



RECEIVED

JAN 31 2020

2800 Pottsville Pike
PO Box 16001
Reading, PA 19612-6001

Teresa K. Harrold, Esq.
(610) 921-6783
(330) 315-9263 (Fax)

PA PUBLIC UTILITY COMMISSION
SECRETARY'S BUREAU

January 31, 2020

M-2016-2522508

VIA UNITED PARCEL SERVICE

Rosemary Chiavetta, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street, 2nd Floor
Harrisburg, PA 17120

Re: Joint 4th Quarter 2019 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 2019 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,

Teresa K. Harrold / KHW

Teresa K. Harrold

Enclosures

- c: As Per Certificate of Service
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)
J. Van Zant – Bureau of Technical Utility Services (via email and first-class mail)

Met-Ed
A FirstEnergy Company

Penelec
A FirstEnergy Company

PennPower
A FirstEnergy Company

**WestPenn
Power**
A FirstEnergy Company



Joint 2019 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 2019 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
Penelec	64,234	Duration	58 hours, 31 minutes	Winter Storm	Approved December 23, 2019
		Start Date/Time	October 31, 2019 1236		
		End Date/Time	November 2, 2019 2307		

RECEIVED

JAN 31 2020

PA PUBLIC UTILITY COMMISSION
SECRETARY'S BUREAU

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 2019 (12-Mo Rolling)	Met-Ed			Penclec			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	1.54	1.26	1.52	1.72	1.12	1.34	1.38	1.05	1.26	1.19
CAIDI	117	140	164	117	141	147	101	121	129	170	204	165
SAIDI	135	194	253	148	213	252	113	162	178	179	257	196
MAIFI ²			0.804			0.726			0.140			
Customers Served ³	566,218			579,647			164,199			717,331		
Number of Sustained Interruptions	12,887			13,772			3,380			13,043		
Customers Affected	874,452			995,121			226,745			851,338		
Customer Minutes	143,334,631			146,082,071			29,151,703			140,292,539		
Number of Customer Momentary Interruptions	456,276			423,658			23,028					

² Momentary Average Interruption Frequency Index ("MAIFI") values are not available for West Penn.

³ Represents the average number of customers served during the reporting period.

Unique Events Occurring in 4Q 2019:

Met-Ed

- Beginning the afternoon of Thursday, October 31, 2019, a strong storm system caused by an incoming cold front moved through Pennsylvania, including the Met-Ed service territory. This system produced lightning, locally heavy rain, and wind gusts upwards of 50 miles per hour. The reliability impact of the storm was 13.7 minutes of System Average Interruption Duration Index (“SAIDI”), 0.04 of System Average Interruption Frequency Index (“SAIFI”), and an overall storm Customer Average Interruption Duration Index (“CAIDI”) of 362.4 minutes.
- On Wednesday, November 27, 2019 and continuing into Thursday, November 28, 2019, a strong storm system caused by an incoming cold front moved through Pennsylvania, including the Met-Ed service territory. This system produced wind gusts upwards of 55 miles per hour. Damage in all areas included downed trees and power lines, broken poles and crossarms, and damaged transformers. The reliability impact of the storm was 5.8 minutes of SAIDI, 0.02 of SAIFI, and an overall storm CAIDI of 274.3 minutes.
- Beginning on Sunday, December 1, 2019, a winter storm system producing freezing rain, snow and wind gusts affected most of Pennsylvania, including the Met-Ed service territory. This winter storm produced ice accumulations up to 0.25 inch, up to nine inches of wet snow and wind gusts up to forty-one miles per hour. Damage in all areas included downed trees and power lines, broken poles and crossarms, and damaged transformers. The reliability impact of the storm was 28.7 minutes of SAIDI, 0.06 of SAIFI, and an overall storm CAIDI of 509.7 minutes.

Penelec⁴

- Beginning the early morning of Sunday, December 1, 2019, a winter storm system producing freezing rain, snow and wind gusts affected most of Pennsylvania, including the Penelec service territory. This winter storm produced ice accumulations up to 0.40 inches, wet snow and wind gusts up to forty miles per hour. Damage in all areas included downed trees and power lines, damaged transformers, and broken poles, crossarms and cutouts. The reliability impact of the storm was 21.0 minutes of SAIDI, 0.05 of SAIFI, and an overall storm CAIDI of 426.0 minutes.

⁴ Please see page 2 for a discussion of the Penelec major event in 4Q.

Penn Power

- Beginning the late afternoon of Thursday, October 31, 2019, a storm system was moving throughout Pennsylvania including the Penn Power service territory causing numerous outages. This system produced lightning, locally heavy rain, and wind gusts upwards of 50 miles per hour. Damage included downed trees and power lines, damaged transformers, and broken poles. The reliability impact of the storm was 10.5 minutes of SAIDI, 0.04 of SAIFI, and an overall storm CAIDI of 285.0 minutes.

West Penn

- Beginning the afternoon of Thursday, October 31, 2019, a strong storm system caused by an incoming cold front moved through Pennsylvania, including the West Penn service territory. This system produced lightning, locally heavy rain, and wind gusts upwards of 50 miles per hour. Damage included downed trees and power lines, damaged transformers, and broken poles. The reliability impact of the storm was 13.3 minutes of SAIDI, 0.04 of SAIFI, and an overall storm CAIDI of 349.2 minutes.

RECEIVED
JAN 31 2020
PA PUBLIC UTILITY COMMISSION
SECRETARY'S BUREAU

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 SAIFI and 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.

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

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.

RECEIVED

JAN 31 2020

PA PUBLIC UTILITY COMMISSION
SECRETARY'S BUREAU

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 2019 12-Month Rolling	Met-Ed			
Cause	Customer Minutes	Number of Sustained Interruptions	Customers Affected	% Based on Customer Minutes
Trees off ROW - tree	65,742,622	2,610	249,931	45.87%
Equipment failure	26,519,737	2,666	224,316	18.50%
Vehicle	11,430,891	338	54,622	7.97%
Unknown	6,324,950	1,387	53,772	4.41%
Line failure	6,839,920	952	43,388	4.77%
Trees off ROW - limb	6,781,523	661	37,114	4.73%
Forced outage	4,065,355	463	65,896	2.84%
Lightning	3,409,037	401	24,185	2.38%
Trees on ROW	3,201,987	363	11,293	2.23%
Animal	1,969,281	1,472	22,408	1.37%
Wind	1,275,128	113	6,490	0.89%
Human error - company	981,761	81	35,698	0.68%
Overload	851,898	70	10,270	0.59%
Object contact with line	807,797	70	6,426	0.56%
Trees - sec/service	747,370	567	1,506	0.52%
Bird	684,093	428	5,196	0.48%
Ice	588,481	35	1,609	0.41%
Human error - non-company	504,634	87	5,762	0.35%
UG dig-up	348,215	39	2,547	0.24%
Customer equipment	171,056	40	11,389	0.12%
Other electric utility	32,420	7	169	0.02%
Previous lightning	24,533	20	64	0.02%
Contamination	14,828	3	134	0.01%
Other utility - non-electric	12,774	4	215	0.01%
Fire	3,707	4	46	0.00%
Vandalism	633	6	6	0.00%
Total	143,334,631	12,887	874,452	100%

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, 2019, and associated actions designed to address these outage causes.

To address outages caused by trees, Met-Ed performs cycle-based tree trimming and enhanced tree trimming in select locations. Enhanced tree trimming removes healthy limbs overhanging primary conductors. Met-Ed's options under the law are strictly limited when it comes to all forms of off right-of-way tree management. However, Met-Ed is legally permitted to identify priority off-right-of-way ("ROW") trees that are dead, dying, diseased, leaning, and significantly encroaching the corridor and remove those trees when customer consent is obtained or easement rights permit. Met-Ed is very active in pursuing this option, where available. Trees identified as a potential cause of a future outage are removed to prevent an interruption of electrical service to Met-Ed's customers. Met-Ed increased its focus on off-ROW tree removals in the third and fourth quarter of 2019. Met-Ed continues its program to mitigate trees subject to damage from the Emerald Ash Borer.

To reduce the likelihood of equipment-caused outages, Met-Ed follows inspection and maintenance ("I&M") programs⁵ 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.

Met-Ed reviews vehicle caused outages to determine if it is a repeat location warranting remedial action, which could include modifying attachment height for communications, installing a taller pole, relocating the pole or installing sectionalizing equipment to minimize customer impact.

⁵ 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. The Companies submitted their Biennial Inspection, Maintenance, Repair and Replacement Plan for the period January 1, 2019 through December 31, 2020 on September 29, 2017, which was deemed approved pursuant to 52 Pa. Code § 57.198(i).

Outages by Cause – Penelec

Outage by Cause				
4th Quarter 2019 12-Month Rolling	Penelec			
Cause	Customer Minutes	Number of Sustained Interruptions	Customers Affected	% Based on Customer Minutes
Trees off ROW - tree	51,010,144	1,954	231,638	34.92%
Equipment failure	25,382,977	2,816	254,638	17.38%
Line failure	22,958,925	1,860	172,480	15.72%
Unknown	10,029,375	1,631	63,614	6.87%
Lightning	8,578,606	717	66,604	5.87%
Vehicle	6,282,161	324	34,588	4.30%
Forced outage	5,859,407	1,049	63,052	4.01%
Wind	3,640,062	36	6,646	2.49%
Animal	3,416,929	1,327	27,198	2.34%
Trees off ROW - limb	2,422,040	330	20,063	1.66%
Human error - non-company	1,445,043	93	9,189	0.99%
Object contact with line	1,128,103	35	5,525	0.77%
Bird	1,059,277	345	11,733	0.73%
Trees - sec/service	984,026	812	3,082	0.67%
Other electric utility	752,257	104	2,513	0.51%
Trees on ROW	425,381	106	3,654	0.29%
Human error - company	241,366	56	13,493	0.17%
Overload	238,673	32	1,993	0.16%
Customer equipment	111,696	20	2,512	0.08%
UG dig-up	71,764	52	322	0.05%
Previous lightning	12,646	35	74	0.01%
Vandalism	12,438	12	256	0.01%
Other utility - non-electric	5,592	3	30	0.00%
Fire	4,650	9	54	0.00%
Ice	3,875	7	27	0.00%
Switching Error	3,125	1	125	0.00%
Contamination	1,533	6	18	0.00%
Total	146,082,071	13,772	995,121	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, 2019 and the associated actions designed to address these outage causes.

To reduce outages caused by trees, Penelec performs cycle-based tree trimming which removes selected incompatible trees within the clearing zone corridor, removes certain defective limbs that are overhanging primary conductors, controls selected incompatible brush, and removes off-ROW priority trees. Penelec's options under the law are strictly limited when it comes to all forms of off right-of-way tree management. However, Penelec is legally permitted to identify priority off-ROW trees that are dead, dying, diseased, leaning, and significantly encroaching the corridor and remove those trees when customer consent is obtained or easement rights permit. Penelec is very active in pursuing this option, where available. Trees identified as a potential cause of a future outage are removed to prevent an interruption of electrical service to Penelec's customers. Penelec increased its focus on off-ROW tree removals in the third and fourth quarter of 2019. Penelec continues its program to mitigate trees subject to damage from the Emerald Ash Borer.

To reduce the likelihood of outages caused by equipment and line failure, 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.

RECEIVED
JAN 31 2020
PA PUBLIC UTILITY COMMISSION
SECRETARY'S BUREAU

Outages by Cause – Penn Power

Outage by Cause				
4th Quarter 2019 12-Month Rolling	Penn Power			
Cause	Customer Minutes	Number of Sustained Interruptions	Customers Affected	% Based on Customer Minutes
Trees off ROW - tree	14,685,584	919	85,047	50.38%
Equipment failure	3,386,523	369	40,412	11.62%
Vehicle	2,052,413	99	16,922	7.04%
Animal	1,913,773	413	19,484	6.56%
Line failure	1,669,941	300	11,047	5.73%
Lightning	1,257,674	278	6,958	4.31%
Unknown	1,073,824	147	21,627	3.68%
Trees off ROW - limb	972,660	136	5,187	3.34%
Forced outage	619,256	80	6,582	2.12%
Bird	483,477	332	4,873	1.66%
Human error - non-company	448,302	21	3,824	1.54%
Trees - sec/service	195,566	156	586	0.67%
Trees on ROW	123,061	9	362	0.42%
Overload	77,413	23	1,847	0.27%
Wind	50,035	3	109	0.17%
Previous lightning	40,309	45	288	0.14%
Human error - company	34,425	11	227	0.12%
UG dig-up	28,191	16	282	0.10%
Object contact with line	27,708	6	1,047	0.10%
Ice	7,936	1	16	0.03%
Customer equipment	3,026	12	12	0.01%
Vandalism	330	2	2	0.00%
Fire	276	2	4	0.00%
Total	29,151,703	3,380	226,745	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, 2019 and the associated actions designed to address these outage causes.

To address outages caused by trees, Penn Power performs tree trimming which removes selected incompatible trees within the clearing zone corridor, removes certain defective limbs that are overhanging primary conductors, controls selected incompatible brush, and removes off-ROW priority trees. Penn Power's options under the law are strictly limited when it comes to all forms of off right-of-way tree management. However, Penn Power is legally permitted to identify priority off-ROW trees that are dead, dying, diseased, leaning, and significantly encroaching the corridor and remove those trees when customer consent is obtained or easement rights permit. Penn Power is very active in pursuing this option, where available. Trees identified as a potential cause of a future outage are removed to prevent an interruption of electrical service to Penn Power's customers. In addition, Penn Power performs enhanced trimming to circuits that experience high customer interruption minutes due to vegetation, which removes limbs overhanging primary conductors.

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

Penn Power reviews vehicle caused outages to determine if it is a repeat location warranting remedial action, which could include modifying attachment height for communications, installing a taller pole, relocating the pole or installing sectionalizing equipment to minimize customer impact.

Outages by Cause – West Penn

Outage by Cause				
4th Quarter 2019 12-Month Rolling	West Penn			
Cause	Customer Minutes	Number of Sustained Interruptions	Customers Affected	% Based on Customer Minutes
Trees off ROW - tree	60,036,547	3,343	252,993	42.79%
Equipment failure	20,490,398	2,231	139,896	14.61%
Line failure	17,304,671	1,403	92,942	12.33%
Vehicle	9,251,688	372	78,552	6.59%
Unknown	8,800,166	1,824	79,057	6.27%
Trees on ROW	4,430,614	535	21,169	3.16%
Trees off ROW - limb	4,418,019	234	32,451	3.15%
Forced outage	3,842,805	635	63,131	2.74%
Wind	2,274,642	81	7,870	1.62%
Animal	1,976,577	1,239	22,158	1.41%
Lightning	1,537,810	178	11,651	1.10%
Human error - non-company	1,500,349	73	11,523	1.07%
Ice	1,150,377	21	2,139	0.82%
Other electric utility	795,905	15	1,163	0.57%
Bird	736,394	331	7,849	0.52%
Human error - company	578,984	53	19,423	0.41%
Trees - sec/service	263,628	366	931	0.19%
Customer equipment	247,982	10	2,159	0.18%
Vandalism	215,824	5	558	0.15%
Overload	146,090	19	2,273	0.10%
Fire	122,486	7	366	0.09%
Object contact with line	84,004	22	406	0.06%
UG dig-up	75,378	38	508	0.05%
Other utility - non-electric	8,840	5	84	0.01%
Switching error	2,225	2	85	0.00%
Previous Lightning	136	1	1	0.00%
Total	140,292,539	13,043	851,338	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, 2019, and the associated actions designed to address these outage causes.

To reduce outages caused by trees, West Penn performs cycle-based tree trimming which removes selected incompatible trees within the clearing zone corridor, removes certain defective limbs that are overhanging primary conductors, controls selected incompatible brush, and removes off-ROW priority trees. West Penn's options under the law are strictly limited when it comes to all forms of off right-of-way tree management. However, West Penn is legally permitted to identify priority off-ROW trees that are dead, dying, diseased, leaning, and significantly encroaching the corridor and remove those trees when customer consent is obtained or easement rights permit. West Penn is very active in pursuing this option, where available. Trees identified as a potential cause of a future outage are removed to prevent an interruption of electrical service to West Penn's customers. West Penn increased its focus on off-ROW tree removals in the third and fourth quarter of 2019. West Penn continues its program to mitigate trees subject to damage from the Emerald Ash Borer.

To reduce the likelihood of equipment and line failures, 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.

RECEIVED
JAN 31 2020
PA PUBLIC UTILITY COMMISSION
SECRETARY'S BUREAU

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).⁶

Staffing Levels

Met-Ed 2019												
Department	Position	Staffing Level				Staff Added in Quarter			Staff Lost in Quarter			Plan to Hire in 2020
		1Q	2Q	3Q	4Q	New Hire – Experienced	New Hire – PSI Student	Other ⁷	Retirement	Voluntary Separation	Other ⁸	
Distribution	Line Leader	48	49	51	51							
	Line Troubleshooter	35	35	35	34						1	
	Lineman	128	136	132	128					3	1	21
Substation	Substation Leader	15	15	15	15							
	Substation Employee	66	70	75	74			2			3	4
Transmission	Line Leader	1	1	2	2							
	Lineman	10	10	9	9							
	Total	303	316	319	314			2		3	5	25

⁶ 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.

⁷ This column includes transfers and promotions.

⁸ This Column includes transfers, involuntary separations, and promotions.

RECEIVED

JAN 31 2020

Penelec 2019												
Department	Position	Staffing Level				Staff Added in Quarter			Staff Lost in Quarter			Plan to Hire in 2020
		1Q	2Q	3Q	4Q	New Hire – Experienced	New Hire – PSI Student	Other ⁹	Retirement	Voluntary Separation	Other ¹⁰	
Distribution	Line Leader	70	68	69	68			1			2	
	Line Troubleshooter	67	65	65	64			1			2	
	Lineman	122	148	146	143					1	2	25
Substation	Substation Leader	34	35	35	35							
	Substation Employee	27	38	33	33							6
Transmission	Line Leader	5	5	6	5					1		
	Lineman	21	21	20	19					1		
	Total	346	380	374	367			2		3	6	31

⁹ This column includes transfers and promotions.

¹⁰ This column includes transfers, involuntary separations, and promotions.

Penn Power 2019												
Department	Position	Staffing Level				Staff Added in Quarter			Staff Lost in Quarter			Plan to Hire in 2020
		1Q	2Q	3Q ¹¹	4Q	New Hire – Experienced	New Hire – PSI Student	Other ¹²	Retirement	Voluntary Separation	Other ¹³	
Distribution	Line Leader	23	22	22	22							
	Line Troubleshooter	9	9	9	9							
	Lineman	44	48	48	48							2
Substation	Substation Leader	5	5	5	5							
	Substation Employee	19	23	21	21							
Transmission	Line Leader	1	1	1	1							
	Lineman	3	3	3	3							
	Total	104	111	109	109							2

¹¹ The distribution and transmission lineman Q3 staffing has been adjusted to reflect actuals for the Q4 report. PSI hires were incorrectly added to other column in Q2 and were duplicated for the Q3 report in the PSI column.

¹² This column includes transfers and promotions.

¹³ This column includes transfers, involuntary separations, and promotions.

West Penn 2019												
Department	Position	Staffing Level				Staff Added in Quarter			Staff Lost in Quarter			Plan to Hire in 2020
		1Q	2Q	3Q	4Q	New Hire – Experienced	New Hire – PSI Student	Other ¹⁴	Retirement	Voluntary Separation	Other ¹⁵	
Distribution	Line Leader	54	55	56	63			9	2			
	Line Troubleshooter	67	61	63	59			2	1		5	
	Lineman	103	133	129	121			29			37	25
Substation	Substation Leader	16	21	22	21				1			
	Substation Employee	72	75	74	72			12	1		13	5
Transmission	Line Leader	0	0	1	1							
	Lineman	1	5	4	4							
Total		313	350	349	341			52	5		55	30

¹⁴ This column includes transfers and promotions.

¹⁵ This column includes transfers, involuntary separations, and promotions.

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 call-outs 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 Penn¹⁷ 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 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.

¹⁷ Penelec, Penn Power and West Penn utilize ARCOS. Met-Ed transitioned to ARCOS during the fourth quarter of 2019.

ATTACHMENT A

Worst Performing Circuits - Reliability Indices

RECEIVED

JAN 31 2020

PA PUBLIC UTILITY COMMISSION
SECRETARY'S BUREAU

Met-Ed													
Circuit Rank	Substation	Circuit	District	Average Customers	Outages	Lockouts	Customer Minutes	Customers Affected	SAIDI Impact	SAIDI	SAIFI	CAIDI	MAIFI
1	No Bangor	00826-3	Easton	3,183	163	1	5,489,623	18,964	9.70	1,724.67	5.958	289.48	1.37
2	Fox Hill	00816-3	Stroudsburg	3,621	72	1	4,467,001	7,196	7.89	1,233.64	1.987	620.76	1.58
3	Shawnee	00895-3	Stroudsburg	3,669	123	1	3,807,048	9,679	6.72	1,037.63	2.638	393.33	0.90
4	Mountain	00744-4	Dillsburg	1,823	111	1	3,265,495	7,365	5.77	1,791.28	4.04	443.38	0.40
5	Carsonia	00764-1	Reading	2,888	48	2	1,675,478	8,525	2.96	580.15	2.952	196.54	0.00
6	Huffs Church	00600-1	Boyertown	1,434	116	1	1,558,500	3,937	2.75	1,086.82	2.745	395.86	0.00
7	S Nazareth	00809-3	Easton	3,208	57	2	1,378,179	10,303	2.43	429.61	3.212	133.76	0.00
8	Bern Church	00789-1	Reading	1,428	75	0	1,338,472	3,778	2.36	937.31	2.646	354.28	0.00
9	Shawnee	00899-3	Stroudsburg	1,574	53	3	1,233,744	4,407	2.18	783.83	2.8	279.95	1.40
10	Lynnville	00735-1	Hamburg	1,376	42	1	1,192,589	3,892	2.11	866.71	2.828	306.42	1.00
11	North Cornwall	00610-2	Lebanon	2,138	68	1	1,155,317	8,127	2.04	540.37	3.801	142.16	3.03
12	Flying Hills	00777-1	Reading	1,776	82	0	1,154,593	5,396	2.04	650.11	3.038	213.97	1.00
13	Crossroads	00728-4	York	1,152	65	1	1,106,870	4,164	1.95	960.82	3.615	265.82	0.30
14	Taxville	00575-4	York	2,218	42	2	1,032,006	5,594	1.82	465.29	2.522	184.48	0.44
15	Saylorsburg	00114-3	Stroudsburg	692	48	1	1,028,314	2,240	1.82	1,486.00	3.237	459.07	1.00
16	Walker	00865-3	Stroudsburg	2,224	64	0	1,025,382	3,875	1.81	461.05	1.742	264.61	0.00
17	Fairview	00519-4	Hanover	2,709	35	2	1,015,668	8,905	1.79	374.92	3.287	114.06	4.93
18	Hokes	00587-4	York	893	27	1	986,858	2,899	1.74	1,105.10	3.246	340.41	3.00
19	Ferndale	00871-3	Easton	486	42	1	955,680	2,766	1.69	1,966.42	5.691	345.51	1.00
20	Water Gap	00109-3	Stroudsburg	206	23	1	954,768	505	1.69	4,634.80	2.451	1,890.63	0.00
21	Barto	00705-1	Boyertown	690	65	1	904,534	2,736	1.60	1,310.92	3.965	330.6	0.00
22	Hill	00734-4	York	1,639	43	1	880,342	2,972	1.55	537.12	1.813	296.21	1.09
23	Campbelltown	00731-2	Lebanon	2,848	86	1	867,564	6,023	1.53	304.62	2.115	144.04	0.10
24	Mountain	00740-4	Dillsburg	2,668	45	1	867,219	4,780	1.53	325.04	1.792	181.43	1.18
25	Birdsboro	00756-1	Reading	1,411	87	2	863,799	4,546	1.53	612.19	3.222	190.01	7.60
26	Lickdale	00626-2	Lebanon	1,464	59	2	827,294	5,041	1.46	565.09	3.443	164.11	0.00
27	Painted Sky	00650-1	Reading	1,780	25	2	810,397	4,688	1.43	455.28	2.634	172.87	0.00
28	Berville	00786-1	Hamburg	1,849	100	1	800,914	5,770	1.41	433.16	3.121	138.81	1.00

Met-Ed													
Circuit Rank	Substation	Circuit	District	Average Customers	Outages	Lockouts	Customer Minutes	Customers Affected	SAIDI Impact	SAIDI	SAIFI	CAIDI	MAIFI
29	Palmer	00657-3	Easton	1,445	32	0	767,243	5,514	1.36	530.96	3.816	139.14	0.84
30	Windsor	00797-4	York	1,531	100	3	766,219	7,222	1.35	500.47	4.717	106.1	7.01
31	Hill	00737-4	York	2,271	44	0	744,316	6,804	1.31	327.75	2.996	109.39	1.00
32	Crossroads	00729-4	York	813	33	4	732,883	3,353	1.29	901.46	4.124	218.58	0.00
33	Raintree	00642-4	York	1,830	33	1	704,165	3,816	1.24	384.79	2.085	184.53	3.81
34	Birdsboro	00757-1	Reading	1,894	78	1	687,568	4,021	1.21	363.02	2.123	170.99	1.06
35	S 6Th St	00415-2	Lebanon	1,186	8	2	663,552	2,580	1.17	559.49	2.175	257.19	0.00
36	Queen St	00522-4	York	2,114	29	0	650,261	3,419	1.15	307.6	1.617	190.19	0.00
37	Windsor	00795-4	York	1,017	79	0	648,358	1,803	1.15	637.52	1.773	359.6	0.00
38	East Prospect	00765-4	York	1,921	47	4	635,317	9,480	1.12	330.72	4.935	67.02	0.00
39	Newberry	00576-4	York	1,771	113	0	623,727	6,791	1.10	352.19	3.835	91.85	1.04

Penelec													
Circuit Rank	Substation	Circuit Desc	District	Average Customers	Outages	Lockouts	Customer Minutes	Customers Affected	SAIDI Impact	SAIDI	SAIFI	CAIDI	MAIFI
1	Dubois	00137-23	Dubois	3,045	111	1	1,731,882	14,933	2.99	0.609	4.904	116.0	3.012
2	Logan	00700-81	Lewistown	953	47	0	1,604,721	3,921	2.77	0.673	4.114	409.3	0.667
3	Thompson	00436-65	Montrose	1,343	88	0	1,411,589	4,105	2.44	0.797	3.057	343.9	1.431
4	Revloc	00069-72	Altoona	552	7	1	1,357,373	1,658	2.34	0.780	3.004	818.7	0.000
5	Carlisle Pike	00643-83	Shippensburg	3,195	26	2	1,225,291	9,109	2.11	0.741	2.851	134.5	0.843
6	Milroy	00128-81	Lewistown	1,803	38	2	1,212,735	3,833	2.09	0.984	2.126	316.4	0.651
7	Rolling Meadows	00310-31	Eric	3,303	39	1	1,124,335	11,057	1.94	0.579	3.348	101.7	0.203
8	Lake Como	00787-65	Montrose	890	36	1	1,104,376	3,928	1.91	0.432	4.413	281.2	1.561
9	Lake Como	00786-65	Montrose	466	23	0	1,085,572	1,437	1.87	0.607	3.084	755.4	0.000
10	Piney	00523-51	Oil City	1,506	55	1	1,066,391	3,639	1.84	0.761	2.416	293.0	0.040
11	Thompson	00446-65	Montrose	507	34	0	1,056,277	2,339	1.82	0.395	4.613	451.6	0.000
12	East Sayre	00518-61	Towanda	950	25	1	1,031,720	2,465	1.78	0.686	2.595	418.5	0.043
13	Madera	00165-22	Philipsburg	1,707	49	1	1,009,361	5,103	1.74	0.582	2.989	197.8	0.734
14	Grover	00527-63	Towanda	1,051	55	1	1,007,731	3,462	1.74	0.528	3.294	291.1	0.000
15	Springboro	00237-52	Meadville	2,768	88	0	994,377	7,163	1.72	0.663	2.588	138.8	0.711
16	N Meshoppen Tran	00534-65	Montrose	927	52	2	964,036	2,340	1.66	0.659	2.524	412.0	0.826
17	Madera	00166-22	Philipsburg	1,539	50	0	956,612	9,442	1.65	0.269	6.135	101.3	0.902
18	Curryville	00644-71	Altoona	1,787	63	0	935,308	4,082	1.61	0.706	2.284	229.1	1.008
19	Marienville	00328-51	Oil City	1,099	51	0	900,384	2,149	1.55	0.794	1.955	419.0	0.000
20	Fairview Altoona	00005-71	Altoona	750	5	0	896,282	2,295	1.55	0.505	3.060	390.5	0.000
21	Birmingham	00168-22	Philipsburg	1,082	46	1	824,110	4,014	1.42	0.383	3.710	205.3	0.116
22	Brookville	00125-23	Dubois	617	34	1	799,490	4,439	1.38	0.192	7.194	180.1	0.326
23	Warren South	00220-41	Warren	2,855	87	1	797,271	7,317	1.38	0.537	2.563	109.0	0.021
24	Russell Hill	00282-65	Montrose	999	59	0	796,995	2,768	1.37	0.496	2.771	287.9	0.094
25	Viscose Hill	00116-81	Lewistown	684	13	2	789,546	1,253	1.36	0.744	1.832	630.1	0.009
26	Logan	00701-81	Lewistown	1,418	29	1	785,679	3,233	1.36	0.595	2.280	243.0	0.067
27	Wellsboro	00324-63	Mansfield Pa	263	33	3	783,379	904	1.35	0.393	3.437	866.6	1.798
28	Utica Junction	00331-51	Oil City	643	46	2	748,736	1,868	1.29	0.445	2.905	400.8	1.009
29	Edgewood	00089-13	Indiana	868	32	2	698,768	3,258	1.21	0.321	3.753	214.5	0.215
30	Covington	00729-63	Mansfield Pa	774	26	0	686,418	1,443	1.18	0.635	1.864	475.7	1.003
31	Reedsville	00127-81	Lewistown	924	24	0	683,297	1,649	1.18	0.661	1.785	414.4	0.583
32	Dushore	00669-62	Towanda	243	10	1	637,536	683	1.10	0.391	2.811	933.4	3.342

Penelec													
Circuit Rank	Substation	Circuit Desc	District	Average Customers	Outages	Lockouts	Customer Minutes	Customers Affected	SAIDI Impact	SAIDI	SAIFI	CAIDI	MAIFI
33	Philipsburg	00162-22	Philipsburg	3,157	86	2	633,370	9,877	1.09	0.349	3.129	64.1	2.623
34	East Pike	00095-13	Indiana	3,846	28	2	623,964	8,501	1.08	0.487	2.210	73.4	1.662
35	Blairsville East	00082-13	Indiana	1,562	55	0	612,397	3,008	1.06	0.549	1.926	203.6	0.000
36	East Pike	00094-13	Indiana	1,109	7	1	606,435	2,934	1.05	0.395	2.646	206.7	1.307
37	Utica Junction	00318-51	Oil City	827	60	0	587,006	1,894	1.01	0.442	2.290	309.9	1.042
38	Mansfield	00559-63	Mansfield Pa	561	23	2	575,299	1,803	0.99	0.309	3.214	319.1	0.230
39	Monroeton	00770-62	Towanda	580	11	0	571,999	1,293	0.99	0.443	2.229	442.4	0.333
40	Tyrone North Sub	00643-22	Philipsburg	1,477	10	0	552,498	3,800	0.95	0.370	2.573	145.4	1.003
41	Industrial	00170-81	Lewistown	766	15	1	545,034	1,444	0.94	0.499	1.885	377.4	1.000
42	Cambria County Priso	00202-72	Altoona	89	5	1	543,112	1,849	0.94	0.045	20.775	293.7	0.000
43	New Albany Sw Stati	00526-62	Towanda	160	4	2	539,397	626	0.93	0.238	3.913	861.7	2.213
44	Tiffany	00440-65	Montrose	1,296	32	0	531,571	5,337	0.92	0.223	4.118	99.6	0.150
45	Two Mile	00127-42	Bradford	1,286	42	1	521,621	2,380	0.90	0.486	1.851	219.2	0.983
46	Mcconnellstown	00099-82	Altoona	775	19	1	521,332	1,376	0.90	0.507	1.775	378.9	0.708
47	Hilltop	00048-11	Johnstown	1,545	15	1	513,429	3,269	0.89	0.419	2.116	157.1	1.341
48	Ansonia	00740-63	Mansfield Pa	170	21	0	506,792	302	0.87	0.492	1.776	1,678.1	3.000
49	North Warren	00207-41	Warren	1,363	58	1	501,245	3,274	0.86	0.360	2.402	153.1	1.970
50	Timblin	00103-23	Dubois	761	35	1	499,269	4,508	0.86	0.145	5.924	110.8	1.359
51	Boyer	00584-31	Erie	1,692	29	1	498,903	3,484	0.86	0.418	2.059	143.2	1.427
52	Falls	00297-65	Montrose	798	21	0	497,351	1,659	0.86	0.413	2.079	299.8	4.991
53	Green Garden	00539-31	Erie	1,072	10	1	495,194	2,073	0.85	0.442	1.934	238.9	0.000
54	Shawville	00151-21	Clearfield	2,221	43	1	494,976	4,212	0.85	0.450	1.896	117.5	0.172
55	Thompson	00442-65	Montrose	648	23	1	489,366	1,759	0.84	0.311	2.715	278.2	0.000
56	Union City Sub	00206-43	Erie	2,849	107	0	486,745	4,900	0.84	0.488	1.720	99.3	1.081
57	Wyalusing Sub	00532-62	Towanda	737	45	1	481,711	1,358	0.83	0.451	1.843	354.7	1.651
58	Port Allegany Sub	00151-42	Bradford	481	30	1	468,138	898	0.81	0.433	1.867	521.3	0.000
59	L And R	00120-81	Lewistown	729	17	1	457,891	1,794	0.79	0.321	2.461	255.2	0.000
60	Warren South	00219-41	Warren	320	25	2	454,132	1,455	0.78	0.172	4.547	312.1	0.000
61	Shelocta	00102-13	Indiana	1,143	27	1	453,839	4,531	0.78	0.198	3.964	100.2	0.000
62	Salix	00070-11	Johnstown	2,337	41	0	453,611	4,659	0.78	0.393	1.994	97.4	1.692

Penn Power													
Circuit Rank	Substation	Circuit	District	Average Customers	Outages	Lockouts	Customer Minutes	Customers Affected	SAIDI Impact	SAIDI	SAIFI	CAIDI	MAIFI*
1	Stoneboro	W-131	Clark	1,302	67	1	916,628	3,745	5.58	704.02	2.876	244.8	0.0
2	Camp Reynolds	W-134	Clark	1,736	77	1	745,237	3,900	4.54	429.28	2.247	191.1	0.0
3	Thompson Run	D550	Zelienople	976	28	1	658,045	3,705	4.01	674.23	3.796	177.6	0.0
4	Stoneboro	W-132	Clark	1,119	55	1	641,799	2,623	3.91	573.55	2.344	244.7	0.0
5	Perry	W-156	Clark	1,049	50	1	544,778	2,502	3.32	519.33	2.385	217.7	0.0
6	West Middlesex	W-138	Clark	1,362	46	2	538,003	3,599	3.28	395.01	2.642	149.5	0.0
7	Evans City	D611	Zelienople	941	44	0	513,414	1,168	3.13	545.60	1.241	439.6	0.0
8	Henderson	W-281	Clark	695	26	0	497,655	1,112	3.03	716.05	1.600	447.5	0.0
9	Bedford	D-445	New Castle	982	51	1	467,966	1,873	2.85	476.54	1.907	249.8	0.0

West Penn Power												
Circuit Rank	Substation	Circuit	District	Average Customers	Outages	Lockouts	Customer Minutes	Customers Affected	SAIDI Impact	SAIDI	SAIFI	CAIDI
1	Piney Fork	Cochran Mill	Charleroi	1,189	5	1	1,768,630	2,704	2.47	1,487.49	2.27	654.1
2	Franklin	Rogersville	Jefferson	812	59	3	1,615,192	3,198	2.25	1,989.15	3.94	505.1
3	Flintstone	Chaneyville	Hyndman	563	72	1	1,450,520	2,996	2.02	2,576.41	5.32	484.2
4	Waterville	Waterville	State College	355	25	3	1,341,832	2,890	1.87	3,779.81	8.14	464.3
5	Mather	Jefferson	Jefferson	1,363	27	2	1,325,437	3,313	1.85	972.44	2.43	400.1
6	Piney Fork	Stoltz	Charleroi	1,822	27	2	1,305,078	5,839	1.82	716.29	3.20	223.5
7	Rutan	Bristoria	Jefferson	1,126	89	0	1,213,341	3,794	1.69	1,077.57	3.37	319.8
8	North Washington	Poke Run	Arnold	1,230	66	1	1,143,874	5,795	1.59	929.98	4.71	197.4
9	Westraver	Pittsburgh Coal	Charleroi	1,852	33	1	1,116,551	7,534	1.56	602.89	4.07	148.2
10	Dutch Fork	Claysville	Washington Pa	1,583	75	1	1,109,389	4,564	1.55	700.81	2.88	243.1
11	St. Clair	Mclaughlin	Boyce	649	29	2	1,097,364	3,480	1.53	1,690.85	5.36	315.3
12	Avella	W Middletown	Washington Pa	1,142	63	0	1,064,975	2,742	1.48	932.55	2.40	388.4
13	Cecil	Muse	Boyce	1,369	7	0	944,130	2,615	1.32	689.65	1.91	361.0
14	Murrycrest	Christy Road	Jeannette	1,032	38	2	912,892	3,490	1.27	884.59	3.38	261.6
15	St. Clair	Skyridge	Boyce	898	23	4	879,465	5,466	1.23	979.36	6.09	160.9
16	Roundhill	Roundhill	Charleroi	947	36	0	868,085	2,146	1.21	916.67	2.27	404.5
17	Bethel Park	Clifton	Boyce	923	15	9	863,909	7,858	1.20	935.98	8.51	109.9
18	Bethlen	Darlington	Latrobe	1,246	72	0	802,447	5,100	1.12	644.02	4.09	157.3
19	Smith	Florence	Washington Pa	777	51	2	798,960	4,515	1.11	1,028.26	5.81	177.0
20	Cooperstown	Twin Willows	Butler	1,579	30	2	796,290	5,781	1.11	504.30	3.66	137.7
21	Buckeye No.3	Paisley	Jefferson	663	25	0	795,801	1,177	1.11	1,200.30	1.78	676.1
22	Bedford Road	Rt 220 North	Hyndman	788	38	0	763,646	2,685	1.06	969.09	3.41	284.4
23	Whiteley	Mt. Morris	Jefferson	1,065	37	0	734,913	2,038	1.02	690.06	1.91	360.6
24	Bethlen	Laurel Valley	Latrobe	1,443	69	4	707,264	7,391	0.99	490.13	5.12	95.7
25	Purcell	Artemas	Hyndman	560	37	1	692,931	2,311	0.97	1,237.38	4.13	299.8
26	Shanor Manor	Oneida	Butler	1,169	34	0	689,904	2,843	0.96	590.17	2.43	242.7

West Penn Power												
Circuit Rank	Substation	Circuit	District	Average Customers	Outages	Lockouts	Customer Minutes	Customers Affected	SAIDI Impact	SAIDI	SAIFI	CAIDI
27	Blue Ridge Summit	Sabillasville	Waynesboro	961	37	0	659,110	2,612	0.92	685.86	2.72	252.3
28	Fort Palmer	West Fairfield	Latrobe	960	79	0	631,433	2,136	0.88	657.74	2.23	295.6
29	North Fayette	Tyre	Boyce	1,632	52	1	624,004	3,784	0.87	382.36	2.32	164.9
30	Kane	Russell City	St Marys	579	18	0	621,851	2,184	0.87	1,074.01	3.77	284.7
31	Kiski Valley Distrib	Kittanning Rd	Arnold	1,785	38	1	612,535	3,366	0.85	343.16	1.89	182.0
32	Hyndman	Route 96 South	Hyndman	692	39	0	608,045	2,194	0.85	878.68	3.17	277.1
33	California	Malden	Charleroi	1,063	32	0	605,173	3,004	0.84	569.31	2.83	201.5
34	Atherton	East Residential	State College	1,992	27	2	596,966	6,760	0.83	299.68	3.39	88.3
35	Bethlen	Laughlintown	Latrobe	1,089	53	2	590,257	3,733	0.82	542.02	3.43	158.1
36	Amity	Amity	Washington Pa	507	41	0	582,693	1,886	0.81	1,149.30	3.72	309.0
37	Finleyville	Finleyville	Charleroi	1,302	27	0	562,256	2,486	0.78	431.84	1.91	226.2
38	Lagonda	Club Forty	Washington Pa	754	25	0	560,026	1,672	0.78	742.74	2.22	334.9
39	Houston	Weavertown	Washington Pa	2,145	30	4	554,910	8,638	0.77	258.70	4.03	64.2
40	Smith	Francis Mine	Washington Pa	1,431	50	1	544,678	2,958	0.76	380.63	2.07	184.1

ATTACHMENT B

Worst Performing Circuits – Remedial Actions

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	No Bangor	00826-3	<i>Performance was driven by trees off ROW (47%), a vehicle accident (35%), and equipment failure (10%)</i>			2Q 2019 3Q 2019 4Q 2019
			Three-phase overhead inspection	Complete	Feb-19	
			Repair items identified during circuit inspection	Complete	Sep-19	
			Repair items identified during circuit inspection	Complete	Oct-19	
2	Fox Hill	00816-3	<i>Performance was driven by trees off ROW (51%), equipment failure (29%), and limbs off ROW (11%)</i>			
			Overhead circuit inspection	Complete	Sep-19	
			Enhanced tree removal	Complete	Nov-19	
			Repair items identified during circuit inspection	To be Completed 2020	25%	
3	Shawnee	00895-3	<i>Performance was driven by trees off ROW (59%) and equipment failure (15%)</i>			1Q 2019 2Q 2019 3Q 2019 4Q 2019
			Three-phase overhead inspection	Complete	Jan-19	
			Repair items identified during circuit inspection	Complete	Mar-19	
			On cycle tree trimming	To be Completed 2020	0%	
4	Mountain	00744-4	<i>Performance was driven by trees off ROW (86%)</i>			1Q 2019 2Q 2019 3Q 2019 4Q 2019
			Perform accelerated backbone and three phase circuit assessment	Complete	Mar-19	
			Replace pole from inspection	Complete	Jun-19	
			Replace pole from inspection	Complete	Aug-19	
			Upgrade Zone 2 recloser to EMS radio controlled	Complete	Oct-19	
			Enhanced tree trimming	Complete	Dec-19	
Overhead circuit inspection	To be Completed 2020	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	
5	Carsonia	00764-1	<i>Performance was driven by trees off ROW (47%) and vehicle (33%)</i>				1Q 2019 2Q 2019 3Q 2019 4Q 2019
			Targeted forestry inspection	Complete	Mar-19		
			Targeted forestry inspection	Complete	Jun-19		
			Overhead circuit inspection	Complete	Jun-19		
			Engineering circuit tie addition review	Complete	Sep-19		
			Mainline pole replacement	Complete	Oct-19		
			Engineering circuit split review	Complete	Oct-19		
			Engineering circuit tie additional review	Complete	Dec-19		
6	Huffs Church	00600-1	<i>Performance was driven by trees off ROW (76%) and vehicle (15%)</i>				1Q 2019 2Q 2019 3Q 2019 4Q 2019
			Thermovision and overhead inspection	Complete	Jan-19		
			Targeted forestry inspection	Complete	Feb-19		
			Replace mainline guy wire from inspection	Complete	Mar-19		
			Replace mainline pole from inspection	Complete	Jul-19		
			Replace crossarm from inspection	Complete	Sep-19		
			Repair mainline guy wire from inspection	Complete	Oct-19		
			Replace mainline crossarm	Complete	Nov-19		
			Engineering circuit tie addition review	Complete	Dec-19		
			Enhanced Tree Trimming	To be Completed 2020	0%		
			On cycle tree trimming	To be Completed 2020	0%		
			Overhead circuit inspection	To be Completed 2020	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	
7	S Nazareth	00809-3	<i>Performance was driven by trees off ROW (68%), line failure (11%), and equipment failure (10%)</i>				1Q 2019 2Q 2019 3Q 2019 4Q 2019
			Replace pole from inspection	Complete	Jan-19		
			Three-phase overhead inspection	Complete	Feb-19		
			Install SCADA recloser #1	Complete	Dec-19		
			Install SCADA recloser #2	Complete	Dec-19		
			Install SCADA recloser #3	Complete	Dec-19		
			Install SCADA recloser #4	Complete	Dec-19		
			Construct circuit tie	To be Completed 2020	50%		
			Targeted Mainline Circuit Rehabilitation	To be Completed 2020	50%		
			On cycle tree trimming	To be Completed 2020	0%		
8	Bern Church	00789-1	<i>Performance was driven by trees off ROW (92%)</i>				1Q 2019 2Q 2019 3Q 2019 4Q 2019
			Three-phase overhead inspection	Complete	Mar-19		
			Replace mainline pole from inspection	Complete	Jun-19		
			Replace mainline pole from inspection	Complete	Jun-19		
			Targeted forestry inspection	Complete	Aug-19		
			Enhanced Tree Trimming	Complete	Oct-19		
9	Shawnee	00899-3	<i>Performance was driven by trees off ROW (91%)</i>				1Q 2019 2Q 2019 4Q 2019
			Thermovision and overhead inspection	Complete	Feb-19		
			Three-phase overhead inspection	Complete	Jan-19		

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	
10	Lynnville	00735-1	<i>Performance was driven by trees off ROW (60%) and vehicle (33%)</i>				1Q 2019 2Q 2019 3Q 2019 4Q 2019
			Upgrade mainline recloser	Complete	Mar-19		
			Replace line clamp from thermovision inspection #1	Complete	Apr-19		
			Overhead circuit inspection	Complete	May-19		
			Install SCADA switch #1	Complete	Sep-19		
			Replace arrester from thermovision inspection	Complete	Oct- 19		
			Install SCADA switch #2	Complete	Oct- 19		
			Replace line clamp from thermovision inspection #2	Complete	Nov- 19		
			Replace pole from thermovision inspection	Complete	Nov- 19		
Install SCADA switch #3	To be Completed 2020	75%					
11	N. Cornwall	00610-2	<i>Performance was driven by trees off ROW (68%)</i>				1Q 2019 2Q 2019 3Q 2019 4Q 2019
			Three-phase overhead inspection	Complete	Jan-19		
			Repair/replace high priority items identified during inspection	Complete	Oct-19		
			Remove switch that limits backfeed capacity	Complete	Dec-19		
			Porcelain cutout replacement in the lockout zone	Complete	Dec-19		
			On cycle tree trimming	To be Completed 2020	0%		
12	Flying Hills	00777-1	<i>Performance was driven by trees off ROW (76%) and vehicle (15%)</i>				1Q 2019 2Q 2019 3Q 2019 4Q 2019
			Targeted forestry inspection	Complete	Mar-19		
			Replace mainline underground cable in large residential development	Complete	May-19		
			On cycle tree trimming	To be Completed 2020	4%		
			Overhead circuit inspection	To be Completed 2020	0%		
13	Crossroads	00728-4	<i>Performance was driven by trees off ROW (37%) and vehicle (38%)</i>				1Q 2019 2Q 2019 3Q 2019 4Q 2019
			Post storm patrol	Complete	Feb-19		
			Lockout zone circuit inspection	Complete	Apr-19		
			Install SCADA switch	Complete	Nov-19		
			On cycle tree trimming	To be Completed 2020	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
14	Taxville	00575-4	<i>Performance was driven by trees off ROW (69%) and underground dig-in (22%)</i>			3Q 2019 4Q 2019
			Install SCADA recloser	Complete	Sep-19	
			Engineering review to identify for targeted mainline inspection	Complete	Sep-19	
			Repair/Replace items from capacitor inspection	Complete	May-19	
15	Saylorsburg	00114-3	<i>Performance was driven by trees off ROW (46%) and vehicle (36%)</i>			1Q 2019 2Q 2019 3Q 2019 4Q 2019
			On cycle tree trimming	Complete	Dec-19	
			Thermovision and overhead inspection	Complete	Feb-19	
16	Walker	00865-3	<i>Performance was driven by trees off ROW (82%) and equipment failure (11%)</i>			
			On cycle tree trimming	Complete	Dec-19	
17	Fairview	00519-4	<i>Performance was driven by trees off ROW (91%)</i>			2Q 2019 3Q 2019 4Q 2019
			Perform accelerated backbone and three phase circuit assessment	Complete	Jan-19	
			Thermovision and overhead inspection	Complete	Jan-19	
			Enhanced tree trimming	Complete	Nov-19	
			Overhead circuit inspection	To be Completed 2020	0%	
18	Hokes	00587-4	<i>Performance was driven by trees off ROW (86%) and trees on ROW (11%)</i>			2Q 2019 3Q 2019 4Q 2019
			Replace regulator	Complete	Apr-19	
			Engineering review - Identify future SCADA devices	Complete	Jun-19	
			Install SCADA switch #1	Complete	Sep-19	
			Install SCADA switch #2	Complete	Sep-19	
			Engineering review - Identify for targeted mainline inspection	Complete	Sep-19	
Repair/replace high priority items identified during inspection	To be Completed 2020	10%				
19	Ferndale	00871-3	<i>Performance was driven by trees off ROW (63%) and equipment failure (16%)</i>			1Q 2019 2Q 2019 3Q 2019 4Q 2019
			Three-phase overhead inspection	Complete	Feb-19	
			On cycle tree trimming	To be Completed 2020	0%	
20	Water Gap	00109-3	<i>Performance was driven by trees off ROW (84%) and trees on secondary/service (12%)</i>			
			Three-phase overhead inspection	Complete	Jan-19	
			Overhead circuit inspection	To be Completed 2020	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	Barto	00705-1	<i>Performance was driven by trees off ROW (74%)</i>			1Q 2019 2Q 2019 3Q 2019 4Q 2019
			Three-phase overhead inspection	Complete	Mar-19	
			Targeted forestry inspection	Complete	May-19	
			Enhanced tree trimming	Complete	Nov-19	
			On cycle tree trimming	To be Completed 2020	4%	
			Overhead circuit inspection	To be Completed 2020	0%	
22	Hill	00734-4	<i>Performance was driven by trees off ROW (90%)</i>			3Q 2019 4Q 2019
			Repair/Replace items from Capacitor Inspection #1	Complete	Apr-19	
			Repair/replace high priority items identified during overhead circuit patrol	Complete	Jul-19	
			Replace priority pole	Complete	Oct-19	
			Three-phase overhead inspection	Complete	Oct-19	
			Repair/Replace items from Capacitor Inspection #2	To be Completed 2020	50%	
			Repair/Replace items from Capacitor Inspection #3	To be Completed 2020	50%	
			On cycle Tree Trimming	To be Completed 2020	0%	
23	Campbelltown	00731-2	<i>Performance was driven by trees off ROW (41%) and vehicle (33%)</i>			2Q 2019 3Q 2019 4Q 2019
			Three-phase overhead inspection	Complete	Jan-19	
			Replace crossarm from inspection	Complete	Dec-19	
			Enhanced three phase tree trimming	Complete	Dec-19	
			On cycle tree trimming	To be Completed 2020	0%	
24	Mountain	00740-4	<i>Performance was driven by trees off ROW (83%) and equipment failures (8%)</i>			1Q 2019 2Q 2019 3Q 2019 4Q 2019
			Perform accelerated backbone and three phase circuit assessment	Complete	Feb-19	
			Install SCADA recloser #1	Complete	Nov-19	
			Install SCADA recloser #2	Complete	Oct-19	
			Enhanced tree removal	Complete	Dec-19	
			Overhead circuit inspection	To be Completed 2020	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
25	Birdsboro	00756-1	<i>Performance was driven by trees off ROW (87%)</i>			1Q 2019 2Q 2019 3Q 2019 4Q 2019
			Overhead mainline circuit inspection	Complete	Mar-19	
			Mainline Tie Recloser Upgrade	Complete	Mar-19	
			Targeted forestry inspection	Complete	Mar-19	
			Replace mainline poles	Complete	May-19	
			Targeted tree trimming to improve reliability	Complete	Oct-19	
			Replace mainline pole #1	Complete	Nov-19	
			Replace mainline pole #2	Complete	Nov-19	
			Replace mainline pole #3	Complete	Nov-19	
			Replace mainline pole #4	Complete	Nov-19	
			Replace mainline pole #5	Complete	Nov-19	
			Replace mainline pole #6	Complete	Nov-19	
			Install additional mainline switch	Complete	Dec-19	
26	Lickdale	00626-2	<i>Performance was driven by trees off ROW (41%) and vehicle (30%)</i>			1Q 2019 2Q 2019 3Q 2019 4Q 2019
			Three-phase overhead inspection	Complete	Jan-19	
			Repair/replace high priority items identified during inspection	Complete	Mar-19	
			Install SCADA switch #1	Complete	Aug-19	
			Install SCADA switch #2	Complete	Aug-19	
			Install SCADA switch #3	Complete	Aug-19	
			Install SCADA recloser #1	Complete	Aug-19	
			GOAB Replacement	Complete	Dec-19	
			Targeted Mainline Circuit Rehabilitation #1	To be Completed 2020	50%	
			Targeted Mainline Circuit Rehabilitation #2	To be Completed 2020	50%	
			Targeted Mainline Circuit Rehabilitation #3	To be Completed 2020	50%	
			Overhead circuit inspection	To be Completed 2020	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
27	Painted Sky	00650-1	<i>Performance was driven by trees off ROW (78%)</i>			
			Targeted forestry inspection	Complete	Jun-19	
			Replace priority poles	Complete	Aug-19	
			Targeted forestry inspection	Complete	Oct-19	
			Install additional mainline disconnects	To be Completed 2020	50%	
28	Bernville	00786-1	<i>Performance was driven by trees off ROW (51%) and line and equipment failures (16%)</i>			1Q 2019 2Q 2019 3Q 2019 4Q 2019
			Three-phase overhead inspection	Complete	Mar-19	
			Targeted Mainline Circuit Rehabilitation Engineering Review	Complete	May-19	
			Replace crossarm brace from thermovision inspection	Complete	May-19	
			Replace line clamp from thermovision inspection	Complete	Jun-19	
			Replace mainline crossarm braces from inspection	Complete	Sep-19	
			Upgrade mainline recloser	Complete	Sep-19	
			Install SCADA recloser	Complete	Aug- 19	
			Install SCADA switch #1	Complete	Oct- 19	
			Install SCADA switch #2	Complete	Oct- 19	
			Replace crossarm brace from thermovision inspection	To be Completed 2020	95%	
			Replace crossarm brace from thermovision inspection	To be Completed 2020	95%	
			Targeted mainline circuit rehabilitation #1	To be Completed 2020	50%	
			Targeted mainline circuit rehabilitation #2	To be Completed 2020	95%	
Targeted mainline circuit rehabilitation #3	To be Completed 2020	50%				
29	Palmer	00657-3	<i>Performance was driven by trees off ROW (65%) and object in contact with line (17%)</i>			3Q 2019 4Q 2019
			Thermovision and overhead inspection	Complete	Mar-19	
			Install SCADA recloser	To be Completed 2020	50%	
			Overhead circuit inspection	To be Completed 2020	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
30	Windsor	00797-4	<i>Performance was driven by trees off Row (85%) and forced outage (6%)</i>			2Q 2019 3Q 2019 4Q 2019
			Install SCADA switch #1	Complete	Sep-19	
			Install SCADA switch #2	Complete	Sep-19	
			Install SCADA switch #3	Complete	Sep-19	
			Install SCADA switch #4	Complete	Sep-19	
			Replace/repair high priority items identified during overhead circuit patrol	Complete	Oct-19	
			Targeted mainline inspection	Complete	Oct-19	
			Enhanced tree removal	Complete	Dec-19	
31	Hill	00737-4	<i>Performance was driven by equipment failure (43%), lightning strike (26%), and forced outage (22%)</i>			3Q 2019 4Q 2019
			Install SCADA switch	Complete	Dec-19	
			Post storm patrol	Complete	Feb-19	
			On cycle tree trimming	To be Completed 2020	0%	
32	Crossroads	00729-4	<i>Performance was driven by equipment failure (43%), lightning strike (26%), and forced outage (22%)</i>			3Q 2019 4Q 2019
			Replace H-Frame Structures	Complete	Oct-19	
			Install SCADA switch #1	Complete	Nov-19	
			Install SCADA recloser #1	Complete	Dec-19	
			Replace recloser #1	Complete	Oct-19	
			Replace recloser #2	Complete	Oct-19	
On cycle tree trimming	To be Completed 2020	0%				
33	Raintree	00642-4	<i>Performance was driven by vehicle (69%)</i>			2Q 2019 3Q 2019 4Q 2019
			Repair/Replace items from Capacitor Inspection	Complete	Jan-19	
			Repair/Replace items from Capacitor Inspection	Complete	Feb-19	
			Repair/Replace items from Capacitor Inspection	Complete	May-19	
			Repair/Replace items from Recloser Inspection	Complete	Oct-19	

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	
34	Birdsboro	00757-1	<i>Performance was driven by trees off ROW (53%) and vehicle (34%)</i>				2Q 2019 3Q 2019 4Q 2019
			Replace mainline pole from inspection #1	Complete	Jan-19		
			Replace mainline pole from inspection #2	Complete	Mar-19		
			Three-phase overhead inspection	Complete	Mar-19		
			Targeted forestry inspection	Complete	May-19		
			Enhanced Tree Trimming	Complete	0%		
35	S Sixth Street	00415-2	<i>Performance was driven by unknown cause (83%) and human error non-company (16%)</i>				3Q 2019 4Q 2019
			Three-phase overhead inspection	Complete	Jan-19		
			On cycle tree trimming	Complete	Mar-19		
			Post storm circuit patrol	Complete	Aug-19		
			Install fusing on mainline taps	To be Completed 2020	0%		
36	Queen St	00522-4	<i>Performance was driven by trees off ROW (34%), wind (23%), unknown (22%), and equipment failure (15%)</i>				1Q 2019 2Q 2019 3Q 2019 4Q 2019
			Post storm patrol	Complete	Feb-19		
			Complete circuit protection study	Complete	Feb-19		
			Complete engineering review for additional remote-control devices	Complete	Feb-19		
			Repair equipment failure	Complete	Apr-19		
			Targeted mainline inspection	Complete	Oct-19		
			Enhanced tree removal	Complete	Dec-19		
37	Windsor	00795-4	<i>Performance was driven by trees off ROW (88%) and equipment failure (5%)</i>				
			Replace/repair high priority items identified during overhead circuit patrol	Complete	Sep-19		
			Install SCADA switch	Complete	Aug-19		
			Circuit rehab inspection	Complete	Oct-19		
			Targeted mainline inspection	Complete	Dec-19		
			Enhanced tree removal	Complete	Dec-19		
38	East Prospect	00765-4	<i>Performance was driven by trees off ROW (64%), equipment failure (16%) and lightning (13%)</i>				3Q 2019 4Q 2019
			Enhanced tree removal	Complete	Dec-19		
			On cycle tree trimming	To be Completed 2020	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
39	Newberry	00576-4	<i>Performance was driven by trees off ROW (57%)</i>			
			Enhanced tree removal	Complete	Dec-19	
			Repair/replace high priority items identified during inspection	To be Completed 2020	10%	

Met-Ed					
Unranked circuits appearing 2 or more quarters in the last 4 quarters					
Substation	Circuit	1Q 2019	2Q 2019	3Q 2019	4Q 2019
Allen	00502-4	X	X		
Gardners	00752-4	X	X		
Gardners	00754-4	X	X	X	
Lickdale	00625-2	X	X	X	
Moselem	00782-1	X	X		
Myerstown	00751-2	X	X		
Ottsville	00660-3	X	X	X	
Raubsville	00079-3	X	X	X	
Shawnee	00822-3	X	X	X	
Stouchburg	00758-2		X	X	
West Boyertown	00714-1	X	X		

Met-Ed				
Unranked circuits with remedial actions scheduled to be or recently completed				
Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work	Progress of Remedial Work or Date Completed
19th and Cotton	00156-1	Repair mainline spacers from inspection #1	Complete	Oct-19
19th and Cotton	00156-1	Repair mainline spacers from inspection #2	Complete	Oct-19
19th and Cotton	00156-1	Repair mainline spacers from inspection #3	Complete	Nov-19
Allen	00502-4	Install SCADA recloser	Complete	Oct-19
Allen	00502-4	On cycle tree trimming	Complete	Dec-19
Belfast	00812-3	Install SCADA recloser #1	To be Completed 2020	75%
Belfast	00812-3	Install SCADA recloser #2	To be Completed 2020	75%
Birchwood	00624-3	Install SCADA recloser	To be Completed 2020	75%
Broad St	00776-2	On cycle tree trimming	To be Completed 2020	0%
Clearfield	00631-3	Construct circuit tie	To be Completed 2020	90%
Clearfield	00632-3	Construct circuit tie	To be Completed 2020	90%
Ferndale	00076-3	On cycle tree trimming	Complete	Dec-19
Friedensburg	00769-1	Complete circuit split	Complete	Oct-19
Friedensburg	00769-1	Install SCADA switch #1	Complete	Oct-19
Friedensburg	00769-1	Install SCADA switch #2	Complete	Nov-19
Gardners	00754-4	Upgrade Zone 2 recloser to EMS radio controlled	Complete	Dec-19
Leesport	00812-1	On cycle tree trimming	Complete	Dec-19
Lickdale	00625-2	Install SCADA #1	Complete	Oct-19
Lickdale	00625-2	Install SCADA #2	Complete	Nov-19
Moselem	00782-1	Targeted mainline circuit rehabilitation #1	Complete	Dec-19
Moselem	00782-1	Targeted mainline circuit rehabilitation #2	Complete	Nov-19
Moselem	00782-1	Targeted mainline circuit rehabilitation #3	Complete	Nov-19
Moselem	00782-1	Install SCADA switch #1	Complete	Dec-19
Moselem	00782-1	Install SCADA switch #2	To be Completed 2020	50%
Moselem	00782-1	Install SCADA switch #3	To be Completed 2020	50%

Met-Ed				
Unranked circuits with remedial actions scheduled to be or recently completed				
Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work	Progress of Remedial Work or Date Completed
Moselem	00782-1	Install SCADA recloser #1	To be Completed 2020	50%
Moselem	00782-1	Install SCADA recloser #2	To be Completed 2020	50%
Myerstown	00751-2	Install SCADA switch	Complete	Oct-19
Newberry	00577-4	Install SCADA switch	Complete	Nov-19
No Bangor	00813-3	On cycle tree trimming	Complete	Dec-19
No Bangor	00838-3	Install SCADA recloser #1	Complete	Dec-19
No Bangor	00838-3	Install SCADA recloser #2	Complete	Dec-19
No Bangor	00838-3	On cycle tree trimming	Complete	Dec-19
Northwood	00821-3	On cycle tree trimming	Complete	Nov-19
Orrtanna	00764-4	Targeted mainline circuit rehabilitation	To be Completed 2020	50%
Ottsville	00660-3	Replace pole from inspection	Complete	Oct-19
Riverview	00793-1	Install SCADA switch #1	Complete	Oct-19
Riverview	00793-1	Install SCADA switch #2	Complete	Oct-19
Riverview	00793-1	Install SCADA switch #3	Complete	Oct-19
S Hamburg	00801-1	Replace crossarm from inspection	Complete	Nov-19
S Hamburg	00801-1	Replace crossarm from inspection	Complete	Nov-19
S Hamburg	00801-1	Replace crossarm from inspection	Complete	Oct-19
S Hamburg	00801-1	Replace mainline crossarm from inspection #1	Complete	Dec-19
S Hamburg	00801-1	Replace mainline crossarm from inspection #2	Complete	Dec-19
S Hamburg	00801-1	Replace mainline crossarm from inspection #3	Complete	Oct-19
S Hamburg	00801-1	Replace mainline crossarm from inspection #4	Complete	Nov-19
S Hamburg	00801-1	Replace mainline crossarm from inspection #5	Complete	Dec-19
Shawnee	00822-3	On cycle tree trimming	Complete	Dec-19
Shawnee	00822-3	Install SCADA switch	To be Completed 2020	75%
Shawnee	00837-3	Install SCADA recloser	Complete	Dec-19
Shawnee	00837-3	On cycle tree trimming	Complete	Dec-19

Met-Ed				
Unranked circuits with remedial actions scheduled to be or recently completed				
Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work	Progress of Remedial Work or Date Completed
Stouchburg	00758-2	Install SCADA device #1	Complete	Dec-19
Stouchburg	00758-2	Install SCADA device #2	Complete	Dec-19
Stouchburg	00758-2	Line project to reconductor four spans and improve coordination	To be Completed 2020	50%
Straban	00676-4	Install SCADA recloser	Complete	Nov-19
W Boyertown	00714-1	Replace mainline pole from inspection	Complete	Oct-19
Windsor	00316-4	Replace/repair high priority items identified during overhead circuit patrol	Complete	Oct-19

Penlec							
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	DuBois	00137-23	<i>Performance was driven by trees off ROW (71%) and equipment failure (15%)</i>				1Q 2019 2Q 2019 3Q 2019 4Q 2019
			Repair damage caused by trees during a storm	Complete	Jan-19		
			Repair damage caused by trees	Complete	Jun-19		
			Targeted circuit rehabilitation	Complete	Aug-19		
			On cycle tree trimming	Complete	Nov-19		
			Install advanced distribution protective devices	To be Completed 2020	0%		
			Circuit inspection	To be Completed 2020	0%		
2	Logan	00700-81	<i>Performance was driven by trees off ROW (96%)</i>				1Q 2019 2Q 2019 3Q 2019 4Q 2019
			Repair damage caused by trees	Complete	Mar-19		
			Repair damage caused by trees during a storm	Complete	Apr-19		
			Repair damage caused by trees during a storm	Complete	Aug-19		
			Repair damage caused by trees	Complete	Dec-19		
			Circuit inspection	To be Completed 2020	0%		
3	Thompson	00436-65	<i>Performance was driven by trees off ROW (33%), line failure (32%), and equipment failure (20%)</i>				1Q 2019 2Q 2019 3Q 2019 4Q 2019
			Repair line failure	Complete	Mar-19		
			Circuit inspection	Complete	May-19		
			Repair equipment failure	Complete	Jul-19		
			Repair line failure	Complete	Dec-19		
			On cycle tree trimming	To be Completed 2020	0%		
4	Revloc	00069-72	<i>Performance was driven by trees off ROW (100%)</i>				1Q 2019 2Q 2019 3Q 2019 4Q 2019
			Repair damage caused by trees during a storm	Complete	Feb-19		
			Repair damage caused by trees during a storm	Complete	May-19		
			On cycle tree trimming	To be Completed 2020	0%		
5	Carlisle Pike	00643-83	<i>Performance was driven by trees off ROW (48%) and line failure (31%)</i>				2Q 2019 3Q 2019 4Q 2019
			Repair line failure	Complete	Mar-19		
			Repair damage caused by trees during a storm	Complete	May-19		

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
6	Milroy	00128-81	<i>Performance was driven by breaker operation of unknown cause (52%) and trees off ROW (43%)</i>			1Q 2019 2Q 2019 3Q 2019 4Q 2019
			Repair damage caused by trees during a storm	Complete	Jun-19	
			Restore breaker operation of unknown cause	Complete	Aug-19	
			Install advanced distribution protective devices	To be Completed 2020	0%	
			Install new radio-controlled switch	To be Completed 2020	0%	
7	Rolling Meadows	00310-31	<i>Performance was driven by equipment failure (73%) and line failure (16%)</i>			2Q 2019 3Q 2019 4Q 2019
			Repair equipment failure	Complete	Apr-19	
			Repair equipment failure	Complete	Jun-19	
			Repair line failure	Complete	Jul-19	
			Install advanced distribution protective devices	To be Completed 2020	0%	
			Circuit inspection	To be Completed 2020	0%	
8	Lake Como	00787-65	<i>Performance was driven by line failure (50%) and trees off ROW (33%)</i>			3Q 2019 4Q 2019
			Repair damage caused by trees during a storm	Complete	Jul-19	
			Repair line failure	Complete	Dec-19	
			Install advanced distribution protective devices	To be Completed 2020	0%	
			Circuit inspection	To be Completed 2020	0%	
9	Lake Como	00786-65	<i>Performance was driven by trees off ROW (51%) and line failure (46%)</i>			2Q 2019 3Q 2019 4Q 2019
			Repair damage caused by trees during a storm	Complete	Apr-19	
			Repair damage caused by trees during a storm	Complete	Apr-19	
			Repair line failure	Complete	Apr-19	
			Circuit inspection	To be Completed 2020	0%	
10	Piney	00523-51	<i>Performance was driven by trees off ROW (51%) and equipment failure (45%)</i>			1Q 2019 2Q 2019 3Q 2019 4Q 2019
			Repair equipment failure	Complete	Jun-19	
			Repair equipment failure	Complete	Aug-19	
			Circuit inspection	Complete	Sep-19	
			Install new radio-controlled switch	To be Completed 2020	95%	
			Install advanced distribution protective devices	To be Completed 2020	0%	
			On cycle tree trimming	To be Completed 2020	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
11	Thompson	00446-65	<i>Performance was driven by trees off ROW (62%) and equipment failure (23%)</i>			2Q 2019 3Q 2019 4Q 2019
			Repair equipment failure	Complete	Mar-19	
			Repair damage caused by trees during a storm	Complete	Apr-19	
			Repair damage caused by trees during a storm	Complete	Apr-19	
			On cycle tree trimming	Complete	Oct-19	
			Repair damage caused by trees	Complete	Dec-19	
12	East Sayre	00518-61	<i>Performance was driven by breaker operation of unknown cause (73%) and lightning (18%)</i>			
			Repair damage caused by lightning	Complete	Aug-19	
			Restore breaker operation of unknown cause	Complete	Nov-19	
			Circuit inspection	To be Completed 2020	0%	
13	Madera	00165-22	<i>Performance was driven by trees off ROW (85%)</i>			1Q 2019 2Q 2019 3Q 2019 4Q 2019
			Repair damage caused by trees during a storm	Complete	Jan-19	
			Repair damage caused by trees during a storm	Complete	Feb-19	
			Repair damage caused by trees during a storm	Complete	May-19	
			Install advanced distribution protective devices	Complete	Jan-19	
			Circuit inspection	To be Completed 2020	0%	
			On cycle tree trimming	To be Completed 2020	0%	
14	Grover	00527-63	<i>Performance was driven by non-company human error (53%), squirrel (25%), and trees off ROW (12%)</i>			1Q 2019 2Q 2019 3Q 2019 4Q 2019
			Repair damage caused by non-company human error	Complete	Sep-19	
			Repair damage caused by a squirrel	Complete	Dec-19	
			Circuit inspection	To be Completed 2020	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	
15	Springboro	00237-52	<i>Performance was driven by trees off ROW (78%) and bird (12%)</i>				1Q 2019 2Q 2019 3Q 2019 4Q 2019
			Repair damage caused by trees during a storm	Complete	Feb-19		
			Repair damage caused by trees during a storm	Complete	Apr-19		
			Repair damage caused by trees during a storm	Complete	Apr-19		
			Repair damage caused by trees	Complete	Sep-19		
			Repair damage caused by bird	Complete	Oct-19		
			Targeted circuit rehabilitation	Complete	Dec-19		
		Install advanced distribution protective devices	To be Completed 2020	0%			
16	N Meshoppen Tran	00534-65	<i>Performance was driven by trees off ROW (61%) and line failure (25%)</i>				1Q 2019 4Q 2019
			Repair damage caused by trees	Complete	Dec-19		
			Repair line failure	Complete	Dec-19		
17	Madera	00166-22	<i>Performance was driven by vehicle (57%), equipment failure (15%), and trees off ROW (15%)</i>				1Q 2019 2Q 2019 3Q 2019 4Q 2019
			Repair equipment failure	Complete	Jan-19		
			Repair damage caused by a vehicle	Complete	Feb-19		
			Repair damage caused by a vehicle	Complete	Jul-19		
			Repair damage caused by trees during a storm	Complete	Oct-19		
			Install advanced distribution protective devices	To be Completed 2020	0%		
			Circuit inspection	To be Completed 2020	0%		
18	Curryville	00644-71	<i>Performance was driven by equipment failure (40%) and trees off ROW (38%)</i>				3Q 2019 4Q 2019
			Repair damage caused by trees during a storm	Complete	Jun-19		
			Repair equipment failure	Complete	Sep-19		
			Circuit inspection	To be Completed 2020	0%		
			On cycle tree trimming	To be Completed 2020	0%		
19	Marienville	00328-51	<i>Performance was driven by trees off ROW (81%)</i>				1Q 2019 3Q 2019 4Q 2019
			Repair damage caused by trees during a storm	Complete	Jul-19		
			Install advanced distribution protective devices	To be Completed 2020	0%		
			Circuit inspection	To be Completed 2020	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
20	Fairview Altoona	00005-71	<i>Performance was driven by vehicle (56%) and equipment failure (43%)</i>			
			Repair equipment failure	Complete	Nov-19	
			Repair damage caused by a vehicle	Complete	Dec-19	
21	Birmingham	00168-22	<i>Performance was driven by vehicle (55%), trees off ROW (19%), and line failure (10%)</i>			1Q 2019 2Q 2019 3Q 2019 4Q 2019
			Repair damage caused by trees during a storm	Complete	Jan-19	
			Repair damage caused by vehicle accident	Complete	Jan-19	
			Repair damage caused by line failure	Complete	May-19	
			Install advanced distribution protective devices	To be Completed 2020	0%	
22	Brookville	00125-23	<i>Performance was driven by equipment failure (43%) and trees off ROW (38%)</i>			1Q 2019 2Q 2019 3Q 2019 4Q 2019
			Repair damage caused by trees during a storm	Complete	Jan-19	
			Repair equipment failure during a storm	Complete	Feb-19	
			Repair equipment failure	Complete	Apr-19	
			On cycle tree trimming	Complete	Nov-19	
23	Warren South	00220-41	<i>Performance was driven by trees off ROW (77%) and equipment failure (9%)</i>			1Q 2019 2Q 2019 3Q 2019 4Q 2019
			Repair damage caused by trees	Complete	Jan-19	
			Repair equipment failure	Complete	Jun-19	
			On cycle tree trimming	Complete	Nov-19	
			Install advanced distribution protective devices	To be Completed 2020	0%	
			Circuit inspection	To be Completed 2020	0%	
24	Russell Hill	00282-65	<i>Performance was driven by trees off ROW (87%)</i>			1Q 2019 2Q 2019 3Q 2019 4Q 2019
			Repair damage caused by trees during a storm	Complete	Jan-19	
			Repair damage caused by trees	Complete	Jan-19	
			Repair damage caused by trees	Complete	Mar-19	
			Repair damage caused by trees	Complete	Dec-19	
25	Viscose Hill	00116-23	<i>Performance was driven by wind (80%)</i>			
			Repair damage caused by wind	Complete	Apr-19	

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	Logan	00701-81	<i>Performance was driven by trees off ROW (44%), line failure (25%), and non-company human error (17%)</i>				1Q 2019 2Q 2019 3Q 2019 4Q 2019
			Repair damage caused by non-company human error	Complete	May-19		
			Repair line failure	Complete	May-19		
			Repair damage caused by trees during a storm	Complete	Aug-19		
			Repair line failure	Complete	Oct-19		
			Targeted circuit rehabilitation	To be Completed 2020	0%		
27	Wellsboro	00324-63	<i>Performance was driven by trees off ROW (85%)</i>				
			Repair damage caused by trees	Complete	May-19		
			Repair damage caused by trees	Complete	Dec-19		
28	Utica Junction	00331-51	<i>Performance was driven by trees off ROW (82%)</i>				3Q 2019 4Q 2019
			Repair damage caused by trees during a storm	Complete	Aug-19		
			Repair equipment failure	Complete	Aug-19		
			Install advanced distribution protective devices	To be Completed 2020	0%		
			On cycle tree trimming	To be Completed 2020	0%		
29	Edgewood	00089-13	<i>Performance was driven by trees off ROW (68%) and line failure (17%)</i>				3Q 2019 4Q 2019
			Repair damage caused by trees during a storm	Complete	May-19		
			Repair line failure	Complete	Jul-19		
			Repair damage caused by trees during a storm	Complete	Jul-19		
			Install advanced distribution protective devices	To be Completed 2020	0%		
			Targeted circuit rehabilitation	To be Completed 2020	0%		
			Circuit inspection	To be Completed 2020	0%		
30	Covington	00729-63	<i>Performance was driven by equipment failure (64%) and fuse operation of unknown cause (18%)</i>				
			Restored fuse operation of unknown cause	Complete	Dec-19		
			Repair equipment failure	Complete	Oct-19		
31	Reedsville	00127-81	<i>Performance was driven by trees off ROW (98%)</i>				3Q 2019 4Q 2019
			Repair damage caused by trees during a storm	Complete	Aug-19		
			Repair damage caused by trees during a storm	Complete	Aug-19		

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	
32	Dushore	00669-62	<i>Performance was driven by trees off ROW (98%)</i>				2Q 2019 3Q 2019 4Q 2019
			Repair damage caused by trees during a storm	Complete	Apr-19		
			Repair damage caused by trees	Complete	May-19		
			On cycle tree trimming	Complete	Aug-19		
33	Philipsburg	00162-22	<i>Performance was driven by equipment failure (32%), trees off ROW (25%), and lightning (24%)</i>				1Q 2019 2Q 2019 3Q 2019 4Q 2019
			Repair equipment failure	Complete	Jan-19		
			Split large circuits	Complete	Apr-19		
			Targeted circuit rehabilitation	Complete	Apr-19		
			Repair damage caused by lightning	Complete	Aug-19		
			Install advanced distribution protective devices	To be Completed 2020	0%		
			Circuit inspection	To be Completed 2020	0%		
34	East Pike	00095-13	<i>Performance was driven by equipment failure (59%), line failure (28%), and trees off ROW (12%)</i>				1Q 2019 2Q 2019 4Q 2019
			Repair line failure	Complete	Jan-19		
			Repair equipment failure	Complete	Oct-19		
			On cycle tree trimming	Complete	Dec-19		
			Circuit inspection	To be Completed 2020	0%		
35	Blairsville East	00082-13	<i>Performance was driven by trees off ROW (45%), fuse operation of unknown cause (16%), and non-company human error (11%)</i>				2Q 2019 3Q 2019 4Q 2019
			Repair damage caused by trees during a storm	Complete	Feb-19		
			Repair damage caused by lightning	Complete	Feb-19		
			Repair damage caused by trees during a storm	Complete	May-19		
			Repair damage caused by trees during a storm	Complete	May-19		
			Restored fuse operation of unknown cause	Complete	Jun-19		
			Repair damage caused by non-company human error	Complete	Sep-19		
			Install advanced distribution protective devices	To be Completed 2020	0%		
			On cycle tree trimming	To be Completed 2020	0%		
36	East Pike	00094-13	<i>Performance was driven by line failure (75%) and vehicle accident (23%)</i>				1Q 2019 3Q 2019 4Q 2019
			Repair damage caused by a vehicle	Complete	Jan-19		
			Repair line failure	Complete	Sep-19		

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	Utica Junction	00318-51	<i>Performance was driven by trees off ROW (62%) and vehicle accident (15%)</i>			3Q 2019 4Q 2019
			Repair damage caused by vehicle accident	Complete	May-19	
			Repair damage caused by trees during a storm	Complete	Jul-19	
			Install advanced distribution protective devices	To be Completed 2020	0%	
			Circuit inspection	To be Completed 2020	0%	
			On cycle tree trimming	To be Completed 2020	0%	
38	Mansfield	00559-63	<i>Performance was driven by line failure (57%) and non-company human error (26%)</i>			
			Repair line failure	Complete	Jul-19	
			Repair damage caused by non-company human error	Complete	Dec-19	
			Targeted circuit rehabilitation	To be Completed 2020	0%	
39	Monroeton	00770-62	<i>Performance was driven by line failure (72%) and trees off ROW (28%)</i>			2Q 2019 3Q 2019 4Q 2019
			Repair line failure	Complete	Apr-19	
			Repair damage caused by trees	Complete	Aug-19	
40	Tyrone North	00643-22	<i>Performance was driven by line failure (53%), trees off ROW (26%), and non-company human error (19%)</i>			2Q 2019 3Q 2019 4Q 2019
			Repair damage caused by non-company human error	Complete	Apr-19	
			Repair damage caused by trees	Complete	Aug-19	
			Circuit inspection	Complete	Sep-19	
41	Industrial	00170-81	<i>Performance was driven by lightning (76%) and trees off ROW (20%)</i>			3Q 2019 4Q 2019
			Repair damage caused by wind	Complete	Apr-19	
			Repair damage caused by trees	Complete	Jul-19	
			Repair damage caused by lightning	Complete	Aug-19	
			Install advanced distribution protective devices	To be Completed 2020	0%	
42	Cambria County Prision	00202-72	<i>Performance was driven by line failure (99%)</i>			2Q 2019 3Q 2019 4Q 2019
			Repair line failure	Complete	Apr-19	

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	
43	New Albany SW Station	00526-62	<i>Performance was driven by trees off ROW (94%)</i>				2Q 2019 3Q 2019 4Q 2019
			Repair damage caused by trees during a storm	Complete	Apr-19		
			Repair damage caused by trees	Complete	May-19		
			Circuit inspection	To be Completed 2020	0%		
			On cycle tree trimming	To be Completed 2020	0%		
44	Tiffany	00440-65	<i>Performance was driven by bird (65%) and equipment failure (20%)</i>				3Q 2019 4Q 2019
			Repair damage caused by a bird	Complete	Aug-19		
			Repair damage caused by trees during a storm	Complete	Aug-19		
			Repair equipment failure	Complete	Dec-19		
			Targeted circuit rehabilitation	To be Completed 2020	0%		
45	Two Mile	00127-42	<i>Performance was driven by equipment failure (54%), vehicle (28%), and trees off ROW (12%)</i>				
			Repair damage caused by trees during a storm	Complete	Aug-19		
			Repair equipment failure	Complete	Dec-19		
			Repair damage caused by vehicle accident	Complete	Dec-19		
			Install advanced distribution protective devices	To be Completed 2020	0%		
			Circuit inspection	To be Completed 2020	0%		
46	McConnellstown	00099-82	<i>Performance was driven by breaker operation of primary contact (83%) and trees off ROW (14%)</i>				1Q 2019 2Q 2019 3Q 2019 4Q 2019
			Restore breaker operation of primary contact	Complete	Jan-19		
			Repair damage caused by trees	Complete	Aug-19		
			Install advanced distribution protective devices	To be Completed 2020	0%		
			Circuit inspection	To be Completed 2020	0%		
47	Hilltop	00048-11	<i>Performance was driven by line failure (74%) and structure fire (24%)</i>				1Q 2019 2Q 2019 3Q 2019 4Q 2019
			Repair line failure	Complete	Jan-19		
			Forced outage due to structure fire	Complete	Jan-19		
48	Ansonia	00740-63	<i>Performance was driven by breaker operation of unknown cause (91%)</i>				
			Restored breaker operation of unknown cause	Complete	Dec-19		

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	
49	North Warren	00207-41	<i>Performance was driven by equipment failure (61%) and line failure (20%)</i>				3Q 2019 4Q 2019
			Targeted circuit rehabilitation	Complete	Feb-19		
			Repair equipment failure	Complete	Jul-19		
			Repair line failure	Complete	Dec-19		
			Targeted circuit rehabilitation	To be Completed 2020	0%		
			Install advanced distribution protective devices	To be Completed 2020	0%		
			Install new radio-controlled switch	To be Completed 2020	0%		
			Circuit inspection	To be Completed 2020	0%		
50	Timblin	00103-23	<i>Performance was driven by trees off ROW (45%), line failure (21%), and lightning (12%)</i>				1Q 2019 2Q 2019 3Q 2019 4Q 2019
			Targeted circuit rehabilitation	Complete	May-19		
			Repair damage caused by trees	Complete	Jun-19		
			Repair line failure	Complete	Jan-19		
			Repair damage caused by lightning	Complete	Aug-19		
			On cycle tree trimming	Complete	Oct-19		
			Install advanced distribution protective devices	To be Completed 2020	0%		
51	Boyer	00584-31	<i>Performance was driven by line failure (58%), equipment failure (18%) and trees off ROW (9%)</i>				2Q 2019 3Q 2019 4Q 2019
			Repair equipment failure	Complete	Mar-19		
			Repair line failure	Complete	Jun-19		
52	Falls	00297-65	<i>Performance was driven by trees off ROW (69%) and trees on ROW (16%)</i>				
			Repair damage caused by trees during a storm	Complete	Mar-19		
			Repair damage caused by trees during a storm	Complete	Dec-19		
			On cycle tree trimming	To be Completed 2020	0%		
53	Green Garden	00539-31	<i>Performance was driven by line failure (93%)</i>				3Q 2019 4Q 2019
			Repair line failure	Complete	Jul-19		

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	
54	Shawville	00151-21	<i>Performance was driven by vehicle (43%), equipment failure (26%), and line failure (20%)</i>				1Q 2019 4Q 2019
			Repair line failure	Complete	Jun-19		
			Repair equipment failure	Complete	Jan-19		
			Repair damage caused by a vehicle	Complete	Jul-19		
			Install advanced distribution protective devices	To be Completed 2020	0%		
55	Thompson	00442-65	<i>Performance was driven by trees off ROW (53%) and line failure (40%)</i>				
			Repair damage caused by trees	Complete	Apr-19		
			Repair line failure	Complete	Dec-19		
56	Union City	00206-43	<i>Performance was driven by trees off ROW (26%), equipment failure (26%), and non-company human error (12%)</i>				1Q 2019 2Q 2019 3Q 2019 4Q 2019
			Repair damage caused by trees during a storm	Complete	Jan-19		
			Repair equipment failure during a storm	Complete	Jan-19		
			Repair line failure	Complete	Jan-19		
			Install advanced distribution protective devices	Complete	Jan-19		
			Targeted circuit rehabilitation	Complete	Jan-19		
			Repair damage caused by non-company human error	Complete	Aug-19		
			Install new radio-controlled switch	To be Completed 2020	95%		
			Targeted circuit rehabilitation	To be Completed 2020	0%		
			On cycle tree trimming	To be Completed 2020	0%		
57	Wyalusing sub	00532-62	<i>Performance was driven by breaker operation of unknown cause (58%) and trees off ROW (23%)</i>				2Q 2019 4Q 2019
			Repair damage caused by trees during a storm	Complete	Apr-19		
			Restore breaker operation of unknown cause	Complete	Apr-19		
58	Port Allegany	00151-42	<i>Performance was driven by trees off ROW (79%)</i>				3Q 2019 4Q 2019
			Repair damage caused by trees during a storm	Complete	Aug-19		
			Repair damage caused by trees	Complete	Aug-19		
			Install advanced distribution protective devices	To be Completed 2020	0%		
			On cycle tree trimming	To be Completed 2020	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	L and R	00120-81	<i>Performance was driven by line failure (47%) and vehicle (41%)</i>				3Q 2019 4Q 2019
			Repair damage caused by a vehicle	Complete	Jun-19		
			Repair line failure	Complete	Aug-19		
60	Warren South	00219-41	<i>Performance was driven by trees off ROW (72%) and equipment failure (21%)</i>				
			Repair damage caused by trees	Complete	Jun-19		
			Repair equipment failure	Complete	Dec-19		
			Install advanced distribution protective devices	To be Completed 2020	0%		
61	Shelocta	00102-13	<i>Performance was driven by vehicle (66%), line failure (15%), and trees off ROW (12%)</i>				3Q 2019 4Q 2019
			Repair line failure	Complete	Mar-19		
			Repair damage caused by trees during a storm	Complete	Apr-19		
			Repair damage caused by a vehicle	Complete	Jul-19		
			Repair damage caused by a vehicle	Complete	Jul-19		
62	Salix	00070-11	<i>Performance was driven by trees off ROW (40%), lightning (29%), and line failure (17%)</i>				2Q 2019 3Q 2019 4Q 2019
			Repair line failure	Complete	Feb-19		
			Repair damage caused by lightning	Complete	Jul-19		

Penelec					
Unranked circuits appearing 2 or more quarters in the last 4 quarters					
Substation	Circuit	1Q 2019	2Q 2019	3Q 2019	4Q 2019
Blairsville East	00080-13	X	X		
Brookville West	00121-23	X	X		
Buffalo Road	00265-31	X		X	
East Hickory	00201-41	X	X		
Erie South	00259-31	X	X		
Glory	00105-13	X	X		
Kearsarge	00528-31	X	X		
Laurel Pipeline	00036-71	X	X	X	
Lawrenceville	00632-63	X	X		
Lenox	00755-65	X	X		
Mansfield	00558-63	X	X	X	
Marienville	00327-51	X	X	X	
McVeytown	00112-81	X	X	X	
Meshoppen	00283-65	X	X		
Mildred	00771-62	X	X		
Millfair Road	00283-34	X	X	X	
Nanty Glo	00066-72		X	X	
Natl Forge Sw Sta	00577-41	X	X	X	
North Warren	00596-41	X	X	X	
Northeast	00591-31	X	X		
Penmar	00002-12	X	X		
Revioc	00071-72		X	X	
Seward	00075-11	X	X		
Seward	00079-11	X	X		
Shade Gap 115Kv	00622-82	X	X	X	
Springboro	00217-52	X	X		

Penelec				
Unranked circuits with remedial actions scheduled to be or recently completed				
Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work Completed	Progress of Remedial Work or Date Completed
Mansfield	00558-63	Targeted circuit rehabilitation	Complete	Nov-19
Marienville	00327-51	Install new radio controlled recloser	To be Completed 2020	95%
Erie South	00259-31	Install new GOAB switch	Complete	Nov-19
East Hickory	00201-41	On cycle tree trimming	Complete	Nov-19
Waren Eddy Sub	00249-41	Circuit inspection	Complete	Oct-19
Cooper	00069-11	On cycle tree clearing	Complete	Nov-19

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	Stoneboro	W-131	<i>Performance was driven by trees off ROW (76%), line failure (9%) and trees on ROW (5%)</i>			2Q 2019 3Q 2019 4Q 2019
			Repair wire damage due to tornado	Complete	Jan-19	
			Repair damage caused by trees during a storm	Complete	May-19	
			Repair damage caused by trees during a storm	Complete	Jul-19	
			Repair damage caused by trees during a storm	Complete	Oct-19	
			Repair line failure	Complete	Nov-19	
2	Camp Reynolds	W-134	<i>Performance was driven by trees off ROW (67%), unknown (17%) and equipment failure (9%)</i>			3Q 2019 4Q 2019
			Repair damage caused by trees during a storm	Complete	Apr-19	
			Repair damage caused by trees during a storm	Complete	May-19	
			Repair damage caused by tree	Complete	Jul-19	
			Repair damage caused by trees during a storm	Complete	Aug-19	
			Repair damage caused by trees during a storm	Complete	Aug-19	
			Replace pole	Complete	Aug-19	
			Restore breaker operation of unknown cause	Complete	Oct-19	
3	Thompson Run	D550	<i>Performance was driven by trees off ROW (45%), equipment failure (40%), and line failure (11%)</i>			1Q 2019 2Q 2019 3Q 2019 4Q 2019
			Repair damage caused by trees during a storm	Complete	Feb-19	
			Repair damage caused by trees during a storm	Complete	Jun-19	
			Replace crossarm	Complete	Jun-19	
			Repair line failure during storm	Complete	Jul-19	
4	Stoneboro	W-132	<i>Performance was driven by trees off ROW (72%), bird (12%) and lightening (5%)</i>			2Q 2019 3Q 2019 4Q 2019
			Repair damage from bird nest	Complete	Apr-19	
			Repair damage caused by trees during a storm	Complete	May-19	
			Repair damage caused by trees during a storm	Complete	Aug-19	

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
5	Perry	W-156	<i>Performance was driven by equipment failure (58%), bird (22%) and trees off ROW (14%)</i>			1Q 2019 2Q 2019 3Q 2019 4Q 2019
			Replace switch	Complete	Feb-19	
			Repair damage from bird nest	Complete	Apr-19	
			Repair damage from bird nest	Complete	Sep-19	
			Repair damage caused by trees	Complete	Nov-19	
6	West Middlesex	W-138	<i>Performance was driven by equipment failure (37%), trees off ROW (34%), unknown (9%) and animal (8%)</i>			
			Repair equipment failure during storm	Complete	Apr-19	
			Porcelain cutout replacement	Complete	Apr-19	
			Repair damage caused by trees during a storm	Complete	Apr-19	
			Repair damage caused by animal contact	Complete	Nov-19	
			Restore breaker operation of unknown cause	Complete	Nov-19	
7	Evans City	D611	<i>Performance was driven by trees off ROW (93%) and equipment failure (3%)</i>			2Q 2019 3Q 2019 4Q 2019
			Repair damage caused by trees during a storm	Complete	May-19	
			Repair damage caused by trees during a storm	Complete	Sep-19	
8	Henderson	W-281	<i>Performance was driven by trees off ROW (58%), lightning (31%) and animal (7%)</i>			3Q 2019 4Q 2019
			Repair damage caused by trees during a storm	Complete	Jul-19	
			Repair damage caused by lightning	Complete	Jul-19	
9	Bedford	D-445	<i>Performance was driven by trees off ROW (96%) and equipment failure (1%)</i>			2Q 2019 3Q 2019 4Q 2019
			Repair damage caused by trees during a storm	Complete	Apr-19	
			Repair damage caused by trees during a storm	Complete	Jun-19	

Penn Power					
Unranked circuits appearing 2 or more quarters in the last 4 quarters					
Substation	Circuit	1Q 2019	2Q 2019	3Q 2019	4Q 2019
Jamestown	W-162	X	X		
Koppel	D-531	X	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	Substation	Remedial Action Planned or Taken	Status of Remedial Work Completed	Progress of Remedial Work or Date Completed	Appeared in 2 of 4 Quarters
1	Piney Fork	Cochran Mill	<i>Performance driven by line failure (99%)</i>			
			Repair line failure	Complete	Oct-19	
			Repair line failure	Complete	Oct-19	
			Overhead circuit inspection	To Be Completed 2020	0%	
2	Franklin	Rogersville	<i>Performance driven by trees off ROW (60%) and line failure (27%)</i>			Q1 2019 Q2 2019 Q3 2019 Q4 2019
			Repair damage caused by a tree during a storm	Complete	Jan-19	
			Repair damage caused by a tree during a storm	Complete	Jan-19	
			Repair equipment failure	Complete	Jun-19	
			Repair damage caused by a tree	Complete	Jun-19	
			Repair line failure during a storm	Complete	Jul-19	
			Repair damage caused by a tree during a storm	Complete	Jul-19	
			Repair line failure	Complete	Dec-19	
			Repair damage caused by a tree	Complete	Dec-19	
Zone 1 Infrared Inspection	To Be Completed 2020	0%				
3	Flintstone	Chaneyville	<i>Performance driven by trees off ROW (79%) and Ice (14%)</i>			Q1 2019 Q2 2019 Q3 2019 Q4 2019
			Repair damage caused by a tree during a storm	Complete	Jan-19	
			Repair damage caused by a tree during a storm	Complete	Feb-19	
			Repair damage caused by a tree during a storm	Complete	Apr-19	
			Forced outage to repair damage during a storm	Complete	Jun-19	
			Restore unknown outage	Complete	Jul-19	
			Repair damage caused by a tree during a storm	Complete	Jul-19	
			Repair damage caused by a tree	Complete	Oct-19	
Repair damage caused by ice during a storm	Complete	Dec-19				

West Penn Power							
Rank	Substation	Substation	Remedial Action Planned or Taken	Status of Remedial Work Completed	Progress of Remedial Work or Date Completed	Appeared in 2 of 4 Quarters	
4	Waterville	Waterville	<i>Performance driven by other electric utility (57%) and trees off ROW (29%)</i>				Q1 2019 Q2 2019 Q3 2019 Q4 2019
			Repair damage caused by a tree	Complete	Mar-19		
			Restore outage caused by other electric utility	Complete	May-19		
			Repair damage caused by a tree	Complete	Jun-19		
			Restore outage caused by other electric utility during a storm	Complete	Jun-19		
			Restore outage caused by other electric utility	Complete	Aug-19		
			Repair damage caused by a tree during a storm	Complete	Dec-19		
			On Cycle Tree Trimming	To Be Completed 2020	0%		
5	Mather	Jefferson	<i>Performance driven by trees off ROW (70%) and equipment failure (28%)</i>				Q2 2019 Q3 2019 Q4 2019
			Repair damage caused by a vehicle during a storm	Complete	Apr-19		
			Repair damage caused by a tree during a storm	Complete	May-19		
			Repair damage caused by a tree during a storm	Complete	Jun-19		
			Repair damage caused by a tree	Complete	Jul-19		
			Repair equipment failure during a storm	Complete	Nov-19		
			Repair damage caused by a tree during a storm	Complete	Nov-19		
			Overhead circuit inspection	To Be Completed 2020	0%		
6	Piney Fork	Stoltz	<i>Performance driven by trees off ROW (75%) and bird (17%)</i>				Q3 2019 Q4 2019
			Repair damage caused by a tree during a storm	Complete	Aug-19		
			Repair damage caused by a tree during a storm	Complete	Sep-19		
			Repair damage caused by a bird	Complete	Oct-19		
			Repair damage caused by a tree	Complete	Oct-19		

West Penn Power							
Rank	Substation	Substation	Remedial Action Planned or Taken	Status of Remedial Work Completed	Progress of Remedial Work or Date Completed	Appeared in 2 of 4 Quarters	
7	Rutan	Bristoria	<i>Performance driven by trees off ROW (66%) and line failure (15%)</i>				Q1 2019 Q2 2019 Q3 2019 Q4 2019
			Repair line failure during a storm	Complete	Feb-19		
			Repair equipment failure during a storm	Complete	Feb-19		
			Repair damage caused by a tree	Complete	May-19		
			Repair line failure during a storm	Complete	Jun-19		
			Overhead circuit inspection	Complete	Jun-19		
			Repair damage caused by a tree during a storm	Complete	Jul-19		
			Restore unknown outage	Complete	Aug-19		
			Forestry off cycle work	Complete	Sep-19		
			Repair line failure	Complete	Nov-19		
8	North Washington	Poke Run	<i>Performance driven by trees off ROW (75%) and line failure (10%)</i>				Q2 2019 Q3 2019 Q4 2019
			Repair damage caused by a tree	Complete	Apr-19		
			Repair damage caused by a tree during a storm	Complete	Jun-19		
			Repair damage caused by a tree during a storm	Complete	Jul-19		
			Repair line failure	Complete	Aug-19		
			Repair damage caused by a tree	Complete	Sep-19		
9	Westraver	Pittsburgh Coal	<i>Performance driven by trees off ROW (50%) and line failure (39%)</i>				Q2 2019 Q3 2019 Q4 2019
			Repair line failure	Complete	Jun-19		
			Repair damage caused by a tree during a storm	Complete	Jun-19		
			Repair damage caused by a tree	Complete	Jul-19		
			Repair damage caused by a tree during a storm	Complete	Jul-19		
			Repair damage caused by a tree during a storm	Complete	Oct-19		
			Overhead circuit inspection	Complete	Nov-19		
Repair damage caused by a vehicle	Complete	Dec-19					

West Penn Power							
Rank	Substation	Substation	Remedial Action Planned or Taken	Status of Remedial Work Completed	Progress of Remedial Work or Date Completed	Appeared in 2 of 4 Quarters	
10	Dutch Fork	Claysville	<i>Performance driven by trees off ROW (48%), vehicle (20%), and line failure (19%)</i>				Q1 2019 Q3 2019 Q4 2019
			Forced outage to repair damage	Complete	Jan-19		
			Repair damage caused by a tree during a storm	Complete	Jul-19		
			Repair damage caused by a vehicle during a storm	Complete	Jul-19		
			Forced outage to repair damage	Complete	Oct-19		
			Repair line failure during a storm	Complete	Nov-19		
			Zone 1 Infrared Inspection	To Be Completed 2020	0%		
11	St. Clair	Mclaughlin	<i>Performance driven by trees off ROW (95%)</i>				
			Repair damage caused by a tree	Complete	Dec-19		
12	Avella	W Middletown	<i>Performance driven by trees off ROW (78%) and line failure (13%)</i>				Q1 2019 Q2 2019 Q3 2019 Q4 2019
			Repair damage caused by a tree during a storm	Complete	Jan-19		
			Repair damage caused by a tree	Complete	Feb-19		
			Repair line failure	Complete	Jun-19		
			Repair damage caused by a tree during a storm	Complete	Jun-19		
			Repair line failure during a storm	Complete	Jul-19		
			Repair damage caused by a tree during a storm	Complete	Jul-19		
			Restore unknown outage during a storm	Complete	Oct-19		
13	Cecil	Muse	<i>Performance driven by wind (80%) and trees on ROW (9%)</i>				
			Repair damage caused by wind during a storm	Complete	Oct-19		
14	Murrycrest	Christy Road	<i>Performance driven by trees off ROW (68%) and wind (25%)</i>				
			Repair damage caused by a tree	Complete	Oct-19		
			Repair damage caused by wind during a storm	Complete	Oct-19		

West Penn Power							
Rank	Substation	Substation	Remedial Action Planned or Taken	Status of Remedial Work Completed	Progress of Remedial Work or Date Completed	Appeared in 2 of 4 Quarters	
15	St. Clair	Skyridge	<i>Performance driven by trees off ROW (93%)</i>				Q1 2019 Q2 2019 Q3 2019 Q4 2019
			Repair equipment failure	Complete	Jan-19		
			Repair damage caused by a tree during a storm	Complete	Jun-19		
			Repair damage caused by a tree during a storm	Complete	Jul-19		
			Repair damage caused by a tree during a storm	Complete	Sep-19		
			Repair damage caused by a tree during a storm	Complete	Oct-19		
			On Cycle Tree Trimming	To Be Completed 2020	0%		
16	Roundhill	Roundhill	<i>Performance driven by trees off ROW (90%)</i>				Q3 2019 Q4 2019
			Repair damage caused by a tree during a storm	Complete	Jul-19		
			Repair damage caused by a tree during a storm	Complete	Aug-19		
			Repair damage caused by a tree	Complete	Dec-19		
			Zone 1 Infrared Inspection	To Be Completed 2020	0%		
17	Bethel Park	Clifton	<i>Performance driven by trees off ROW (47%), unknown (29%), and equipment failure (11%)</i>				Q2 2019 Q3 2019 Q4 2019
			Repair damage caused by a tree during a storm	Complete	May-19		
			Restore unknown outage during a storm	Complete	Jun-19		
			Repair line failure	Complete	Aug-19		
			Repair damage caused by a tree during a storm	Complete	Sep-19		
			On Cycle Tree Trimming	Complete	Oct-19		
			Repair damage caused by a tree	Complete	Oct-19		
			Restore unknown outage	Complete	Nov-19		
			Overhead circuit inspection	To Be Completed 2020	0%		

West Penn Power						
Rank	Substation	Substation	Remedial Action Planned or Taken	Status of Remedial Work Completed	Progress of Remedial Work or Date Completed	Appeared in 2 of 4 Quarters
18	Bethlen	Darlington	<i>Performance driven by trees off ROW (69%) and unknown (13%)</i>			Q1 2019 Q2 2019 Q3 2019 Q4 2019
			Repair damage caused by a tree	Complete	Jan-19	
			Repair damage caused by a tree	Complete	Apr-19	
			Repair damage caused by a tree	Complete	Jun-19	
			Restore unknown outage	Complete	Jun-19	
			Repair equipment failure during a storm	Complete	Jul-19	
			Repair damage caused by a tree during a storm	Complete	Jul-19	
			Repair damage caused by a tree	Complete	Oct-19	
19	Smith	Florence	<i>Performance driven by trees off ROW (54%), forced outage (18%), and line failure (11%)</i>			Q1 2019 Q2 2019 Q3 2019 Q4 2019
			Enhanced WPC remediation	To Be Completed 2020	0%	
			Repair damage caused by a tree during a storm	Complete	Jan-19	
			Restore unknown failure	Complete	May-19	
			Repair damage caused by a tree during a storm	Complete	Jun-19	
			Forced outage to repair damage	Complete	Jul-19	
			Repair line failure during a storm	Complete	Jul-19	
			Repair line failure during a storm	Complete	Nov-19	
20	Cooperstown	Twint Willows	<i>Performance driven by trees off ROW (50%), vehicle (30%), and line failure (18%)</i>			Q2 2019 Q3 2019 Q4 2019
			Repair damage caused by a tree during a storm	Complete	May-19	
			Repair damage caused by a tree	Complete	Jun-19	
			Repair line failure during a storm	Complete	Aug-19	
			Repair line failure	Complete	Nov-19	
			Overhead circuit inspection	To Be Completed 2020	0%	
21	Buckeye No. 3	Paisley	<i>Performance driven by trees off ROW (96%)</i>			
			Repair damage caused by a tree during a storm	Complete	Nov-19	
			On Cycle Tree Trimming	To Be Completed 2020	0%	

West Penn Power						
Rank	Substation	Substation	Remedial Action Planned or Taken	Status of Remedial Work Completed	Progress of Remedial Work or Date Completed	Appeared in 2 of 4 Quarters
22	Bedford Road	Rt 220 North	<i>Performance driven by trees off ROW (88%)</i>			Q1 2019 Q2 2019 Q3 2019 Q4 2019
			On Cycle Tree Trimming	Complete	Jan-19	
			Repair damage caused by a tree during a storm	Complete	Jan-19	
			Restore unknown outage during a storm	Complete	May-19	
			Repair damage caused by a tree during a storm	Complete	Jun-19	
			Repair damage caused by a tree during a storm	Complete	Aug-19	
			Forced outage to repair damage	Complete	Nov-19	
			Repair damage caused by a tree during a storm	Complete	Nov-19	
23	Whiteley	Mt. Morris	<i>Performance driven by equipment failure (49%) and trees off ROW (40%)</i>			Q3 2019 Q4 2019
			Repair damage caused by a tree during a storm	Complete	Jul-19	
			Repair equipment failure	Complete	Sep-19	
			Repair damage caused by a tree during a storm	Complete	Oct-19	
			Overhead circuit inspection	To Be Completed 2020	0%	
24	Bethlen	Laurel Valley	<i>Performance driven by trees off ROW (38%), equipment failure (28%), and forced outage (19%)</i>			Q3 2019 Q4 2019
			Repair damage caused by a tree during a storm	Complete	Jul-19	
			Repair equipment failure	Complete	Aug-19	
			Forced outage to repair damage during a storm	Complete	Sep-19	
			Repair damage caused by a tree during a storm	Complete	Oct-19	
			Zone 1 Infrared Inspection	To Be Completed 2020	0%	
25	Purcell	Artemas	<i>Performance driven by trees off ROW (65%) and forced outage (24%)</i>			
			Forced outage to repair damage	Complete	Dec-19	
			Repair damage caused by a tree during a storm	Complete	Dec-19	
			On Cycle Tree Trimming	Complete	Dec-19	
26	Shanor Manor	Oneida	<i>Performance driven by equipment failure (63%) and trees off ROW (15%)</i>			Q3 2019 Q4 2019
			Repair damage caused by a tree	Complete	Aug-19	
			Repair equipment failure	Complete	Dec-19	
			Zone 1 Infrared Inspection	To Be Completed 2020	0%	

West Penn Power						
Rank	Substation	Substation	Remedial Action Planned or Taken	Status of Remedial Work Completed	Progress of Remedial Work or Date Completed	Appeared in 2 of 4 Quarters
27	Blue Ridge Summit	Sabillasville	<i>Performance driven by trees off ROW (70%) and line failure (18%)</i>			
			Repair line failure during a storm	Complete	Nov-19	
			Repair damage caused by a tree during a storm	Complete	Dec-19	
28	Fort Palmer	West Fairfield	<i>Performance driven by trees off ROW (76%) and line failure (15%)</i>			Q1 2019 Q2 2019 Q3 2019 Q4 2019
			Repair damage caused by a tree during a storm	Complete	Feb-19	
			Restore unknown outage	Complete	Mar-19	
			Repair damage caused by a tree during a storm	Complete	May-19	
			Zone 1 Infrared Inspection	Complete	Jul-19	
29	North Fayette	Tyre	<i>Performance driven by trees off ROW (60%) and unknown (31%)</i>			
			Repair damage caused by a tree during a storm	Complete	Nov-19	
30	Kane	Russell City	<i>Performance driven by trees off ROW (74%) and line failure (21%)</i>			Q1 2019 Q2 2019 Q3 2019 Q4 2019
			Repair line failure	Complete	Jan-19	
			Repair damage caused by a tree during a storm	Complete	Jan-19	
			Repair damage caused by a tree during a storm	Complete	May-19	
			Repair damage caused by a tree	Complete	Aug-19	
			Repair damage caused by a tree	Complete	Dec-19	
31	Kiski Valley	Kittanning Rd	<i>Performance driven by trees off ROW (56%) and line failure (38%)</i>			Q1 2019 Q3 2019 Q4 2019
			Repair line failure	Complete	Mar-19	
			Repair damage caused by a tree	Complete	Mar-19	
			Repair damage caused by a tree during a storm	Complete	Jul-19	
			Repair line failure	Complete	Sep-19	
			Repair damage caused by a tree	Complete	Oct-19	
32	Hyndman	Route 96 South	<i>Performance driven by trees off ROW (61%) and line failure (29%)</i>			
			Zone 1 Infrared Inspection	Complete	Aug-19	
			Repair line failure	Complete	Oct-19	
			Repair damage caused by a tree during a storm	Complete	Nov-19	

West Penn Power						
Rank	Substation	Substation	Remedial Action Planned or Taken	Status of Remedial Work Completed	Progress of Remedial Work or Date Completed	Appeared in 2 of 4 Quarters
33	California	Malden	<i>Performance driven by trees off ROW (75%) and unknown (20%)</i>			Q3 2019 Q4 2019
			Repair damage caused by a tree during a storm	Complete	Jul-19	
			Restore unknown outage during a storm	Complete	Nov-19	
34	Atherton	East Residential	<i>Performance driven by equipment failure (61%) and line failure (20%)</i>			Q3 2019 Q4 2019
			On cycle tree trimming	Complete	Feb-19	
			Repair damage caused by a tree	Complete	Jul-19	
			Repair equipment failure during a storm	Complete	Jul-19	
			Repair line failure	Complete	Aug-19	
			Repair equipment failure	Complete	Nov-19	
35	Bethlen	Laughlintown	<i>Performance driven by equipment failure (47%), trees off ROW (27%), and line failure (10%)</i>			
			Repair equipment failure	Complete	Nov-19	
			Repair damage caused by a tree	Complete	Nov-19	
			Overhead circuit inspection	To Be Completed 2020	0%	
36	Amity	Amity	<i>Performance driven by trees off ROW (81%)</i>			Q1 2019 Q2 2019 Q3 2019 Q4 2019
			Repair damage caused by a tree during a storm	Complete	Jan-19	
			Forced outage to repair damage during a storm	Complete	Mar-19	
			Repair line failure	Complete	Apr-19	
			Repair damage caused by a tree during a storm	Complete	Apr-19	
			Overhead circuit inspection	Complete	Jul-19	
			Repair damage caused by a tree during a storm	Complete	Jul-19	
			Repair damage caused by a tree during a storm	Complete	Oct-19	
37	Finleyville	Finleyville	<i>Performance driven by trees off ROW (83%)</i>			
			Repair damage caused by a tree during a storm	Complete	Nov-19	
38	Lagonda	Club Forty	<i>Performance driven by trees off ROW (92%)</i>			
			Repair damage caused by a tree during a storm	Complete	Oct-19	
			On cycle tree trimming	To Be Completed 2020	0%	

West Penn Power							
Rank	Substation	Substation	Remedial Action Planned or Taken	Status of Remedial Work Completed	Progress of Remedial Work or Date Completed	Appeared in 2 of 4 Quarters	
39	Houston	Weavertown	<i>Performance driven by vehicle (59%), unknown (14%), and human error-company (13%)</i>				Q2 2019 Q3 2019 Q4 2019
			Repair damage caused by a vehicle during a storm	Complete	Jun-19		
			Repair line failure	Complete	Sep-19		
			Repair damage caused by a tree during a storm	Complete	Oct-19		
			Overhead circuit inspection	To Be Completed 2020	0%		
40	Smith	Francis Mine	<i>Performance driven by trees off ROW (81%)</i>				Q1 2019 Q2 2019 Q3 2019 Q4 2019
			Repair damage caused by a tree	Complete	Mar-19		
			Repair damage caused by a tree	Complete	Apr-19		
			Repair damage caused by a tree during a storm	Complete	Jun-19		
			Repair damage caused by a tree during a storm	Complete	Jul-19		
			Zone 1 Infrared Inspection	Complete	Jul-19		
			Repair equipment failure	Complete	Oct-19		

West Penn					
Unranked circuits appearing 2 or more quarters in the last 4 quarters					
Substation	Circuit	1Q 2019	2Q 2019	3Q 2019	4Q 2019
Charleroi	N. Charleroi		X	X	
Emporium	Emporium Jct	X	X		
Karns City	Kaylor	X		X	
Luxor	Rolling Acres	X	X		
Peters	Library	X	X		
Peters	McMurray	X	X		
Ridgway	Montmorenci	X	X		
Rutan	Windridge	X	X		
Sewickley	Wendel	X	X		
Shaffers Corner	Seventh St Rd	X	X		
Smith	Burgettstown	X	X	X	
St. Clair	Lesnett	X	X		
Superior	Culmerville		X	X	
Thompson Farm	Toftrees	X	X		
Vanceville	Vanceville	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
Kersey	Shelvey	On cycle tree trimming	Complete	Dec-19
Rutan	Windridge	On cycle tree trimming	Complete	Dec-19

ATTACHMENT C

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

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
851Q	456	232	235	66
2Q	297	103	384	34
3Q	111	57	507	19
4Q	85	0	338	0

RECEIVED

JAN 31 2020

PA PUBLIC UTILITY COMMISSION
SECRETARY'S BUREAU

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 2019 12-Month Rolling			
Cause of Line Hit	Number of Incidents	Invoice Amount (\$)	Recovery Amount (\$)
Dig In - Other	34	16,080	7,522
Excavated in Tolerance	18	176,749	25,497
Excavation Inconsistent with Ticket Scope	18	26,458	9,875
Excavation Prior to Lawful Start Date	4	6,040	2,672
Expired Ticket	9	16,757	9,889
Hand Digging	1	427	427
Marked Improperly	20	231,300	28,920
No Ticket	27	54,160	26,380
Total	131	527,971	111,182

Penelec – Third Party Line Hit Incidents			
4th Quarter 2019 12-Month Rolling			
Cause of Line Hit	Number of Incidents	Invoice Amount (\$)	Recovery Amount (\$)
Dig In - Other	26	6,141	2,685
Excavated in Tolerance	39	64,883	47,218
Excavation Inconsistent with Ticket Scope	3	160	160
Excavation Prior to Lawful Start Date	5	8,367	3,871
Expired Ticket	4	2,546	803
Hand Digging	5	1,208	528
Marked Improperly	37	121,888	101,811
No Ticket	42	65,609	35,713
Total	161	270,802	192,789

Penn Power – Third Party Line Hit Incidents			
4th Quarter 2019 12-Month Rolling			
Cause of Line Hit	Number of Incidents	Invoice Amount (\$)	Recovery Amount (\$)
Dig In - Other	16	4,164	4,284
Excavated in Tolerance	18	39,421	20,743
Excavation Inconsistent with Ticket Scope	1	3,429	3,429
Excavation Prior to Lawful Start Date	2	1,913	3,032
Expired Ticket	5	9,926	7,597
Hand Digging	0	0	0
Marked Improperly	10	21,057	18,546
No Ticket	20	23,038	14,480
Total	72	102,948	72,111

West Penn – Third Party Line Hit Incidents			
4th Quarter 2019 12-Month Rolling			
Cause of Line Hit	Number of Incidents	Invoice Amount (\$)	Recovery Amount (\$)
Dig In - Other	50	120,631	100,133
Excavated in Tolerance	4	6,785	6,785
Excavation Inconsistent with Ticket Scope	4	5,534	1,972
Excavation Prior to Lawful Start Date	2	2,127	2,127
Expired Ticket	5	8,452	894
Hand Digging	10	8,040	7,267
Marked Improperly	26	67,072	58,980
No Ticket	47	116,503	51,753
Total	148	335,144	229,911

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 2019 Reliability Report – :
Metropolitan Edison Company, :
Pennsylvania Electric Company :
Pennsylvania Power Company and West :
Penn Power Company – Public Version :**

RECEIVED

JAN 31 2020

PA PUBLIC UTILITY COMMISSION
SECRETARY'S BUREAU

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
Commonwealth of Pennsylvania
555 Walnut Street, 1st Floor
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

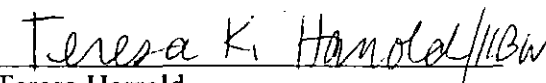
Scott Rubin
Utility Workers Union of America
333 Oak Lane
Bloomsburg, PA 17815-2036

Service by electronic mail, as follows:

David Dulick, General Counsel
David Dulick@ccsenergy.com

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

Dated: January 31, 2020


Teresa Harrold
Attorney No. 311082
FirstEnergy Service Company
2800 Pottsville Pike
P.O. Box 16001
Reading, Pennsylvania 19612-6001
(610) 921-6783
tharrold@firstenergycorp.com

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

MAIL ROOM
(610) 921-6633
AE-1440
2600 POTTSVILLE PIKE
READING PA 19605-2459

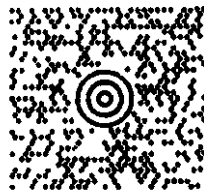
3 LBS

1 OF 1

877) or visit UPS.com®.

SHIP TO:

ROSEMARY CHIAVETTA, SECRETARY
PA PUBLIC UTILITY COMMISSION
2ND FLOOR
COMMONWEALTH KEYSTONE BUILDING
400 NORTH STREET
HARRISBURG PA 17120-0079



PA 171 9-20



PUBLIC UTILITY COMMISSION
400 NORTH ST
FLOOR 2ND
HARRISBURG PA 17120

UPS NEXT DAY AIR SAVER **1P**

TRACKING #: 1Z AE1 440 13 5978 1205

P: SILVER S: BBLUE I: 39D

PROC - 1800

1ZAE1440135978 1205 1600

RNC1VZ PAHARSBUJC F2S 1 08180118 2020
US 1711 HIP 20.8.0 ZBRNZ7410



BILLING: P/P

REF 1: 503003

REF 2: TERESA HARROLD-REAP-37

US 22.0.17

LP2844 83.0A 12/2019



SEE NOTICE ON REVERSE regarding UPS Terms, and notice of limitation of liability. Where allowed by law, shipper authorizes UPS to act as forwarding agent for export control and customs purposes. If exported from the US, shipper certifies that the commodities, technology or software were exported from the US in accordance with the Export Administration Regulations. Diversion contrary to law is prohibited.

9502 0718