore unknown outage during a storm	Complete	Nov-17		
			Repair damage caused by a tree during a storm	Complete	Dec-17		
Zone 2 Ash tree removal	Complete	Dec-17					

West Penn Power							
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work Completed	Progress of Remedial Work or Date Completed	Appeared in 2 of 4 Quarters	
5	North Fayette	Beechcliff	<i>Performance was driven by equipment failure (53%), trees off ROW (14%), and trees on ROW (12%).</i>				1Q2017 2Q2017 3Q2017 4Q2017
			Repair damage caused by a tree during a storm	Complete	Mar-17		
			Repair equipment failure during a storm	Complete	Mar-17		
			Repair equipment failure	Complete	Apr-17		
			Line rehabilitation	Complete	May-17		
			Repair damage caused by a tree during a storm	Complete	Jul-17		
			Repair damage caused by a tree during a storm	Complete	Jul-17		
			Repair line failure	Complete	Aug-17		
			Repair equipment failure	Complete	Dec-17		
6	Cooperstown	Twin Willows	<i>Performance was driven by trees off ROW (82%).</i>				1Q2017 2Q2017 3Q2017 4Q2017
			Restore unknown outage during a storm	Complete	Mar-17		
			Repair damage caused by a tree	Complete	Apr-17		
			Repair damage caused by a tree during a storm	Complete	May-17		
			Repair damage caused by a tree during a storm	Complete	Jul-17		
			Repair damage caused by a tree	Complete	Sep-17		
			Repair damage caused by a tree during a storm	Complete	Nov-17		
			Repair damage caused by a tree during a storm	Complete	Dec-17		
On cycle tree trimming	Complete	Dec-17					
7	Bethel Park	Dashwood	<i>Performance was driven by trees off ROW (68%) and line failure (22%).</i>				2Q2017 3Q2017 4Q2017
			Repair damage caused by a tree	Complete	May-17		
			Repair line failure	Complete	Jun-17		
			Repair line failure	Complete	Jul-17		
			Repair damage caused by a tree during a storm	Complete	Jul-17		
			Repair line failure	Complete	Oct-17		
			Repair line failure during a storm	Complete	Nov-17		

West Penn Power						
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work Completed	Progress of Remedial Work or Date Completed	Appeared in 2 of 4 Quarters
8	White Valley	Borlands	<i>Performance was driven by trees off ROW (86%).</i>			1Q2017 3Q2017 4Q2017
			Repair damage caused by a tree during a storm	Complete	Feb-17	
			Repair line failure during a storm	Complete	Mar-17	
			Reliability job to install fuses	Complete	Mar-17	
			Repair damage caused by a tree during a storm	Complete	Jul-17	
			Repair damage caused by a tree during a storm	Complete	Aug-17	
			Repair damage caused by a tree	Complete	Oct-17	
9	Mateer	Dime Rd	<i>Performance was driven by equipment failure (53%) and trees off ROW (37%).</i>			1Q2017 2Q2017 3Q2017 4Q2017
			Repair equipment failure	Complete	Jan-17	
			Repair damage caused by a tree during a storm	Complete	Feb-17	
			Repair damage caused by a tree	Complete	Mar-17	
			Repair damage caused by a tree during a storm	Complete	Mar-17	
			Repair damage caused by a tree	Complete	Apr-17	
			Repair damage caused by a tree during a storm	Complete	Jun-17	
			Repair equipment failure	Complete	Jul-17	
			Repair damage caused by a tree during a storm	Complete	Aug-17	
			Repair equipment failure	Complete	Sep-17	
			Repair damage caused by a tree	Complete	Oct-17	
			Repair damage caused by a tree during a storm	Complete	Nov-17	
Zone 2 Ash tree removal	Complete	Dec-17				

West Penn Power							
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work Completed	Progress of Remedial Work or Date Completed	Appeared in 2 of 4 Quarters	
10	Avella	W Middletown	<i>Performance was driven by trees off ROW (66%), equipment failure (12%), and trees on ROW (9%).</i>				2Q2017 3Q2017 4Q2017
			Reliability job to install fuses	Complete	Mar-17		
			Forced outage to replace a crossarm	Complete	Apr-17		
			Repair damage caused by a tree	Complete	Jun-17		
			Repair damage caused by a tree during a storm	Complete	Jun-17		
			Repair damage caused by a tree	Complete	Jul-17		
			Repair damage caused by a tree	Complete	Oct-17		
			Repair equipment failure	Complete	Dec-17		
11	Vanceville	Vanceville	<i>Performance was driven by trees off ROW (40%), vehicle (29%), and line failure (13%).</i>				3Q2017 4Q2017
			Repair damage caused by a tree	Complete	Aug-17		
			Repair line failure during a storm	Complete	Aug-17		
			Repair damage caused by a tree during a storm	Complete	Aug-17		
			Repair damage caused by a vehicle accident	Complete	Nov-17		
			Repair line failure	Complete	Dec-17		
			On cycle tree trimming	To be completed 2018	0%		
12	Piney Fork	Stoltz	<i>Performance was driven by trees off ROW (66%) and animal (20%).</i>				1Q2017 2Q2017 3Q2017 4Q2017
			Restore unknown outage	Complete	Mar-17		
			Repair damage caused by a tree during a storm	Complete	Mar-17		
			Repair damage caused by a tree during a storm	Complete	Jun-17		
			Repair line failure	Complete	Jul-17		
			On cycle tree trimming	Complete	Sep-17		

West Penn Power							
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work Completed	Progress of Remedial Work or Date Completed	Appeared in 2 of 4 Quarters	
13	Franklin	Rogersville	<i>Performance was driven by trees off ROW (38%), unknown (22%), and line failure (18%).</i>				1Q2017 2Q2017 3Q2017 4Q2017
			Restore unknown outage during a storm	Complete	Feb-17		
			Repair damage caused by a tree during a storm	Complete	Feb-17		
			Line rehabilitation	Complete	Mar-17		
			Overhead circuit inspection	Complete	Apr-17		
			Repair damage caused by a tree during a storm	Complete	Jun-17		
			Restore unknown outage during a storm	Complete	Jun-17		
			Repair damage caused by a tree during a storm	Complete	Jul-17		
			Repair damage caused by a tree during a storm	Complete	Jul-17		
			Repair line failure	Complete	Aug-17		
			Restore unknown outage during a storm	Complete	Nov-17		
			Repair damage caused by a tree during a storm	Complete	Dec-17		
14	Saltsburg	Saltsburg	<i>Performance was driven by trees off ROW (59%) and equipment failure (22%).</i>				1Q2017 2Q2017 4Q2017
			Repair damage caused by a tree during a storm	Complete	Feb-17		
			Repair damage caused by a tree during a storm	Complete	Mar-17		
			Repair equipment failure	Complete	Apr-17		
			On cycle tree trimming	Complete	Oct-17		
			Repair damage caused by a tree during a storm	Complete	Nov-17		
15	Krendale	Meridian	<i>Performance was driven by equipment failure (53%) and trees off ROW (39%).</i>				
			Repair equipment failure	Complete	Dec-17		
			Restore unknown outage	Complete	Dec-17		
			Reliability job to install fuses	To be completed 2018	0%		

West Penn Power						
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work Completed	Progress of Remedial Work or Date Completed	Appeared in 2 of 4 Quarters
16	Huntingdon	Shawtown	<i>Performance was driven by trees off ROW (69%) and trees on ROW (27%).</i>			2Q2017 3Q2017 4Q2017
			Repair damage caused by a tree during a storm	Complete	Apr-17	
			Repair damage caused by a tree during a storm	Complete	Jun-17	
			Repair equipment failure	Complete	Aug-17	
			Repair equipment failure	Complete	Nov-17	
17	Piney Fork	Gillhall	<i>Performance was driven by trees off ROW (69%) and equipment failure (18%).</i>			1Q2017 4Q2017
			Repair damage caused by a tree during a storm	Complete	Feb-17	
			Repair damage caused by a tree during a storm	Complete	Nov-17	
			Line rehabilitation	To be completed 2018	0%	
18	Harwick	Harmar	<i>Performance was driven by trees off ROW (60%), equipment failure (16%), and vehicle (14%).</i>			1Q2017 2Q2017 3Q2017 4Q2017
			Repair damage caused by a tree during a storm	Complete	Feb-17	
			Overhead circuit inspection	Complete	Apr-17	
			Repair damage caused by a tree	Complete	Jul-17	
			Repair equipment failure during a storm	Complete	Jul-17	
			Repair damage caused by a tree during a storm	Complete	Aug-17	
			Repair damage caused by a tree during a storm	Complete	Nov-17	
Repair damage caused by a vehicle accident	Complete	Dec-17				
19	Peters	Venetia	<i>Performance was driven by equipment failure (64%) and unknown (22%).</i>			3Q2017 4Q2017
			Repair equipment failure during a storm	Complete	Jul-17	
			Repair equipment failure during a storm	Complete	Jul-17	
			Repair damage caused by a tree during a storm	Complete	Aug-17	
			Overhead circuit inspection	Complete	Sep-17	
			Restore unknown outage	Complete	Dec-17	

West Penn Power						
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work Completed	Progress of Remedial Work or Date Completed	Appeared in 2 of 4 Quarters
20	Dutch Fork	W Alexander	<i>Performance was driven by trees off ROW (68%) and unknown (21%).</i>			3Q2017 4Q2017
			Repair damage caused by a tree during a storm	Complete	Jul-17	
			Restore unknown outage during a storm	Complete	Jul-17	
			Repair damage caused by a tree	Complete	Aug-17	
			Repair damage caused by a tree	Complete	Oct-17	
			Install Tollgrade monitors	Complete	Nov-17	
			Restore unknown outage during a storm	Complete	Nov-17	
21	Cecil	Bishop	<i>Performance was driven by trees off ROW (65%) and line failure (17%).</i>			2Q2017 3Q2017 4Q2017
			Repair line failure	Complete	May-17	
			Repair damage caused by a vehicle during a storm	Complete	Jun-17	
			Repair damage caused by a tree during a storm	Complete	Jul-17	
			Repair damage caused by a tree	Complete	Aug-17	
			Repair damage caused by a tree	Complete	Oct-17	
			Repair line failure	Complete	Dec-17	
Reliability job to install fuses	To be completed 2018	0%				
22	Fort Palmer	West Fairfield	<i>Performance was driven by trees off ROW (63%) and human error non-company (15%).</i>			1Q2017 2Q2017 3Q2017 4Q2017
			Repair damage caused by a tree during a storm	Complete	Mar-17	
			Repair damage caused by a tree during a storm	Complete	Mar-17	
			Repair damage caused by a tree during a storm	Complete	Mar-17	
			Repair damage caused by a tree	Complete	Apr-17	
			Repair equipment failure during a storm	Complete	Jun-17	
			Repair damage caused by a tree during a storm	Complete	Jul-17	
			Repair damage caused by a tree during a storm	Complete	Dec-17	
On cycle tree trimming	Complete	Nov-17				

West Penn Power						
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work Completed	Progress of Remedial Work or Date Completed	Appeared in 2 of 4 Quarters
23	Gobain	Pittsburgh Street	<i>Performance was driven by trees off ROW (72%) and equipment failure (13%).</i>			3Q2017 4Q2017
			On cycle tree trimming	Complete	Apr-17	
			Repair damage caused by a tree during a storm	Complete	Jul-17	
			Repair equipment failure	Complete	Aug-17	
			Repair damage caused by a tree during a storm	Complete	Aug-17	
24	Kiski Valley	Kittanning	<i>Performance was driven by trees off ROW (69%) and line failure (27%).</i>			3Q2017 4Q2017
			Repair line failure during a storm	Complete	Jul-17	
			Repair damage caused by a tree during a storm	Complete	Jul-17	
			Repair damage caused by a tree	Complete	Aug-17	
			On cycle tree trimming	Complete	Oct-17	
			Repair damage caused by a tree	Complete	Oct-17	
			Repair line failure during a storm	Complete	Nov-17	
25	Murrycrest	Sardis Road	<i>Performance was driven by trees off ROW (65%) and line failure (22%).</i>			3Q2017 4Q2017
			On cycle tree trimming	Complete	Apr-17	
			Repair line failure	Complete	Aug-17	
			Repair damage caused by a tree during a storm	Complete	Aug-17	
			Repair damage caused by a tree	Complete	Aug-17	
			Repair damage caused by a tree during a storm	Complete	Nov-17	
26	Smith	Francis Mine	<i>Performance was driven by trees off ROW (55%), line failure (22%), and vehicle (18%).</i>			
			Repair damage caused by a tree	Complete	Oct-17	
			Repair damage caused by a tree during a storm	Complete	Nov-17	
			Repair damage caused by a tree during a storm	Complete	Dec-17	
			Reliability job to install fuses	To be completed 2018	0%	

West Penn Power						
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work Completed	Progress of Remedial Work or Date Completed	Appeared in 2 of 4 Quarters
27	Houston	McGovern	<i>Performance was driven by trees off ROW (56%) and line failure (29%).</i>			3Q2017 4Q2017
			Repair line failure	Complete	Jul-17	
			Repair damage caused by a tree	Complete	Jul-17	
			Repair line failure during a storm	Complete	Aug-17	
			Repair damage caused by a tree during a storm	Complete	Aug-17	
			Repair damage caused by a tree during a storm	Complete	Nov-17	
28	Hickory	Fort Cherry	<i>Performance was driven by trees off ROW (80%).</i>			1Q2017 3Q2017 4Q2017
			Forced outage to repair conductor	Complete	Mar-17	
			Perform CEMI review	Complete	Apr-17	
			Overhead circuit inspection	Complete	Apr-17	
			Repair damage caused by a tree during a storm	Complete	Aug-17	
			Restore unknown outage during a storm	Complete	Aug-17	
			Repair damage caused by a tree during a storm	Complete	Nov-17	
29	Amity	Banetown	<i>Performance was driven by trees off ROW (65%) and line failure (14%).</i>			1Q2017 2Q2017 4Q2017
			Repair damage caused by a tree during a storm	Complete	Mar-17	
			Repair damage caused by a tree	Complete	Apr-17	
			Restore unknown outage	Complete	May-17	
			Repair damage caused by a tree	Complete	Jun-17	
			Repair line failure	Complete	Oct-17	
			Repair damage caused by a tree during a storm	Complete	Nov-17	
			On cycle tree trimming	Complete	Dec-17	
30	Crossgates	Peters Twp	<i>Performance was driven by unknown (52%) and trees off ROW (29%).</i>			
			Repair damage caused by a tree	Complete	Oct-17	
			Restore unknown outage during a storm	Complete	Nov-17	
			Restore unknown outage during a storm	Complete	Nov-17	

West Penn Power						
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work Completed	Progress of Remedial Work or Date Completed	Appeared in 2 of 4 Quarters
31	Pangburn Hill	Pangburn Hill	<i>Performance was driven by trees off ROW (89%).</i>			
			Repair damage caused by a tree	Complete	Oct-17	
			Repair damage caused by a tree during a storm	Complete	Nov-17	
			On cycle tree trimming	To be completed 2018	0%	
32	Bethlen	Darlington	<i>Performance was driven by trees off ROW (94%).</i>			2Q2017 4Q2017
			Repair damage caused by a tree	Complete	May-17	
			Repair damage caused by a tree	Complete	Jun-17	
			Reliability job to install fuses	Complete	Jun-17	
			Repair damage caused by a tree	Complete	Oct-17	
Repair damage caused by a tree during a storm	Complete	Nov-17				
33	Waterville	Waterville	<i>Performance was driven by other electric utility (53%) and trees off ROW (44%).</i>			
			Zone 2 Ash tree removal	Complete	Feb-17	
			Restore outage caused by other electric utility	Complete	Oct-17	
			Restore outage caused by other electric utility	Complete	Dec-17	
34	Emporium	Town Emporium	<i>Performance was driven by vehicle (85%) and trees off ROW (12%).</i>			
			Repair damage caused by a tree	Complete	Oct-17	
			Repair damage caused by a vehicle accident	Complete	Oct-17	
			On cycle tree trimming	Complete	Dec-17	
35	Normalville	Mill Run	<i>Performance was driven by trees off ROW (99%).</i>			3Q2017 4Q2017
			Repair damage caused by a tree during a storm	Complete	Aug-17	
			On cycle tree trimming	Complete	Oct-17	
			Restore unknown outage	Complete	Oct-17	
			Repair damage caused by a tree during a storm	Complete	Dec-17	

West Penn Power							
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work Completed	Progress of Remedial Work or Date Completed	Appeared in 2 of 4 Quarters	
36	Smithton	Smithton	<i>Performance was driven by trees off ROW (65%) and line failure (22%).</i>				1Q2017 2Q2017 3Q2017 4Q2017
			Repair damage caused by a tree during a storm	Complete	Feb-17		
			Repair damage caused by a tree	Complete	Feb-17		
			Restore unknown outage during a storm	Complete	Mar-17		
			Repair damage caused by a vehicle accident	Complete	Apr-17		
			Repair damage caused by a tree during a storm	Complete	Jun-17		
			Repair damage caused by a tree during a storm	Complete	Jul-17		
			Repair line failure	Complete	Oct-17		
			On cycle tree trimming	Complete	Dec-17		
37	Krendale	Unionville	<i>Performance was driven by trees off ROW (82%) and unknown (14%).</i>				1Q2017 2Q2017 3Q2017 4Q2017
			Restore unknown outage during a storm	Complete	Feb-17		
			Repair damage caused by a tree during a storm	Complete	Feb-17		
			Restore unknown outage during a storm	Complete	Mar-17		
			Repair damage caused by a tree during a storm	Complete	Mar-17		
			Zone 2 ash tree removal	Complete	Apr-17		
			Repair damage caused by a tree during a storm	Complete	Apr-17		
			Repair damage caused by a tree	Complete	Oct-17		
			Restore unknown outage during a storm	Complete	Nov-17		
38	Driftwood	Driftwood	<i>Performance was driven by trees of ROW (44%) and line failure (36%).</i>				1Q2017 2Q2017 3Q2017 4Q2017
			Repair equipment failure	Complete	Jan-17		
			Repair line failure during a storm	Complete	Feb-17		
			Repair damage caused by a tree	Complete	Mar-17		
			Repair damage caused by a tree during a storm	Complete	Mar-17		
			Forced outage to repair a pole	Complete	May-17		
			Repair damage caused by a tree during a storm	Complete	Aug-17		
Repair damage caused by human error non-company	Complete	Dec-17					

West Penn Power							
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work Completed	Progress of Remedial Work or Date Completed	Appeared in 2 of 4 Quarters	
39	Saltsburg	Salina	<i>Performance was driven by trees off ROW (83%) and unknown (16%).</i>				
			Restore unknown outage during a storm	Complete	Nov-17		
			Repair damage caused by a tree	Complete	Dec-17		
			On cycle tree trimming	To be completed 2018	0%		
40	Westraver	Pittsburgh Coal	<i>Performance was driven by line failure (67%) and trees off ROW (30%).</i>				1Q2017 2Q2017 3Q2017 4Q2017
			Repair damage caused by a tree during a storm	Complete	Jan-17		
			Forced outage to repair regulator during a storm	Complete	Feb-17		
			Repair line failure	Complete	Mar-17		
			Repair line failure	Complete	Jun-17		
			Repair line failure	Complete	Jun-17		
			Line rehabilitation	Complete	Jun-17		
			Repair damage caused by a tree during a storm	Complete	Aug-17		
Repair damage caused by a tree	Complete	Sep-17					

West Penn					
Unranked circuits appearing 2 or more quarters in the last 4 quarters					
Substation	Circuit	1Q 2017	2Q 2017	3Q 2017	4Q 2017
Avella	Penowa	X	X		
Bethlen	Laughlintown	X	X		
Bethlen	Laurel Valley	X	X		
Butler	Center Ave		X	X	
Cecil	Murray Hill	X	X		
Donegal	Buchanan	X	X	X	
Donegal	Donegal	X	X	X	
Emporium	Emporium Jct	X	X	X	
Frazier	Perry	X	X		
Hempfield	Cool Valley	X	X	X	
Henry Clay	Markleysburg	X	X	X	
Lake Lynn-Union	Fancy Hill	X	X		
Lantz	Meadow	X		X	
Murrysville	Wallace Lane	X	X		
Smithton	Yukon	X	X		
Thompson Farm	Oakwood	X	X		

West Penn				
Unranked circuits with remedial actions scheduled to be or recently completed				
Substation	Circuit	Remedial Action Planned	Status of Remedial Work	Progress of Remedial Work
Westraver	West Newton	Line rehabilitation	Complete	Nov-17
Dutch Fork	Claysville	Overhead circuit inspection	Complete	Oct-17
Parker	Parker	On cycle tree trimming	Complete	Dec-17
Crossgates	Robinhood	On cycle tree trimming	Complete	Dec-17
Bethel Park	Hillcrest	On cycle tree trimming	Complete	Dec-17
Amity	Amity	Zone 2 Ash tree removal	Complete	Dec-17
Bethel Park	Coverdale	Zone 2 Ash tree removal	Complete	Nov-17
Lake Lynn	Fancy Hill	Zone 2 Ash tree removal	Complete	Dec-17
Bethlen	Laurel Valley	Overhead circuit inspection	Complete	Oct-17
Donegal	Bear Rocks	On cycle tree trimming	Complete	Aug-17
Henry Clay	Markleysburg	Zone 2 Ash tree removal	Complete	Dec-17
Hempfield	Cool Valley	Reliability job to install fuses	Complete	Dec-17
Emporium	Emporium Jct	On cycle tree trimming	Complete	Dec-17

ATTACHMENT C

FirstEnergy's Compliance with Terms of the March 30, 2015 Management Audit Order

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Pursuant to Docket Nos. D-2014-2365991 and D-2014-2365992, (Appendix A)(2): Met-Ed and Penelec are directed to provide a quarterly report that shall consist of a chart documenting the Open Priority 3 repairs and the Overdue Priority 3 (P3) Repairs for each company each quarter.

	Met-Ed		Penelec	
	Open P3 Conditions	Overdue P3 Conditions	Open P3 Conditions	Overdue P3 Conditions
1Q	1,459	1,201	2,143	1,956
2Q	1,308	1,039	1,463	1,254
3Q	1,159	1,037	1,291	1,060
4Q	1,025	931	1,168	954

Pursuant to Docket Nos. D-2014-2365991, D-2014-2365992, D-2014-2365993, and D-2014-2365994, (Appendix A)(3): FirstEnergy is directed to track and measure line hit incidents, causes of line hits, and damage recovery amounts for all third-party line hit incidents for each company.

Met-Ed – Third Party Line Hit Incidents			
4th Quarter 2017 12-Month Rolling²⁶			
Cause of Line Hit	Number of Incidents	Invoice Amount (\$)	Recovery Amount (\$)
Dig In - Other	20	14,465	10,645
Excavated in Tolerance	47	140,339	35,137
Excavation Inconsistent with Ticket Scope	11	27,592	7,383
Excavation Prior to Lawful Start Date	0	0	0
Expired Ticket	2	1,827	908
Hand Digging	0	0	0
Marked Improperly	8	19,834	17,511
No Ticket	25	33,417	23,451
Total	113	237,474	95,035

Penelec – Third Party Line Hit Incidents			
4th Quarter 2017 12-Month Rolling²⁷			
Cause of Line Hit	Number of Incidents	Invoice Amount (\$)	Recovery Amount (\$)
Dig In - Other	4	0	0
Excavated in Tolerance	61	173,007	150,215
Excavation Inconsistent with Ticket Scope	3	1,206	501
Excavation Prior to Lawful Start Date	2	1,457	0
Expired Ticket	11	9,784	5,663
Hand Digging	6	6,157	4,497
Marked Improperly	46	71,468	64,620
No Ticket	49	54,258	37,413
Total	182	317,337	262,909

²⁶ Data includes line hits closed during the rolling twelve-month period as well as the line hits that are still open as of December 31, 2017.

²⁷ Data includes line hits closed during the rolling twelve-month period as well as the line hits that are still open as of December 31, 2017.

Penn Power – Third Party Line Hit Incidents			
4th Quarter 2017 12-Month Rolling			
Cause of Line Hit	Number of Incidents	Invoice Amount (\$)	Recovery Amount (\$)
Dig In - Other	14	11,315	6,499
Excavated in Tolerance	4	3,094	742
Excavation Inconsistent with Ticket Scope	2	3,749	1,436
Excavation Prior to Lawful Start Date	0	0	0
Expired Ticket	4	6,545	4,688
Hand Digging	0	0	0
Marked Improperly	4	9,903	9,000
No Ticket	13	29,813	12,635
Total	41	64,420	35,000

West Penn – Third Party Line Hit Incidents			
4th Quarter 2017 12-Month Rolling			
Cause of Line Hit	Number of Incidents	Invoice Amount (\$)	Recovery Amount (\$)
Dig In - Other	28	21,434	15,073
Excavated in Tolerance	10	26,376	3,543
Excavation Inconsistent with Ticket Scope	14	39,054	24,617
Excavation Prior to Lawful Start Date	0	0	0
Expired Ticket	3	21,506	20,225
Hand Digging	7	14,339	1,943
Marked Improperly	14	40,720	17,187
No Ticket	33	102,427	36,857
Total	109	265,855	119,446

Cause of Line Hit	Definition
Dig In - Other	Still under investigation
Excavated in Tolerance	Excavator didn't use prudent digging techniques within the Tolerance Zone
Excavation Inconsistent with Ticket Scope	Excavation outside dig box and/or scope of ticket
Excavation Prior to Lawful Start Date	Three business days prior to start of excavation from when the ticket was called in to mark
Expired Ticket	After ten business days have passed, the ticket is considered expired
Hand Digging	Excavator was hand digging within the Tolerance Zone, however the facility was still hit
Marked Improperly	Ticket called in, facility and/or equipment was not marked properly
No Ticket	No contact was made to create a dig-request ticket

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

**Joint 4th Quarter 2017 Reliability Report – :
Metropolitan Edison Company, :
Pennsylvania Electric Company :
Pennsylvania Power Company and West :
Penn Power Company – Public Version :**

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CERTIFICATE OF SERVICE

I hereby certify that I have this day served a true and correct copy of the foregoing document upon the individuals listed below, in accordance with the requirements of 52 Pa. Code § 1.54 (relating to service by a participant).

Service by first class mail, as follows:

John R. Evans
Office of Small Business Advocate
Suite 1102, Commerce Building
300 North Second Street
Harrisburg, PA 17101

Tanya McCloskey
Office of Consumer Advocate
555 Walnut Street – 5th Floor
Harrisburg, PA 17101-1923

Richard A. Kanaskie
Bureau of Investigation & Enforcement
Pennsylvania Public Utility Commission
P.O. Box 3265
Harrisburg, PA 17105-3265

Scott Rubin
Utility Workers Union of America
333 Oak Lane
Bloomsburg, PA 17815-2036

Service by electronic mail, as follows:

David Dulick, General Counsel
David.Dulick@ccsenergy.com

Rich Geosits, Manager, Power Delivery
Rich.Geosits@ccsenergy.com

Dated: February 1, 2018



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Counsel for Metropolitan Edison Company,
Pennsylvania Electric Company,
Pennsylvania Power Company and
West Penn Power Company

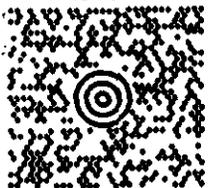
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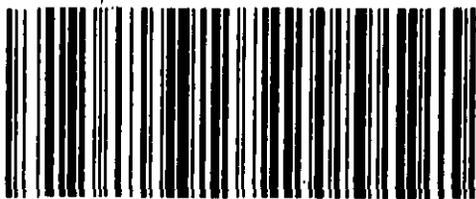


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