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February 1, 2022

VIA E-FILING

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

Re: Joint 4th Quarter 2021 Reliability Report – Metropolitan Edison Company, Pennsylvania Electric Company, Pennsylvania Power Company and West Penn Power Company – Public Version; Docket No. M-2016-2522508

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”) is the Joint 4th Quarter 2021 Reliability Report – Public Version (“Joint Report”).

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

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

Sincerely,



Tori L. Giesler

Enclosures

- c: As Per Certificate of Service
D. Searfoorce - Bureau of Technical Utility Services (via electronic mail)
J. Van Zant – Bureau of Technical Utility Services (via electronic mail)
Harry Bidelspach – Bureau of Technical Utility Services (via electronic mail)



Joint 2021 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 2021 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)

None of the Companies experienced a major event during the reporting period ending December 31, 2021.

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 2021 (12-Mo Rolling)	Met-Ed			Penelec			Penn Power			West Penn		
	Benchmark	12-Month Standard	12-Month Actual	Benchmark	12-Month Standard	12-Month Actual	Benchmark	12-Month Standard	12-Month Actual	Benchmark	12-Month Standard	12-Month Actual
SAIFI	1.15	1.38	1.35	1.26	1.52	1.84	1.12	1.34	1.00	1.05	1.26	1.26
CAIDI	117	140	173	117	141	151	101	121	129	170	204	192
SAIDI	135	194	233	148	213	277	113	162	129	179	257	242
MAIFI²			0.670			0.662			0.629			
Customers Served³	573,243			580,180			166,590			722,128		
Number of Sustained Interruptions	12,819			14,397			3,217			12,734		
Customers Affected	772,644			1,065,004			166,681			910,590		
Customer Minutes	133,405,906			160,524,900			21,565,551			174,483,152		
Number of Customer Momentary Interruptions	380,297			397,501			104,828					

² 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 2021:

Met-Ed

- Beginning the morning of Friday, October 29, 2021, a low-pressure system moved into the Met-Ed service territory from the south. This low-pressure system produced sustained high winds with maximum winds gusts up to 43 miles per hour in addition to two inches of rain. The reliability impact of the storm was 9.0 minutes of System Average Interruption Duration Index (“SAIDI”), 0.03 of System Average Interruption Frequency Index (“SAIFI”), and an overall storm Customer Average Interruption Duration Index (“CAIDI”) of 298.67 minutes.
- Beginning the afternoon of Monday, December 6, 2021, a low-pressure system moved into the Met-Ed service territory from the west. This low-pressure system produced sustained high winds with maximum winds gusts up to 52 miles per hour in addition to up to a half-an-inch of rain. The reliability impact of the storm was 8.0 minutes of SAIDI, 0.03 of SAIFI, and an overall storm CAIDI of 298.6 minutes.
- Beginning Saturday evening, December 11, 2021, a slow-moving cold front producing thunderstorms, rain showers, and wind gusts, moved from west to east across Pennsylvania including Met-Ed’s service territory. Wind gusts in the affected area exceeded 50-miles per hour on December 11, 2021. The reliability impact of the storm was 6.4 minutes of SAIDI, 0.02 of SAIFI, and an overall storm CAIDI of 365.3 minutes.
- On Tuesday, December 21, 2021, service from the Allen Substation was interrupted as a result of the transformer load tap changer (LTC) failure. This outage resulted in approximately 5.9 minutes of SAIDI and 636.9 minutes of CAIDI and less than 0.01 SAIFI impact.

Penelec

- Beginning Saturday evening, December 11, 2021, a slow-moving cold front producing thunderstorms, rain showers and wind gusts, moved from west to east across Pennsylvania including the Penelec service territory. Wind gusts in the Penelec service territory exceeded 60-miles per hour on December 11, 2021. The reliability impact of the storm was 17.0 minutes of SAIDI, 0.05 of SAIFI, and an overall storm CAIDI of 331.1 minutes.

West Penn

- Beginning Saturday evening, December 11, 2021, a slow-moving cold front producing thunderstorms, rain showers, and wind gusts moved from west to east across Pennsylvania, including the West Penn service territory. Wind gusts in the West Penn service territory exceeded 50-miles per hour on December 11, 2021. The reliability impact of the storm was 15 minutes of SAIDI, 0.04 of SAIFI, and an overall storm CAIDI of 374.1 minutes.

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.

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 2021 12-Month Rolling	Met-Ed			
Cause	Customer Minutes	Number of Sustained Interruptions	Customers Affected	% Based on Customer Minutes
Trees off ROW - tree	66,428,817	3,270	222,068	49.79%
Equipment failure	23,254,228	2,624	168,806	17.43%
Vehicle	8,712,215	327	50,151	6.53%
Unknown	6,494,991	1,258	61,582	4.87%
Trees off ROW - limb	5,580,609	618	25,684	4.18%
Line failure	5,076,907	738	31,974	3.81%
Forced outage	4,331,424	501	74,896	3.25%
Lightning	3,682,207	312	19,435	2.76%
Animal	2,530,052	1,399	36,659	1.90%
Wind	1,690,137	111	10,016	1.27%
Human error - company	1,323,913	66	42,073	0.99%
Trees on ROW	1,151,608	115	3,981	0.86%
Trees - sec/service	942,455	570	1,791	0.71%
Object contact with line	640,352	65	5,974	0.48%
Human error - non-company	593,405	52	3,979	0.44%
Bird	338,532	627	3,943	0.25%
Overload	319,089	39	7,236	0.24%
Previous lightning	93,978	22	345	0.07%
UG dig-up	84,590	32	583	0.06%
Other electric utility	54,105	9	547	0.04%
Customer equipment	33,474	32	179	0.03%
Other utility - non-electric	17,543	7	512	0.01%
Contamination	14,355	1	145	0.01%
Ice	13,674	13	56	0.01%
Fire	2,444	6	24	0.00%
Vandalism	802	5	5	0.00%
Total	133,405,906	12,819	772,644	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, 2021, 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 ("ROW") tree management. However, Met-Ed 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. 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 continues its program to mitigate trees subject to damage from the Emerald Ash Borer.

To reduce the likelihood of equipment failure outages, Met-Ed follows inspection and maintenance ("I&M") programs⁴ 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.

⁴ 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, 2021 through December 31, 2022 on October 1, 2019, which was deemed approved pursuant to 52 Pa. Code § 57.198(i).

Outages by Cause – Penelec

Outage by Cause				
4th Quarter 2021 12-Month Rolling	Penelec			
Cause	Customer Minutes	Number of Sustained Interruptions	Customers Affected	% Based on Customer Minutes
Trees off ROW - tree	65,134,922	2,490	284,057	40.58%
Equipment failure	29,926,345	2,597	242,696	18.64%
Line failure	12,864,067	1,416	110,631	8.01%
Forced outage	9,417,228	1,230	83,675	5.87%
Unknown	7,736,493	1,716	94,935	4.82%
Trees off ROW - limb	6,752,862	790	42,228	4.21%
Lightning	5,636,708	423	43,758	3.51%
Vehicle	5,101,216	326	35,946	3.18%
Wind	4,058,060	1,193	15,581	2.53%
Animal	3,853,926	205	37,130	2.40%
Other electric utility	2,669,422	155	17,884	1.66%
Ice	1,700,384	108	4,667	1.06%
Human error - company	1,366,571	854	19,901	0.85%
Trees - sec/service	1,081,080	475	3,601	0.67%
Bird	904,733	86	11,053	0.56%
Human error - non-company	816,243	49	5,182	0.51%
UG dig-up	354,579	63	1,387	0.22%
Trees on ROW	349,220	49	1,372	0.22%
Overload	344,105	19	3,291	0.21%
Customer equipment	142,381	22	2,308	0.09%
Object contact with line	107,018	36	497	0.07%
Switching Error	92,779	6	2,764	0.06%
Contamination	57,975	13	292	0.04%
Previous lightning	26,886	12	32	0.02%
Fire	18,213	45	106	0.01%
Other utility - non-electric	9,890	5	18	0.01%
Vandalism	1,594	14	12	0.00%
Total	160,524,900	14,397	1,065,004	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, 2021 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-ROW 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. In response to damage caused by the Emerald Ash Borer, a program to proactively remove ash trees off rights-of-way was completed in 2019. Beyond 2019, any additional ash trees are addressed under Penelec's hazardous tree maintenance process.

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.

Outages by Cause – Penn Power

Outage by Cause				
4th Quarter 2021 12-Month Rolling	Penn Power			
Cause	Customer Minutes	Number of Sustained Interruptions	Customers Affected	% Based on Customer Minutes
Trees off ROW - tree	12,738,012	765	60,449	59.07%
Line failure	1,588,545	267	9,728	7.37%
Lightning	1,516,946	317	9,423	7.03%
Equipment failure	1,085,321	303	12,107	5.03%
Vehicle	1,062,017	80	8,028	4.92%
Trees off ROW - limb	910,066	181	6,777	4.22%
Unknown	714,846	147	23,034	3.31%
Animal	559,618	445	7,873	2.59%
Forced outage	397,180	83	8,170	1.84%
Bird	352,031	405	3,907	1.63%
Human error - company	217,440	27	14,915	1.01%
Trees - sec/service	189,996	140	449	0.88%
Human error - non-company	167,342	23	1,111	0.78%
Object contact with line	30,045	7	258	0.14%
UG dig-up	20,559	10	264	0.10%
Trees on ROW	7,631	3	103	0.04%
Ice	3,705	1	13	0.02%
Overload	3,132	2	61	0.01%
Previous lightning	776	7	7	0.00%
Customer equipment	239	3	3	0.00%
Vandalism	104	1	1	0.00%
Total	21,565,551	3,217	166,681	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, 2021 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-ROW 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 and line failure outages, 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.

Outages by Cause – West Penn

Outage by Cause				
4th Quarter 2021 12-Month Rolling	West Penn			
Cause	Customer Minutes	Number of Sustained Interruptions	Customers Affected	% Based on Customer Minutes
Trees off ROW - tree	85,733,317	3,341	286,176	49.14%
Equipment failure	18,275,944	1,872	124,086	10.47%
Line failure	16,805,645	1,315	93,858	9.63%
Unknown	15,793,726	1,632	101,640	9.05%
Vehicle	9,940,311	328	70,047	5.70%
Trees on ROW	7,862,058	491	37,938	4.51%
Forced outage	5,171,949	615	68,136	2.96%
Trees off ROW - limb	4,545,063	270	36,272	2.60%
Wind	2,434,405	113	9,242	1.40%
Animal	2,331,052	1,412	35,973	1.34%
Human error - non-company	1,232,083	60	5,891	0.71%
Lightning	1,219,552	220	5,622	0.70%
Bird	750,421	480	8,778	0.43%
Other electric utility	679,103	21	2,591	0.39%
Human error - company	528,952	44	16,486	0.30%
Trees - sec/service	425,925	432	826	0.24%
Ice	259,958	7	1,112	0.15%
Overload	233,331	7	3,723	0.13%
Object contact with line	92,951	11	856	0.05%
UG dig-up	74,381	32	582	0.04%
Fire	51,019	7	488	0.03%
Customer equipment	38,781	13	248	0.02%
Other utility - non-electric	2,393	4	12	0.00%
Contamination	414	2	2	0.00%
Vandalism	238	3	3	0.00%
Previous Lightning	180	2	2	0.00%
Total	174,483,152	12,734	910,590	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, 2021, 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-ROW 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 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.

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

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.

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

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.

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

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).⁵

Staffing Levels

Met-Ed 2021												
		Staffing Level				Staff Added in Quarter			Staff Lost in Quarter			Plan to Hire in 2022
Department	Position	1Q	2Q	3Q	4Q	New Hire – Experienced	New Hire – PSI Student	Other ⁶	Retirement	Voluntary Separation	Other ⁷	
Distribution	Line Leader	48	49	50	52			4			2	
	Line Troubleshooter	35	35	35	33			1			3	
	Lineman	140	161	159	157			21		1	22	10
Substation	Substation Leader	14	15	16	16			0				
	Substation Employee	67	74	69	66			4	1	1	5	4
Transmission	Line Leader	2	2	2	2			0				
	Lineman	10	9	9	9			0				
Total		316	345	340	335	0	0	30	1	2	32	14

⁵ 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), the Companies are directed to provide additional detail as described below in the staff reporting section in the Quarterly Reliability Reports. Specifically, for each staff member added, the Companies provide information on whether they were a new hire, whether they were already at the journeyman level, or whether they had obtained some other experienced level of training. For each staff member lost, the Companies provide the reason for the loss (retirement, voluntary separation, etc.). Additionally, the Companies also disclose the number of staff in each category that each one is planning to hire in the next calendar year.

⁶ Includes transfers and promotions.

⁷ Includes transfers, voluntary separations, and promotions.

Penelec 2021												
		Staffing Level				Staff Added in Quarter			Staff Lost in Quarter			Plan to Hire in 2022
Department	Position	1Q	2Q	3Q	4Q	New Hire – Experienced	New Hire – PSI Student	Other ⁸	Retirement	Voluntary Separation	Other ⁹	
Distribution	Line Leader	63	63	61	58			6			9	
	Line Troubleshooter	70	68	69	74	1		6		1	1	
	Lineman	142	163	158	151			4		2	9	10
Substation	Substation Leader	29	27	25	26			1				
	Substation Employee	45	50	52	48			2			6	6
Transmission	Line Leader	4	4	4	5			2			1	
	Lineman	18	18	19	20			1				
Total		371	393	388	382	1	0	22	0	3	26	16

⁸ Includes transfers and promotions.

⁹ Includes transfers, involuntary separations, and promotions.

Penn Power 2021												
		Staffing Level				Staff Added in Quarter			Staff Lost in Quarter			Plan to Hire in 2022
Department	Position	1Q	2Q	3Q	4Q	New Hire – Experienced	New Hire – PSI Student	Other ¹⁰	Retirement	Voluntary Separation	Other ¹¹	
Distribution	Line Leader	25	25	25	25							
	Line Troubleshooter	9	9	9	14			5				4
	Lineman	42	45	45	40						5	
Substation	Substation Leader	5	5	5	5							
	Substation Employee	18	19	19	19							2
Transmission	Line Leader	1	1	1	1							
	Lineman	5	5	5	5							
Total		105	109	109	109	0	0	5	0	0	5	

¹⁰ Includes transfers, promotions, and promotions within a position.

¹¹ Includes transfers, involuntary separations, promotions, and promotions within a position.

West Penn 2021												
		Staffing Level				Staff Added in Quarter			Staff Lost in Quarter			Plan to Hire in 2022
Department	Position	1Q	2Q	3Q	4Q	New Hire – Experienced	New Hire – PSI Student	Other ¹²	Retirement	Voluntary Separation	Other ¹³	
Distribution	Line Leader	63	65	65	66			3			2	
	Line Troubleshooter	59	60	58	56			2	1		3	
	Lineman	133	152	152	151			4			5	11
Substation	Substation Leader	22	22	21	21			1	1			
	Substation Employee	74	81	78	76						2	6
Transmission	Line Leader	2	2	2	2							
	Lineman	8	7	8	8			1			1	
Total		361	389	384	380	0	0	11	2	0	13	17

¹² Includes transfers, promotions, and promotions within a position.

¹³ Includes transfers, involuntary separations, promotions, and promotions within a position.

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

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. As a result, hourly information is not available.

This portion of the report is confidential.

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

Call-out Acceptance Rate

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

This portion of the report is confidential.

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

Call-out Response

This portion of the report is confidential.

Call-Out Procedure:

When an event occurs, Met-Ed, Penelec, Penn Power, and West Penn 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 on-duty DCC person or Customer Operations Center person, or both, 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.

During the Covid-19 pandemic, crews had been placed in work pods to limit employees’ potential exposure. Each pod ranged between three and eight crew members. For an event, the entire pod team was called making every effort to keep pod members together without mixing different pod teams.

ATTACHMENT A

Worst Performing Circuits - Reliability Indices

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	3,258	178	0	2,303,091	6,369	4.02	706.90	1.95	361.61	0.00
2	Bushkill Falls	00698-3	Stroudsburg	1,757	24	3	2,299,171	3,898	4.01	1,308.58	2.22	589.83	0.00
3	Huffs Church	00600-1	Boyertown	1,603	145	1	2,018,740	4,497	3.52	1,259.35	2.81	448.91	0.00
4	Shawnee	00895-3	Stroudsburg	4,013	74	1	1,949,803	6,351	3.40	485.87	1.58	307.01	0.28
5	Snydersville	00621-3	Stroudsburg	1,304	49	0	1,942,727	4,734	3.39	1,489.82	3.63	410.38	1.00
6	Birdsboro	00756-1	Reading	1,521	90	3	1,666,432	4,612	2.91	1,095.62	3.03	361.33	6.31
7	Lynnville	00737-1	Hamburg	1,075	158	0	1,666,117	4,147	2.91	1,549.88	3.86	401.76	1.00
8	Shawnee	00860-3	Stroudsburg	3,223	48	3	1,383,618	13,533	2.41	429.30	4.20	102.24	0.00
9	Orrtanna	00761-4	Gettysburg	487	17	2	1,335,410	1,743	2.33	2,742.11	3.58	766.16	0.00
10	Flying Hills	00777-1	Reading	1,789	59	0	1,291,458	5,155	2.25	721.89	2.88	250.53	0.18
11	Barto	00705-1	Boyertown	652	77	0	1,215,957	1,813	2.12	1,864.96	2.78	670.69	0.66
12	Mountain	00744-4	Dillsburg	1,794	109	0	1,130,837	4,695	1.97	630.34	2.62	240.86	0.00
13	Cly	00721-4	York	822	50	0	971,031	1,923	1.69	1,181.30	2.34	504.96	0.00
14	Shawnee	00899-3	Stroudsburg	1,677	52	2	963,472	3,915	1.68	574.52	2.33	246.10	4.45
15	W Boyertown	00715-1	Boyertown	1,696	60	2	962,956	5,019	1.68	567.78	2.96	191.86	0.00
16	Violet Hill	00527-4	York	1,271	25	5	937,557	6,332	1.64	737.65	4.98	148.07	3.91
17	Bairs	00571-4	York	2,367	80	0	907,875	4,256	1.58	383.56	1.80	213.32	0.00
18	North Cornwall	00610-2	Lebanon	2,281	65	1	902,925	6,079	1.58	395.85	2.67	148.53	6.05
19	Grantley	00401-4	York	799	11	2	900,883	1,759	1.57	1,127.51	2.20	512.16	0.00
20	Pleasantville	00142-1	Boyertown	819	80	1	883,131	3,216	1.54	1,078.30	3.93	274.61	0.00
21	Mountain	00742-4	Dillsburg	1,422	43	0	864,378	2,552	1.51	607.86	1.79	338.71	1.08
22	Friedensburg	00141-1	Reading	647	56	0	863,393	1,427	1.51	1,334.46	2.21	605.04	0.00
23	Collins	00760-2	Lebanon	1,112	42	0	853,261	3,366	1.49	767.32	3.03	253.49	0.00
24	Tolna	00792-4	York	1,791	33	1	852,906	4,253	1.49	476.22	2.37	200.54	0.09
25	North Lebanon	00712-2	Lebanon	2,578	66	3	848,778	8,806	1.48	329.24	3.42	96.39	7.01
26	Belfast	00817-3	Easton	1,018	53	2	783,465	4,111	1.37	769.61	4.04	190.58	0.99
27	No Bangor	00838-3	Easton	1,704	59	1	752,771	2,820	1.31	441.77	1.65	266.94	0.18
28	S Hamb	00740-1	Hamburg	1,271	79	1	701,954	1,982	1.22	552.28	1.56	354.16	0.37

Met-Ed													
Circuit Rank	Substation	Circuit	District	Average Customers	Outages	Lockouts	Customer Minutes	Customers Affected	SAIDI Impact	SAIDI	SAIFI	CAIDI	MAIFI
29	Hill	00737-4	York	2,332	47	0	688,149	5,391	1.20	295.09	2.31	127.65	0.14
30	Walker	00865-3	Stroudsburg	2,920	64	1	686,130	5,762	1.20	234.98	1.97	119.08	0.36
31	Gardners	00750-4	Gettysburg	1,249	27	0	685,367	2,682	1.20	548.73	2.15	255.54	0.00
32	Grantley	00544-4	York	550	15	1	683,984	1,464	1.19	1,243.61	2.66	467.20	1.77
33	Hokes	00587-4	York	769	30	1	673,442	2,224	1.17	875.74	2.89	302.81	1.13
34	Lorane	00560-1	Reading	1,144	23	1	653,648	4,173	1.14	571.37	3.65	156.64	4.56
35	Palmer	00658-3	Easton	1,471	28	0	649,069	5,015	1.13	441.24	3.41	129.43	0.00
36	Campbelltown	00731-2	Lebanon	2,896	65	1	645,257	4,747	1.13	222.81	1.64	135.93	4.00
37	Swatara Hill	00763-2	Lebanon	1,539	63	1	643,198	3,901	1.12	417.93	2.53	164.88	4.99
38	Ferndale	00871-3	Easton	487	46	1	639,261	2,332	1.12	1,312.65	4.79	274.13	1.98
39	No Bangor	00813-3	Easton	1,325	35	0	638,510	2,149	1.11	481.89	1.62	297.12	1.02

Penelec													
Circuit Rank	Substation	Circuit	District	Average Customers	Outages	Lockouts	Customer Minutes	Customers Affected	SAIDI Impact	SAIDI	SAIFI	CAIDI	MAIFI
1	Madera	00166-22	Philipsburg	1,385	61	2	3,404,251	7,293	5.87	2,457.94	5.27	466.78	2.767
2	Grover	00527-63	Towanda	1,053	88	4	2,812,034	7,394	4.85	2,670.50	7.02	380.31	0.223
3	Dubois	00137-23	Dubois	3,072	135	1	2,659,283	9,076	4.58	865.65	2.95	293.00	0.434
4	Russell Hill	00282-65	Montrose	1,005	75	0	2,166,652	3,990	3.73	2,155.87	3.97	543.02	0.993
5	Saxton Sub	00625-73	Altoona	861	35	1	1,983,810	4,957	3.42	2,304.08	5.76	400.20	0.148
6	Falls	00297-65	Montrose	757	31	0	1,710,862	2,850	2.95	2,260.06	3.76	600.30	11.723
7	Marienville	00328-51	Oil City	1,206	47	0	1,471,086	3,242	2.54	1,219.81	2.69	453.76	0.002
8	Revloc	00069-72	Altoona	560	6	4	1,192,833	2,262	2.06	2,130.06	4.04	527.34	0.000
9	Tiffany	00435-65	Montrose	1,623	57	8	1,190,908	7,760	2.05	733.77	4.78	153.47	2.720
10	Warren South	00220-41	Warren	2,730	82	0	1,155,371	8,829	1.99	423.21	3.23	130.86	1.184
11	Union City Sub	00206-43	Erie	2,826	112	0	1,149,011	9,755	1.98	406.59	3.45	117.79	0.643
12	Piney	00523-51	Oil City	1,503	82	7	1,114,604	9,410	1.92	741.59	6.26	118.45	1.966
13	Tunkhannock	00533-65	Montrose	1,245	80	0	1,038,294	4,635	1.79	833.97	3.72	224.01	6.518
14	Fallen Timbers	00995-22	Philipsburg	755	26	2	1,028,536	4,884	1.77	1,362.30	6.47	210.59	0.069
15	Samuel Rea Car Shop	00031-71	Altoona	1,840	17	3	1,022,444	15,301	1.76	555.68	8.32	66.82	3.056
16	N Meshoppen Tran	00534-65	Montrose	844	82	0	993,349	1,779	1.71	1,176.95	2.11	558.37	0.056
17	Rolling Meadows	00310-31	Erie	4,031	48	0	977,503	10,376	1.68	242.50	2.57	94.21	1.370
18	Cranberry	00350-51	Oil City	1,072	29	3	969,898	4,982	1.67	904.76	4.65	194.68	0.000
19	Springboro	00237-52	Meadville	2,756	84	0	964,190	7,713	1.66	349.85	2.80	125.01	0.058
20	Seward	00075-11	Johnstown	824	39	2	963,654	4,057	1.66	1,169.48	4.92	237.53	1.933
21	Madera	00165-22	Philipsburg	1,516	34	0	921,811	5,296	1.59	608.05	3.49	174.06	0.000
22	Ppl West	PL097-62	Towanda	104	15	0	826,743	953	1.42	7,949.45	9.16	867.52	0.000
23	Meshoppen	00283-65	Montrose	386	16	0	771,055	1,092	1.33	1,997.55	2.83	706.09	5.668
24	Lake Como	00788-65	Montrose	591	39	6	763,164	2,359	1.32	1,291.31	3.99	323.51	1.078
25	French Road	00219-31	Erie	1,484	12	0	730,953	2,945	1.26	492.56	1.98	248.20	0.061
26	Logan	00700-81	Lewistown	1,005	44	0	714,454	2,858	1.23	710.90	2.84	249.98	0.105
27	Titusville Sub	00514-51	Oil City	521	25	0	710,765	1,736	1.23	1,364.23	3.33	409.43	0.010
28	Wyalusing Sub	00532-62	Towanda	748	66	3	684,011	3,703	1.18	914.45	4.95	184.72	1.029

Penelec													
Circuit Rank	Substation	Circuit	District	Average Customers	Outages	Lockouts	Customer Minutes	Customers Affected	SAIDI Impact	SAIDI	SAIFI	CAIDI	MAIFI
29	Spangler Sub	00052-72	Altoona	1,495	16	2	680,636	4,619	1.17	455.27	3.09	147.36	0.000
30	Brookville West	00121-23	Dubois	769	41	2	667,869	2,058	1.15	868.49	2.68	324.52	0.723
31	Greenwood	00041-71	Altoona	1,214	20	0	666,815	2,621	1.15	549.27	2.16	254.41	0.000
32	East Pike	00095-13	Indiana	3,262	31	1	648,657	5,469	1.12	198.85	1.68	118.61	0.002
33	Blairsville East	00080-13	Indiana	1,518	32	0	627,658	6,556	1.08	413.48	4.32	95.74	0.703
34	French Road	00550-31	Erie	1,453	26	1	619,355	4,218	1.07	426.26	2.90	146.84	0.301
35	Erie South	00259-31	Erie	2,670	78	0	614,943	4,529	1.06	230.32	1.70	135.78	0.000
36	Natl Forge Sw Sta	00577-41	Warren	1,103	58	0	607,671	3,801	1.05	550.93	3.45	159.87	1.741
37	Russell Hill	00765-65	Montrose	349	38	0	596,899	1,429	1.03	1,710.31	4.09	417.70	1.069
38	Crown	00519-51	Oil City	645	69	0	594,732	1,765	1.03	922.07	2.74	336.96	0.000
39	Tower 51	00051-11	Johnstown	576	26	0	568,122	2,732	0.98	986.32	4.74	207.95	0.031
40	Tionesta	00344-51	Oil City	516	20	0	566,420	1,001	0.98	1,097.71	1.94	565.85	0.000
41	East Hickory	00200-41	Warren	476	35	3	560,155	1,886	0.97	1,176.80	3.96	297.01	3.536
42	N Meshoppen Tran	00531-65	Montrose	349	40	5	527,464	1,916	0.91	1,511.36	5.49	275.29	2.854
43	Tiffany	00440-65	Montrose	1,212	28	0	522,332	4,867	0.90	430.97	4.02	107.32	1.467
44	Philipsburg	00162-22	Philipsburg	2,713	60	0	515,127	4,591	0.89	189.87	1.69	112.20	2.012
45	N Meshoppen Tran	00530-65	Montrose	497	31	1	511,679	2,424	0.88	1,029.54	4.88	211.09	4.046
46	Glen Campbell Sub	00680-21	Clearfield	440	39	3	504,980	3,564	0.87	1,147.68	8.10	141.69	5.064
47	Thompson	00446-65	Montrose	1,138	43	1	500,979	2,999	0.86	440.23	2.64	167.05	0.704
48	Samuel Rea Car Shop	00032-71	Altoona	823	26	1	487,310	3,148	0.84	592.11	3.83	154.80	1.683
49	Claysburg	00044-71	Altoona	1,193	30	0	485,606	2,417	0.84	407.05	2.03	200.91	0.000
50	Somerset	00013-12	Somerset	1,992	46	3	476,251	4,229	0.82	239.08	2.12	112.62	1.553
51	Crown	00320-51	Oil City	466	30	1	474,026	1,153	0.82	1,017.22	2.47	411.12	0.000
52	Thompson	00436-65	Montrose	1,254	55	3	473,572	3,440	0.82	377.65	2.74	137.67	0.006
53	Millcreek Sub	00055-11	Johnstown	1,825	15	3	469,388	4,980	0.81	257.20	2.73	94.25	1.088
54	Shawville	00151-21	Clearfield	2,248	34	2	462,680	7,715	0.80	205.82	3.43	59.97	0.107
55	East Towanda	00525-62	Towanda	654	47	0	462,340	1,166	0.80	706.94	1.78	396.52	0.936
56	Vail	00647-22	Philipsburg	539	27	2	461,157	2,074	0.79	855.58	3.85	222.35	1.048

Penelec													
Circuit Rank	Substation	Circuit	District	Average Customers	Outages	Lockouts	Customer Minutes	Customers Affected	SAIDI Impact	SAIDI	SAIFI	CAIDI	MAIFI
57	Titusville Sub	00387-51	Oil City	626	31	1	457,618	1,483	0.79	731.02	2.37	308.58	1.449
58	Wellsboro	00324-63	Mansfield Pa	281	24	3	449,663	1,685	0.78	1,600.22	6.00	266.86	1.708
59	Montrose Sub	00457-65	Montrose	658	47	0	449,319	1,239	0.77	682.86	1.88	362.65	0.445
60	Punxsutawney	00117-23	Dubois	304	14	2	449,027	876	0.77	1,477.06	2.88	512.59	0.326
61	Brookville	00125-23	Dubois	563	37	0	444,184	2,023	0.77	788.96	3.59	219.57	2.494
62	Portage	00635-72	Altoona	193	9	0	437,622	539	0.75	2,267.47	2.79	811.91	0.000

Penn Power												
Circuit Rank	Substation	Circuit	District	Average Customers	Outages	Lockouts	Customer Minutes	Customers Affected	SAIDI Impact	SAIDI	SAIFI	CAIDI
1	McDowell	W-121	Clark	698	33	4	745,418	1,851	4.47	1,067.93	2.70	402.70
2	Ingomar	D620	Zelienople	1,268	15	2	734,704	3,712	4.41	579.42	2.90	197.90
3	Seneca	W700	Zelienople	976	40	1	543,729	2,556	3.26	557.10	2.60	212.70
4	Stoneboro	W-131	Clark	1,450	84	0	503,441	1,395	3.02	347.20	1.00	360.90
5	Union	W-561	New Castle	1,596	34	2	439,286	3,701	2.64	275.24	2.30	118.70
6	Richard	W745	Zelienople	644	22	1	425,688	2,453	2.56	661.01	3.80	173.50
7	Warrendale	D625	Zelienople	1,281	21	2	401,013	2,977	2.41	313.05	2.30	134.70
8	Hermitage	W-260	Clark	2,366	73	0	322,714	2,526	1.94	136.40	1.10	127.80
9	Castlewood	D-326	New Castle	1,184	38	0	296,703	2,415	1.78	250.59	2.00	122.90

West Penn												
Circuit Rank	Substation	Circuit	District	Average Customers	Outages	Lockouts	Customer Minutes	Customers Affected	SAIDI Impact	SAIDI	SAIFI	CAIDI
1	Avella	W Middletown	Washington PA	1,057	90	0	3,639,856	7,713	5.0	3,444	7.30	471.91
2	Amity	Banetown	Washington PA	1,480	78	4	2,707,251	7,237	3.7	1,829	4.89	374.08
3	Treveskyn	Treveskyn	Boyce	1,464	33	2	2,448,093	3,732	3.4	1,672	2.55	655.97
4	Rutan	Bristoria	Jefferson	1,126	88	0	1,699,465	2,955	2.4	1,509	2.62	575.12
5	Karns City	Kaylor	Butler	1,152	38	0	1,508,698	3,104	2.1	1,310	2.69	486.05
6	Vandergrift	Grifflo Park	Arnold	2,735	56	1	1,427,354	8,983	2.0	522	3.28	158.90
7	Waterville	Waterville	State College	357	37	0	1,369,831	4,347	1.9	3,837	12.18	315.12
8	Thomas	Thomas	Boyce	1,348	49	2	1,351,235	4,650	1.9	1,002	3.45	290.59
9	Piney Fork	Gillhall	Charleroi	2,200	16	0	1,311,384	3,924	1.8	596	1.78	334.20
10	Robbins	Balkan	Jeannette	1,718	17	3	1,267,594	4,236	1.8	738	2.47	299.24
11	Bethel Park	Dashwood	Boyce	2,161	25	1	1,181,134	4,332	1.6	547	2.00	272.65
12	Avella	Penowa	Washington PA	628	62	0	1,165,069	2,302	1.6	1,855	3.67	506.11
13	Cecil	Murray Hill	Boyce	1,790	24	2	1,161,155	3,820	1.6	649	2.13	303.97
14	Crossgates	Peters Twp	Boyce	1,065	17	0	1,133,526	1,735	1.6	1,064	1.63	653.33
15	Flintstone	Chaneyville	Hyndman	577	33	3	1,114,169	2,674	1.5	1,931	4.63	416.67
16	Franklin	Rogersville	Jefferson	832	71	0	1,018,794	2,915	1.4	1,225	3.50	349.50
17	New Kensington	Power	Arnold	1,503	13	0	935,070	3,502	1.3	622	2.33	267.01
18	Port Matilda	Port Matilda	State College	1,441	57	3	926,621	3,784	1.3	643	2.63	244.88
19	Saltsburg	Saltsburg	Arnold	1,409	59	2	863,272	5,029	1.2	613	3.57	171.66
20	Gordon	Wolfdale	Washington PA	2,087	52	1	832,836	3,764	1.2	399	1.80	221.26
21	Smithton	Fitzhenry	Charleroi	1,167	31	2	824,956	3,876	1.1	707	3.32	212.84
22	Charleroi	N. Charleroi	Charleroi	1,075	13	0	824,724	1,678	1.1	767	1.56	491.49
23	Crossgates	Robinhood	Boyce	1,102	23	0	806,707	2,893	1.1	732	2.63	278.85
24	Fountaindale	Carroll Valley	Waynesboro	1,265	54	2	805,583	3,533	1.1	637	2.79	228.02
25	Cooperstown	Twin Willows	Butler	1,822	39	4	802,255	8,994	1.1	440	4.94	89.20
26	Shingletown	Windmill Rd	State College	1,071	19	3	787,875	3,781	1.1	736	3.53	208.38

West Penn												
Circuit Rank	Substation	Circuit	District	Average Customers	Outages	Lockouts	Customer Minutes	Customers Affected	SAIDI Impact	SAIDI	SAIFI	CAIDI
27	Enlow	Summit	Boyce	1,804	17	0	769,229	5,009	1.1	426	2.78	153.57
28	Dry Run	Town	Charleroi	1,815	17	4	758,005	6,034	1.0	418	3.32	125.62
29	King Farm	Church St.	Pleasant Valley	1,618	15	2	750,064	3,464	1.0	464	2.14	216.53
30	Smith	Francis Mine	Washington PA	1,436	50	1	734,383	3,521	1.0	511	2.45	208.57
31	Atherton	East Residential	State College	1,954	20	2	713,212	3,075	1.0	365	1.57	231.94
32	North Union	Phillips	Uniontown	1,472	26	1	706,480	4,041	1.0	480	2.75	174.83
33	Weedville	Weedville	St Marys	1,435	35	0	702,789	4,088	1.0	490	2.85	171.92
34	Fowler	Bald Eagle	State College	428	24	0	685,692	1,051	0.9	1,602	2.46	652.42
35	Mateer	Dime Rd	Arnold	1,200	68	0	676,486	2,104	0.9	564	1.75	321.52
36	St. Clair	Fort Couch	Boyce	1,156	36	0	669,123	2,253	0.9	579	1.95	296.99
37	Driftwood	Driftwood	St Marys	870	28	1	664,245	1,557	0.9	764	1.79	426.62
38	Kiski Valley Distrib	Kittanning Rd	Arnold	1,778	43	0	654,619	2,974	0.9	368	1.67	220.11
39	Salem	Greenvillage	Waynesboro	1,625	17	4	635,089	3,219	0.9	391	1.98	197.29
40	Graysville	Graysville	Jefferson	581	35	0	627,713	1,706	0.9	1,080	2.94	367.94

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), the Companies were directed to provide additional detail in their Commission Quarterly Reliability Report of the 5% of worst performing circuits in the 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	District	Customers	Outages	
1	No Bangor	00826-3	Easton	3,258	178	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	4.02	Trees Off Row-Tree	73%	1Q 2021	
	SAIDI	706.90	Equipment Failure	11%	2Q 2021	
	SAIFI	1.95	Line Failure	5%	3Q 2021	
	CAIDI	362	All Other	12%	4Q 2021	
	Customer Minutes	2,303,091				
	Customers Affected	6,369				
	Remedial Action Planned or Taken				Status	Progress
	Construct circuit tie Phase 1				Complete	May-21
	Overhead circuit inspection				Complete	Aug-21
	Construct circuit tie Phase 2				Complete	Aug-21
	Construct circuit tie Phase 3				Complete	Aug-21
	Mainline 34.5 kV forestry aerial patrol				Complete	Jul-21
On cycle tree trimming				To be completed 2022	0%	
Rank	Substation	Circuit	District	Customers	Outages	
2	Bushkill Falls	00698-3	Stroudsburg	1,757	24	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	4.01	Trees Off Row-Tree	84%	3Q 2021	
	SAIDI	1,308.58	Line Failure	13%	4Q 2021	
	SAIFI	2.22	Equipment Failure	3%		
	CAIDI	590	All Other	1%		
	Customer Minutes	2,299,171				
	Customers Affected	3,898				
	Remedial Action Planned or Taken				Status	Progress
	Repair/replace Priority items from overhead circuit inspection				Complete	Apr-21
On cycle tree trimming				To be completed 2022	0%	

Met-Ed						
Rank	Substation	Circuit	District	Customers	Outages	
3	Huffs Church	00600-1	Boyertown	1,603	145	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	3.52	Trees Off Row-Tree	78%	1Q 2021	
	SAIDI	1,259.35	Trees Off Row-Limb	11%	2Q 2021	
	SAIFI	2.81	Trees - Sec/Service	3%	3Q 2021	
	CAIDI	449	All Other	8%	4Q 2021	
	Customer Minutes	2,018,740				
	Customers Affected	4,497				
	Remedial Action Planned or Taken				Status	Progress
	On cycle tree trimming				Complete	Dec-20
	Install Supervisory Control and Data Acquisition (SCADA) switch				Complete	Apr-21
	Repair/Replace high priority items from overhead circuit inspection				Complete	Apr-21
	Targeted forestry inspection				Complete	Aug-21
	Targeted forestry inspection (Maryann Drive)				Complete	Sep-21
	Targeted tree trimming (Maryann Drive)				Complete	Nov-21
Targeted forestry inspection				To be completed 2022	0%	
Rank	Substation	Circuit	District	Customers	Outages	
4	Shawnee	00895-3	Stroudsburg	4,013	74	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	3.40	Trees Off Row-Tree	95%	3Q 2021	
	SAIDI	485.87	Lightning	3%	4Q 2021	
	SAIFI	1.58	Equipment Failure	1%		
	CAIDI	307	All Other	1%		
	Customer Minutes	1,949,803				
	Customers Affected	6,351				
	Remedial Action Planned or Taken				Status	Progress
	On cycle tree trimming				Complete	Oct-20
	Repair/replace priority items from thermovision circuit inspection				Complete	Mar-21
	Reconductor 1 mile of circuit				Complete	Apr-21
	Complete voltage conversion and circuit reconfiguration				Complete	May-21

Met-Ed						
Rank	Substation	Circuit	District	Customers	Outages	
5	Snydersville	00621-3	Stroudsburg	1,304	49	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	3.39	Trees Off Row-Tree	59%	3Q 2021	
	SAIDI	1,489.82	Unknown	31%	4Q 2021	
	SAIFI	3.63	Forced Outage	5%		
	CAIDI	410	All Other	5%		
	Customer Minutes	1,942,727				
	Customers Affected	4,734				
	Remedial Action Planned or Taken				Status	Progress
	Overhead circuit inspection				Complete	Mar-21
	Repair/Replace priority items from overhead circuit inspection				Complete	Jun-21
	On cycle tree trimming				To be completed 2022	0%
	Rank	Substation	Circuit	District	Customers	Outages
6	Birdsboro	00756-1	Reading	1,521	90	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	2.91	Trees Off Row-Tree	90%	4Q 2021	
	SAIDI	1,095.62	Equipment Failure	3%		
	SAIFI	3.03	Trees Off Row-Limb	2%		
	CAIDI	361	All Other	5%		
	Customer Minutes	1,666,432				
	Customers Affected	4,612				
	Remedial Action Planned or Taken				Status	Progress
	Targeted forestry inspection				To be completed 2022	0%
	On cycle tree trimming				To be completed 2022	0%
	Rank	Substation	Circuit	District	Customers	Outages
	7	Lynnville	00737-1	Hamburg	1,075	158
Reliability		Outage by Cause		Previously Ranked		
SAIDI Impact		2.91	Trees Off Row-Tree	84%	1Q 2021	
SAIDI		1,549.88	Equipment Failure	3%	2Q 2021	
SAIFI		3.86	Unknown	3%	3Q 2021	
CAIDI		402	All Other	9%	4Q 2021	
Customer Minutes		1,666,117				
Customers Affected		4,147				
Remedial Action Planned or Taken				Status	Progress	
Targeted forestry inspection				Complete	Nov-20	
Target tree trimming (Sousley Rd)				Complete	Aug-21	
Install Supervisory Control and Data Acquisition (SCADA)				To be completed 2022	50%	
Targeted forestry inspection				To be completed 2022	0%	

Met-Ed						
Rank	Substation	Circuit	District	Customers	Outages	
8	Shawnee	00860-3	Stroudsburg	3,223	48	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	2.41	Trees Off Row-Tree	69%	2Q 2021	
	SAIDI	429.30	Equipment Failure	20%	3Q 2021	
	SAIFI	4.20	Lightning	5%	4Q 2021	
	CAIDI	102	All Other	6%		
	Customer Minutes	1,383,618				
	Customers Affected	13,533				
	Remedial Action Planned or Taken				Status	Progress
	Apply new recloser settings				Complete	Jan-21
	Repair items from thermovision inspection				Complete	Apr-21
	Mainline 34.5 kV forestry aerial patrol				Complete	Jul-21
	On cycle tree trimming				To be completed 2022	0%
Rank	Substation	Circuit	District	Customers	Outages	
9	Orrtanna	00761-4	Gettysburg	487	17	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	2.33	Trees Off Row-Tree	83%	2Q 2021	
	SAIDI	2,742.11	Equipment Failure	17%	3Q 2021	
	SAIFI	3.58	Wind	0%	4Q 2021	
	CAIDI	766	All Other	0%		
	Customer Minutes	1,335,410				
	Customers Affected	1,743				
	Remedial Action Planned or Taken				Status	Progress
	On cycle tree trimming				Complete	Mar-20
Thermovision and overhead Inspection				Complete	Oct-21	
Rank	Substation	Circuit	District	Customers	Outages	
10	Flying Hills	00777-1	Reading	1,789	59	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	2.25	Trees Off Row-Tree	64%	1Q 2021	
	SAIDI	721.89	Vehicle	19%	2Q 2021	
	SAIFI	2.88	Trees On Row	5%	3Q 2021	
	CAIDI	251	All Other	11%	4Q 2021	
	Customer Minutes	1,291,458				
	Customers Affected	5,155				
	Remedial Action Planned or Taken				Status	Progress
	Install TripSaver Recloser #1				Complete	Dec-20
	Install TripSaver Recloser #2				Complete	Dec-20
Install TripSaver Recloser #3				Complete	Dec-20	
Repair/Replace high priority items from overhead circuit inspection				Complete	May-21	
Install Supervisory Control and Data Acquisition (SCADA) switch (4 devices)				To be completed 2022	75%	

Met-Ed					
Rank	Substation	Circuit	District	Customers	Outages
11	Barto	00705-1	Boyertown	652	77
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	2.12	Trees Off Row-Tree	80%	4Q 2021
	SAIDI	1,864.96	Trees Off Row-Limb	16%	
	SAIFI	2.78	Unknown	2%	
	CAIDI	671	All Other	3%	
	Customer Minutes	1,215,957			
	Customers Affected	1,813			
	Remedial Action Planned or Taken			Status	Progress
	On cycle tree trimming			Complete	Dec-20
	Targeted forestry inspection (Mountain Mary Rd)			To be completed 2022	0%
Rank	Substation	Circuit	District	Customers	Outages
12	Mountain	00744-4	Dillsburg	1,794	109
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	1.97	Trees Off Row-Tree	67%	1Q 2021
	SAIDI	630.34	Vehicle	15%	2Q 2021
	SAIFI	2.62	Forced Outage	11%	3Q 2021
	CAIDI	241	All Other	7%	4Q 2021
	Customer Minutes	1,130,837			
	Customers Affected	4,695			
	Remedial Action Planned or Taken			Status	Progress
	Repair/Replace high priority items from overhead circuit inspection			Complete	Feb-21
	On cycle tree trimming			To be completed 2022	0%
Circuit Rehabilitation Zone 2			To be completed 2022	25%	
Rank	Substation	Circuit	District	Customers	Outages
13	Cly	00721-4	York	822	50
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	1.69	Trees Off Row-Tree	82%	3Q 2021
	SAIDI	1,181.30	Trees Off Row-Limb	8%	4Q 2021
	SAIFI	2.34	Unknown	8%	
	CAIDI	505	All Other	1%	
	Customer Minutes	971,031			
	Customers Affected	1,923			
	Remedial Action Planned or Taken			Status	Progress
	Overhead circuit inspection			Complete	Oct-21
	Repair/replace priority items from overhead circuit inspection			To be completed 2022	50%

Met-Ed					
Rank	Substation	Circuit	District	Customers	Outages
14	Shawnee	00899-3	Stroudsburg	1,677	52
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	1.68	Trees Off Row-Tree	80%	3Q 2021
	SAIDI	574.52	Trees Off Row-Limb	10%	4Q 2021
	SAIFI	2.33	Equipment Failure	5%	
	CAIDI	246	All Other	5%	
	Customer Minutes	963,472			
	Customers Affected	3,915			
	Remedial Action Planned or Taken			Status	Progress
	Mainline 34.5 kV forestry aerial patrol			Complete	Jul-21
	On cycle tree trimming			Complete	Dec-21
Rank	Substation	Circuit	District	Customers	Outages
15	W Boyertown	00715-1	Boyertown	1,696	60
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	1.68	Trees Off Row-Tree	65%	1Q 2021
	SAIDI	567.78	Human Error - Company	19%	2Q 2021
	SAIFI	2.96	Unknown	7%	3Q 2021
	CAIDI	192	All Other	10%	4Q 2021
	Customer Minutes	962,956			
	Customers Affected	5,019			
	Remedial Action Planned or Taken			Status	Progress
	Mainline recloser upgrade and circuit coordination improvements			Complete	Jan-21
	Overhead circuit inspection			Complete	Apr-21
	On cycle tree trimming			Complete	Jul-21
	Targeted tree trimming investigation			Complete	Oct-21
	Targeted forestry inspections (Old State Rd & Long Lane)			To be completed 2022	0%
Rank	Substation	Circuit	District	Customers	Outages
16	Violet Hill	00527-4	York	1,271	25
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	1.64	Trees Off Row-Tree	30%	1Q 2021
	SAIDI	737.65	Trees Off Row-Limb	29%	2Q 2021
	SAIFI	4.98	Unknown	16%	3Q 2021
	CAIDI	148	All Other	25%	4Q 2021
	Customer Minutes	937,557			
	Customers Affected	6,332			
	Remedial Action Planned or Taken			Status	Progress
	On cycle tree trimming			Complete	May-21
	Joint Planning meeting with AEC for Potential SCADA/Sectionalizing devices			Complete	Sep-21
	Install additional Supervisory Control and Data Acquisition (SCADA) 3 devices			To be completed 2022	0%
Circuit Rehabilitation from AEC Metering Point up to upstream recloser			To be completed 2022	0%	

Met-Ed					
Rank	Substation	Circuit	District	Customers	Outages
17	Bairs	00571-4	York	2,367	80
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	1.58	Trees Off Row-Tree	60%	4Q 2021
	SAIDI	383.56	Forced Outage	19%	
	SAIFI	1.80	Vehicle	15%	
	CAIDI	213	All Other	7%	
	Customer Minutes	907,875			
	Customers Affected	4,256			
	Remedial Action Planned or Taken			Status	Progress
	On cycle tree trimming			Complete	Dec-21
Rank	Substation	Circuit	District	Customers	Outages
18	North Cornwall	00610-2	Lebanon	2,281	65
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	1.58	Trees Off Row-Tree	55%	3Q 2021
	SAIDI	395.85	Forced Outage	23%	4Q 2021
	SAIFI	2.67	Vehicle	12%	
	CAIDI	149	All Other	9%	
	Customer Minutes	902,925			
	Customers Affected	6,079			
	Remedial Action Planned or Taken			Status	Progress
	On cycle tree trimming			Complete	Dec-20
Overhead circuit inspection			Complete	Oct-21	
Mainline Circuit Rehabilitation			To be completed 2022	95%	
Rank	Substation	Circuit	District	Customers	Outages
19	Grantley	00401-4	York	799	11
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	1.57	Trees Off Row-Tree	62%	3Q 2021
	SAIDI	1,127.51	Equipment Failure	35%	4Q 2021
	SAIFI	2.20	Unknown	3%	
	CAIDI	512	All Other	1%	
	Customer Minutes	900,883			
	Customers Affected	1,759			
	Remedial Action Planned or Taken			Status	Progress
	Overhead circuit inspection			Complete	Mar-21
Protection/Coordination review on Substation breaker/relay settings			Complete	Aug-21	
Substation settings change issued to correct over tripping			Complete	Aug-21	
On cycle tree trimming			Complete	Sep-21	
Repair/replace priority items from overhead circuit inspection			To be completed 2022	50%	

Met-Ed						
Rank	Substation	Circuit	District	Customers	Outages	
20	Pleasantville	00142-1	Boyertown	819	80	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	1.54	Trees Off Row-Tree	67%	1Q 2021	
	SAIDI	1,078.30	Human Error - Company	15%	2Q 2021	
	SAIFI	3.93	Equipment Failure	4%	3Q 2021	
	CAIDI	275	All Other	14%	4Q 2021	
	Customer Minutes	883,131				
	Customers Affected	3,216				
	Remedial Action Planned or Taken			Status	Progress	
	Targeted forestry inspections (Haas Ln & Mine Rd)			Complete	Jun-21	
	Targeted tree trimming (Haas Ln)			Complete	Jul-21	
	Targeted tree trimming investigation			Complete	Nov-21	
	Targeted tree trimming			Complete	Dec-21	
	Overhead circuit inspection			Complete	Jan-22	
Rank	Substation	Circuit	District	Customers	Outages	
21	Mountain	00742-4	Dillsburg	1,422	43	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	1.51	Trees Off Row-Limb	50%	2Q 2021	
	SAIDI	607.86	Wind	18%	3Q 2021	
	SAIFI	1.79	Trees Off Row-Tree	17%	4Q 2021	
	CAIDI	339	All Other	15%		
	Customer Minutes	864,378				
	Customers Affected	2,552				
	Remedial Action Planned or Taken			Status	Progress	
	Repair/Replace high priority items from overhead circuit inspection			Complete	Feb-21	
	On cycle tree trimming			To be completed 2022	0%	
	Rank	Substation	Circuit	District	Customers	Outages
	22	Friedensburg	00141-1	Reading	647	56
		Reliability		Outage by Cause		Previously Ranked
SAIDI Impact		1.51	Trees Off Row-Tree	82%	4Q 2021	
SAIDI		1,334.46	Unknown	11%		
SAIFI		2.21	Forced Outage	2%		
CAIDI		605	All Other	4%		
Customer Minutes		863,393				
Customers Affected		1,427				
Remedial Action Planned or Taken			Status	Progress		
Overhead circuit inspection			Complete	Aug-21		
Repair/Replace high priority item from overhead circuit inspection			To be completed 2022	50%		
On cycle tree trimming			To be completed 2022	0%		

Met-Ed					
Rank	Substation	Circuit	District	Customers	Outages
23	Collins	00760-2	Lebanon	1,112	42
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	1.49	Trees Off Row-Tree	63%	2Q 2021
	SAIDI	767.32	Line Failure	27%	3Q 2021
	SAIFI	3.03	Equipment Failure	5%	4Q 2021
	CAIDI	253	All Other	5%	
	Customer Minutes	853,261			
	Customers Affected	3,366			
	Remedial Action Planned or Taken			Status	Progress
	On cycle tree trimming			Complete	Jun-21
Rank	Substation	Circuit	District	Customers	Outages
24	Tolna	00792-4	York	1,791	33
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	1.49	Vehicle	68%	2Q 2021
	SAIDI	476.22	Equipment Failure	19%	3Q 2021
	SAIFI	2.37	Trees Off Row-Tree	6%	4Q 2021
	CAIDI	201	All Other	7%	
	Customer Minutes	852,906			
	Customers Affected	4,253			
	Remedial Action Planned or Taken			Status	Progress
	Engineering Circuit Review			Complete	Dec-21
Rank	Substation	Circuit	District	Customers	Outages
25	North Lebanon	00712-2	Lebanon	2,578	66
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	1.48	Trees Off Row-Tree	66%	3Q 2021
	SAIDI	329.24	Vehicle	19%	4Q 2021
	SAIFI	3.42	Equipment Failure	12%	
	CAIDI	96	All Other	4%	
	Customer Minutes	848,778			
	Customers Affected	8,806			
	Remedial Action Planned or Taken			Status	Progress
	Thermovision and overhead inspection			Complete	Jan-21
On cycle tree trimming			Complete	Dec-21	

Met-Ed					
Rank	Substation	Circuit	District	Customers	Outages
26	Belfast	00817-3	Easton	1,018	53
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	1.37	Trees Off Row-Tree	73%	3Q 2021
	SAIDI	769.61	Equipment Failure	18%	4Q 2021
	SAIFI	4.04	Wind	4%	
	CAIDI	191	All Other	5%	
	Customer Minutes	783,465			
	Customers Affected	4,111			
	Remedial Action Planned or Taken			Status	Progress
	Mainline 34.5 kV forestry aerial patrol			Complete	Jul-21
	Danger tree removal from aerial patrol			Complete	Jul-21
	On cycle tree trimming			Complete	Oct-21
	Replace backlog poles (9 poles)			Complete	Dec-21
	Rank	Substation	Circuit	District	Customers
27	No Bangor	00838-3	Easton	1,704	59
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	1.31	Trees Off Row-Tree	64%	2Q 2021
	SAIDI	441.77	Equipment Failure	24%	3Q 2021
	SAIFI	1.65	Forced Outage	6%	4Q 2021
	CAIDI	267	All Other	6%	
	Customer Minutes	752,771			
	Customers Affected	2,820			
	Remedial Action Planned or Taken			Status	Progress
	Overhead circuit inspection			Complete	Apr-21
	Repair priority items from circuit inspection			Complete	May-21
	Mainline 34.5 kV forestry aerial patrol			Complete	Jul-21
	Repair priority items from thermovision inspection			Complete	Sep-21
	Rank	Substation	Circuit	District	Customers
28	S Hamb	00740-1	Hamburg	1,271	79
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	1.22	Trees Off Row-Tree	75%	1Q 2021
	SAIDI	552.28	Equipment Failure	20%	3Q 2021
	SAIFI	1.56	Unknown	2%	4Q 2021
	CAIDI	354	All Other	2%	
	Customer Minutes	701,954			
	Customers Affected	1,982			
	Remedial Action Planned or Taken			Status	Progress
	On cycle tree trimming			Complete	Dec-20
	Install TripSaver			Complete	Apr-21
Overhead circuit inspection			To be completed 2022	0%	

Met-Ed					
Rank	Substation	Circuit	District	Customers	Outages
29	Hill	00737-4	York	2,332	47
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	1.20	Trees Off Row-Tree	77%	4Q 2021
	SAIDI	295.09	Equipment Failure	14%	
	SAIFI	2.31	Line Failure	6%	
	CAIDI	128	All Other	4%	
	Customer Minutes	688,149			
	Customers Affected	5,391			
	Remedial Action Planned or Taken			Status	Progress
	On cycle tree trimming			Complete	Dec-20
	Install Supervisory Control and Data Acquisition (SCADA)			Complete	Dec-21
	Thermovision and overhead circuit inspection			Complete	Dec-21
	Rank	Substation	Circuit	District	Customers
30	Walker	00865-3	Stroudsburg	2,920	64
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	1.20	Trees Off Row-Tree	46%	2Q 2021
	SAIDI	234.98	Equipment Failure	37%	4Q 2021
	SAIFI	1.97	Unknown	11%	
	CAIDI	119	All Other	5%	
	Customer Minutes	686,130			
	Customers Affected	5,762			
	Remedial Action Planned or Taken			Status	Progress
	Replace backlog poles (9 poles)			Complete	Dec-21
Rank	Substation	Circuit	District	Customers	Outages
31	Gardners	00750-4	Gettysburg	1,249	27
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	1.20	Trees Off Row-Tree	97%	2Q 2021
	SAIDI	548.73	Unknown	1%	4Q 2021
	SAIFI	2.15	Equipment Failure	1%	
	CAIDI	256	All Other	1%	
	Customer Minutes	685,367			
	Customers Affected	2,682			
	Remedial Action Planned or Taken			Status	Progress
	Repair/Replace high priority items from overhead inspection			Complete	Apr-21
Install Supervisory Control and Data Acquisition (SCADA) (2 Devices)			To be completed 2022	25%	

Met-Ed						
Rank	Substation	Circuit	District	Customers	Outages	
32	Grantley	00544-4	York	550	15	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	1.19	Trees Off Row-Tree	81%	3Q 2021	
	SAIDI	1,243.61	Lightning	14%	4Q 2021	
	SAIFI	2.66	Line Failure	4%		
	CAIDI	467	All Other	1%		
	Customer Minutes	683,984				
	Customers Affected	1,464				
	Remedial Action Planned or Taken				Status	Progress
	On cycle tree trimming				Complete	Dec-21
	Install switch for additional sectionalizing				Complete	Dec-21
Rank	Substation	Circuit	District	Customers	Outages	
33	Hokes	00587-4	York	769	30	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	1.17	Trees Off Row-Tree	87%	4Q 2021	
	SAIDI	875.74	Unknown	6%		
	SAIFI	2.89	Trees On Row	4%		
	CAIDI	303	All Other	3%		
	Customer Minutes	673,442				
	Customers Affected	2,224				
	Remedial Action Planned or Taken				Status	Progress
	Install Supervisory Control and Data Acquisition (SCADA) (6 Devices)				Complete	Dec-21
	Install Supervisory Control and Data Acquisition (SCADA) recloser				To be completed 2022	25%
On cycle tree trimming				To be completed 2022	0%	
Rank	Substation	Circuit	District	Customers	Outages	
34	Lorane	00560-1	Reading	1,144	23	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	1.14	Trees Off Row-Tree	55%	4Q 2021	
	SAIDI	571.37	Lightning	37%		
	SAIFI	3.65	Line Failure	2%		
	CAIDI	157	All Other	6%		
	Customer Minutes	653,648				
	Customers Affected	4,173				
	Remedial Action Planned or Taken				Status	Progress
	On cycle tree trimming				Complete	Jun-21
	Targeted forester inspection				Complete	Jul-21
Install additional mainline recloser				Complete	Nov-21	

Met-Ed						
Rank	Substation	Circuit	District	Customers	Outages	
35	Palmer	00658-3	Easton	1,471	28	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	1.13	Trees Off Row-Tree	74%	4Q 2021	
	SAIDI	441.24	Trees On Row	11%		
	SAIFI	3.41	Trees Off Row-Limb	7%		
	CAIDI	129	All Other	9%		
	Customer Minutes	649,069				
	Customers Affected	5,015				
	Remedial Action Planned or Taken				Status	Progress
	Repair/Replace priority items from overhead inspection				Complete	Dec-21
	On cycle tree trimming				To be completed 2022	0%
Rank	Substation	Circuit	District	Customers	Outages	
36	Campbelltown	00731-2	Lebanon	2,896	65	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	1.13	Equipment Failure	49%	4Q 2021	
	SAIDI	222.81	Trees Off Row-Tree	19%		
	SAIFI	1.64	Line Failure	7%		
	CAIDI	136	All Other	25%		
	Customer Minutes	645,257				
	Customers Affected	4,747				
	Remedial Action Planned or Taken				Status	Progress
	On cycle tree trimming				Complete	Dec-20
Rank	Substation	Circuit	District	Customers	Outages	
37	Swatara Hill	00763-2	Lebanon	1,539	63	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	1.12	Trees Off Row-Tree	54%	1Q 2021	
	SAIDI	417.93	Equipment Failure	23%	2Q 2021	
	SAIFI	2.53	Forced Outage	11%	3Q 2021	
	CAIDI	165	All Other	11%	4Q 2021	
	Customer Minutes	643,198				
	Customers Affected	3,901				
	Remedial Action Planned or Taken				Status	Progress
	Install Supervisory Control and Data Acquisition (SCADA) device #1				Complete	Aug-21
	Install Supervisory Control and Data Acquisition (SCADA) device #2				Complete	Aug-21
	Install Supervisory Control and Data Acquisition (SCADA) device #3				Complete	Aug-21
	Targeted forestry inspection				Complete	Nov-21
On cycle tree trimming				To be completed 2022	0%	

Met-Ed					
Rank	Substation	Circuit	District	Customers	Outages
38	Ferndale	00871-3	Easton	487	46
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	1.12	Trees Off Row-Tree	87%	4Q 2021
	SAIDI	1,312.65	Trees Off Row-Limb	4%	
	SAIFI	4.79	Wind	3%	
	CAIDI	274	All Other	7%	
	Customer Minutes	639,261			
	Customers Affected	2,332			
	Remedial Action Planned or Taken			Status	Progress
	On cycle tree trimming			Complete	Jun-20
	Overhead circuit inspection			Complete	Nov-21
	Mainline 34.5 kV forestry aerial patrol			Complete	Jul-21
	Repair/replace priority item from overhead inspection			To be completed 2022	0%
	Rank	Substation	Circuit	District	Customers
39	No Bangor	00813-3	Easton	1,325	35
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	1.11	Trees Off Row-Tree	41%	1Q 2021
	SAIDI	481.89	Human Error -Non-Company	30%	2Q 2021
	SAIFI	1.62	Vehicle	12%	3Q 2021
	CAIDI	297	All Other	18%	4Q 2021
	Customer Minutes	638,510			
	Customers Affected	2,149			
	Remedial Action Planned or Taken			Status	Progress
	Mainline 34.5 kV forestry aerial patrol			Complete	Jul-21
	Repair priority items from thermovision inspection			Complete	Oct-21
	Overhead circuit inspection			Complete	Nov-21
	Replace backlog poles (8 poles)			Complete	Dec-21

Met-Ed					
Unranked circuits appearing 2 or more quarters in the last 4 quarters					
Substation	Circuit	1Q 2021	2Q 2021	3Q 2021	4Q 2021
Adamstown	00755-1	X	X	X	
Baldy	00736-1	X	X	X	
Baldy	00738-1	X	X	X	
Barto	00706-1	X	X		
Bernville	00787-1	X	X		
Carsonia	00764-1	X	X	X	
Dillsburg	00748-4	X	X		
Glendon	00818-3	X	X		
Lickdale	00625-2	X	X		
Lyons	00729-1	X	X		
Menges Mills	00543-4	X	X		
Mountain	00743-4	X	X		
Painted Sky	00650-1		X	X	
South Hamburg	00801-1	X	X		
Schuylkill Ave	00157-1	X	X		
Shawnee	00822-3	X	X	X	
Shawnee	00833-3	X	X		
Snydersville	00620-3	X		X	
Swatara Hill	00765-2	X	X	X	
Zionsview	00717-4	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
Bernville	00787-1	On cycle tree trimming	Complete	Dec-21
Lickdale	00625-2	Targeted forestry inspection	Complete	Nov-21
Lickdale	00626-2	Targeted forestry inspection	Complete	Nov-21
Lincoln	00771-4	On cycle tree trimming	Complete	Nov-21
Swatara Hill	00765-2	Targeted forestry inspection	Complete	Nov-21
Zionsview	00717-4	Replace/repair high priority items identified during overhead circuit inspection	Complete	Aug-21

Penelec						
Rank	Substation	Circuit	District	Customers	Outages	
1	Madera	00166-22	Philipsburg	1,385	61	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	5.87	Trees Off Row-Tree	97%	1Q 2021	
	SAIDI	2,457.94	Equipment Failure	1%	2Q 2021	
	SAIFI	5.27	Lightning	1%	3Q 2021	
	CAIDI	466.78	All Other	1%	4Q 2021	
	Customer Minutes	3,404,251				
	Customers Affected	7,293				
	Remedial Action Planned or Taken				Status	Progress
	Repair damage caused by trees during a storm				Complete	Mar-21
	Repair damage caused by trees during a storm				Complete	May-21
	Repair damage caused by trees during a storm				Complete	Aug-21
Rank	Substation	Circuit	District	Customers	Outages	
2	Grover	00527-63	Towanda	1,053	88	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	4.85	Equipment Failure	36%	1Q 2021	
	SAIDI	2,670.50	Trees Off Row-Limb	31%	2Q 2021	
	SAIFI	7.02	Trees Off Row-Tree	15%	3Q 2021	
	CAIDI	380.31	All Other	18%	4Q 2021	
	Customer Minutes	2,812,034				
	Customers Affected	7,394				
	Remedial Action Planned or Taken				Status	Progress
	Repair damage caused by trees during a storm				Complete	Jan-21
	Install advanced Dx protective devices				Complete	May-21
	Targeted circuit rehabilitation				Complete	Jun-21
Repair equipment failure				Complete	Jun-21	
Rank	Substation	Circuit	District	Customers	Outages	
3	Dubois	00137-23	Dubois	3,072	135	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	4.58	Trees Off Row-Tree	87%	1Q 2021	
	SAIDI	865.65	Forced Outage	6%	2Q 2021	
	SAIFI	2.95	Unknown	2%	3Q 2021	
	CAIDI	293.00	All Other	5%	4Q 2021	
	Customer Minutes	2,659,283				
	Customers Affected	9,076				
	Remedial Action Planned or Taken				Status	Progress
	Repair damage caused by trees during a storm				Complete	Mar-21
	Repair damage caused by trees during a storm				Complete	Apr-21
	Repair damage caused by trees during a storm				Complete	Aug-21
Install advanced Dx protective devices				Complete	Aug-21	

Penelec					
Rank	Substation	Circuit	District	Customers	Outages
4	Russell Hill	00282-65	Montrose	1,005	75
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	3.73	Trees Off Row-Tree	36%	1Q 2021
	SAIDI	2,155.87	Wind	31%	2Q 2021
	SAIFI	3.97	Equipment Failure	28%	3Q 2021
	CAIDI	543.02	All Other	5%	4Q 2021
	Customer Minutes	2,166,652			
	Customers Affected	3,990			
	Remedial Action Planned or Taken			Status	Progress
	Repair damage caused by trees during a storm			Complete	Mar-21
	Repair damage caused by wind			Complete	Apr-21
	Repair damage caused by trees during a storm			Complete	May-21
	Install advanced Dx protective devices			Complete	Jun-21
	Repair equipment failure			Complete	Oct-21
Repair damage caused by wind			Complete	Dec-21	
Rank	Substation	Circuit	District	Customers	Outages
5	Saxton Sub	00625-73	Altoona	861	35
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	3.42	Trees Off Row-Tree	81%	1Q 2021
	SAIDI	2,304.08	Equipment Failure	9%	2Q 2021
	SAIFI	5.76	Vehicle	6%	3Q 2021
	CAIDI	400.20	All Other	3%	4Q 2021
	Customer Minutes	1,983,810			
	Customers Affected	4,957			
	Remedial Action Planned or Taken			Status	Progress
	Repair damage caused by trees during a storm			Complete	Jan-21
	Repair equipment failure			Complete	Feb-21
	Repair damage caused by trees			Complete	Aug-21
	Repair damage caused by trees during a storm			Complete	Sep-21

Penelec						
Rank	Substation	Circuit	District	Customers	Outages	
6	Falls	00297-65	Montrose	757	31	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	2.95	Trees Off Row-Tree	82%	1Q 2021	
	SAIDI	2,260.06	Unknown	10%	2Q 2021	
	SAIFI	3.76	Ice	4%	3Q 2021	
	CAIDI	600.30	All Other	5%	4Q 2021	
	Customer Minutes	1,710,862				
	Customers Affected	2,850				
	Remedial Action Planned or Taken				Status	Progress
	Repair damage caused by ice				Complete	Jan-21
	Repair damage caused by trees during a storm				Complete	Mar-21
	Repair damage caused by trees during a storm				Complete	Jul-21
	Rank	Substation	Circuit	District	Customers	Outages
7	Marienville	00328-51	Oil City	1,206	47	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	2.54	Trees Off Row-Tree	90%	1Q 2021	
	SAIDI	1,219.81	Lightning	5%	2Q 2021	
	SAIFI	2.69	Line Failure	2%	3Q 2021	
	CAIDI	453.76	All Other	3%	4Q 2021	
	Customer Minutes	1,471,086				
	Customers Affected	3,242				
	Remedial Action Planned or Taken				Status	Progress
	Repair damage caused by trees during a storm				Complete	Mar-21
	Install advanced Dx protective devices				Complete	Oct-21
	Repair Damage caused by trees				Complete	Dec-21
	Rank	Substation	Circuit	District	Customers	Outages
8	Revloc	00069-72	Altoona	560	6	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	2.06	Trees Off Row-Tree	94%	1Q 2021	
	SAIDI	2,130.06	Trees Off Row-Limb	6%	2Q 2021	
	SAIFI	4.04	Lightning	1%	3Q 2021	
	CAIDI	527.34	All Other	0%	4Q 2021	
	Customer Minutes	1,192,833				
	Customers Affected	2,262				
	Remedial Action Planned or Taken				Status	Progress
	Repair damage caused by trees during a storm				Complete	Feb-21
	Repair damage caused by trees during a storm				Complete	Mar-21

Penelec						
Rank	Substation	Circuit	District	Customers	Outages	
9	Tiffany	00435-65	Montrose	1,623	57	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	2.05	Trees Off Row-Tree	28%	1Q 2021	
	SAIDI	733.77	Lightning	27%	2Q 2021	
	SAIFI	4.78	Other Electric Utility	18%	3Q 2021	
	CAIDI	153.47	All Other	27%	4Q 2021	
	Customer Minutes	1,190,908				
	Customers Affected	7,760				
	Remedial Action Planned or Taken			Status	Progress	
	Repair damage caused by lightning			Complete	Jun-21	
	Repair damage caused by trees during a storm			Complete	Jul-21	
	Circuit inspection			Complete	Oct-21	
	Rank	Substation	Circuit	District	Customers	Outages
10	Warren South	00220-41	Warren	2,730	82	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	1.99	Trees Off Row-Tree	58%	1Q 2021	
	SAIDI	423.21	Forced Outage	12%	2Q 2021	
	SAIFI	3.23	Line Failure	10%	3Q 2021	
	CAIDI	130.86	All Other	20%	4Q 2021	
	Customer Minutes	1,155,371				
	Customers Affected	8,829				
	Remedial Action Planned or Taken			Status	Progress	
	Repair damage caused by trees during a storm			Complete	Jul-21	
	Repaired line failure			Complete	Nov-21	
	Rank	Substation	Circuit	District	Customers	Outages
	11	Union City Sub	00206-43	Erie	2,826	112
Reliability		Outage by Cause		Previously Ranked		
SAIDI Impact		1.98	Trees Off Row-Tree	67%	4Q 2020	
SAIDI		406.59	Equipment Failure	8%	2Q 2021	
SAIFI		3.45	Forced Outage	6%	3Q 2021	
CAIDI		117.79	All Other	19%	4Q 2021	
Customer Minutes		1,149,011				
Customers Affected		9,755				
Remedial Action Planned or Taken			Status	Progress		
Repair damage caused by trees during a storm			Complete	Mar-21		
Restore fuse operation of unknown cause			Complete	May-21		
Repair damage caused by trees during a storm			Complete	Jul-21		
Install advanced Dx protective devices			Complete	Dec-21		

Penelec						
Rank	Substation	Circuit	District	Customers	Outages	
12	Piney	00523-51	Oil City	1,503	82	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	1.92	Trees Off Row-Tree	36%	1Q 2021	
	SAIDI	741.59	Equipment Failure	18%	2Q 2021	
	SAIFI	6.26	Line Failure	14%	3Q 2021	
	CAIDI	118.45	All Other	32%	4Q 2021	
	Customer Minutes	1,114,604				
	Customers Affected	9,410				
	Remedial Action Planned or Taken				Status	Progress
	Repair line failure				Complete	Mar-21
	Repaired equipment failure				Complete	Dec-21
	Targeted circuit rehabilitation				To be completed 2022	35%
Rank	Substation	Circuit	District	Customers	Outages	
13	Tunkhannock	00533-65	Montrose	1,245	80	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	1.79	Trees Off Row-Tree	45%	1Q 2021	
	SAIDI	833.97	Unknown	24%	2Q 2021	
	SAIFI	3.72	Equipment Failure	14%	3Q 2021	
	CAIDI	224.01	All Other	1%	4Q 2021	
	Customer Minutes	1,038,294				
	Customers Affected	4,635				
	Remedial Action Planned or Taken				Status	Progress
	Restore recloser operation of unknown cause				Complete	Jun-21
	Install advanced Dx protective devices				Complete	Jun-21
	Repair damage caused by trees during a storm				Complete	Oct-21
Rank	Substation	Circuit	District	Customers	Outages	
14	Fallen Timbers	00995-22	Philipsburg	755	26	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	1.77	Equipment Failure	40%	1Q 2021	
	SAIDI	1,362.30	Trees Off Row-Tree	26%	2Q 2021	
	SAIFI	6.47	Line Failure	18%	3Q 2021	
	CAIDI	210.59	All Other	16%	4Q 2021	
	Customer Minutes	1,028,536				
	Customers Affected	4,884				
	Remedial Action Planned or Taken				Status	Progress
	Repair damage caused by trees during a storm				Complete	Mar-21
	Repair damage caused by trees during a storm				Complete	May-21
	Repair line failure				Complete	May-21
Repair line failure				Complete	Nov-21	

Penelec						
Rank	Substation	Circuit	District	Customers	Outages	
15	Samuel Rea Car Shop	00031-71	Altoona	1,840	17	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	1.76	Equipment Failure	99%	2Q 2021	
	SAIDI	555.68	Animal	1%	3Q 2021	
	SAIFI	8.32	Forced Outage	0%	4Q 2021	
	CAIDI	66.82	All Other	0%		
	Customer Minutes	1,022,444				
	Customers Affected	15,301				
	Remedial Action Planned or Taken				Status	Progress
	Repair equipment failure				Complete	May-21
Rank	Substation	Circuit	District	Customers	Outages	
16	N Meshoppen Tran	00534-65	Montrose	844	82	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	1.71	Trees Off Row-Tree	71%	1Q 2021	
	SAIDI	1,176.95	Lightning	15%	2Q 2021	
	SAIFI	2.11	Equipment Failure	5%	3Q 2021	
	CAIDI	558.37	All Other	9%	4Q 2021	
	Customer Minutes	993,349				
	Customers Affected	1,779				
	Remedial Action Planned or Taken				Status	Progress
	Repair damage caused by trees during a storm				Complete	Jan-21
Rank	Substation	Circuit	District	Customers	Outages	
17	Rolling Meadows	00310-31	Erie	4,031	48	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	1.68	Human Error - Company	43%	1Q 2021	
	SAIDI	242.50	Equipment Failure	24%	2Q 2021	
	SAIFI	2.57	Line Failure	20%	3Q 2021	
	CAIDI	94.21	All Other	13%	4Q 2021	
	Customer Minutes	977,503				
	Customers Affected	10,376				
	Remedial Action Planned or Taken				Status	Progress
	Repair damage caused by human error-company				Complete	Mar-21
Repair line failure				Complete	Sep-21	
Repair line failure				Complete	Dec-21	

Penelec					
Rank	Substation	Circuit	District	Customers	Outages
18	Cranberry	00350-51	Oil City	1,072	29
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	1.67	Line Failure	44%	1Q 2021
	SAIDI	904.76	Trees Off Row-Tree	33%	2Q 2021
	SAIFI	4.65	Equipment Failure	12%	3Q 2021
	CAIDI	194.68	All Other	12%	4Q 2021
	Customer Minutes	969,898			
	Customers Affected	4,982			
	Remedial Action Planned or Taken			Status	Progress
	Repair damage caused by trees during a storm			Complete	Mar-21
	Repair equipment failure			Complete	Jun-21
	Repair line failure			Complete	Oct-21
	Repair line failure			Complete	Dec-21
	Rank	Substation	Circuit	District	Customers
19	Springboro	00237-52	Meadville	2,756	84
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	1.66	Equipment Failure	30%	1Q 2021
	SAIDI	349.85	Line Failure	30%	2Q 2021
	SAIFI	2.80	Trees Off Row-Tree	17%	3Q 2021
	CAIDI	125.01	All Other	22%	4Q 2021
	Customer Minutes	964,190			
	Customers Affected	7,713			
	Remedial Action Planned or Taken			Status	Progress
	Circuit inspection			Complete	May-21
	Repair equipment failure			Complete	Aug-21
	Install advanced Dx protective devices			Complete	Oct-21
	Repair line failure			Complete	Oct-21
	Rank	Substation	Circuit	District	Customers
20	Seward	00075-11	Johnstown	824	39
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	1.66	Equipment Failure	68%	2Q 2021
	SAIDI	1,169.48	Trees Off Row-Limb	16%	3Q 2021
	SAIFI	4.92	Trees Off Row-Tree	11%	4Q 2021
	CAIDI	237.53	All Other	4%	
	Customer Minutes	963,654			
	Customers Affected	4,057			
	Remedial Action Planned or Taken			Status	Progress
	Repair equipment failure			Complete	May-21
Repair damage caused by trees during a storm			Complete	Jun-21	

Penelec						
Rank	Substation	Circuit	District	Customers	Outages	
21	Madera	00165-22	Philipsburg	1,516	34	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	1.59	Equipment Failure	69%	1Q 2021	
	SAIDI	608.05	Lightning	15%	2Q 2021	
	SAIFI	3.49	Trees Off Row-Tree	12%	3Q 2021	
	CAIDI	174.06	All Other	4%	4Q 2021	
	Customer Minutes	921,811				
	Customers Affected	5,296				
	Remedial Action Planned or Taken				Status	Progress
	Repair equipment failure				Complete	Mar-21
	Repair line failure				Complete	Jun-21
	Repair damage caused by trees during a storm				Complete	Oct-21
	Rank	Substation	Circuit	District	Customers	Outages
22	Ppl West	PL097-62	Towanda	104	15	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	1.42	Other Electric Utility	58%	3Q 2021	
	SAIDI	7,949.45	Trees Off Row-Tree	33%	4Q 2021	
	SAIFI	9.16	Trees Off Row-Limb	9%		
	CAIDI	867.52	All Other	0%		
	Customer Minutes	826,743				
	Customers Affected	953				
	Remedial Action Planned or Taken				Status	Progress
	Restore supply caused from other electric utility				Complete	Jul-21
	Restore supply caused from other electric utility				Complete	Sep-21
	Repair damage caused by trees during a storm				Complete	Dec-21
	Rank	Substation	Circuit	District	Customers	Outages
23	Meshoppen	00283-65	Montrose	386	16	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	1.33	Trees Off Row-Tree	64%	1Q 2021	
	SAIDI	1,997.55	Unknown	15%	2Q 2021	
	SAIFI	2.83	Forced Outage	8%	3Q 2021	
	CAIDI	706.09	All Other	14%	4Q 2021	
	Customer Minutes	771,055				
	Customers Affected	1,092				
	Remedial Action Planned or Taken				Status	Progress
	Repair damage caused by trees				Complete	Mar-21
	Restore fuse operation of unknown cause				Complete	Jan-21
	Repair damage caused by trees during a storm				Complete	May-21
	Circuit inspection				Complete	Jun-21
Repair damage caused by trees				Complete	Oct-21	

Penelec						
Rank	Substation	Circuit	District	Customers	Outages	
24	Lake Como	00788-65	Montrose	591	39	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	1.32	Trees Off Row-Tree	78%	1Q 2021	
	SAIDI	1,291.31	Other Electric Utility	12%	3Q 2021	
	SAIFI	3.99	Lightning	4%	4Q 2021	
	CAIDI	323.51	All Other	7%		
	Customer Minutes	763,164				
	Customers Affected	2,359				
	Remedial Action Planned or Taken			Status	Progress	
	Repair damage caused by trees during a storm			Complete	Mar-21	
	Install advanced Dx protective devices			Complete	Jun-21	
	Repair damage caused by trees during a storm			Complete	Jul-21	
	Circuit inspection			Complete	Oct-21	
	Repair damage caused by trees			Complete	Nov-21	
Rank	Substation	Circuit	District	Customers	Outages	
25	French Road	00219-31	Erie	1,484	12	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	1.26	Line Failure	97%	3Q 2021	
	SAIDI	492.56	Equipment Failure	2%	4Q 2021	
	SAIFI	1.98	Unknown	1%		
	CAIDI	248.20	All Other	1%		
	Customer Minutes	730,953				
	Customers Affected	2,945				
	Remedial Action Planned or Taken			Status	Progress	
	Repair line failure			Complete	Sep-21	
	Repair line failure			Complete	Sep-21	
	Rank	Substation	Circuit	District	Customers	Outages
	26	Logan	00700-81	Lewistown	1,005	44
		Reliability		Outage by Cause		Previously Ranked
SAIDI Impact		1.23	Trees Off Row-Tree	88%	1Q 2021	
SAIDI		710.90	Forced Outage	7%	3Q 2021	
SAIFI		2.84	Equipment Failure	2%	4Q 2021	
CAIDI		249.98	All Other	3%		
Customer Minutes		714,454				
Customers Affected		2,858				
Remedial Action Planned or Taken			Status	Progress		
Repair damage caused by trees during a storm			Complete	Feb-21		
Repair damage caused by trees during a storm			Complete	Jul-21		

Penelec						
Rank	Substation	Circuit	District	Customers	Outages	
27	Titusville Sub	00514-51	Oil City	521	25	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	1.23	Trees Off Row-Tree	86%	2Q 2021	
	SAIDI	1,364.23	Vehicle	9%	3Q 2021	
	SAIFI	3.33	Forced Outage	2%	4Q 2021	
	CAIDI	409.43	All Other	3%		
	Customer Minutes	710,765				
	Customers Affected	1,736				
	Remedial Action Planned or Taken				Status	Progress
	Repair damage caused by trees during a storm				Complete	Mar-21
	Repair damage caused by trees during a storm				Complete	Jun-21
	Repair damage caused by trees				Complete	Nov-21
	Rank	Substation	Circuit	District	Customers	Outages
28	Wyalusing Sub	00532-62	Towanda	748	66	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	1.18	Ice	38%	1Q 2021	
	SAIDI	914.45	Trees Off Row-Tree	33%	2Q 2021	
	SAIFI	4.95	Equipment Failure	13%	3Q 2021	
	CAIDI	184.72	All Other	16%	4Q 2021	
	Customer Minutes	684,011				
	Customers Affected	3,703				
	Remedial Action Planned or Taken				Status	Progress
	Repair damage caused by ice				Complete	Jan-21
	Repair damage caused by trees during a storm				Complete	Mar-21
	Rank	Substation	Circuit	District	Customers	Outages
	29	Spangler Sub	00052-72	Altoona	1,495	16
Reliability		Outage by Cause		Previously Ranked		
SAIDI Impact		1.17	Trees Off Row-Tree	73%	1Q 2021	
SAIDI		455.27	Trees Off Row-Limb	26%	2Q 2021	
SAIFI		3.09	Equipment Failure	1%	3Q 2021	
CAIDI		147.36	All Other	1%	4Q 2021	
Customer Minutes		680,636				
Customers Affected		4,619				
Remedial Action Planned or Taken				Status	Progress	
Repair damage caused by trees during a storm				Complete	Mar-21	
Repair damage caused by trees during a storm				Complete	Dec-21	

Penelec						
Rank	Substation	Circuit	District	Customers	Outages	
30	Brookville West	00121-23	Dubois	769	41	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	1.15	Equipment Failure	56%	4Q 2021	
	SAIDI	868.49	Trees Off Row-Tree	22%		
	SAIFI	2.68	Trees Off Row-Limb	12%		
	CAIDI	324.52	All Other	10%		
	Customer Minutes	667,869				
	Customers Affected	2,058				
	Remedial Action Planned or Taken				Status	Progress
	Repair damage caused by trees during a storm				Complete	Jul-21
	Repair damage caused by trees				Complete	Oct-21
	Repair equipment failure				Complete	Dec-21
	Rank	Substation	Circuit	District	Customers	Outages
31	Greenwood	00041-71	Altoona	1,214	20	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	1.15	Line Failure	49%	1Q 2021	
	SAIDI	549.27	Wind	24%	2Q 2021	
	SAIFI	2.16	Trees Off Row-Tree	22%	3Q 2021	
	CAIDI	254.41	All Other	5%	4Q 2021	
	Customer Minutes	666,815				
	Customers Affected	2,621				
	Remedial Action Planned or Taken				Status	Progress
	Repair damage caused by wind				Complete	Mar-21
	Repair damage caused by trees during a storm				Complete	May-21
	Circuit inspection				Complete	Oct-21
	Rank	Substation	Circuit	District	Customers	Outages
32	East Pike	00095-13	Indiana	3,262	31	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	1.12	Equipment Failure	49%	3Q 2021	
	SAIDI	198.85	Trees On Row	26%	4Q 2021	
	SAIFI	1.68	Lightning	19%		
	CAIDI	118.61	All Other	6%		
	Customer Minutes	648,657				
	Customers Affected	5,469				
	Remedial Action Planned or Taken				Status	Progress
	Repair equipment failure				Complete	Aug-21
Repair damage caused by trees during a storm				Complete	Aug-21	

Penelec					
Rank	Substation	Circuit	District	Customers	Outages
33	Blairsville East	00080-13	Indiana	1,518	32
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	1.08	Trees Off Row-Tree	69%	1Q 2021
	SAIDI	413.48	Vehicle	16%	2Q 2021
	SAIFI	4.32	Equipment Failure	8%	3Q 2021
	CAIDI	95.74	All Other	7%	4Q 2021
	Customer Minutes	627,658			
	Customers Affected	6,556			
	Remedial Action Planned or Taken			Status	Progress
	Repair damage caused by a vehicle			Complete	Mar-21
	Targeted circuit rehabilitation			Complete	May-21
	Repair damage caused by trees during a storm			Complete	Jul-21
	Rank	Substation	Circuit	District	Customers
34	French Road	00550-31	Erie	1,453	26
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	1.07	Line Failure	51%	4Q 2021
	SAIDI	426.26	Equipment Failure	39%	
	SAIFI	2.90	Lightning	6%	
	CAIDI	146.84	All Other	4%	
	Customer Minutes	619,355			
	Customers Affected	4,218			
	Remedial Action Planned or Taken			Status	Progress
	Repair equipment failure			Complete	Jun-21
	Repair equipment due to lightning			Complete	Oct-21
	Repair line failure			Complete	Dec-21
	Rank	Substation	Circuit	District	Customers
35	Erie South	00259-31	Erie	2,670	78
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	1.06	Forced Outage	39%	1Q 2021
	SAIDI	230.32	Trees Off Row-Tree	29%	4Q 2021
	SAIFI	1.70	Trees Off Row-Limb	15%	
	CAIDI	135.78	All Other	17%	
	Customer Minutes	614,943			
	Customers Affected	4,529			
	Remedial Action Planned or Taken			Status	Progress
	Repair broken equipment			Complete	Jul-21
	Repair broken equipment			Complete	Sep-21
	Repair damage caused by tree			Complete	Nov-21
	Repair damage caused by tree during a storm			Complete	Dec-21

Penelec						
Rank	Substation	Circuit	District	Customers	Outages	
36	Natl Forge Sw Sta	00577-41	Warren	1,103	58	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	1.05	Trees Off Row-Tree	75%	1Q 2021	
	SAIDI	550.93	Unknown	17%	2Q 2021	
	SAIFI	3.45	Equipment Failure	6%	3Q 2021	
	CAIDI	159.87	All Other	3%	4Q 2021	
	Customer Minutes	607,671				
	Customers Affected	3,801				
	Remedial Action Planned or Taken			Status	Progress	
	Install advanced Dx protective devices			Complete	Apr-21	
	Repair damage caused by trees during a storm			Complete	Jun-21	
	Circuit inspection			Complete	Sep-21	
	Repair damage caused by trees during a storm			Complete	Dec-21	
	Rank	Substation	Circuit	District	Customers	Outages
37	Russell Hill	00765-65	Montrose	349	38	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	1.03	Trees Off Row-Tree	41%	4Q 2021	
	SAIDI	1,710.31	Equipment Failure	34%		
	SAIFI	4.09	Lightning	8%		
	CAIDI	417.70	All Other	16%		
	Customer Minutes	596,899				
	Customers Affected	1,429				
	Remedial Action Planned or Taken			Status	Progress	
	Repair damage caused by trees			Complete	Mar-21	
	Repair damage caused by lightning			Complete	Jul-21	
	Repair equipment failure			Complete	Oct-21	
	Rank	Substation	Circuit	District	Customers	Outages
	38	Crown	00519-51	Oil City	645	69
Reliability		Outage by Cause		Previously Ranked		
SAIDI Impact		1.03	Trees Off Row-Tree	70%	1Q 2021	
SAIDI		922.07	Equipment Failure	11%	2Q 2021	
SAIFI		2.74	Trees Off Row-Limb	6%	3Q 2021	
CAIDI		336.96	All Other	13%	4Q 2021	
Customer Minutes		594,732				
Customers Affected		1,765				
Remedial Action Planned or Taken			Status	Progress		
Repair damage caused by trees during a storm			Complete	Mar-21		
Repair damage caused by trees during a storm			Complete	Jun-21		
On cycle tree trimming			Complete	Dec-21		

Penelec						
Rank	Substation	Circuit	District	Customers	Outages	
39	Tower 51	00051-11	Johnstown	576	26	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	0.98	Trees Off Row-Tree	59%	2Q 2021	
	SAIDI	986.32	Trees Off Row-Limb	16%	3Q 2021	
	SAIFI	4.74	Equipment Failure	15%	4Q 2021	
	CAIDI	207.95	All Other	10%		
	Customer Minutes	568,122				
	Customers Affected	2,732				
	Remedial Action Planned or Taken				Status	Progress
	Repair damage caused by trees during a storm				Complete	May-21
	Repair damage caused by trees during a storm				Complete	Jun-21
	Repair damage caused by trees during a storm				Complete	Jul-21
	Rank	Substation	Circuit	District	Customers	Outages
40	Tionesta	00344-51	Oil City	516	20	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	0.98	Trees Off Row-Tree	60%	3Q 2021	
	SAIDI	1,097.71	Equipment Failure	23%	4Q 2021	
	SAIFI	1.94	Trees Off Row-Limb	10%		
	CAIDI	565.85	All Other	7%		
	Customer Minutes	566,420				
	Customers Affected	1,001				
	Remedial Action Planned or Taken				Status	Progress
	Repair equipment failure				Complete	Jun-21
	Repair damage caused by trees				Complete	Jul-21
	Repair damage caused by trees				Complete	Sep-21
	Repair damage caused by trees during a storm				Complete	Dec-21
Rank	Substation	Circuit	District	Customers	Outages	
41	East Hickory	00200-41	Warren	476	35	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	0.97	Trees Off Row-Tree	87%	2Q 2021	
	SAIDI	1,176.80	Line Failure	8%	3Q 2021	
	SAIFI	3.96	Animal	1%	4Q 2021	
	CAIDI	297.01	All Other	4%		
	Customer Minutes	560,155				
	Customers Affected	1,886				
	Remedial Action Planned or Taken				Status	Progress
	Repair damage caused by trees during a storm				Complete	Jun-21
	Repair damage caused by trees during a storm				Complete	Jun-21
	Repair line failure				Complete	Dec-21

Penelec						
Rank	Substation	Circuit	District	Customers	Outages	
42	N Meshoppen Tran	00531-65	Montrose	349	40	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	0.91	Trees Off Row-Tree	49%	3Q 2021	
	SAIDI	1,511.36	Lightning	29%	4Q 2021	
	SAIFI	5.49	Unknown	10%		
	CAIDI	275.29	All Other	13%		
	Customer Minutes	527,464				
	Customers Affected	1,916				
	Remedial Action Planned or Taken				Status	Progress
	Repair damage caused by trees during a storm				Complete	May-21
	Repair damage caused by lightning				Complete	Jul-21
	Repair damage caused by lightning				Complete	Jul-21
	Rank	Substation	Circuit	District	Customers	Outages
43	Tiffany	00440-65	Montrose	1,212	28	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	0.90	Trees Off Row-Tree	35%	3Q 2021	
	SAIDI	430.97	Other Electric Utility	29%	4Q 2021	
	SAIFI	4.02	Line Failure	21%		
	CAIDI	107.32	All Other	16%		
	Customer Minutes	522,332				
	Customers Affected	4,867				
	Remedial Action Planned or Taken				Status	Progress
	Repair equipment failure				Complete	Mar-21
	Repair damage caused by trees				Complete	Jul-21
	Repair line failure				Complete	Nov-21
	Rank	Substation	Circuit	District	Customers	Outages
44	Philipsburg	00162-22	Philipsburg	2,713	60	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	0.89	Trees Off Row-Tree	60%	1Q 2021	
	SAIDI	189.87	Line Failure	21%	2Q 2021	
	SAIFI	1.69	Equipment Failure	8%	3Q 2021	
	CAIDI	112.20	All Other	11%	4Q 2021	
	Customer Minutes	515,127				
	Customers Affected	4,591				
	Remedial Action Planned or Taken				Status	Progress
	Repair damage caused by trees during a storm				Complete	Mar-21
	Repair line failure				Complete	Nov-21

Penelec						
Rank	Substation	Circuit	District	Customers	Outages	
45	N Meshoppen Tran	00530-65	Montrose	497	31	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	0.88	Trees Off Row-Tree	71%	1Q 2021	
	SAIDI	1,029.54	Equipment Failure	11%	2Q 2021	
	SAIFI	4.88	Trees Off Row-Limb	6%	3Q 2021	
	CAIDI	211.09	All Other	11%	4Q 2021	
	Customer Minutes	511,679				
	Customers Affected	2,424				
	Remedial Action Planned or Taken				Status	Progress
	Repair damage caused by trees during a storm				Complete	Mar-21
	Repair equipment failure				Complete	Oct-21
	Repair damage caused by trees during a storm				Complete	Dec-21
	Rank	Substation	Circuit	District	Customers	Outages
46	Glen Campbell Sub	00680-21	Clearfield	440	39	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	0.87	Trees Off Row-Tree	84%	4Q 2021	
	SAIDI	1,147.68	Equipment Failure	8%		
	SAIFI	8.10	Trees Off Row-Limb	4%		
	CAIDI	141.69	All Other	4%		
	Customer Minutes	504,980				
	Customers Affected	3,564				
	Remedial Action Planned or Taken				Status	Progress
	Repair damage caused by trees during a storm				Complete	Jul-21
	Repair equipment failure				Complete	Aug-21
	Repair damage caused by trees				Complete	Sep-21
	Repair damage caused by trees				Complete	Nov-21
Rank	Substation	Circuit	District	Customers	Outages	
47	Thompson	00446-65	Montrose	1,138	43	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	0.86	Other Electric Utility	27%	3Q 2021	
	SAIDI	440.23	Unknown	23%	4Q 2021	
	SAIFI	2.64	Trees Off Row-Tree	18%		
	CAIDI	167.05	All Other	32%		
	Customer Minutes	500,979				
	Customers Affected	2,999				
	Remedial Action Planned or Taken				Status	Progress
	Repair damage caused by lightning				Complete	Jul-21
Repair equipment failure				Complete	Sep-21	

Penelec					
Rank	Substation	Circuit	District	Customers	Outages
48	Samuel Rea Car Shop	00032-71	Altoona	823	26
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	0.84	Line Failure	62%	2Q 2021
	SAIDI	592.11	Bird	13%	3Q 2021
	SAIFI	3.83	Lightning	12%	4Q 2021
	CAIDI	154.80	All Other	13%	
	Customer Minutes	487,310			
	Customers Affected	3,148			
	Remedial Action Planned or Taken			Status	Progress
	Repair line failure			Complete	May-21
	Repair damage caused by bird			Complete	Apr-21
	Repair damage caused by trees during a storm			Complete	May-21
	Rank	Substation	Circuit	District	Customers
49	Claysburg	00044-71	Altoona	1,193	30
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	0.84	Trees Off Row-Tree	50%	4Q 2021
	SAIDI	407.05	Forced Outage	13%	
	SAIFI	2.03	Vehicle	12%	
	CAIDI	200.91	All Other	25%	
	Customer Minutes	485,606			
	Customers Affected	2,417			
	Remedial Action Planned or Taken			Status	Progress
	Repair damage caused by trees			Complete	Jun-21
	Repair broken equipment			Complete	Aug-21
	Repair damage caused by vehicle			Complete	Sep-21
	Rank	Substation	Circuit	District	Customers
50	Somerset	00013-12	Somerset	1,992	46
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	0.82	Trees Off Row-Tree	64%	3Q 2021
	SAIDI	239.08	Equipment Failure	15%	4Q 2021
	SAIFI	2.12	Wind	14%	
	CAIDI	112.62	All Other	7%	
	Customer Minutes	476,251			
	Customers Affected	4,229			
	Remedial Action Planned or Taken			Status	Progress
	Repair damage caused by trees during a storm			Complete	May-21
Repair damage caused by trees during a storm			Complete	Aug-21	

Penelec					
Rank	Substation	Circuit	District	Customers	Outages
51	Crown	00320-51	Oil City	466	30
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	0.82	Trees Off Row-Tree	80%	4Q 2021
	SAIDI	1,017.22	Unknown	15%	
	SAIFI	2.47	Human Error -Non-Company	3%	
	CAIDI	411.12	All Other	3%	
	Customer Minutes	474,026			
	Customers Affected	1,153			
	Remedial Action Planned or Taken			Status	Progress
	Repair damage caused by trees			Complete	May-21
	Repair damage caused by human error			Complete	May-21
	Repair damage caused by trees during a storm			Complete	Jul-21
	Repair damage caused by trees during a storm			Complete	Jul-21
	Repair damage caused by unknown cause			Complete	Dec-21
Repair damage caused by trees during a storm			Complete	Dec-21	
Rank	Substation	Circuit	District	Customers	Outages
52	Thompson	00436-65	Montrose	1,254	55
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	0.82	Trees Off Row-Tree	38%	3Q 2021
	SAIDI	377.65	Line Failure	28%	4Q 2021
	SAIFI	2.74	Equipment Failure	13%	
	CAIDI	137.67	All Other	21%	
	Customer Minutes	473,572			
	Customers Affected	3,440			
	Remedial Action Planned or Taken			Status	Progress
	Repair equipment failure			Complete	Mar-21
	Repair damage caused by trees			Complete	Jul-21
	Repair damage caused by trees			Complete	Sep-21
	Repair line failure			Complete	Nov-21

Penelec					
Rank	Substation	Circuit	District	Customers	Outages
53	Millcreek Sub	00055-11	Johnstown	1,825	15
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	0.81	Forced Outage	40%	2Q 2021
	SAIDI	257.20	Trees Off Row-Tree	24%	3Q 2021
	SAIFI	2.73	Vehicle	17%	4Q 2021
	CAIDI	94.25	All Other	18%	
	Customer Minutes	469,388			
	Customers Affected	4,980			
	Remedial Action Planned or Taken			Status	Progress
	Repair equipment failure			Complete	Mar-21
	Repair damage caused by trees			Complete	Aug-21
Rank	Substation	Circuit	District	Customers	Outages
54	Shawville	00151-21	Clearfield	2,248	34
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	0.80	Equipment Failure	41%	3Q 2020
	SAIDI	205.82	Trees Off Row-Tree	25%	1Q 2021
	SAIFI	3.43	Lightning	20%	2Q 2021
	CAIDI	59.97	All Other	14%	4Q 2021
	Customer Minutes	462,680			
	Customers Affected	7,715			
	Remedial Action Planned or Taken			Status	Progress
	Repair damage caused by trees			Complete	Mar-21
	Repair equipment damage			Complete	Mar-21
Repair damage caused by lightning			Complete	Aug-21	
Rank	Substation	Circuit	District	Customers	Outages
55	East Towanda	00525-62	Towanda	654	47
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	0.80	Trees Off Row-Tree	43%	1Q 2021
	SAIDI	706.94	Unknown	26%	2Q 2021
	SAIFI	1.78	Wind	13%	3Q 2021
	CAIDI	396.52	All Other	18%	4Q 2021
	Customer Minutes	462,340			
	Customers Affected	1,166			
	Remedial Action Planned or Taken			Status	Progress
	Restore fuse operation of unknown cause			Complete	Jan-21
	Repair damage caused by wind			Complete	Mar-21
Repair damage caused by trees during a storm			Complete	Jul-21	
Repair damage caused by trees during a storm			Complete	Dec-21	

Penelec						
Rank	Substation	Circuit	District	Customers	Outages	
56	Vail	00647-22	Philipsburg	539	27	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	0.79	Trees Off Row-Tree	70%	4Q 2021	
	SAIDI	855.58	Vehicle	10%		
	SAIFI	3.85	Unknown	9%		
	CAIDI	222.35	All Other	11%		
	Customer Minutes	461,157				
	Customers Affected	2,074				
	Remedial Action Planned or Taken				Status	Progress
	Repair damage caused by vehicle accident				Complete	Jun-21
	Repair damage caused by trees				Complete	Oct-21
	Repair damage caused by trees during a storm				Complete	Dec-21
	Rank	Substation	Circuit	District	Customers	Outages
	57	Titusville Sub	00387-51	Oil City	626	31
Reliability		Outage by Cause		Previously Ranked		
SAIDI Impact		0.79	Trees Off Row-Tree	64%	4Q 2021	
SAIDI		731.02	Trees Off Row-Limb	23%		
SAIFI		2.37	Line Failure	6%		
CAIDI		308.58	All Other	7%		
Customer Minutes		457,618				
Customers Affected		1,483				
Remedial Action Planned or Taken				Status	Progress	
Repair line failure				Complete	May-21	
Repair damage caused by trees				Complete	Jun-21	
Repair damage caused by trees during a storm				Complete	Jul-21	
Repair damage caused by trees				Complete	Aug-21	
Repair damage caused by trees				Complete	Oct-21	
Repair damage caused by trees				Complete	Nov-21	

Penelec					
Rank	Substation	Circuit	District	Customers	Outages
58	Wellsboro	00324-63	Mansfield Pa	281	24
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	0.78	Trees Off Row-Tree	64%	3Q 2020
	SAIDI	1,600.22	Equipment Failure	21%	4Q 2020
	SAIFI	6.00	Unknown	11%	1Q 2021
	CAIDI	266.86	All Other	5%	4Q 2021
	Customer Minutes	449,663			
	Customers Affected	1,685			
	Remedial Action Planned or Taken			Status	Progress
	Repair damage caused by trees			Complete	Mar-21
	Repair equipment damage			Complete	Jun-21
	Repair damage caused by unknown cause			Complete	Aug-21
	Repair damage caused by trees			Complete	Dec-21
	Rank	Substation	Circuit	District	Customers
59	Montrose Sub	00457-65	Montrose	658	47
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	0.77	Trees Off Row-Tree	49%	3Q 2021
	SAIDI	682.86	Equipment Failure	28%	4Q 2021
	SAIFI	1.88	Forced Outage	10%	
	CAIDI	362.65	All Other	13%	
	Customer Minutes	449,319			
	Customers Affected	1,239			
	Remedial Action Planned or Taken			Status	Progress
	Repair equipment failure			Complete	Feb-21
	Repair damage caused by trees during a storm			Complete	Jun-21
	Repair damage caused by lightning			Complete	Jul-21
	Repair damage caused by trees during a storm			Complete	Oct-21
	Repair damage caused by trees during a storm			Complete	Dec-21

Penelec						
Rank	Substation	Circuit	District	Customers	Outages	
60	Punxsutawney	00117-23	Dubois	304	14	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	0.77	Trees Off Row-Tree	67%	4Q 2021	
	SAIDI	1,477.06	Lightning	31%		
	SAIFI	2.88	Equipment Failure	1%		
	CAIDI	512.59	All Other	1%		
	Customer Minutes	449,027				
	Customers Affected	876				
	Remedial Action Planned or Taken				Status	Progress
	Repair damage caused by unknown cause				Complete	Jun-21
	Repair damage caused by lightning				Complete	Jun-21
	Repair damage caused by trees				Complete	Aug-21
	Rank	Substation	Circuit	District	Customers	Outages
61	Brookville	00125-23	Dubois	563	37	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	0.77	Trees Off Row-Tree	60%	4Q 2020	
	SAIDI	788.96	Equipment Failure	16%	1Q 2021	
	SAIFI	3.59	Vehicle	9%	2Q 2021	
	CAIDI	219.57	All Other	16%	4Q 2021	
	Customer Minutes	444,184				
	Customers Affected	2,023				
	Remedial Action Planned or Taken				Status	Progress
	Repair damage caused by vehicle				Complete	Mar-21
	Repair equipment failure				Complete	Mar-21
	Repair damage caused by trees				Complete	Jul-21
	Repair damage caused by trees				Complete	Dec-21
Rank	Substation	Circuit	District	Customers	Outages	
62	Portage	00635-72	Altoona	193	9	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	0.75	Equipment Failure	51%	4Q 2021	
	SAIDI	2,267.47	Vehicle	27%		
	SAIFI	2.79	Trees Off Row-Tree	22%		
	CAIDI	811.91	All Other	1%		
	Customer Minutes	437,622				
	Customers Affected	539				
	Remedial Action Planned or Taken				Status	Progress
	Repair broken equipment				Complete	Mar-21
	Repair damage caused by vehicle				Complete	Apr-21
	Repair damage caused by vehicle				Complete	Sep-21
	Repair damage caused by tree				Complete	Sep-21

Penelec					
Unranked circuits appearing 2 or more quarters in the last 4 quarters					
Substation	Circuit	1Q 2021	2Q 2021	3Q 2021	4Q 2021
Blossburg	00310-63	X	X		
Bradford South	00106-42	X	X		
East Hickory	00201-41	X	X		
East Sayre	00518-61	X	X		
Lewis Run	00408-42	X	X		
Lewis Run	00409-42	X	X		
Mill Street	00144-42	X	X		
Morgan Street	00233-52	X	X		
North Towanda	00521-62		X	X	
North Warren	00596-41	X	X		
Northeast	00592-31	X	X		
Reeder Street	00039-11		X	X	
Scalp Level	00932-11	X	X		
Snakespring	00628-73	X	X	X	
Two Mile	00127-42	X	X		
Union City	00208-43	X	X		
Wellsboro	00325-63		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
Birmingham	00168-22	Circuit Inspection	Complete	Oct-21
Brookville	00125-23	Targeted Circuit Rehabilitation	Complete	Oct-21
Church	00427-34	On cycle tree trimming	Complete	Dec-21
East Sayre	00518-61	Targeted Circuit Rehabilitation	To be completed 2022	30%
Lewis Run	00408-42	On cycle tree trimming	Complete	Dec-21
McVeytown	00112-81	On cycle tree trimming	Complete	Nov-21
Mill Street	00144-42	On cycle tree trimming	Complete	Nov-21
North Warren	00207-41	On cycle tree trimming	Complete	Dec-21
Punxsutawney	00118-23	On cycle tree trimming	Complete	Dec-21

Penn Power						
Rank	Substation	Circuit	District	Customers	Outages	
1	McDowell	W-121	Clark	698	33	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	4.47	Trees Off Row-Tree	90%	3Q 2021	
	SAIDI	1,067.93	Unknown	3%	4Q 2021	
	SAIFI	2.70	Equipment Failure	2%		
	CAIDI	403	All Other	4%		
	Customer Minutes	745,418				
	Customers Affected	1,851				
	Remedial Action Planned or Taken				Status	Progress
	Repair damage caused by trees during a storm				Complete	Jul-21
	Repair damage caused by trees during a storm				Complete	Jul-21
Rank	Substation	Circuit	District	Customers	Outages	
2	Ingomar	D620	Zelienople	1,268	15	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	4.41	Trees Off Row-Tree	95%	3Q 2021	
	SAIDI	579.42	Animal	2%	4Q 2021	
	SAIFI	2.90	Trees Off Row-Limb	2%		
	CAIDI	198	All Other	2%		
	Customer Minutes	734,704				
	Customers Affected	3,712				
	Remedial Action Planned or Taken				Status	Progress
	Repair damage caused by tree.				Complete	Jul-21
	Repair damage caused by trees during a storm				Complete	Aug-21
Repair damage caused by trees during a storm				Complete	Sep-21	
Rank	Substation	Circuit	District	Customers	Outages	
3	Seneca	W700	Zelienople	976	40	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	3.26	Trees Off Row-Tree	89%	3Q 2021	
	SAIDI	557.10	Line Failure	4%	4Q 2021	
	SAIFI	2.60	Animal	2%		
	CAIDI	213	All Other	4%		
	Customer Minutes	543,729				
	Customers Affected	2,556				
	Remedial Action Planned or Taken				Status	Progress
	Pole was replaced and equipment repaired				Complete	Dec-20
	Repair damage caused by trees during a storm				Complete	Jul-21
Repair damage caused by trees during a storm				Complete	Sep-21	

Penn Power						
Rank	Substation	Circuit	District	Customers	Outages	
4	Stoneboro	W-131	Clark	1,450	84	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	3.02	Trees Off Row-Tree	86%	4Q 2021	
	SAIDI	347.20	Line Failure	8%		
	SAIFI	1.00	Bird	2%		
	CAIDI	361	All Other	4%		
	Customer Minutes	503,441				
	Customers Affected	1,395				
	Remedial Action Planned or Taken				Status	Progress
	Repair damage caused by trees during a storm				Complete	Mar-21
	Repair damage caused by animal contact.				Complete	Jun-21
	Repair damage caused by trees during a storm				Complete	Aug-21
	Repair line failure				Complete	Dec-21
	Repair damage caused by trees during a storm				Complete	Dec-21
Rank	Substation	Circuit	District	Customers	Outages	
5	Union	W-561	New Castle	1,596	34	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	2.64	Trees Off Row-Tree	74%	4Q 2021	
	SAIDI	275.24	Unknown	15%		
	SAIFI	2.30	Forced Outage	9%		
	CAIDI	119	All Other	3%		
	Customer Minutes	439,286				
	Customers Affected	3,701				
	Remedial Action Planned or Taken				Status	Progress
	Repair damage caused by trees during a storm				Complete	Jul-21
	Repair damage caused by trees during a storm				Complete	Aug-21
	Forced outage caused by broken Verizon pole				Complete	Aug-21
	Repair damage caused by tree				Complete	Dec-21

Penn Power						
Rank	Substation	Circuit	District	Customers	Outages	
6	Richard	W745	Zelienople	644	22	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	2.56	Trees Off Row-Tree	70%	2Q 2021	
	SAIDI	661.01	Trees Off Row-Limb	26%	3Q 2021	
	SAIFI	3.80	Line Failure	3%	4Q 2021	
	CAIDI	174	All Other	1%		
	Customer Minutes	425,688				
	Customers Affected	2,453				
	Remedial Action Planned or Taken				Status	Progress
	Repair damage caused by tree.				Complete	Mar-21
	Repair damage caused by trees during a storm				Complete	Jun-21
	Repair damage caused by tree				Complete	Jul-21
	Repair damage caused by trees during a storm				Complete	Aug-21
Rank	Substation	Circuit	District	Customers	Outages	
7	Warrendale	D625	Zelienople	1,281	21	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	2.41	Trees Off Row-Tree	86%	3Q 2021	
	SAIDI	313.05	Equipment Failure	10%	4Q 2021	
	SAIFI	2.30	Lightning	2%		
	CAIDI	135	All Other	2%		
	Customer Minutes	401,013				
	Customers Affected	2,977				
	Remedial Action Planned or Taken				Status	Progress
	Repair damage caused by tree				Complete	Jul-21
	Repair damage caused by trees during a storm				Complete	Aug-21
	Repair damage caused by trees during a storm				Complete	Sep-21
	Rank	Substation	Circuit	District	Customers	Outages
8	Hermitage	W-260	Clark	2,366	73	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	1.94	Line Failure	39%	4Q 2021	
	SAIDI	136.40	Equipment Failure	26%		
	SAIFI	1.10	Trees Off Row-Tree	24%		
	CAIDI	128	All Other	11%		
	Customer Minutes	322,714				
	Customers Affected	2,526				
	Remedial Action Planned or Taken				Status	Progress
	Repair damage caused by tree				Complete	Jun-21
	Repair underground line failure				Complete	Jul-21
	Restore recloser operation due to water in cable				Complete	Jul-21
	Repair line failure during storm				Complete	Aug-21

Penn Power						
Rank	Substation	Circuit	District	Customers	Outages	
9	Castlewood	D-326	New Castle	1,184	38	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	1.78	Trees Off Row-Tree	67%	4Q 2021	
	SAIDI	250.59	Human Error -Non-Company	24%		
	SAIFI	2.00	Human Error - Company	3%		
	CAIDI	123	All Other	6%		
	Customer Minutes	296,703				
	Customers Affected	2,415				
	Remedial Action Planned or Taken				Status	Progress
	Repair damage caused by trees during a storm				Complete	Jul-21
	Repair damage due to human error (customer brought tree down)				Complete	Sep-21
	Repair damage caused by trees during a storm				Complete	Dec-21

Penn Power					
Unranked circuits appearing 2 or more quarters in the last 4 quarters					
Substation	Circuit	1Q 2021	2Q 2021	3Q 2021	4Q 2021
Camp Reynolds	W-134	X	X	X	
Chippewa	D-558		X	X	
Conneaut	W-174	X	X		
Hartstown	W-126	X	X		
Koppel	D-531	X	X	X	
Mercer	W-167	X	X	X	
Perry	W-156	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						
Rank	Substation	Circuit	District	Customers	Outages	
1	Avella	W Middletown	Washington	1,057	90	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	5	Trees off ROW	64%	Q1 2021	
	SAIDI	3,444	Vehicle	11%	Q2 2021	
	SAIFI	7.3	Line Failure	10%	Q3 2021	
	CAIDI	472	All Other	15%	Q4 2021	
	Customer Minutes	3,639,856				
	Customers Affected	7,713				
	Remedial Action Planned or Taken			Status	Progress	
	Repair damage caused by a tree during a storm			Complete	Mar-21	
	On cycle tree trimming			Complete	Jun-21	
	Repair damage caused by a tree during a storm			Complete	Jun-21	
	Repair damage caused by a vehicle			Complete	Jul-21	
	Repair damage caused by wind during a storm			Complete	Oct-21	
Rank	Substation	Circuit	District	Customers	Outages	
2	Amity	Banetown	Washington	1,480	78	
	Reliability		Outage by Cause		Previously Ranked	
	SAIDI Impact	3.7	Trees off ROW	92%	Q2 2021	
	SAIDI	1829	Line Failure	3%	Q3 2021	
	SAIFI	4.89	Unknown	3%	Q4 2021	
	CAIDI	374	All Other	2%		
	Customer Minutes	2,707,251				
	Customers Affected	7,237				
	Remedial Action Planned or Taken			Status	Progress	
	Repair damage caused by a tree during a storm			Complete	May-21	
	Repair damage caused by a tree during a storm			Complete	Aug-21	
	Repair damage caused by a tree during a storm			Complete	Dec-21	
	Rank	Substation	Circuit	District	Customers	Outages
	3	Treveskyn	Treveskyn	Boyce	1,464	33
Reliability		Outage by Cause		Previously Ranked		
SAIDI Impact		3.4	Trees off ROW	96%	Q3 2021	
SAIDI		1672	Line Failure	2%	Q4 2021	
SAIFI		2.55	Forced Outage	1%		
CAIDI		656	All Other	1%		
Customer Minutes		2,448,093				
Customers Affected		3,732				
Remedial Action Planned or Taken			Status	Progress		
Overhead circuit inspection			Complete	Apr-21		
Repair damage caused by a tree during a storm			Complete	Aug-21		
Repair damage caused by a tree during a storm			Complete	Dec-21		

West Penn					
Rank	Substation	Circuit	District	Customers	Outages
4	Rutan	Bristoria	Jefferson	1126	88
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	2.4	Trees off ROW	61%	Q1 2021
	SAIDI	1,509	Unknown	20%	Q2 2021
	SAIFI	2.62	Line Failure	13%	Q3 2021
	CAIDI	575	All Other	6%	Q4 2021
	Customer Minutes	1,699,465			
	Customers Affected	2,955			
	Remedial Action Planned or Taken			Status	Progress
	Repair line failure			Complete	Mar-21
	Restore unknown outage during a storm			Complete	Jun-21
	Repair damage caused by a tree during a storm			Complete	Aug-21
	Restore unknown outage			Complete	Dec-21
	Rank	Substation	Circuit	District	Customers
5	Karns City	Kaylor	Butler	1,152	38
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	2.1	Trees off ROW	87%	Q1 2021
	SAIDI	1,310	Line Failure	10%	Q2 2021
	SAIFI	2.69	Unknown	1%	Q3 2021
	CAIDI	486	All Other	2%	Q4 2021
	Customer Minutes	1,508,698			
	Customers Affected	3,104			
	Remedial Action Planned or Taken			Status	Progress
	Repair damage caused by a tree during a storm			Complete	Mar-21
	Zone 1 Infrared Inspection			Complete	Jun-21
	Repair damage caused by a tree during a storm			Complete	Apr-21
	Repair line failure			Complete	Sep-21
	Restore unknown outage			Complete	Oct-21

West Penn					
Rank	Substation	Circuit	District	Customers	Outages
6	Vandergrift	Grifflo Park	Arnold	2735	56
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	2	Trees off ROW	85%	Q1 2021
	SAIDI	522	Human Error-Company	8%	Q2 2021
	SAIFI	3.8	Trees on ROW	6%	Q3 2021
	CAIDI	159	All Other	1%	Q4 2021
	Customer Minutes	1,427,354			
	Customers Affected	8,983			
	Remedial Action Planned or Taken			Status	Progress
	Repair damage caused by a tree during a storm			Complete	Mar-21
	On cycle tree trimming			Complete	Jun-21
	Repair damage caused by a tree during a storm			Complete	Jun-21
	Repair damage caused by a tree during a storm			Complete	Aug-21
	Repair damage caused by a tree			Complete	Oct-21
Rank	Substation	Circuit	District	Customers	Outages
7	Waterville	Waterville	State College	357	37
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	1.9	Trees off ROW	51%	Q1 2021
	SAIDI	3,837	Other Electric Utility	47%	Q2 2021
	SAIFI	12.18	Unknown	1%	Q3 2021
	CAIDI	315	All Other	1%	Q4 2021
	Customer Minutes	1,369,831			
	Customers Affected	4,347			
	Remedial Action Planned or Taken			Status	Progress
	Restore outage caused by other electric utility during a storm			Complete	Mar-21
	Restore outage caused by other electric utility			Complete	Jun-21
	Repair damage caused by a tree during a storm			Complete	Jul-21
	Repair damage caused by a tree			Complete	Dec-21
	Overhead circuit inspection			To be completed 2022	0%

West Penn					
Rank	Substation	Circuit	District	Customers	Outages
8	Thomas	Thomas	Boyce	1,348	49
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	1.9	Trees off ROW	51%	Q1 2021
	SAIDI	1002	Vehicle	27%	Q2 2021
	SAIFI	3.45	Unknown	17%	Q3 2021
	CAIDI	291	All Other	5%	Q4 2021
	Customer Minutes	1,351,235			
	Customers Affected	4,650			
	Remedial Action Planned or Taken			Status	Progress
	Repair damage caused by a tree during a storm			Complete	Mar-21
	Forced outage to repair damage during a storm			Complete	Jun-21
	Repair damage caused by a vehicle during a storm			Complete	Jul-21
	Repair damage caused by a tree during a storm			Complete	Dec-21
	Overhead circuit inspection			To be completed 2022	0%
Rank	Substation	Circuit	District	Customers	Outages
9	Piney Fork	Gillhall	Charleroi	2,200	16
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	1.8	Line Failure	41%	Q1 2021
	SAIDI	596	Vehicle	36%	Q2 2021
	SAIFI	1.78	Trees off ROW	12%	Q3 2021
	CAIDI	334	All Other	11%	Q4 2021
	Customer Minutes	1,311,384			
	Customers Affected	3,924			
	Remedial Action Planned or Taken			Status	Progress
	Repair damage caused by a tree during a storm			Complete	Feb-21
	Zone 1 Infrared Inspection			Complete	May-21
	Repair damage caused by a tree during a storm			Complete	Jun-21
	Repair line failure			Complete	Aug-21

West Penn					
Rank	Substation	Circuit	District	Customers	Outages
10	Robbins	Balkan	Jeannette	1,718	17
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	1.8	Trees off ROW	68%	Q3 2021
	SAIDI	738	Trees on ROW	30%	Q4 2021
	SAIFI	2.47	Line Failure	1%	
	CAIDI	299	All Other	1%	
	Customer Minutes	1,267,594			
	Customers Affected	4,236			
	Remedial Action Planned or Taken			Status	Progress
	Repair damage caused by a tree during a storm			Complete	Aug-21
	On cycle tree trimming			Complete	Sep-21
	Repair line failure			Complete	Nov-21
	Rank	Substation	Circuit	District	Customers
11	Bethel Park	Dashwood	Boyce	2,161	25
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	1.6	Trees off ROW	64%	Q3 2021
	SAIDI	547	Trees on ROW	20%	Q4 2021
	SAIFI	2	Vehicle	7%	
	CAIDI	273	All Other	9%	
	Customer Minutes	1,181,134			
	Customers Affected	4,332			
	Remedial Action Planned or Taken			Status	Progress
	Repair damage caused by a tree during a storm			Complete	Aug-21
	Repair line failure			Complete	Oct-21
	On cycle tree trimming			Complete	Dec-21
	Rank	Substation	Circuit	District	Customers
12	Avella	Penowa	Washington	628	62
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	1.6	Trees off ROW	67%	Q2 2021
	SAIDI	1855	Unknown	27%	Q3 2021
	SAIFI	3.67	Trees on ROW	4%	Q4 2021
	CAIDI	506	All Other	2%	
	Customer Minutes	1,165,069			
	Customers Affected	2,302			
	Remedial Action Planned or Taken			Status	Progress
	Overhead circuit inspection			Complete	Mar-21
	Repair damage caused by a tree during a storm			Complete	Jun-21
	Restore unknown outage during a storm			Complete	Jun-21
	Repair damage caused by a tree during a storm			Complete	Jul-21
Repair damage caused by a tree during a storm			Complete	Dec-21	

West Penn					
Rank	Substation	Circuit	District	Customers	Outages
13	Cecil	Murray Hill	Boyce	1790	24
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	1.6	Trees off ROW	93%	Q3 2021
	SAIDI	649	Trees on ROW	3%	Q4 2021
	SAIFI	2.13	Equipment Failure	2%	
	CAIDI	304	All Other	2%	
	Customer Minutes	1,161,155			
	Customers Affected	3,820			
	Remedial Action Planned or Taken			Status	Progress
	Repair damage caused by a tree during a storm			Complete	Aug-21
	Repair equipment failure			Complete	Oct-21
Rank	Substation	Circuit	District	Customers	Outages
14	Crossgates	Peters Twp	Boyce	1065	17
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	1.6	Line Failure	82%	Q4 2021
	SAIDI	1064	Trees off ROW	15%	
	SAIFI	1.63	Equipment Failure	1%	
	CAIDI	653	All Other	2%	
	Customer Minutes	1,133,526			
	Customers Affected	1,735			
	Remedial Action Planned or Taken			Status	Progress
	Repair damage caused by a tree			Complete	Oct-21
Rank	Substation	Circuit	District	Customers	Outages
15	Flintstone	Chaneyville	Hyndman	577	33
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	1.5	Trees off ROW	71%	Q3 2021
	SAIDI	1931	Trees on ROW	28%	Q4 2021
	SAIFI	4.63	Line Failure	0.3%	complete
	CAIDI	417	All Other	0.7%	
	Customer Minutes	1,114,169			
	Customers Affected	2,674			
	Remedial Action Planned or Taken			Status	Progress
	Repair damage caused by a tree during a storm			Complete	Aug-21
Repair damage caused by a tree			Complete	Oct-21	
On cycle tree trimming			Complete	Dec-21	

West Penn					
Rank	Substation	Circuit	District	Customers	Outages
16	Franklin	Rogersville	Jefferson	832	71
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	1.4	Trees off ROW	90%	Q1 2021
	SAIDI	1,225	Unknown	4%	Q2 2021
	SAIFI	3.5	Equipment Failure	4%	Q3 2021
	CAIDI	350	All Other	2%	Q4 2021
	Customer Minutes	1,018,794			
	Customers Affected	2,915			
	Remedial Action Planned or Taken			Status	Progress
	Restore unknown outage during a storm			Complete	Mar-21
	Repair damage caused by a tree			Complete	May-21
	Repair equipment failure			Complete	Aug-21
	Repair damage caused by a tree			Complete	Nov-21
Rank	Substation	Circuit	District	Customers	Outages
17	New Kensington	Power	Arnold	1,503	13
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	1.3	Vehicle	81%	Q4 2021
	SAIDI	622	Equipment Failure	14%	
	SAIFI	2.33	Trees off ROW	5%	
	CAIDI	267	All Other	0%	
	Customer Minutes	935,070			
	Customers Affected	3,502			
	Remedial Action Planned or Taken			Status	Progress
	Repair equipment failure			Complete	Dec-21
Rank	Substation	Circuit	District	Customers	Outages
18	Port Matilda	Port Matilda	State College	1,441	57
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	1.3	Trees off ROW	74%	Q2 2021
	SAIDI	643	Equipment Failure	24%	Q3 2021
	SAIFI	2.63	Line Failure	1%	Q4 2021
	CAIDI	245	All Other	1%	
	Customer Minutes	926,621			
	Customers Affected	3,784			
	Remedial Action Planned or Taken			Status	Progress
	Repair damage caused by a tree			Complete	Jun-21
	Repair equipment failure			Complete	Aug-21
	Overhead circuit inspection			Complete	Oct-21
	Repair equipment failure			Complete	Oct-21

West Penn					
Rank	Substation	Circuit	District	Customers	Outages
19	Saltsburg	Saltsburg	Arnold	1409	59
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	1.2	Trees off ROW	38%	Q3 2021
	SAIDI	613	Equipment Failure	32%	Q4 2021
	SAIFI	3.57	Line Failure	24%	
	CAIDI	172	All Other	6%	
	Customer Minutes	863,272			
	Customers Affected	5,029			
	Remedial Action Planned or Taken			Status	Progress
	Repair line failure			Complete	Jul-21
	Repair equipment failure during a storm			Complete	Dec-21
	Rank	Substation	Circuit	District	Customers
20	Gordon	Wolfdale	Washington	2087	52
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	1.2	Trees off ROW	75%	Q3 2021
	SAIDI	399	Line Failure	10%	Q4 2021
	SAIFI	1.8	Equipment Failure	4%	
	CAIDI	221	All Other	11%	
	Customer Minutes	832,836			
	Customers Affected	3,764			
	Remedial Action Planned or Taken			Status	Progress
	Overhead circuit inspection			Complete	May-21
	Repair damage caused by a tree during a storm			Complete	Aug-21
	Repair line failure			Complete	Oct-21
Rank	Substation	Circuit	District	Customers	Outages
21	Smithton	Fitzhenry	Charleroi	1167	31
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	1.1	Vehicle	46%	Q1 2021
	SAIDI	707	Line Failure	32%	Q2 2021
	SAIFI	3.32	Equipment Failure	15%	Q4 2021
	CAIDI	213	All Other	7%	
	Customer Minutes	824,956			
	Customers Affected	3,876			
	Remedial Action Planned or Taken			Status	Progress
	Repair damage caused by a vehicle			Complete	Mar-21
	Zone 1 Infrared Inspection			Complete	May-21
	Repair damage caused by a vehicle			Complete	Apr-21
Repair line failure			Complete	Oct-21	

West Penn					
Rank	Substation	Circuit	District	Customers	Outages
22	Charleroi	N. Charleroi	Charleroi	1,075	13
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	1.1	Trees off ROW	71%	Q4 2021
	SAIDI	767	Unknown	20%	
	SAIFI	1.56	Line Failure	9%	
	CAIDI	491	All Other	0%	
	Customer Minutes	824,724			
	Customers Affected	1,678			
	Remedial Action Planned or Taken			Status	Progress
	Repair line failure			Complete	Dec-21
	Overhead circuit inspection			To be completed 2022	0%
Rank	Substation	Circuit	District	Customers	Outages
23	Crossgates	Robinhood	Boyce	1,102	23
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	1.1	Trees off ROW	83%	Q2 2021
	SAIDI	732	Trees on ROW	8%	Q3 2021
	SAIFI	2.63	Forced Outage	4%	Q4 2021
	CAIDI	279	All Other	5%	
	Customer Minutes	806,707			
	Customers Affected	2,893			
	Remedial Action Planned or Taken			Status	Progress
	Repair damage caused by a tree during a storm			Complete	May-21
	Repair damage caused by a tree during a storm			Complete	Jul-21
Repair damage caused by a tree during a storm			Complete	Dec-21	
Overhead circuit inspection			To be completed 2022	0%	
Rank	Substation	Circuit	District	Customers	Outages
24	Fountaindale	Carroll Valley	Waynesboro	1,265	54
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	1.1	Trees off ROW	92%	Q3 2021
	SAIDI	637	Unknown	5%	Q4 2021
	SAIFI	2.79	Forced Outage	1%	
	CAIDI	228	All Other	2%	
	Customer Minutes	805,583			
	Customers Affected	3,533			
	Remedial Action Planned or Taken			Status	Progress
	Repair damage caused by a tree during a storm			Complete	Sep-21
	On cycle tree trimming			Complete	Oct-21
Repair damage caused by a tree			Complete	Nov-21	

West Penn					
Rank	Substation	Circuit	District	Customers	Outages
25	Cooperstown	Twin Willows	Butler	1,822	39
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	1.1	Trees off ROW	47%	Q4 2021
	SAIDI	440	Trees on ROW	25%	
	SAIFI	4.94	Unknown	21%	
	CAIDI	89	All Other	7%	
	Customer Minutes	802,255			
	Customers Affected	8,994			
	Remedial Action Planned or Taken			Status	Progress
	Repair damage caused by a tree during a storm			Complete	Dec-21
Rank	Substation	Circuit	District	Customers	Outages
26	Shingletown	Windmill Rd	State College	1,071	19
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	1.1	Trees off ROW	77%	Q3 2021
	SAIDI	736	Equipment Failure	16%	Q4 2021
	SAIFI	3.53	Vehicle	5%	
	CAIDI	208	All Other	2%	
	Customer Minutes	787,875			
	Customers Affected	3,781			
	Remedial Action Planned or Taken			Status	Progress
	Repair damage caused by a tree during a storm			Complete	Jul-21
Repair damage caused by a vehicle			Complete	Oct-21	
Rank	Substation	Circuit	District	Customers	Outages
27	Enlow	Summit	Boyce	1,804	17
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	1.1	Trees off ROW	56%	Q2 2021
	SAIDI	426	Trees on ROW	40%	Q3 2021
	SAIFI	2.78	Line Failure	2%	Q4 2021
	CAIDI	154	All Other	2%	
	Customer Minutes	769,229			
	Customers Affected	5,009			
	Remedial Action Planned or Taken			Status	Progress
	Repair damage caused by a tree during a storm			Complete	Jun-21
Repair damage caused by a tree during a storm			Complete	Aug-21	
Repair line failure			Complete	Oct-21	

West Penn					
Rank	Substation	Circuit	District	Customers	Outages
28	Dry Run	Town	Charleroi	1,815	17
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	1	Trees off ROW	76%	Q2 2021
	SAIDI	418	Forced Outage	20%	Q3 2021
	SAIFI	3.32	Equipment Failure	3%	Q4 2021
	CAIDI	126	All Other	1%	
	Customer Minutes	758,005			
	Customers Affected	6,034			
	Remedial Action Planned or Taken			Status	Progress
	Repair damage caused by a tree during a storm			Complete	Jun-21
	Repair equipment failure			Complete	Jul-21
	Forced outage to repair damage			Complete	Dec-21
	Rank	Substation	Circuit	District	Customers
29	King Farm	Church St.	Pleasant Valley	1,618	15
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	1	Equipment Failure	62%	Q3 2021
	SAIDI	464	Forced Outage	32%	Q4 2021
	SAIFI	2.14	Line Failure	6%	
	CAIDI	217	All Other	0%	
	Customer Minutes	750,064			
	Customers Affected	3,464			
	Remedial Action Planned or Taken			Status	Progress
	Zone 1 Infrared Inspection			Complete	Aug-21
	Repair equipment failure			Complete	Sep-21
	Repair line failure			Complete	Nov-21
	Rank	Substation	Circuit	District	Customers
30	Smith	Francis Mine	Washington	1,436	50
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	1	Trees off ROW	83%	Q1 2021
	SAIDI	511	Trees on ROW	9%	Q2 2021
	SAIFI	2.45	Line Failure	4%	Q3 2021
	CAIDI	209	All Other	4%	Q4 2021
	Customer Minutes	734,383			
	Customers Affected	3,521			
	Remedial Action Planned or Taken			Status	Progress
	Repair damage caused by a tree during a storm			Complete	Mar-21
	Repair damage caused by a tree during a storm			Complete	Jun-21
	On cycle tree trimming			Complete	Aug-21
	Repair damage caused by a tree			Complete	Sep-21
Repair line failure			Complete	Nov-21	

West Penn					
Rank	Substation	Circuit	District	Customers	Outages
31	Atherton	East Residential	State College	1,954	20
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	1	Equipment Failure	93%	Q2 2021
	SAIDI	365	Trees off ROW	3%	Q4 2021
	SAIFI	1.57	Animal	2%	
	CAIDI	232	All Other	2%	
	Customer Minutes	713,212			
	Customers Affected	3,075			
	Remedial Action Planned or Taken			Status	Progress
	Repair equipment failure			Complete	May-21
	Repair damage caused by an animal			Complete	Nov-21
Rank	Substation	Circuit	District	Customers	Outages
32	North Union	Phillips	Uniontown	1472	26
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	1	Trees off ROW	87%	Q4 2021
	SAIDI	480	Line Failure	6%	
	SAIFI	2.75	Forced Outage	4%	
	CAIDI	175	All Other	3%	
	Customer Minutes	706,480			
	Customers Affected	4,041			
	Remedial Action Planned or Taken			Status	Progress
	Repair damage caused by a tree			Complete	Dec-21
Rank	Substation	Circuit	District	Customers	Outages
33	Weedville	Weedville	St Marys	1435	35
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	1	Trees off ROW	71%	Q1 2021
	SAIDI	490	Human Error - Non-Company	17%	Q2 2021
	SAIFI	2.85	Trees on ROW	5%	Q3 2021
	CAIDI	172	All Other	7%	Q4 2021
	Customer Minutes	702,789			
	Customers Affected	4,088			
	Remedial Action Planned or Taken			Status	Progress
	Repair damage caused by a tree during a storm			Complete	Mar-21
	Repair damage caused by a tree			Complete	May-21
	Forced outage to repair damage during a storm			Complete	Jul-21
	Repair damage caused by a tree			Complete	Dec-21
On cycle tree trimming			Complete	Dec-21	

West Penn					
Rank	Substation	Circuit	District	Customers	Outages
34	Fowler	Bald Eagle	State College	428	24
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	0.9	Trees off ROW	95%	Q3 2021
	SAIDI	1602	Equipment Failure	4%	Q4 2021
	SAIFI	2.46	Trees on ROW	0.3%	
	CAIDI	652	All Other	0.7%	
	Customer Minutes	685,692			
	Customers Affected	1,051			
	Remedial Action Planned or Taken			Status	Progress
	Repair damage caused by a tree during a storm			Complete	Jul-21
	Overhead circuit inspection			Complete	Jul-21
	Repair damage caused by a tree			Complete	Oct-21
Rank	Substation	Circuit	District	Customers	Outages
35	Mateer	Dime Rd	Arnold	1,200	68
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	0.9	Trees off ROW	49%	Q4 2021
	SAIDI	564	Forced Outage	38%	
	SAIFI	1.75	Unknown	6%	
	CAIDI	322	All Other	7%	
	Customer Minutes	676,486			
	Customers Affected	2,104			
	Remedial Action Planned or Taken			Status	Progress
	Repair damage caused by a tree during a storm			Complete	Dec-21
	Overhead circuit inspection			To be completed 2022	0%
	Rank	Substation	Circuit	District	Customers
36	St. Clair	Fort Couch	Boyce	1,156	36
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	0.9	Trees off ROW	76%	Q4 2021
	SAIDI	579	Line Failure	12%	
	SAIFI	1.95	Equipment Failure	8%	
	CAIDI	297	All Other	4%	
	Customer Minutes	669,123			
	Customers Affected	2,253			
	Remedial Action Planned or Taken			Status	Progress
	Repair line failure			Complete	Nov-21

West Penn					
Rank	Substation	Circuit	District	Customers	Outages
37	Driftwood	Driftwood	St Marys	870	28
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	0.9	Human Error - Non-Company	73%	Q1 2021
	SAIDI	764	Trees off ROW	20%	Q2 2021
	SAIFI	1.79	Line Failure	6%	Q3 2021
	CAIDI	427	All Other	1%	Q4 2021
	Customer Minutes	664,245			
	Customers Affected	1,557			
	Remedial Action Planned or Taken			Status	Progress
	Repair damage caused by wind during a storm			Complete	Mar-21
	Repair damage caused by Human Error Non-Company			Complete	Apr-21
	Repair damage caused by a tree			Complete	Sep-21
	Repair line failure			Complete	Oct-21
Rank	Substation	Circuit	District	Customers	Outages
38	Kiski Valley	Kittanning Rd.	Arnold	1778	43
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	0.9	Trees off ROW	77%	Q4 2021
	SAIDI	368	Line Failure	9%	
	SAIFI	1.67	Equipment Failure	5%	
	CAIDI	220	All Other	9%	
	Customer Minutes	654,619			
	Customers Affected	2,974			
	Remedial Action Planned or Taken			Status	Progress
	Repair damage caused by a tree during a storm			Complete	Dec-21
Rank	Substation	Circuit	District	Customers	Outages
39	Salem	Greenvillage	Waynesboro	1625	17
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	0.9	Equipment Failure	50%	Q2 2021
	SAIDI	391	Vehicle	47%	Q4 2021
	SAIFI	1.98	Trees on ROW	1%	
	CAIDI	197	All Other	2%	
	Customer Minutes	635,089			
	Customers Affected	3,219			
	Remedial Action Planned or Taken			Status	Progress
	Repair damage caused by a vehicle			Complete	Apr-21
Repair line failure			Complete	Dec-21	

West Penn					
Rank	Substation	Circuit	District	Customers	Outages
40	Graysville	Graysville	Jefferson	581	35
	Reliability		Outage by Cause		Previously Ranked
	SAIDI Impact	0.9	Trees off ROW	58%	Q4 2021
	SAIDI	1080	Equipment Failure	25%	
	SAIFI	2.94	Animal	13%	
	CAIDI	368	All Other	4%	
	Customer Minutes	627,713			
	Customers Affected	1,706			
	Remedial Action Planned or Taken			Status	Progress
	Repair damage caused by an animal			Complete	Dec-21
	Overhead circuit inspection			To be completed 2022	0%

West Penn					
Unranked circuits appearing 2 or more quarters in the last 4 quarters					
Substation	Circuit	1Q 2021	2Q 2021	3Q 2021	4Q 2021
Amity	Amity	X	X		
Belmon	Fayette City	X	X		
Bethlen	Darlington	X	X		
Dutch Fork	Claysville		X	X	
Fayetteville	Keystone	X	X		
Frazier	Star Junction	X	X	X	
Kane	Russell City	X	X		
Lagonda	Taylorstown	X	X		
Marvindale	Clermont	X	X	X	
Murrycrest	Sardis Road	X	X		
Mushroom	Mushroom	X	X		
North Washington	Oklahoma	X	X		
Pangburn Hill	Pangburn Hill		X	X	
Robbins	Rillton	X	X	X	
Sardis	Mamont	X	X	X	
Scottdale	Commercial	X	X		
Shaffers Corner	Seventh St Rd	X	X		
Smithton	Yukon	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
Charleroi	Speers	On cycle tree trimming	Complete	Nov-21
Buckeye No.3	Paisley	Overhead circuit inspection	Complete	Oct-21
Mushroom	Mushroom	Overhead circuit inspection	Complete	Dec-21
Bethlen	Darlington	On cycle tree trimming	To be completed 2022	99%

Pursuant to Docket Nos. D-2014-2365991, D-2014-2365992, D-2014-2365993, and D-2014-2365994, (Appendix A)(3): The Companies are 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 2021 12-Month Rolling			
Cause of Line Hit	Number of Incidents	Invoice Amount (\$)	Recovery Amount (\$)
Dig In - Other	4	\$0	\$0
Excavated in Tolerance	17	\$25,314	\$0
Excavation Inconsistent with Ticket Scope	5	\$3,151	\$0
Excavation Prior to Lawful Start Date	2	\$5,819	\$965
Expired Ticket	3	\$965	\$0
Hand Digging	0	\$0	\$0
Marked Improperly	12	\$93,432	\$0
No Ticket	22	\$49,846	\$1,759
Total	65	\$178,527	\$2,724

Penelec – Third Party Line Hit Incidents			
4th Quarter 2021 12-Month Rolling			
Cause of Line Hit	Number of Incidents	Invoice Amount (\$)	Recovery Amount (\$)
Dig In - Other	11	\$14,580	\$0
Excavated in Tolerance	19	\$21,524	\$0
Excavation Inconsistent with Ticket Scope	1	\$1,141	\$0
Excavation Prior to Lawful Start Date	2	\$0	\$0
Expired Ticket	1	\$2,588	\$0
Hand Digging	0	\$0	\$0
Marked Improperly	29	\$107,872	\$4,821
No Ticket	24	\$33,581	\$10,817
Total	87	\$181,286	\$15,638

Penn Power – Third Party Line Hit Incidents			
4th Quarter 2021 12-Month Rolling			
Cause of Line Hit	Number of Incidents	Invoice Amount (\$)	Recovery Amount (\$)
Dig In - Other	2	\$0	\$0
Excavated in Tolerance	11	\$4,917	\$154
Excavation Inconsistent with Ticket Scope	3	\$2,485	\$0
Excavation Prior to Lawful Start Date	1	\$0	\$0
Expired Ticket	2	\$0	\$0
Hand Digging	0	\$0	\$0
Marked Improperly	3	\$14,220	\$0
No Ticket	5	\$483	\$299
Total	27	\$22,105	\$453

West Penn – Third Party Line Hit Incidents			
4th Quarter 2021 12-Month Rolling			
Cause of Line Hit	Number of Incidents	Invoice Amount (\$)	Recovery Amount (\$)
Dig In - Other	13	\$17,457	\$0
Excavated in Tolerance	13	\$18,227	\$500
Excavation Inconsistent with Ticket Scope	4	\$2,862	\$0
Excavation Prior to Lawful Start Date	1	\$263	\$0
Expired Ticket	4	\$10,285	\$396
Hand Digging	2	\$0	\$0
Marked Improperly	23	\$105,407	\$5,533
No Ticket	28	\$58,267	\$4,777
Total	88	\$212,768	\$11,206

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 2021 Reliability Report – :
Metropolitan Edison Company, :
Pennsylvania Electric Company : **Docket No. M-2016-2522508**
Pennsylvania Power Company and West :
Penn Power Company – Public Version :

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).

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