FirstEnergy

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

Darsh Singh, Esq.
(610) 212-8331
(330) 315-9263 (Fax)

April 28, 2023

VIA E-FILING

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

Re: Joint 2022 Annual Reliability Report – Metropolitan Edison Company, Pennsylvania Electric Company, Pennsylvania Power Company, and West Penn Power Company; Docket No. M-2016-2522508

Dear Secretary Chiavetta,

Pursuant to 52 Pa. Code § 57.195(a) and (b), enclosed for filing is the Joint 2022 Annual Reliability Report ("Joint Report") of Metropolitan Edison Company, Pennsylvania Electric Company, Pennsylvania Power Company, and West Penn Power Company (collectively, the "Companies").

Please contact me if you have any questions.

Sincerely,

Darsh Singh

DS/dml

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)
Derek Ruhl - PaPUC Bureau of Technical Utility Services (via electronic mail)
Harry Bidelspach – PaPUC Bureau of Technical Utility Services (via electronic mail)

Met-Ed A FirstEnergy Company | Penelec A FirstEnergy Company | PennPower A FirstEnergy Company | WestPenn Power A FirstEnergy Company

Joint 2022 Annual Reliability Report

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

Pursuant to 52 Pa. Code § 57.195(a) and (b)

Joint 2022 Annual Reliability Report
Metropolitan Edison Company, Pennsylvania Electric Company, Pennsylvania Power Company, and West Penn Power Company
Pursuant to 52 Pa. Code Chapter § 57.195(a) and (b)

The following Joint 2022 Report ("Report") is submitted to the Pennsylvania Public Utility Commission ("PaPUC" or "Commission") on behalf of Metropolitan Edison Company ("Met-Ed"), Pennsylvania Electric Company ("Penelec"), Pennsylvania Power Company ("Penn Power"), and West Penn Power Company ("West Penn") (collectively, the "Companies").

Section 57.195(b)(1) *An overall current assessment of the state of the system reliability in the EDC's service territory including a discussion of the EDC's current programs and procedures for providing reliable electric service.*

The Companies serve more than two million Pennsylvania customers and their service territory covers more than 20,000 square miles. In 2022, the Companies were able to maintain a focus on safe and reliable electric service while continuing to protect their employees and customers from exposure to COVID-19. A large portion of non-physical workers were able to work remotely using technology to perform their responsibilities safely. For those employees not able to work remotely, additional hygiene and social distancing measures were taken when COVID-19 cases would increase. This included items such as smaller reporting groups, remote reporting locations, additional vehicles, hand sanitizing or hand washing stations, extra personal protective equipment (i.e. masks and gloves), and more frequent surface cleaning. From the physical field employees up to and including top management, the Companies are committed to operating their distribution systems in a manner that results in safe, reasonable, and cost-effective reliable service for their customers.

Methods to improve the efficiency, adequacy and reliability of the distribution system are a continual focus and every employee has an investment in each of the Company's respective reliability metrics. The Companies utilize core programs to support cost-effective and reliable service. These programs include, but are not limited to:

- Inspection and Maintenance ("I&M")

- The Distribution Inspection & Maintenance Practices[1] are designed to assist in determining the need for, and prioritization of, the repair or replacement of distribution system components and facilities.
- Since 2021 the Companies have been using Resistograph technology. Poles showing incipient decay or poles that are thirty-five years old or older will be inspected by the use of a Resistograph. The Resistograph is a sophisticated electronically controlled drill that provides increased accuracy, when compared to manual drilling, in measuring the relative density of wood in timber structures. Driven by a drill motor, a long, thin needle is inserted into the wood pole in order to assess its density, structural integrity, and shell thickness.

- Vegetation Management
  - Routine cycle tree trimming 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 right-of-way priority trees.[2] The Companies are limited in their ability to legally address all forms of off-right-of-way ("ROW") tree management; however, priority off-ROW trees are identified when significantly encroaching the corridor and removed when customer consent is obtained or easement rights permit.
  - Portions of a circuit that experience high customer interruption minutes due to vegetation-caused outages may be targeted to include the removal of certain healthy limbs which overhang primary conductors based on tree species and condition.
  - In response to damage caused by the Emerald Ash Borer, a program to proactively remove Ash Trees off right-of-way was implemented.
  - Post-storm circuit patrols target the areas with high tree-related outages. Circuit patrols identify trees damaged in a storm that may eventually lead to a future outage. Once identified, the tree is removed. In addition, damaged equipment identified as part of the circuit patrol is repaired or replaced.
- Customers Experiencing Multiple Interruptions ("CEMI")

[1] Pursuant to 52 Pa. Code § 57.198(a), every two years an electric distribution company shall file with the Commission 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).

[2] Trees located off the right-of-way that are either dead, diseased, declining, structurally compromised, severely leaning, or significantly encroaching onto the right-of-way.

  - The CEMI program is aimed to reduce frequent or repeated outages for affected clusters of customers or frequently operated devices.

- Load Forecasting and Distribution Planning
  - The load forecasting application is used to estimate future substation and circuit loading based upon historical load data and the planning criteria guidelines are then used to provide a consistent approach for planning the safe, reliable, orderly, and economic expansion of the distribution system.
- Circuit Protection
  - Circuit protection practices are aimed at achieving safety and security for the public and employees, maximizing service reliability to customers, minimizing damage to distribution equipment, and establishing a consistent process and set of application standards for distribution circuit protection.
- Long-Term Infrastructure Improvement Plans ("LTIIP")
  - The Companies first began to execute their respective LTIIP programs in 2016. These plans include expenditures and programs designed to adequately maintain and improve the efficiency, safety, adequacy and reliability of the distribution system. In January 2020, the Commission approved the Companies' respective second LTIIP ("LTIIP II"). LTIIP II, which spans the five-year period of 2020 through 2024, focuses on two areas: asset health and outage exposure. Asset health focuses on maintaining the system in a state of good repair while outage exposure focuses on minimizing the impact of customer outages. LTIIP II includes initiatives and expenditures within these two focus areas that are designed to maximize sustained reliability over the long-term.

In addition to the reliability programs above, the Companies also utilize various strategies to efficiently respond to customer and equipment outages. These include, but are not limited to:

- Minimizing Outage Impact
  - The Companies incorporate design philosophies that support grid operation resulting in maximized reliability. These philosophies include instantaneous breaker tripping on select circuits, circuit sectionalizing devices, and remote device operation (such as supervisory control and data acquisition) to minimize the impact of an outage when possible.

- Storm Exercises
    - Each Company performs an annual storm exercise. A well-designed exercise provides a low-risk environment to test and validate capabilities, familiarize personnel with plans, procedures, roles, and responsibilities, and foster meaningful interaction and communication across internal and external organizations.
- Summer Readiness
    - Summer is the time when most electric utilities experience the highest system loads and most damaging storms. In order to prepare for this period of the year, the Companies perform summer readiness activities such as capacitor inspections, substation inspections, transmission system reliability and capability review, and post-storm reviews to identify and disseminate lessons learned after significant events.
- Smart Meters
    - The Companies have completed mass deployment of smart meters to customers across Pennsylvania. Smart meter installation is a step toward a more modernized electric system that will enable automated meter readings. Smart meters also assist during outage restoration periods, especially when there are a significant number of single customer outages, by allowing the Companies to ping the meter to determine if a customer's service has been restored.
- Incident Command System ("ICS")
    - The Companies are beginning to utilize a more formalized ICS structure, which is designed to enable effective and efficient incident management by integrating a combination of facilities, equipment, personnel, procedures, and communications operating within a common organization. By expanding the use of ICS, the Companies' incident response ability is improved, and reliability is enhanced by utilizing a common system for incident response personnel (both intrastate and interstate).

To support best industry practices, the Companies participate in various external organizations such as the Electric Power Research Institute, the Institute of Electrical and Electronics Engineers, and the Energy Association of Pennsylvania, which focus on topics like reliability, power quality, regulatory issues, distribution planning, vegetation management, risk mitigation, distributed energy resources and more. Lastly, to ensure continuous improvement, the Companies have a team

comprised of reliability engineers to perform an internal review of reliability projects, expenditures, and performance, and to develop an overarching strategy for long-term reliability maintenance and improvement.

In 2022, the Companies had varying performance in regard to the twelve-month standards for System Average Interruption Duration Index ("SAIDI"), System Average Interruption Frequency Index ("SAIFI"), and Customer Average Interruption Duration Index ("CAIDI"). The primary drivers impacting reliability performance were: 1) weather (primarily the impact of minor storms); 2) tree-related outages, specifically off right-of-way trees; [3] occurring during inclement weather; and 3) line and equipment failures. The Companies are using the strategies and tools, as laid out above, to address these outage causes and continue to make improvements to reliability performance.

[3] The Companies' options under the law are strictly limited when it comes to all forms of off right-of-way tree management, with the sole solution it is legally permitted to undertake being the identification of priority off right-of-way trees that are dead, dying, diseased, leaning, and significantly encroaching the corridor.

Reliability Results

The table below, taken from the 4th Quarter 2022 Joint Reliability Report, shows that three of twelve reliability indices in 2022 were at or better than the Commission's twelve-month standards with one of the indices being better than benchmark.

2022 (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	1.32	1.26	1.52	1.83	1.12	1.34	.99	1.05	1.26	1.32
CAIDI	117	140	160	117	141	199	101	121	134	170	204	276
SAIDI	135	194	211	148	213	364	113	162	133	179	257	364
MAIFI[4]			0.670			0.547			0.013			
Customers Served[5]	575,899			579,537			167,618			725,417		
Number of Sustained Interruptions	14,207			19,542			3,648			16,538		
Customers Affected	760,672			1,062,923			166,749			957,562		
Customer Minutes	121,767,029			211,092,054			22,283,199			264,310,751		
Number of Customer Momentary Interruptions	207,599			395,620			22,101					

[4] MAIFI values are not available for West Penn.

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

Section 57.195(b)(2) *A description of each major event that occurred during the year being reported on, including the time and duration of the event, the number of customers affected, the cause of the event and any modified procedures adopted to avoid or minimize the impact of similar events in the future.*[6]

Major Events

FirstEnergy Company	Customers Affected	Time and Duration of the Event		Cause of the Event	Commission Approval Status
Penn Power	24,536	Duration	68 hours, 50 minutes	Thunderstorms and High Winds	Approved June 29, 2022
		Start Date/Time	May 21, 2022 1940		
		End Date/Time	May 24, 2022 1630		
Met-Ed	65,662	Duration	114 hours 16 minutes	Winter Storm Elliott	Approved January 26, 2023
		Start Date/Time	December 23, 2022 444		
		End Date/Time	December 27, 2022 2300		

[6] For purposes of this Joint Report, all reliability figures are 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(b)(3) A table showing the actual values of each of the reliability indices (SAIFI, CAIDI, SAIDI, and if available, MAIFI) for the EDC's service territory for each of the preceding 3 calendar years. The report shall include the data used in calculating the indices, namely the average number of customers served, the number of sustained customer minutes interruptions, the number of customers affected and the minutes of interruption. If MAIFI values are provided, the number of customer momentary interruptions shall also be reported.

Reliability Indices

Historic 12-Month Rolling Reliability Indices				
	Index	**2020**	**2021**	**2022**
Met-Ed	SAIFI	1.27	1.35	1.32
	CAIDI	150	173	160.08
	SAIDI	190	233	211.44
	MAIFI	0.63	0.67	.36
	Customer Minutes	108,430,636	133,405,906	121,767,029
	Customers Affected	724,138	772,644	760,672
	Minutes of Interruption	3,869,429	4,541,905	207,599
	Customers Served[7]	569,922	573,243	575,899
Penelec	SAIFI	1.58	1.84	1.83
	CAIDI	136	151	198.60
	SAIDI	214	277	364.24
	MAIFI	0.55	0.66	.683
	Customer Minutes	124,129,511	160,524,900	211,092,054
	Customers Affected	914,716	1,065,004	1,062,923
	Minutes of Interruption	4,054,877	5,118,308	395,620
	Customers Served[7]	579,765	580,180	579,537
Penn Power	SAIFI	0.97	1.00	.99
	CAIDI	185	129	133.63
	SAIDI	179	129	132.94
	MAIFI	0.01	0.63	.132
	Customer Minutes	29,576,002	21,565,551	22,283,199
	Customers Affected	159,907	166,681	166,749
	Minutes of Interruption	1,456,058	1,011,334	22,101
	Customers Served[7]	165,229	166,590	167,618

[7] Represents the average number of customers served during the reporting period.

Historic 12-Month Rolling Reliability Indices				
	Index	**2020**	**2021**	**2022**
West Penn	SAIFI	1.12	1.26	1.32
	CAIDI	216	192	276.02
	SAIDI	241	242	364.36
	Customer Minutes	173,878,127	174,483,152	264,310,751
	Customers Affected	806,924	910,590	957,562
	Minutes of Interruption	5,912,584	4,909,228	264,310,751
	Customers Served	720,861	722,128	725,417

See tables below for the three-year standard results:

Three-Year Rolling Year-End 2022	**Met-Ed**		**Penelec**	
	Three-Year Standard	Three-Year Actual	Three-Year Standard	Three-Year Actual
SAIFI	1.27	1.31	1.39	1.75
CAIDI	129	161	129	162
SAIDI	163	211	179	285

Three-Year Rolling Year-End 2022	**Penn Power**		**West Penn**	
	Three-Year Standard	Three-Year Actual	Three-Year Standard	Three-Year Actual
SAIFI	1.23	0.99	1.16	1.23
CAIDI	111	149	187	228
SAIDI	136	147	217	282

Section 57.195(b)(4) A breakdown and analysis of outage causes during the year being reported on, including the number and percentage of service outages, the number of customers interrupted, the 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 – Met-Ed

Outage by Cause				
2022 12-Month Rolling	**Met-Ed**			
Cause	**Customer Minutes**	**Number of Sustained Interruptions**	**Customers Affected**	**% Based on Customer Minutes**
Trees off ROW - tree	52,730,526	3,278	192,449	43.30%
Equipment failure	21,346,183	2,938	182,929	17.53%
Unknown	8,324,829	1,522	84,654	6.84%
Vehicle	8,158,908	440	48,756	6.70%
Trees off ROW - limb	7,231,398	866	37,598	5.94%
Forced outage	5,739,833	610	87,327	4.71%
Line failure	4,413,638	768	19,932	3.62%
Wind	3,468,134	211	11,499	2.85%
Animal	2,874,922	1,770	37,592	2.36%
Human error - company	1,558,105	66	19,494	1.28%
Trees on ROW	1,390,532	161	5,833	1.14%
Bird	1,098,905	579	12,358	0.90%
Lightning	1,037,681	154	6,723	0.85%
Trees - sec/service	888,029	553	2,052	0.73%
Human error - non-company	382,419	53	3,157	0.31%
Overload	379,213	75	2,870	0.31%
Object contact with line	324,399	52	2,934	0.27%
Ice	174,646	27	1,010	0.14%
Customer equipment	93,774	27	156	0.08%
Previous lightning	43,223	6	209	0.04%
Other utility - non-electric	34,794	3	902	0.03%
Other electric utility	32,234	12	74	0.03%
UG dig-up	28,208	26	129	0.02%
Fire	6,106	4	20	0.01%
Vandalism	5,487	5	8	0.00%
Contamination	903	1	7	0.00%
Switching error	0	0	0	0.00%
Call Error	0	0	0	0.00%
Total	**121,767,029**	**14,207**	**760,672**	**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, 2022, 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 is limited in its ability to legally address all forms of 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. 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 I&M programs[8] 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 equipment at the location had previously been damaged warranting consideration of remedial actions. Remedial actions could include modifying attachment height for communications, installing a taller pole, relocating the pole, or installing sectionalizing equipment to minimize customer impact.

Outages by Cause – Penelec

[8] 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).

Outage by Cause				
2022 12-Month Rolling	Penelec			
Cause	Customer Minutes	Number of Sustained Interruptions	Customers Affected	% Based on Customer Minutes
Trees off ROW - tree	73,349,925	3,434	252,421	34.75%
Ice	38,396,177	487	42,466	18.19%
Equipment failure	35,850,713	3,825	288,056	16.98%
Line failure	12,598,530	2,066	88,089	5.97%
Unknown	10,502,966	2,480	109,492	4.98%
Lightning	8,644,576	640	39,131	4.10%
Forced outage	8,309,240	1,419	90,656	3.94%
Trees off ROW - limb	6,368,915	559	33,801	3.02%
Vehicle	6,305,922	503	38,046	2.99%
Animal	3,182,052	1,928	32,391	1.51%
Wind	1,576,451	145	6,932	0.75%
Object contact with line	1,425,619	51	5,731	0.68%
Trees - sec/service	1,066,822	926	2,654	0.51%
Trees on ROW	770,275	96	2,583	0.36%
Bird	763,347	565	12,797	0.36%
Other electric utility	514,288	87	1,911	0.24%
Human error - non-company	459,348	86	4,235	0.22%
Overload	416,975	36	4,900	0.20%
UG dig-up	160,910	64	669	0.08%
Human error - company	155,934	51	4,064	0.07%
Switching Error	142,459	6	751	0.07%
Other utility - non-electric	47,123	2	382	0.02%
Contamination	34,485	36	379	0.02%
Customer equipment	21,444	20	276	0.01%
Fire	12,213	4	43	0.01%
Vandalism	9,137	16	29	0.00%
Previous lightning	6,208	10	38	0.00%
Call error	0	0	0	0.00%
Total	**211,092,054**	**19,542**	**1,062,923**	**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, 2022, 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 is limited in its ability to legally address 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. 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				
2022 12-Month Rolling	**Penn Power**			
Cause	**Customer Minutes**	**Number of Sustained Interruptions**	**Customers Affected**	**% Based on Customer Minutes**
Trees off ROW - tree	7,932,163	880	50,322	35.60%
Equipment failure	3,732,950	409	25,808	16.75%
Line failure	2,931,666	430	29,140	13.16%
Animal	2,038,413	525	16,518	9.15%
Vehicle	1,919,116	129	9,898	8.61%
Trees off ROW - limb	1,190,577	223	6,836	5.34%
Lightning	726,960	228	5,879	3.26%
Unknown	612,895	145	6,680	2.75%
Forced outage	449,761	69	7,649	2.02%
Bird	431,542	373	5,296	1.94%
Trees - sec/service	115,456	150	342	0.52%
Overload	78,246	19	986	0.35%
Human error - non-company	47,967	19	295	0.22%
Human error - company	29,810	4	666	0.13%
UG dig-up	14,693	13	133	0.07%
Customer equipment	8,472	8	137	0.04%
Ice	7,849	6	27	0.04%
Other electric utility	7,038	1	69	0.03%
Previous lightning	2,518	6	38	0.01%
Trees on ROW	1,558	1	2	0.01%
Object contact with line	1,491	4	9	0.01%
Fire	1,038	1	3	0.00%
Other utility - non-electric	720	1	12	0.00%
Vandalism	215	3	3	0.00%
Wind	85	1	1	0.00%
Contamination	0	0	0	0.00%
Call Error	0	0	0	0.00%
Switching Error	0	0	0	0.00%
Total	**22,283,199**	**3,648**	**166,749**	**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, 2022 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 is limited in its ability to legally address 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. 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				
2022 12-Month Rolling	West Penn			
Cause	Customer Minutes	Number of Sustained Interruptions	Customers Affected	% Based on Customer Minutes
Trees off ROW - tree	129,605,868	4,676	318,536	49.04%
Equipment failure	23,002,010	2,481	134,859	8.70%
Unknown	22,712,293	1,863	125,938	8.59%
Line failure	19,585,794	1,897	88,218	7.41%
Ice	19,531,449	167	12,067	7.39%
Trees on ROW	11,332,106	558	27,151	4.29%
Wind	9,593,270	236	19,800	3.63%
Trees off ROW - limb	7,188,935	406	26,940	2.72%
Forced outage	6,408,623	775	88,097	2.42%
Vehicle	6,291,893	472	46,564	2.38%
Animal	3,236,085	1,642	38,254	1.22%
Trees - sec/service	1,014,336	513	1,536	0.38%
Human error - company	907,573	28	9,880	0.34%
Lightning	894,336	155	3,905	0.34%
Other electric utility	853,984	11	1,247	0.32%
Object contact with line	695,496	52	3,702	0.26%
Bird	317,096	433	3,274	0.12%
Previous Lightning	315,800	4	1,408	0.12%
Fire	232,637	27	1,165	0.09%
Human error - non-company	188,912	58	3,013	0.07%
UG dig-up	185,773	41	955	0.07%
Overload	129,987	12	750	0.05%
Vandalism	63,806	10	77	0.02%
Other utility - non-electric	8,670	4	38	0.00%
Contamination	6,449	2	17	0.00%
Customer equipment	6,190	14	33	0.00%
Switching error	1,380	1	138	0.00%
Call Error	0	0	0	0.00%
Total	**264,310,751**	**16,538**	**957,562**	**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, 2022, 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 is legally limited in its ability to address 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. 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.

Section 57.195(b)(5) A list of the major remedial efforts taken to date and planned for circuits that have been on the worst performing 5% of circuits list for a year or more.

Worst Performing Circuits – Remedial Actions

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

Section 57.195(b)(6) *A comparison of established transmission and distribution inspections and maintenance goals/objectives versus actual results achieved during the year being reported on. Explanations of any variances shall be included.*

T&D Inspection and Maintenance Programs

Inspection and Maintenance		Met-Ed		Penelec		Penn Power		West Penn	
2022		Planned	Completed	Planned	Completed	Planned	Completed	Planned	Completed
Forestry	Transmission (Miles)	258.80	258.80	441.62	441.62	61.75	61.75	308.61	308.61
	Distribution (Miles)	2,905	3,077	3,780	3,780	1,113	1,113	4,606	4,999.7
Transmission	Aerial Patrols	2	2	2	2	2	2	2	2
	Groundline	0	315	3,102	3,880	0	0	642	1,486
Substation	Substation Inspections Class A	418	418	782	782	148	148	938	938
	Substation Inspections Class B	418	418	782	782	148	148	938	938
	Substation Inspections Class C	1,672	1,672	3,128	3,128	592	592	3,752	3,752
	Transformers	137	137	397	397	11	11	343	343
	Breakers	71	71	346	346	11	11	343	343
	Relay Schemes	218	218	177	177	26	26	44	44
Distribution	Capacitors	4,823	4,823	8,681	8,681	963	963	1,316	1,316
	Poles	45,000	54,402	41,584	42,812	10,802	10,802	55,344	55,345
	Reclosers	1,355	1,355	2,588	2,586[9]	985	985	4,077	4,077
	Radio-Controlled Switches	1,450	1,474	2,629 [10]	2,629	Penn Power has no radio-controlled switches		West Penn has no radio-controlled switches	

General Note: Unless specified otherwise, all inspections are reported on a unit basis rather than on a location basis.

[9] Two recloser sites were removed from service.

[10] The year-end commitment for radio-controlled switch inspections was revised as a result of the removal of certain sites that did not need inspection.

Section 57.195(b)(7) A comparison of budgeted versus actual transmission and distribution operation and maintenance expenses for the year being reported on in total and detailed by the EDC's own functional account code of FERC account code as available. Explanations of any variances shall be included.

Budgeted vs. Actual T&D Operation & Maintenance Expenditures

Met-Ed T&D O&M - 2022 ($)					
Transmission					
Category		**2022 Actuals**	**2022 Budget**	**Variance %**	**Notes**
560	Operation Supervision and Engineering	0	0	N/A	
561	Load Dispatching	13,454	83,678	-84%	1
562	Station Expenses	113,311	4,273	2551.80%	2
563	Overhead Lines Expenses	54,965	43,581	26.12%	3
565	Transmission of Electricity by Others	11,845,968	9,654,000	23%	4
566	Miscellaneous Transmission Expenses	(60,949)	(54,546)	11.74%	5
567	Rents	0	0	N/A	
568	Maintenance Supervision and Engineering	1,341	(1)	268314%	6
569	Maintenance of Structures	2,278	0	100%	7
570	Maintenance of Station Equipment	432,690	0	100%	8
571	Maintenance of Overhead Lines	288,376	(71,426)	503.74%	9
572	Transmission-Maintenance of Underground Lines	0	0	N/A	
573	Maintenance of Miscellaneous Transmission Plant	0	0	N/A	
575	Market Administration, Monitoring & Compliance Services	0	0	N/A	
Transmission Total		**$12,691,434**	**$9,659,559**		
Distribution					
Category		**2022 Actuals**	**2022 Budget**	**Variance %**	**Notes**
580	Operation Supervision and Engineering	1,158,680	254,746	355%	10
581	Load Dispatching	152,488	137,578	11%	11
582	Station Expenses	1,126,975	677,399	66%	12
583	Overhead Line Expenses	662,566	346,235	91%	13
584	Underground Line Expenses	0	0	N/A	
586	Meter Expenses	672,785	679,676	-1%	
587	Customer Installations Expenses	0	0	N/A	
588	Miscellaneous Distribution Expenses	8,851,593	6,779,182	31%	14
589	Rents	567,494	497,655	14%	15
590	Maintenance Supervision and Engineering	769,519	267,195	188%	16
591	Maintenance of Structures	(3,581)	(17,643)	-80%	17
592	Maintenance of Station Equipment	5,642,575	5,998,844	-6%	
593	Maintenance of Overhead Lines	65,541,452	60,113,643	9%	
594	Maintenance of Underground Lines	2,667,072	3,020,043	-12%	18
595	Maintenance of Line Transformer	170,309	10,193	1571%	8
596	Maintenance of Street Lighting and Signal Systems	1,022,238	441,200	132%	8
597	Maintenance of Meters	1,744,286	2,349,712	-26%	19
598	Maintenance of Miscellaneous Distribution Plant	640,463	(4,811,977)	-113%	20
Distribution Total		**$91,386,913**	**$76,743,681**		
Met-Ed Total		**$104,078,347**	**$86,403,240**		

Variance Explanations (Variances 10% or greater)	
1	Under budget due to load studies associated with new business (labor, contractors, reimbursements) being less than planned.
2	Over budget due to maintenance at Hunterstown Substation being greater than planned.
3	Over budget due to rental/leasing fees for right-of-ways being greater than planned.
4	Over budget due to PJM Transmission Enhancement and Ancillary Services costs being greater than planned.
5	Over budget due to internal labor and benefits being higher than planned.
6	Over budget due to environmental permits and labor being greater than planned.
7	Over budget due to communication equipment for monitoring purposes being greater than planned.
8	Over budget due to internal labor costs being greater than planned.
9	Over budget due to contractor expense being greater than planned.
10	Over budget due to contractor costs, telecommunications, and internal labor being greater than planned.
11	Over budget due to the number of load studies being greater than planned.
12	Over budget due to station maintenance expense for Vegetation Management contractors being greater than planned.
13	Over budget due to higher Vegetation Management contractor spend and labor being greater than planned.
14	Over budget due to materials costs being greater than planned.
15	Over budget due to joint use rental expense being greater than planned.
16	Over budget due to internal labor and benefit costs being greater than planned.
17	Under budget due to internal labor costs being less than planned.
18	Under budget due to contractor costs being less than planned.
19	Under budget due to internal labor costs associated with meter work being less than planned.
20	Under budget due to contractor, labor, and material costs be less than planned.

Penelec T&D O&M - 2022 ($)					
Transmission					
	Category	**2022 Actuals**	**2022 Budget**	**Variance %**	**Notes**
560	Operation Supervision and Engineering	3,028	0	100%	1
561	Load Dispatching	(61,776)	232,782	-127%	2
562	Station Expenses	41,600	168,125	-75%	2
563	Overhead Lines Expenses	80,561	168,499	-52%	2
564	Transmission-Underground Line Expenses	1,279	0	100%	3
565	Transmission of Electricity by Others	52,584,948	33,165,600	59%	4
566	Miscellaneous Transmission Expenses	(885)	0	100%	
567	Rents	0	0	N/A	
568	Maintenance Supervision and Engineering	56,531	0	31406039%	3
569	Maintenance of Structures	0	0	N/A	
570	Maintenance of Station Equipment	297,007	0	100%	3
571	Maintenance of Overhead Lines	125,453	(78,498)	260%	3
572	Transmission-Maintenance of Underground Lines	(1)	0	100%	
573	Maintenance of Miscellaneous Transmission Plant	0	0	N/A	
575	Market Administration, Monitoring & Compliance Services	0	0	N/A	
Transmission Total		**$53,127,745**	**$33,656,509**		
Distribution					
	Category	**2022 Actuals**	**2022 Budget**	**Variance %**	**Notes**
580	Operation Supervision and Engineering	802,664	519,741	54%	3
581	Load Dispatching	313,285	256,142	22%	3
582	Station Expenses	590,709	0	100%	3
583	Overhead Line Expenses	283,131	91,827	208%	5
584	Underground Line Expenses	1,347,175	970,299	39%	6
586	Meter Expenses	1,112,120	975,377	14%	3
587	Customer Installations Expenses	0	0	N/A	
588	Miscellaneous Distribution Expenses	11,059,784	8,724,160	27%	7
589	Rents	3,214,586	2,337,375	38%	8
590	Maintenance Supervision and Engineering	872,065	293,647	197%	9
591	Maintenance of Structures	0	0	N/A	
592	Maintenance of Station Equipment	6,993,892	6,790,524	3%	
593	Maintenance of Overhead Lines	69,887,079	62,479,697	12%	10
594	Maintenance of Underground Lines	1,996,572	413,842	382%	11
595	Maintenance of Line Transformer	148,800	0	100%	12
596	Maintenance of Street Lighting and Signal Systems	1,704,595	1,417,969	20%	13
597	Maintenance of Meters	3,025,755	3,776,090	-20%	14
598	Maintenance of Miscellaneous Distribution Plant	446,490	(7,711,926)	106%	15
Distribution Total		**$103,798,701**	**$81,334,764**		
Penelec Total		**$156,926,446**	**$114,991,272**		

Variance Explanations (Variances 10% or greater)	
1	Current budgeting practices do not budget directly to FERC accounts. FirstEnergy budgets to different cost collectors, which settle to FERC accounts. Actual settlements to these FERC accounts are relatively immaterial amounts.
2	Under budget due to labor requirements being less than planned.
3	Over budget due to labor requirements being greater than planned.
4	Over budget due to higher Network Integration Transmission Services (NITS) charges which is a result of more customers shopping than anticipated.
5	Over budget due to internal labor and benefits being higher than planned.
6	Over budget due to transformer maintenance being greater than planned.
7	Over budget due to Material, Fleet, and labor requirements being greater than planned.
8	Over budget due to Outside Services/Contractors and Right of Way Easements being greater than planned.
9	Over budget due to Outside Services/Contractors being greater than planned.
10	Over budget due to contractors, transportation, and labor requirements being greater than planned.
11	Over budget due to transportation and labor requirements being greater than planned.
12	Over budget due to materials and labor requirements being greater than planned.
13	Over budget due to transportation requirements being greater than planned.
14	Under budget due to fleet costs charged to O&M and labor costs being less than planned.
15	Over budget due to Contractors and labor requirements being greater than planned.

Penn Power T&D O&M - 2022 ($)					
Transmission					
Category		**2022 Actuals**	**2022 Budget**	**Variance %**	**Notes**
560	Operation Supervision and Engineering	1,718	1,962	-12%	1
561	Load Dispatching	(2,108)	8,746	-124%	2
562	Station Expenses	1,365	(365)	474%	3
563	Overhead Lines Expenses	118	(635)	119%	4
565	Transmission of Electricity by Others	5,132,635	4,759,080	8%	
566	Miscellaneous Transmission Expenses	0	0	N/A	
567	Rents	0	0	N/A	
568	Maintenance Supervision and Engineering	15,865	16,854	-6%	
569	Maintenance of Structures	29,710	11,934	149%	5
570	Maintenance of Station Equipment	37,244	3,047	1122%	6
571	Maintenance of Overhead Lines	94,836	(38,516)	346%	7
572	Transmission-Maintenance of Underground Lines	304	0	100%	
573	Maintenance of Miscellaneous Transmission Plant	(2,422)	0	100%	8
575	Market Administration, Monitoring & Compliance Services	0	0	N/A	
Transmission Total		**$5,309,265**	**$4,762,107**		
Distribution					
Category		**2022 Actuals**	**2022 Budget**	**Variance %**	**Notes**
580	Operation Supervision and Engineering	139,656	0	100%	9
581	Load Dispatching	0	0	N/A	
582	Station Expenses	111,060	0	100%	6
583	Overhead Line Expenses	117,268	0	100%	10
584	Underground Line Expenses	1,966,764	603,791	226%	5
586	Meter Expenses	91,053	69,040	32%	11
587	Customer Installations Expenses	0	0	N/A	
588	Miscellaneous Distribution Expenses	1,570,336	481,268	226%	12
589	Rents	32,904	0	100%	5
590	Maintenance Supervision and Engineering	209,385	75,956	176%	5
591	Maintenance of Structures	0	0	N/A	
592	Maintenance of Station Equipment	1,350,889	1,324,038	2%	
593	Maintenance of Overhead Lines	22,506,316	17,520,819	28%	13
594	Maintenance of Underground Lines	384,995	68,457	462%	14
595	Maintenance of Line Transformer	24,952	0	100%	4
596	Maintenance of Street Lighting and Signal Systems	99,952	26,141	282%	15
597	Maintenance of Meters	642,431	620,642	4%	
598	Maintenance of Miscellaneous Distribution Plant	368,109	(1,128,000)	133%	16
Distribution Total		**$29,616,069**	**$19,662,150**		
Penn Power Total		**$34,925,334**	**$24,424,257**		

Variance Explanations (Variances 10% or greater)	
1	Under budget due to benefits and contractor costs being less than planned.
2	Under budget due to other expenses being less than planned.
3	Over budget due to telecommunication equipment and service expense being greater than planned.
4	Over budget due to internal labor being greater than planned.
5	Over budget due to internal labor and benefits being higher than planned.
6	Over budget due to internal labor and transportation expenses being greater than planned.
7	Over budget due to internal labor, benefits, and contractor expense being greater than planned.
8	Under budget due to material costs being less than planned.
9	Over budget due to benefits, employee expense, contractor, and material expense being greater than planned.
10	Over budget due to benefits and contractor expense being greater than planned.
11	Over budget due to internal labor and material expense being greater than planned.
12	Over budget due to internal labor, contractor, material, and transportation expense being greater than planned.
13	Over budget due to internal labor, contractor, material, lease, and transportation expense being greater than planned.
14	Over budget due to internal labor, employee expense, contractor, material, and transportation expense being greater than planned.
15	Over budget due to internal labor, material, and transportation expense being greater than planned.
16	Over budget due to contractor and other expense being greater than planned.

West Penn Power T&D O&M - 2022 ($)					
Transmission					
Category		**2022 Actuals**	**2022 Budget**	**Variance %**	**Notes**
560	Operation Supervision and Engineering	94,111	53,889	75%	1
561	Load Dispatching	857,744	1,034,944	-17%	2
562	Station Expenses	780,869	1,270,231	-39%	3
563	Overhead Lines Expenses	3,688,700	10,220	35992%	4
565	Transmission of Electricity by Others	74,162,008	57,143,173	30%	5
566	Miscellaneous Transmission Expenses	2,384,990	992,974	140%	6
567	Rents	901,737	957,820	-6%	
568	Maintenance Supervision and Engineering	937,120	816,332	15%	7
569	Maintenance of Structures	30,952	26,729	16%	8
570	Maintenance of Station Equipment	2,805,418	4,081,464	-31%	9
571	Maintenance of Overhead Lines	18,360,454	16,036,183	14%	10
572	Transmission-Maintenance of Underground Lines	1,880	0	100%	11
573	Maintenance of Miscellaneous Transmission Plant	527,003	334,989	57%	12
575	Market Administration, Monitoring & Compliance Services	3,087	0	100%	13
Transmission Total		**$105,536,073**	**$82,758,949**		
Distribution					
Category		**2022 Actuals**	**2022 Budget**	**Variance %**	**Notes**
580	Operation Supervision and Engineering	981,200	(161,254)	708%	14
581	Load Dispatching	277,633	2,129,899	-87%	15
582	Station Expenses	1,685,915	1,025,554	64%	16
583	Overhead Line Expenses	1,080,285	1,289,711	-16%	17
584	Underground Line Expenses	2,034,515	1,785,000	14%	18
586	Meter Expenses	1,158,892	1,182,753	-2%	
587	Customer Installations Expenses	0	0	N/A	
588	Miscellaneous Distribution Expenses	18,157,382	14,059,798	29%	19
589	Rents	0	0	100%	
590	Maintenance Supervision and Engineering	1,169,748	769,375	52%	7
591	Maintenance of Structures	0	0	N/A	
592	Maintenance of Station Equipment	8,345,030	8,344,270	0%	
593	Maintenance of Overhead Lines	74,031,069	64,270,619	15%	20
594	Maintenance of Underground Lines	1,422,659	1,219,112	17%	21
595	Maintenance of Line Transformer	290,192	0	100%	22
596	Maintenance of Street Lighting and Signal Systems	1,102,614	535,315	106%	19
597	Maintenance of Meters	1,661,464	2,149,270	-23%	23
598	Maintenance of Miscellaneous Distribution Plant	170,448	(7,998,198)	102%	24
Distribution Total		**$113,569,046**	**$90,601,224**		
West Penn Power Total		**$219,105,119**	**$173,360,174**		

Variance Explanations (Variances 10% or greater)	
1	Over budget due to internal labor being greater than planned.
2	Under budget due to internal labor, benefits, employee expenses, and material being less than planned.
3	Under budget due to contractors being less than planned.
4	Over budget due to internal labor, contractors, material, and lease costs being greater than planned.
5	Over budget due to PJM Ancillary Service Transmission Enhancement "Schedule 12" charges and Remand Transmission Enhancement charges being greater than planned.
6	Over budget due to contractors, materials, and leases being greater than planned.
7	Over budget due to internal labor and contractor costs being greater than planned.
8	Over budget due to Information Technology (IT) labor costs being greater than planned.
9	Under budget due to contractor, benefits, material, and transportation costs being lower than planned.
10	Over budget due to internal labor, employee expense, material, transportation, lease, and contractor costs for tree-trimming being greater than planned.
11	Current budgeting practices do not budget directly to FERC accounts. FirstEnergy budgets to different cost collectors, which settle to FERC accounts. Actual settlements to these FERC accounts are relatively immaterial amounts.
12	Over budget due to contractor and material costs being greater than planned.
13	Over budget due to PJM Ancillary Service Market Administration, Monitoring & Compliance "Schedule 9&10" charges being greater than planned.
14	Over budget due to internal labor, benefits, and contractor expenses being greater than planned.
15	Under budget due to internal labor, benefits, employee expense, and contractor costs being less than planned.
16	Over budget due to internal labor, employee expense, material, transportation, and lease costs being greater than planned.
17	Under budget due to internal labor and contractor costs being less than planned.
18	Over budget due to contractor and other expenses being greater than planned.
19	Over budget due to internal labor, contractor, material, and transportation costs being greater than planned.
20	Over budget due to internal labor, contractor, employee expense, and transportation costs being greater than planned.
21	Over budget due to internal labor and transportation costs being greater than planned.
22	Over budget due to internal labor and material costs being greater than planned.
23	Under budget due to internal labor and transportation costs being less than planned.
24	Over budget due to internal labor, contractor, and material costs being greater than planned.

Section 57.195(b)(8) *A comparison of budgeted versus actual transmission and distribution operation and maintenance capital expenses for the year being reported on in total and detailed by the EDC's own functional account code or FERC account code as available. Explanations of any variances 10% or greater shall be included.*

Budgeted vs. Actual T&D Capital Expenditures

Met-Ed T&D Capital – 2022 ($)					
Category	**2022 Actuals**	**2022 Budget**	**Annual Budget**	**Variance %**	**Notes**
Capacity	16,180,257	10,130,266	10,130,266	60%	1
Condition	6,655,239	13,201,403	13,201,403	-50%	2
Facilities	4,494,835	78,509	78,509	5625%	3
Forced	53,496,158	62,270,280	62,270,280	-14%	4
Meter Related	574,789	1,220,265	1,220,265	-53%	5
New Business	22,510,090	19,520,780	19,520,780	15%	6
Other	5,042,593	11,809,561	11,809,561	-57%	7
Reliability	39,280,459	40,566,772	40,566,772	-3%	
Street Light	698,835	741,648	741,648	-6%	
Tools & Equip	4,425,820	1,480,642	1,480,642	199%	8
Vegetation Mgt.	-3,935	16,936,082	16,936,082	-100%	9
Met-Ed Total	**$153,355,140**	**$177,956,208**	**$177,956,208**		

Penelec T&D Capital – 2022 ($)					
Category	**2022 Actuals**	**2022 Budget**	**Annual Budget**	**Variance %**	**Notes**
Capacity	1,294,995	0	0	100%	10
Condition	9,272,714	9,361,442	9,361,442	-1%	
Facilities	4,043,694	81,246	81,246	4877%	11
Forced	61,476,185	54,411,120	54,411,120	13%	12
Meter Related	1,297,916	871,605	871,605	49%	13
New Business	15,247,826	12,690,370	12,690,370	20%	6
Other	7,465,967	28,394,402	28,394,402	-74%	14
Reliability	54,090,321	44,486,093	44,486,093	22%	15
Street Light	2,420,135	3,212,819	3,212,819	-25%	16
Tools & Equip	5,089,922	2,304,300	2,304,300	121%	17
Vegetation Mgt.	-3,026	17,436,485	17,436,485	-100%	18
Penelec Total	**$161,696,649**	**$173,249,881**	**$173,249,881**		

Penn Power T&D Capital – 2022 ($)					
Category	**2022 Actuals**	**2022 Budget**	**Annual Budget**	**Variance %**	**Notes**
Capacity	273,275	2,161	2,161	12547%	19
Condition	1,353,930	651,221	651,221	108%	20
Facilities	1,814,556	24,835	24,835	7206%	21
Forced	9,820,772	10,609,555	10,609,555	-7%	
Meter Related	346,179	628,161	628,161	-45%	22
New Business	5,502,916	8,105,637	8,105,637	-32%	23
Other	2,082,411	3,784,979	3,784,979	-45%	22
Reliability	17,449,839	11,819,638	11,819,638	48%	21
Street Light	496,818	678,858	678,858	-27%	22
Tools & Equip	2,115,635	255,119	255,119	729%	24
Vegetation Mgt.	-1,464	2,890,784	2,890,784	-100%	9
Penn Power Total	**$41,254,867**	**$39,450,948**	**$39,450,948**		

West Penn Power T&D Capital – 2022 ($)					
Category	**2022 Actuals**	**2022 Budget**	**Annual Budget**	**Variance %**	**Notes**
Capacity	8,132,266	6,066,404	6,066,404	34%	25
Condition	26,728,275	16,547,775	16,547,775	62%	26
Facilities	7,225,567	98,453	98,453	7239%	27
Forced	58,962,607	39,781,136	39,781,136	48%	28
Meter Related	286,701	1,408,225	1,408,225	-80%	5
New Business	22,719,012	27,378,885	27,378,885	-17%	29
Other	-5,232,420	13,064,903	13,064,903	-140%	30
Reliability	72,477,942	63,035,232	63,035,232	15%	31
Street Light	2,375,124	2,352,817	2,352,817	1%	
Tools & Equip	5,827,161	3,140,666	3,140,666	86%	32
Vegetation Mgt.	-8,498	25,861,448	25,861,448	-100%	9
West Penn Power Total	**$199,493,735**	**$198,735,944**	**$198,735,944**		

Variance Explanations (Variances 10% or greater)	
1	Over budget due to Substation Projects (carryover from 2021 as well as emergent failures) being greater than planned.
2	Under budget due to overhead and underground repairs being less than planned.
3	Over budget due to emergent facilities projects (underground storage tank removal, concrete dock work) being greater than planned.
4	Under budget due to required pole programs, substation, and inspections being less than planned.
5	Under budget due to meter exchanges being less than planned.
6	Over budget due to new commercial and residential business requests being greater than planned.
7	Under budget due to smart meter expenses being less than planned.
8	Over budget due to costs associated with First Energy Forward initiatives being greater than planned.
9	Under budget due to vegetation management accounting change from capital to O&M.
10	Over budget due to DEP Main Plant 3 Phase Service, Penelec-West Penn Ralphton/Laughlintown Tie Upgrade, and Incentive Compensation awards being greater than planned.
11	Over budget due to timing differences in several construction projects.
12	Over budget due to higher capitalized storm expenditures and timing differences in several construction projects.
13	Over budget due to meter and smart meter exchanges being greater than planned.
14	Under budget due to Joint Use Third Party Attachments, PA Smart Meter Implementation, and emergent projects being less than planned.
15	Over budget due to timing differences in several LTIIP projects and OMS/GIS upgrade being greater than planned.
16	Under budget due to LED conversion & new LED project being less than planned.
17	Over budget due to FE Forward initiative to improve company processes and small tools purchases being greater than planned.
18	Under budget due to Vegetation Management Planned Distribution being less than planned.
19	Over budget due to capital related payroll overhead adjustment and materials being greater than planned.
20	Over budget due to labor and overhead expense being greater than planned.
21	Over budget due to contractor and construction overhead expense being greater than planned.
22	Under budget due to labor and overhead expense being less than planned.
23	Under budget due to commercial new business being less than planned.
24	Over budget due to labor, material, contractors, and overheads being greater than planned.
25	Over budget due to several construction projects materials and contractor expenses being greater than planned.
26	Over budget due to several projects contractor, labor, material, and overhead expense being greater than planned.
27	Over budget due to facility projects contractor and overhead expense being greater than planned.
28	Over budget due to contractor projects (IT Legacy Circuit Replacements, Enhanced Substation security, P1 Pole Replacement program), overheads, and storm expense being greater than planned.
29	Under budget due to commercial and residential new business being less than planned.
30	Under budget due to property accounting Close errors, lower PA Smart Meter Implementation, and Manual Bulk transmission Administrative and General expenses being less than planned.
31	Over budget due to lower contribution in aid of construction and labor, material, and contractor costs being greater than planned.
32	Over budget due to labor and contractor expenses being greater than planned.

Section 57.195(b)(9) *Quantified transmission and distribution inspection and maintenance goals/objectives for the current calendar year detailed by system area (that is, transmission, substation and distribution).*

T&D Inspection & Maintenance Programs – 2023 Goals / Objectives

T&D Inspection & Maintenance Programs - 2023				
Program/Project	**Met-Ed**	**Penelec**	**Penn Power**	**West Penn**
Forestry				
Transmission (Miles)	283	372	78	533
Distribution (Miles)	2,605	3,438	1,121	4,203
Transmission				
Aerial Patrols	2	2	2	2
Groundline (Poles)	2,246	2,398	0	1,591
Substation				
Substation Inspections Class A	418	780	148	936
Substation Inspections Class B	418	780	148	936
Substation Inspections Class C	1,672	3,120	592	3,744
Transformers	157	432	11	382
Breakers	63	366	7	387
Relay Schemes	138	276	22	159
Distribution				
Capacitors	4,864	8,646	318	1,310
Poles	49,000	41,590	9,687	53,746
Reclosers	1,526	2,607	1,073	4,128
Radio-Controlled Switches (2 / year)	1,566	2,628	Penn Power has no radio-controlled switches	West Penn has no radio-controlled switches

Section 57.195(b)(10) Budgeted transmission and distribution operation and maintenance expenses for the current year in total and detailed by the EDC's own functional account code or FERC account code as available.

2022 T&D O&M Budget[10]

Met-Ed T&D O&M - Annual 2023 ($)		
Transmission		
Category		**Annual Budget**
560	Operation Supervision & Engineering	0
561	Load Dispatching	18,228
562	Station	4,255
563	Overhead Line Expenses	43,581
565	Transmission of Electricity by Others	11,930,368
566	Miscellaneous Transmission Expenses	(49,026)
567	Rents	0
568	Maintenance Supervision and Engineering	0
569	Maintenance of Structures	0
570	Maintenance of Station Equipment	308,990
571	Maintenance of Overhead Lines	(30,323)
573	Maintenance of Miscellaneous Transmission Plant	0
575	Market Administration, Monitoring & Compliance Services	0
Transmission Total		**$12,226,074**
Distribution		
Category		**Annual Budget**
580	Operation Supervision & Engineering	1,342,390
581	Load Dispatching	307,177
582	Station Expenses	675,233
583	Overhead Line Expenses	594,649
584	Underground Line Expenses	0
586	Meter Expenses	635,231
588	Miscellaneous Distribution Expenses	11,113,201
589	Rents	497,655
590	Maintenance Supervision and Engineering	526,105
591	Maintenance of Structures	2,475
592	Maintenance of Station Equipment	5,423,142
593	Maintenance of Overhead Lines	56,321,346
594	Maintenance of Underground Lines	2,699,020
595	Maintenance of Line Transformers	10,569
596	Maintenance of Street Lighting and Signal Systems	433,434
597	Maintenance of Meters	1,950,075
598	Maintenance of Miscellaneous Distribution Plant	1,115,525
Distribution Total		**$83,647,228**
Met-Ed Total		**$95,873,302**

Penelec T&D O&M - Annual 2023 ($)		
Transmission		
Category		**Annual Budget**
560	Operation Supervision & Engineering	0
561	Load Dispatching	60,507
562	Station Expenses	(27,357)
563	Overhead Line Expenses	(26,983)
565	Transmission of Electricity by Others	49,404,011
566	Miscellaneous Transmission Expenses	0
567	Rents	0
568	Maintenance Supervision and Engineering	(1)
569	Maintenance of Structures	0
570	Maintenance of Station Equipment	0
571	Maintenance of Overhead Lines	(33,325)
573	Maintenance of Miscellaneous Transmission Plant	0
575	Market Administration, Monitoring & Compliance Services	0
Transmission Total		**$49,376,852**
Distribution		
Category		**Annual Budget**
580	Operation Supervision & Engineering	1,726,824
581	Load Dispatching	331,654
583	Overhead Line Expenses	377,810
584	Underground Line Expenses	1,215,000
586	Meter Expenses	961,647
588	Miscellaneous Distribution Expenses	13,441,323
589	Rents	2,485,642
590	Maintenance Supervision and Engineering	578,298
592	Maintenance of Station Equipment	7,330,556
593	Maintenance of Overhead Lines	53,237,238
594	Maintenance of Underground Lines	1,126,375
596	Maintenance of Street Lighting and Signal Systems	1,435,037
597	Maintenance of Meters	3,563,459
598	Maintenance of Miscellaneous Distribution Plant	(142,150)
Distribution Total		**$87,668,714**
Penelec Total		**$137,045,565**

Penn Power T&D O&M - Annual 2023 ($)		
Transmission		
Category		**Annual Budget**
560	Operation Supervision & Engineering	2,863
561	Load Dispatching	12,758
562	Station Expenses	0
563	Overhead Line Expenses	0
565	Transmission of Electricity by Others	5,006,315
566	Miscellaneous Transmission Expenses	0
568	Maintenance Supervision and Engineering	23,587
569	Maintenance of Structures	14,078
570	Maintenance of Station Equipment	3,047
571	Maintenance of Overhead Lines	-17,958
575	Market Administration, Monitoring & Compliance Services	0
Transmission Total		**$5,044,691**
Distribution		
Category		**Annual Budget**
580	Operation Supervision & Engineering	799,393
582	Station Expenses	60,000
583	Overhead Line Expenses	133,838
584	Underground Line Expenses	957,506
586	Meter Expenses	57,074
588	Miscellaneous Distribution Expenses	1,393,312
589	Rents	37,425
590	Maintenance Supervision and Engineering	149,963
592	Maintenance of Station Equipment	919,918
593	Maintenance of Overhead Lines	17,089,280
594	Maintenance of Underground Lines	287,650
596	Maintenance of Street Lighting and Signal Systems	49,995
597	Maintenance of Meters	563,288
598	Maintenance of Miscellaneous Distribution Plant	80,468
Distribution Total		**$22,579,111**
Penn Power Total		**$27,623,802**

West Penn Power T&D O&M - Annual 2023 ($)		
Transmission		
Category		**Annual Budget**
560	Operation Supervision & Engineering	158,192
561	Load Dispatching	1,116,432
562	Station Expenses	136,412
563	Overhead Line Expenses	81,000
565	Transmission of Electricity by Others	74,161,837
566	Miscellaneous Transmission Expenses	409,958
567	Rents	957,820
568	Maintenance Supervision and Engineering	790,538
569	Maintenance of Structures	12,584
570	Maintenance of Station Equipment	4,205,302
571	Maintenance of Overhead Lines	20,023,908
573	Maintenance of Miscellaneous Transmission Plant	373,340
575	Market Administration, Monitoring & Compliance Services	0
Transmission Total		**$102,427,323**
Distribution		
Category		**Annual Budget**
580	Operation Supervision & Engineering	1,519,145
581	Load Dispatching	660,155
582	Station Expenses	1,011,129
583	Overhead Line Expenses	1,736,783
584	Underground Line Expenses	1,840,661
586	Meter Expenses	982,204
588	Miscellaneous Distribution Expenses	15,811,039
590	Maintenance Supervision and Engineering	1,114,949
592	Maintenance of Station Equipment	9,093,098
593	Maintenance of Overhead Lines	50,033,494
594	Maintenance of Underground Lines	968,323
595	Maintenance of Line Transformers	0
596	Maintenance of Street Lighting and Signal Systems	576,874
597	Maintenance of Meters	2,267,471
598	Maintenance of Miscellaneous Distribution Plant	(319,022)
Distribution Total		**$87,296,304**
West Penn Power Total		**$189,723,627**

Section 57.195(b)(11) Budgeted transmission and distribution capital expenses for the current year in total and detailed by the EDC's own functional account code or FERC account code as available.

2023 T&D Capital Budget[11]

Met-Ed T&D Capital - Annual 2023 ($)	
Category	**Annual Budget**
Capacity	29,352,522
Condition	9,193,140
Facilities	9,900,249
Forced	54,319,046
Meter Related	1,712,865
New Business	19,775,682
Other	(20,011,088)
Reliability	35,896,141
Street Light	1,242,634
Tools & Equip	3,559,487
Vegetation Management	(0)
Met-Ed Total	**$144,940,678**

Penelec T&D Capital - Annual 2023 ($)	
Category	**Annual Budget**
Capacity	223
Condition	10,090,039
Facilities	3,792,967
Forced	59,638,275
Meter Related	718,851
New Business	15,595,654
Other	174,706
Reliability	48,946,613
Street Light	4,055,162
Tools & Equip	4,015,225
Vegetation Management	0
Penelec Total	**$147,027,716**

Penn Power T&D Capital - Annual 2023 ($)	
Category	**Annual Budget**
Capacity	156,911
Condition	1,175,619
Facilities	949,477
Forced	14,261,143
Meter Related	688,364
New Business	7,103,818
Other	1,863,323
Reliability	11,830,203
Street Light	659,144
Tools & Equip	1,087,606
Vegetation Management	20,206
Penn Power Total	**$39,795,816**

West Penn Power T&D Capital - Annual 2023 ($)	
Category	**Annual Budget**
Capacity	11,276,358
Condition	38,424,156
Facilities	19,799,540
Forced	57,720,238
Meter Related	1,811,368
New Business	26,787,097
Other	(7,617,981)
Reliability	68,106,546
Street Light	2,030,078
Tools & Equip	4,115,807
Vegetation Management	0
West Penn Power Total	**$222,453,207**

Section 57.195(b)(12) *Significant changes, if any, to the transmission and distribution maintenance programs previously submitted to the Commission.*

Changes to T&D Maintenance Programs

In 2022, the Companies made no significant revisions to their Inspection and Maintenance practices.

ATTACHMENT A

Worst Performing Circuits – Remedial Actions

Met-Ed				
Substation	**Circuit**	**District**	**Customers**	**Outages**
Barto	00706-1	Boyertown	2,974	203
Reliability		**Outage by Cause**		**Previously Ranked**
SAIDI Impact	3.16	Trees Off Row-Tree	76%	1Q 2022
SAIDI	611.28	Trees Off Row-Limb	10%	2Q 2022
SAIFI	1.79	Unknown	8%	3Q 2022
CAIDI	342	All Other	6%	4Q 2022
Customer Minutes	1,817,945			
Customers Affected	5,311			
Remedial Action Planned or Taken			**Status**	**Progress**
Replace mainline switch			Complete	Apr-22
Targeted forestry inspection - 70612 Recloser Zone			Complete	Apr-22
Targeted overhead circuit inspection			Complete	Sep-22
Substation	**Circuit**	**District**	**Customers**	**Outages**
North Lebanon	00712-2	Lebanon	2,583	57
Reliability		**Outage by Cause**		**Previously Ranked**
SAIDI Impact	2.65	Trees Off Row-Tree	74%	1Q 2022
SAIDI	590.69	Wind	13%	2Q 2022
SAIFI	2.29	Line Failure	4%	3Q 2022
CAIDI	258	All Other	9%	4Q 2022
Customer Minutes	1,525,743			
Customers Affected	6,226			
Remedial Action Planned or Taken			**Status**	**Progress**
Cycle Tree Trimming			Complete	Dec-21
Install Supervisory Control and Data Acquisition (SCADA) switch (2 devices)			To be completed 2023	50%
Substation	**Circuit**	**District**	**Customers**	**Outages**
No Bangor	00826-3	Easton	3,211	124
Reliability		**Outage by Cause**		**Previously Ranked**
SAIDI Impact	2.49	Trees Off Row-Tree	34%	1Q 2022
SAIDI	446.92	Vehicle	27%	2Q 2022
SAIFI	3.03	Equipment Failure	12%	3Q 2022
CAIDI	148	All Other	27%	4Q 2022
Customer Minutes	1,435,069			
Customers Affected	13,036			
Remedial Action Planned or Taken			**Status**	**Progress**
Mainline 34.5 kV forestry aerial patrol			Complete	Jul-21
Cycle tree trimming			Complete	Dec-22
Pole relocation project			To be completed 2023	50%

Met-Ed				
Substation	**Circuit**	**District**	**Customers**	**Outages**
Snydersville	00621-3	Stroudsburg	1,286	64
Reliability		**Outage by Cause**		**Previously Ranked**
SAIDI Impact	2.43	Trees Off Row-Tree	85%	1Q 2022
SAIDI	1,086.03	Equipment Failure	8%	2Q 2022
SAIFI	4.63	Vehicle	5%	3Q 2022
CAIDI	235	All Other	2%	4Q 2022
Customer Minutes	1,396,630			
Customers Affected	5,949			
Remedial Action Planned or Taken			**Status**	**Progress**
Replace priority poles (2 poles)			Complete	Mar-22
Cycle tree trimming			Complete	Oct-22
Replace 2022 priority poles (2 poles)			To be completed 2023	25%
Substation	**Circuit**	**District**	**Customers**	**Outages**
Huffs Church	00600-1	Boyertown	1,534	137
Reliability		**Outage by Cause**		**Previously Ranked**
SAIDI Impact	2.17	Trees Off Row-Tree	73%	1Q 2022
SAIDI	812.84	Line Failure	7%	2Q 2022
SAIFI	2.26	Trees Off Row-Limb	6%	3Q 2022
CAIDI	360	All Other	14%	4Q 2022
Customer Minutes	1,246,899			
Customers Affected	3,468			
Remedial Action Planned or Taken			**Status**	**Progress**
Targeted forestry inspection			Complete	Jan-22
Targeted mainline inspection - 60062 Recloser Zone			Complete	Feb-22
CEMI re-route project			To be completed 2023	50%
Targeted tree trimming (Maryann Drive)			To be completed 2023	0%
Substation	**Circuit**	**District**	**Customers**	**Outages**
North Cornwall	00610-2	Lebanon	2,366	64
Reliability		**Outage by Cause**		**Previously Ranked**
SAIDI Impact	2.05	Trees Off Row-Tree	85%	1Q 2022
SAIDI	497.88	Unknown	5%	2Q 2022
SAIFI	1.99	Trees Off Row-Limb	3%	3Q 2022
CAIDI	250	All Other	7%	4Q 2022
Customer Minutes	1,177,977			
Customers Affected	4,708			
Remedial Action Planned or Taken			**Status**	**Progress**
Mainline Circuit Rehab			Complete	Feb-22
Circuit rehab project			To be completed 2023	50%

Met-Ed				
Substation	**Circuit**	**District**	**Customers**	**Outages**
Lynnville	00737-1	Hamburg	1,079	103
Reliability		**Outage by Cause**		**Previously Ranked**
SAIDI Impact	1.73	Trees Off Row-Tree	61%	1Q 2022
SAIDI	924.50	Equipment Failure	13%	2Q 2022
SAIFI	2.52	Vehicle	7%	3Q 2022
CAIDI	366	All Other	18%	4Q 2022
Customer Minutes	997,532			
Customers Affected	2,724			
Remedial Action Planned or Taken			**Status**	**Progress**
Target Tree Trimming (Sousley Rd)			Complete	Aug-21
Install Supervisory Control and Data Acquisition (SCADA)			Complete	Mar-22
Targeted forestry inspection			Complete	Jan-22
Replace mainline backlog poles (2 poles)			Complete	Jul-22
Cycle Tree Trimming			Complete	Dec-22
Substation	**Circuit**	**District**	**Customers**	**Outages**
Birdsboro	00756-1	Reading	1,530	114
Reliability		**Outage by Cause**		**Previously Ranked**
SAIDI Impact	1.72	Trees Off Row-Tree	63%	1Q 2022
SAIDI	648.29	Equipment Failure	15%	2Q 2022
SAIFI	6.99	Vehicle	9%	3Q 2022
CAIDI	93	All Other	13%	4Q 2022
Customer Minutes	991,885			
Customers Affected	10,701			
Remedial Action Planned or Taken			**Status**	**Progress**
Targeted forestry inspection			Complete	Feb-22
Cycle tree trimming			Complete	May-22
Overhead circuit inspection			To be completed 2023	0%
Substation	**Circuit**	**District**	**Customers**	**Outages**
Angelica	00129-1	Reading	701	38
Reliability		**Outage by Cause**		**Previously Ranked**
SAIDI Impact	1.64	Trees Off Row-Tree	96%	1Q 2022
SAIDI	1,348.87	Trees Off Row-Limb	1%	2Q 2022
SAIFI	2.22	Forced Outage	1%	3Q 2022
CAIDI	607	All Other	2%	4Q 2022
Customer Minutes	945,560			
Customers Affected	1,559			
Remedial Action Planned or Taken			**Status**	**Progress**
Targeted forestry inspection			Complete	Aug-21
Replace mainline backlog pole			Complete	Jun-22
Cycle tree trimming			To be completed 2023	0%

Met-Ed				
Substation	**Circuit**	**District**	**Customers**	**Outages**
Bairs	00571-4	York	2,373	89
Reliability		**Outage by Cause**		**Previously Ranked**
SAIDI Impact	1.52	Trees Off Row-Tree	39%	1Q 2022
SAIDI	367.71	Animal	20%	2Q 2022
SAIFI	3.24	Equipment Failure	18%	3Q 2022
CAIDI	113	All Other	23%	4Q 2022
Customer Minutes	872,572			
Customers Affected	7,698			
Remedial Action Planned or Taken			**Status**	**Progress**
Cycle tree trimming			Complete	Dec-21
Engineering SCADA Analysis			Complete	Feb-22
Replace Recloser			Complete	Oct-22
Substation	**Circuit**	**District**	**Customers**	**Outages**
Mountain	00744-4	Dillsburg	1,866	57
Reliability		**Outage by Cause**		**Previously Ranked**
SAIDI Impact	1.50	Trees Off Row-Tree	79%	1Q 2022
SAIDI	463.87	Unknown	5%	2Q 2022
SAIFI	2.53	Trees Off Row-Limb	5%	3Q 2022
CAIDI	184	All Other	11%	4Q 2022
Customer Minutes	865,578			
Customers Affected	4,713			
Remedial Action Planned or Taken			**Status**	**Progress**
Cycle Tree Trimming			Complete	May-22
Targeted overhead circuit inspection			Complete	Aug-22
Circuit Rehabilitation Zone 2			To be Completed 2023	50%
Substation	**Circuit**	**District**	**Customers**	**Outages**
Shawnee	00860-3	Stroudsburg	3,228	50
Reliability		**Outage by Cause**		**Previously Ranked**
SAIDI Impact	1.48	Trees Off Row-Tree	54%	1Q 2022
SAIDI	264.78	Equipment Failure	24%	2Q 2022
SAIFI	1.81	Lightning	13%	3Q 2022
CAIDI	146	All Other	10%	4Q 2022
Customer Minutes	854,714			
Customers Affected	5,842			
Remedial Action Planned or Taken			**Status**	**Progress**
Mainline 34.5 kV forestry aerial patrol			Complete	Jul-21
Replace backlog poles (10 poles)			Complete	Dec-21
Overhead circuit inspection			Complete	Mar-22
Circuit Rehabilitation			Complete	Aug-22
Cycle tree trimming			Complete	Nov-22
Targeted mainline patrol			To be Completed 2023	0%

Met-Ed				
Substation	**Circuit**	**District**	**Customers**	**Outages**
North Lebanon	00715-2	Lebanon	1,637	44
Reliability		**Outage by Cause**		**Previously Ranked**
SAIDI Impact	1.46	Vehicle	64%	1Q 2022
SAIDI	514.19	Equipment Failure	20%	2Q 2022
SAIFI	3.34	Trees Off Row-Tree	7%	3Q 2022
CAIDI	154	All Other	10%	4Q 2022
Customer Minutes	841,724			
Customers Affected	5,470			
Remedial Action Planned or Taken			**Status**	**Progress**
Cycle tree trimming			Complete	Dec-21
Substation	**Circuit**	**District**	**Customers**	**Outages**
Ferndale	00871-3	Easton	489	54
Reliability		**Outage by Cause**		**Previously Ranked**
SAIDI Impact	1.31	Trees Off Row-Limb	61%	1Q 2022
SAIDI	1,545.70	Trees Off Row-Tree	27%	2Q 2022
SAIFI	3.33	Equipment Failure	6%	3Q 2022
CAIDI	465	All Other	6%	4Q 2022
Customer Minutes	755,848			
Customers Affected	2,558			
Remedial Action Planned or Taken			**Status**	**Progress**
Mainline 34.5 kV forestry aerial patrol			Complete	Aug-22
Repair/replace priority item from overhead inspection			Complete	Oct-22
Mid cycle forestry inspection			To be Completed 2023	0%
Substation	**Circuit**	**District**	**Customers**	**Outages**
Collins	00760-2	Lebanon	1,110	47
Reliability		**Outage by Cause**		**Previously Ranked**
SAIDI Impact	1.25	Trees Off Row-Tree	87%	1Q 2022
SAIDI	648.74	Vehicle	4%	2Q 2022
SAIFI	1.73	Equipment Failure	3%	3Q 2022
CAIDI	374	All Other	6%	4Q 2022
Customer Minutes	720,106			
Customers Affected	1,923			
Remedial Action Planned or Taken			**Status**	**Progress**
Cycle tree trimming			Complete	Jun-21
Additional Ash Tree Removal			Complete	Jul-21

Penelec
Penelec had no circuits that appeared on the Worst Performing Circuit list all four quarters of 2022.

Penn Power
Penn Power had no circuits that appeared on the Worst Performing Circuit list all four quarters of 2022.

West Penn Power				
Substation	**Circuit**	**District**	**Customers**	**Outages**
Dutch Fork	Claysville	Washington Pa	1,640	99
Reliability		**Outage by Cause**		**Previously Ranked**
SAIDI Impact	6.03	Trees Off Row-Tree	59%	Q1 2022
SAIDI	2,665.59	Unknown	20%	Q2 2022
SAIFI	3.86	Ice	11%	Q3 2022
CAIDI	690	All Other	10%	Q4 2022
Customer Minutes	4,371,569			
Customers Affected	6,335			
Remedial Action Planned or Taken		**Status**	**Progress**	
Repair damage caused by ice during a storm			Complete	Feb-22
Forced outage to repair damage during a storm			Complete	Apr-22
Restore unknown outage during a storm			Complete	Jul-22
Restore unknown outage			Complete	Dec-22
Overhead Circuit Inspection			To Be Completed 2023	0%
Substation	**Circuit**	**District**	**Customers**	**Outages**
Hickory	Hickory	Washington Pa	951	58
Reliability		**Outage by Cause**		**Previously Ranked**
SAIDI Impact	5.50	Unknown	42%	Q1 2022
SAIDI	4,189.98	Ice	37%	Q2 2022
SAIFI	2.28	Equipment Failure	9%	Q3 2022
CAIDI	1,835	All Other	12%	Q4 2022
Customer Minutes	3,984,674			
Customers Affected	2,172			
Remedial Action Planned or Taken		**Status**	**Progress**	
Restore unknown outage during a storm			Complete	Feb-22
Repair damage caused by a tree during a storm			Complete	May-22
Restore unknown outage			Complete	Aug-22
Restore unknown outage			Complete	Dec-22
Hickory	Hickory	Washington Pa	951	58
Smith	Francis Mine	Washington Pa	1,433	40
Reliability		**Outage by Cause**		**Previously Ranked**
SAIDI Impact	5.49	Trees Off Row-Tree	93%	Q1 2022
SAIDI	2,775.94	Trees Off Row-Limb	2%	Q2 2022
SAIFI	2.68	Unknown	2%	Q3 2022
CAIDI	1,034	All Other	3%	Q4 2022
Customer Minutes	3,977,923			
Customers Affected	3,846			
Remedial Action Planned or Taken		**Status**	**Progress**	
Repair damage caused by a tree during a storm			Complete	Feb-22
Overhead Circuit Inspection			Complete	Mar-22
Restore unknown outage			Complete	Jun-22
Repair damage caused by a tree during a storm			Complete	Jul-22
Repair damage caused by wind			Complete	Dec-22

West Penn Power				
Substation	**Circuit**	**District**	**Customers**	**Outages**
Dutch Fork	W Alexander	Washington Pa	1,175	79
Reliability		**Outage by Cause**		**Previously Ranked**
SAIDI Impact	5.26	Ice	51%	Q1 2022
SAIDI	3,246.27	Trees Off Row-Tree	35%	Q2 2022
SAIFI	2.73	Unknown	11%	Q3 2022
CAIDI	1,189	All Other	2%	Q4 2022
Customer Minutes	3,814,362			
Customers Affected	3,207			
Remedial Action Planned or Taken		**Status**	**Progress**	
Repair damage caused by a tree			Complete	Feb-22
Repair damage caused by a tree during a storm			Complete	Jun-22
Overhead Circuit Inspection			Complete	Jul-22
Repair damage caused by a tree during a storm			Complete	Jul-22
Restore outage caused by lightning			Complete	Nov-22
Substation	**Circuit**	**District**	**Customers**	**Outages**
Donegal	Bear Rocks	Pleasant Valley	1,279	56
Reliability		**Outage by Cause**		**Previously Ranked**
SAIDI Impact	3.62	Trees Off Row-Tree	92%	Q1 2022
SAIDI	2,051.81	Trees On Row	4%	Q2 2022
SAIFI	2.70	Unknown	2%	Q3 2022
CAIDI	760	All Other	3%	Q4 2022
Customer Minutes	2,624,271			
Customers Affected	3,451			
Remedial Action Planned or Taken		**Status**	**Progress**	
Repair damage caused by a tree during a storm			Complete	Feb-22
Repair damage caused by a tree			Complete	Apr-22
Zone 1 Infrared Inspection			Complete	Jun-22
Repair damage caused by a tree			Complete	Sep-22
Restore unknown outage			Complete	Oct-22

West Penn Power				
Substation	**Circuit**	**District**	**Customers**	**Outages**
Rutan	Bristoria	Jefferson	1,116	83
Reliability		**Outage by Cause**		**Previously Ranked**
SAIDI Impact	3.45	Trees Off Row-Tree	75%	Q1 2022
SAIDI	2,242.84	Line Failure	8%	Q2 2022
SAIFI	3.39	Unknown	6%	Q3 2022
CAIDI	662	All Other	11%	Q4 2022
Customer Minutes	2,503,005			
Customers Affected	3,781			
Remedial Action Planned or Taken			**Status**	**Progress**
Repair damage caused by a tree			Complete	Jan-22
Repair damage caused by a tree			Complete	Apr-22
Zone 1 Infrared Inspection			Complete	Jun-22
Repair damage caused by a tree			Complete	Jul-22
Repair line failure			Complete	Nov-22
Substation	**Circuit**	**District**	**Customers**	**Outages**
Hickory	Fort Cherry	Washington Pa	1,048	53
Reliability		**Outage by Cause**		**Previously Ranked**
SAIDI Impact	2.95	Trees Off Row-Tree	48%	Q1 2022
SAIDI	2,040.83	Unknown	37%	Q2 2022
SAIFI	3.85	Equipment Failure	10%	Q3 2022
CAIDI	531	All Other	6%	Q4 2022
Customer Minutes	2,138,795			
Customers Affected	4,030			
Remedial Action Planned or Taken			**Status**	**Progress**
Repair equipment failure			Complete	Feb-22
Repair damage caused by a tree			Complete	May-22
Restore unknown outage during a storm			Complete	Jul-22
Restore unknown outage			Complete	Dec-22
Overhead Circuit Inspection			To Be Completed 2023	0%

West Penn Power				
Substation	**Circuit**	**District**	**Customers**	**Outages**
Cecil	Bishop	Boyce	1,963	39
Reliability		**Outage by Cause**		**Previously Ranked**
SAIDI Impact	2.86	Trees On Row	52%	Q1 2022
SAIDI	1,056.38	Trees Off Row-Tree	26%	Q2 2022
SAIFI	3.17	Equipment Failure	12%	Q3 2022
CAIDI	333	All Other	10%	Q4 2022
Customer Minutes	2,073,682			
Customers Affected	6,228			
Remedial Action Planned or Taken			**Status**	**Progress**
Repair damage caused by a tree during a storm			Complete	Feb-22
Repair damage caused by a tree during a storm			Complete	May-22
Repair damage caused by a tree during a storm			Complete	Jul-22
Restore unknown outage			Complete	Nov-22
Substation	**Circuit**	**District**	**Customers**	**Outages**
Saltsburg	Bell Township	Arnold	753	37
Reliability		**Outage by Cause**		**Previously Ranked**
SAIDI Impact	2.19	Trees Off Row-Tree	89%	Q1 2022
SAIDI	2,110.53	Forced Outage	6%	Q2 2022
SAIFI	4.69	Unknown	3%	Q3 2022
CAIDI	450	All Other	2%	Q4 2022
Customer Minutes	1,589,231			
Customers Affected	3,530			
Remedial Action Planned or Taken			**Status**	**Progress**
Repair damage caused by a tree			Complete	Mar-22
Repair damage caused by a tree			Complete	May-22
Repair damage caused by a tree during a storm			Complete	Aug-22
Repair damage caused by a tree			Complete	Dec-22
Overhead Circuit Inspection			To Be Completed 2023	0%

West Penn Power				
Substation	**Circuit**	**District**	**Customers**	**Outages**
Franklin (Wpp)	Rogersville	Jefferson	830	61
Reliability		**Outage by Cause**		**Previously Ranked**
SAIDI Impact	1.56	Trees Off Row-Tree	60%	Q1 2022
SAIDI	1,360.05	Unknown	26%	Q2 2022
SAIFI	1.91	Line Failure	5%	Q3 2022
CAIDI	713	All Other	9%	Q4 2022
Customer Minutes	1,128,843			
Customers Affected	1,583			
Remedial Action Planned or Taken			**Status**	**Progress**
Repair damage caused by a tree during a storm			Complete	Feb-22
Repair damage caused by a tree during a storm			Complete	Jun-22
Repair line failure			Complete	Sep-22
Restore unknown outage			Complete	Dec-22
Overhead Circuit Inspection			To Be Completed 2023	0%
Substation	**Circuit**	**District**	**Customers**	**Outages**
Waterville	Waterville	State College	358	22
Reliability		**Outage by Cause**		**Previously Ranked**
SAIDI Impact	1.41	Other Electric Utility	73%	Q1 2022
SAIDI	2,847.76	Trees Off Row-Tree	20%	Q2 2022
SAIFI	5.61	Ug Dig-Up	4%	Q3 2022
CAIDI	508	All Other	2%	Q4 2022
Customer Minutes	1,019,499			
Customers Affected	2,008			
Remedial Action Planned or Taken			**Status**	**Progress**
Overhead Circuit Inspection			Complete	Mar-22
Restore outage caused by other electric utility during a storm			Complete	Mar-22
Restore outage caused by other electric utility during a storm			Complete	Jun-22
Repair damage caused by UG Dig-up			Complete	Aug-22
Restore outage caused by other electric utility			Complete	Oct-22

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Joint 2022 Annual Reliability Report –	**:**	
Metropolitan Edison Company,	**:**	
Pennsylvania Electric Company,	**:**	**Docket No. M-2016-2522508**
Pennsylvania Power Company, and	**:**	
West Penn Power Company	**:**	

CERTIFICATE OF SERVICE

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

Service by electronic mail, as follows:

NazAarah Sabree
Office of Small Business Advocate
Suite 1102, Commerce Building
300 North Second Street
Harrisburg, PA 17101
ra-sba@pa.gov
tereswagne@pa.gov

Richard Kanaskie, Director
Bureau of Investigation and Enforcement
Pennsylvania Public Utility Commission
400 North Street 2nd Floor West
Harrisburg, PA 17105-3265
rkanaskie@pa.gov

Patrick M. Cicero, Esquire
Office of Consumer Advocate
555 Walnut Street – 5th Floor
Harrisburg, PA 17101-1923
pcicero@paoca.org

Byron Farnsworth, Jr., Chief Operating Officer
Robert S. McCarthy, VP of Operations
Wellsboro Electric Company
33 Austin Street
Wellsboro, PA 16901
barneyf@ctenterprises.org
bobbym@ctenterprises.org

Amy E. Hirakis, Esquire
800 North 3rd Street, Suite 204
Harrisburg, PA 17102
ahirakis@nisource.com

Kimberly A. Klock, Esquire
PPL Services Corp.
2 North 9th Street
Allentown, PA 18101
kklock@pplweb.com

John Kelchner
Nathan Johnson, Director of Operations
Citizens' Electric Company of Lewisburg, PA
1775 Industrial Boulevard
Lewisburg, PA 17837
kelchnerj@citizenselectric.com
johnsonn@citizenselectric.com

Thomas J. Sniscak, Esquire
Whitney E. Snyder, Esquire
Hawke McKeon and Sniscak LLP
100 N. Tenth Street
Harrisburg, PA 17101
tjsniscak@hmslegal.com
wesnyder@hmslegal.com

Lindsay Baxter
Analyst
Duquesne Light Company
411 Seventh Avenue
Pittsburgh, PA 15219
lbaxter@duqlight.com

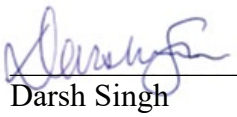
Eric Sorber
UGI Utilities, Inc.
One UGI Center
Wilkes-Barre, PA 18711
esorber@ugi.com

John L. Carley
Assistant General Counsel
Pike County Light & Power Company
4 Irving Place
New York, NY 10003
carleyj@coned.com

Richard G. Webster, Jr.
Director of Rates
Peco Energy Company
2301 Market Street, S15
Philadelphia, PA 19103
Dick.webster@peco-energy.com

Vincent A. Degiusto, Jr.
Sr. Manager
UGI
2525 N. 12th Street, Suite 360
PO Box 12677
Reading, PA 19612-2677
vdegiustojr@ugi.com

Dated: April 28, 2023



Darsh Singh
Attorney No. 330971
FirstEnergy Service Company
2800 Pottsville Pike
P.O. Box 16001
Reading, Pennsylvania 19612-6001
(610) 212-8331
singhd@firstenergycorp.com

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