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E-FILE

August 1, 2024

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

**Re: PPL Electric Utilities Corporation
Quarterly Reliability Report for the
Period Ended June 30, 2024
Docket No. M-2023-3039027**

Dear Ms. Chiavetta:

Enclosed for filing on behalf of PPL Electric Utilities Corporation ("PPL Electric") is the **NON-CONFIDENTIAL** version of PPL Electric's Quarterly Reliability Report for the Period Ended June 30, 2024. The report is being filed pursuant to 52 Pa. Code § 57.195(d).

Pursuant to 52 Pa. Code § 1.11, the enclosed document is to be deemed filed on August 1, 2024, which is the date it was filed electronically with the Commission's E-Filing System.

A proprietary and confidential version of this report has also been filed with the Commission on this date via overnight delivery.

If you have any questions regarding this document, please call me at (610) 774-5696.

Respectfully submitted,

A handwritten signature in blue ink that reads "Kimberly A. Klock". The signature is fluid and cursive, with a long, sweeping underline.

Kimberly A. Klock

Enclosures

cc via email: Patrick Cicero, Esquire
NazAarah Sabree

Mr. Daniel Searfoorce



PPL Electric Utilities Corporation
Quarterly Reliability Report
to the
Pennsylvania Public Utility Commission

July 2024

- 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.***

No major events occurred during the second quarter of 2024.

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.

The following table provides data for the 12 months ending June 30, 2024.

SAIFI	BM 0.98	1.14
	STD 1.18	1.14
CAIDI (Benchmark = 145; Rolling 12-month Std. = 174)	BM 145	319
	STD 174	319
SAIDI (Benchmark = 142; Rolling 12-month Std. = 205)	BM 142	364
	STD 205	364
MAIFI ¹		5.45
Average Number of Customers Served ²		1,361,074
Number of Sustained Customer Interruptions (Trouble Cases)		30,989
Number of Customers Affected		1,667,054
Customer Minutes of Interruptions (CMI)		532,202,862
Number of Customer Momentary Interruptions		7,962,853

¹ Beginning in Q1 2024, MAIFI results are obtained from meter data. The Q2 result is only data through Q2, not rolling 12 months. Additionally, meters are programmed not to send a power down until they have lost power for 35 seconds.

² PPL Electric calculates the annual indices using customers served at the end of period. This is consistent with the method used to calculate PPL Electric's benchmarks.

During the second quarter, there were no (0) PUC major events, five (5) PUC reportable events, and four (4) other storms that did not rise to the level of reportability.

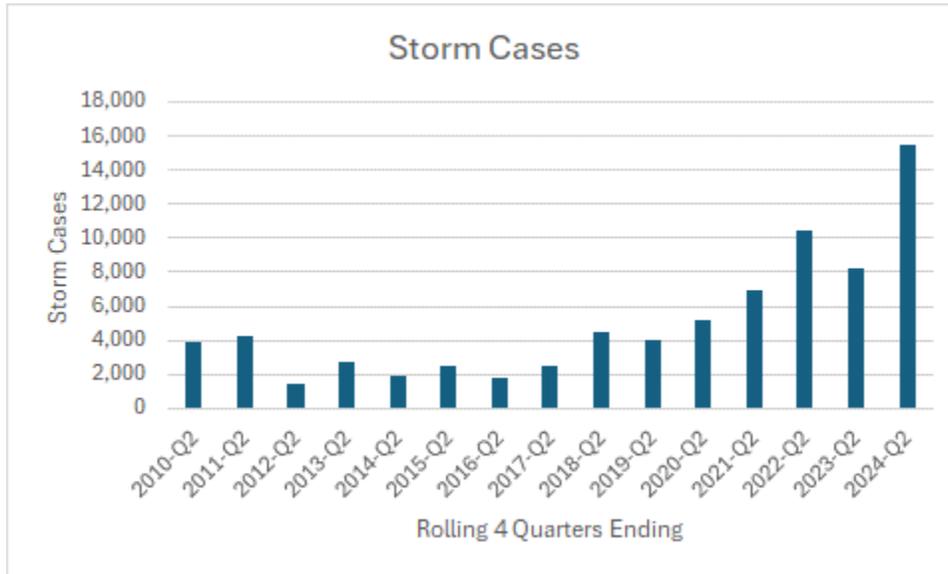
For the rolling four quarters ending on 6/30/2024, storm impacts remain highly elevated by historical standards. PPL Electric saw forty-two storms (PUC and non-PUC) during the last four quarters. In the first half of 2024 alone, PPL Electric has seen eight storms of 600 cases or higher, including four storms of over 1,000 cases. Three of the four quarters covered in this reporting period are in the top four highest storm-case quarters in data going back to 2002.

Quarter	Storm Cases (No Lights)
2024-Q1	5,866
2021-Q3	4,873
2024-Q2	4,818
2023-Q3	3,786
2022-Q4	2,727
2018-Q2	2,700
2022-Q1	2,571
2023-Q2	2,200
2020-Q2	2,193
2007-Q2	2,170
2019-Q1	1,416
2008-Q4	1,193
2010-Q2	1,178
2014-Q1	1,168
2008-Q2	1,164
2002-Q4	1,131
2010-Q1	1,130
2023-Q4	1,027
2006-Q4	1,007
2007-Q3	983
2002-Q3	952
2017-Q3	951
2022-Q2	935
2011-Q3	920
2008-Q1	919

20 Most Impactful Storm Quarters

While PPL Electric’s second-quarter SAIFI was within the PUC standard, other metrics were significantly behind, largely attributable to high storm impact.

Reviewing rolling four quarter periods ending in Q2, the period ending 2024 Q2 saw 258% more storm cases than the average of 2010-2023.



Because weather has a significant impact on volatility in reliability metrics, PPL Electric’s IEEE Metrics are shown below. The IEEE 1366 standard is a widely used methodology that allows for weather normalized performance evaluation that better reflects system performance during non-major storm events. The table below lists PPL Electric’s IEEE performance metrics compared to the 2022 performance quartiles for large utilities nationally, as issued by the IEEE annual reliability survey. This survey comprises some one hundred utilities serving 85 million customers across the country.

	IEEE CAIDI	IEEE SAIFI	IEEE SAIDI
2020	100	0.69	69
2021	124	0.68	85
2022	121	0.74	89
2023	142	0.64	91
Rolling 4Q ending 6/30/2024	146	0.66	97
IEEE First Quartile Ceiling	101	0.82	85
IEEE Second Quartile Ceiling	120	1.02	115

PPL Electric has been a top quartile IEEE SAIFI performer since 2014.

3) Rolling 12-month reliability index values (SAIFI, CAIDI, SAIDI, CMI, 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.

The following table provides PUC reliability values for the worst performing 5% of the circuits in the system for the 12 months ended at the current quarter. An explanation of how PPL Electric defines its worst performing circuits is included in Appendix A.

WPC Rank	Feeder ID	SAIDI	SAIFI	CAIDI	Customers	Cases of Trouble	Customer Minutes Interrupted (CMI)	Customer Interruptions (CI)
1	22803	697	2.03	343	2,481	20	1,729,261	5,036
2	46802	805	2.05	392	1,941	79	1,562,803	3,984
3	20601	545	3.64	150	1,488	48	811,715	5,414
4	24602	550	2.61	211	1,435	82	790,445	3,745
5	13901	437	3.71	118	1,453	22	636,263	5,390
6	43401	690	3.51	197	996	79	687,614	3,494
7	10601	479	2.37	202	1,694	89	811,945	4,013
8	46004	473	1.70	279	2,077	101	983,821	3,525
9	28604	414	1.95	212	1,840	59	762,225	3,588
10	49804	392	3.30	119	1,349	81	529,947	4,451
11	10904	473	1.94	244	1,746	134	826,628	3,389
12	23401	387	2.19	176	1,747	83	677,175	3,831
13	25501	359	2.35	153	1,715	91	617,147	4,023
14	20402	567	1.71	332	1,635	31	928,005	2,796
15	54101	325	3.09	105	1,705	85	555,239	5,264
16	28303	379	1.75	216	1,962	93	744,183	3,439
17	16101	391	2.07	189	1,578	92	618,192	3,269
18	45402	374	1.98	188	1,643	81	615,252	3,261
19	47002	284	4.32	66	2,029	77	576,502	8,756
20	65904	324	2.43	133	1,437	13	466,968	3,489
21	28102	575	2.14	268	1,096	66	630,287	2,350
22	61704	342	1.81	189	1,807	25	619,402	3,276
23	52102	366	2.40	153	1,199	56	439,892	2,875
24	16801	313	2.03	154	1,662	51	521,638	3,381

WPC Rank	Feeder ID	SAIDI	SAIFI	CAIDI	Customers	Cases of Trouble	Customer Minutes Interrupted (CMI)	Customer Interruptions (CI)
25	25801	343	1.62	212	1,845	91	633,830	2,984
26	67803	323	1.59	204	1,999	35	646,792	3,172
27	25402	319	1.75	182	1,820	76	582,331	3,194
28	44505	315	3.53	89	912	53	287,643	3,221
29	18001	796	2.89	275	701	65	558,472	2,027
30	45002	262	3.51	75	1,450	48	380,796	5,092
31	14008	615	2.54	242	801	56	492,874	2,032
32	24603	422	1.53	276	1,398	60	590,153	2,136
33	45602	316	1.13	280	2,458	59	778,144	2,771
34	53901	426	1.56	273	1,347	45	574,099	2,105
35	40602	270	1.39	195	2,458	75	665,682	3,407
36	12402	993	3.35	297	563	50	559,127	1,885
37	40601	352	2.80	126	873	32	307,990	2,444
38	46302	480	1.78	270	1,113	65	534,617	1,980
39	14403	260	1.38	188	2,589	84	673,482	3,575
40	27402	534	1.55	344	1,259	36	673,456	1,955
41	67702	507	2.58	196	763	37	387,271	1,972
42	41802	1,067	3.43	311	525	47	560,621	1,802
43	23101	341	1.38	247	1,722	68	587,364	2,380
44	27502	228	2.23	102	2,988	34	681,609	6,666
45	44701	304	2.22	137	1,180	55	359,424	2,620
46	13501	455	1.22	374	1,554	40	707,608	1,890
47	15704	418	1.50	279	1,298	67	543,069	1,946
48	28801	263	1.99	132	1,404	64	370,508	2,800
49	16402	376	1.56	241	1,279	89	480,970	1,996
50	16802	462	2.04	227	885	62	409,543	1,803
51	27102	521	1.96	265	897	62	467,701	1,762
52	26401	253	1.41	180	2,245	91	568,398	3,155
53	40101	275	1.15	240	2,170	53	597,414	2,489
54	28402	265	1.60	166	1,640	48	436,113	2,622
55	24502	421	1.57	268	1,114	60	469,609	1,750
56	59202	199	3.05	65	1,791	58	357,839	5,454
57	13905	204	3.50	58	1,118	44	228,505	3,910
58	41901	394	2.34	169	740	19	292,222	1,728
59	22601	340	1.48	230	1,246	37	424,086	1,842
60	61001	207	1.63	127	2,019	30	419,003	3,295
61	20401	243	1.83	133	1,314	55	320,276	2,403
62	15701	222	2.31	96	1,184	50	263,860	2,737
63	58402	260	1.19	218	1,771	73	461,920	2,116
64	63403	198	2.29	87	1,491	50	296,459	3,410

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

01 Circuit 22803 -- HAUTO 28-03

Performance Analysis

The HAUTO 28-03 circuit experienced three outages of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On August 18, 2023, a tree contacted an overhead switch causing a recloser to trip to lockout. This outage affected 1,682 customers for up to 229 minutes resulting in 378,747 CMI.

On September 23, 2023, during a period of strong wind, a tree contacted an overhead conductor causing a circuit breaker to trip to lockout. This outage affected 2,143 customers for up to 507 minutes resulting in 1,074,664 CMI.

On May 14, 2024, during a period of heavy rain, a tree contacted a pole or pole arm causing a load break fuse to operate. This outage affected 102 customers for up to 1,682 minutes resulting in 161,820 CMI.

In total, the HAUTO 28-03 circuit had 23 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (16); equipment failure (4); animal contacts (2); nothing found (1).

Remedial Actions

- In 2023, an additional sectionalizing device was installed.
- In 2024, an additional recloser will be installed.
- In 2024, a new tie line will be evaluated.
- In 2024, reconductoring a section of this circuit will be evaluated.
- In 2024, proactive fault sensors will be installed.
- In 2024, additional fusing will be installed.
- In 2025, full circuit trimming will be performed.

02 Circuit 46802 -- HEPBURN 68-02

Performance Analysis

The HEPBURN 68-02 circuit experienced one outage of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On August 30, 2023, during a period of strong wind, an equipment failure occurred on an overhead conductor causing a circuit breaker to trip to lockout. This outage affected 1,958 customers for up to 1,162 minutes resulting in 1,202,488 CMI.

In total, the HEPBURN 68-02 circuit had 92 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (61); equipment failure (21); nothing found (5); animal contacts (4); vehicles (1).

Remedial Actions

- In 2024, a section of difficult-to-access single-phase was relocated.
- In 2024, a single-phase recloser was replaced.
- In 2024, additional animal guarding will be installed.
- In 2024, additional fusing will be installed.
- In 2025, a three-phase tie will be constructed.

03 Circuit 20601 -- GREENWOOD 06-01

Performance Analysis

The GREENWOOD 06-01 circuit experienced ten outages of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On August 18, 2023, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 461 customers for up to 905 minutes resulting in 261,115 CMI.

On January 6, 2024, during a period of ice/sleet/snow, a vehicle contacted a pole causing a recloser to trip to lockout. This outage affected 157 customers for up to 792 minutes resulting in 124,298 CMI.

On February 13, 2024, during a period of strong wind, a tree contacted an overhead splice causing a sectionalizing device to be interrupted. This outage affected 2,025 customers for up to 2,051 minutes resulting in 1,227,626 CMI.

On March 23, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a circuit breaker to trip to lockout. This outage affected 916 customers for up to 205 minutes resulting in 36,268 CMI.

On April 8, 2024, during a period of extreme temperatures, an equipment failure occurred on an overhead conductor causing a recloser to trip to lockout. This outage affected 1,486 customers for up to 415 minutes resulting in 255,282 CMI.

On May 22, 2024, an issue occurred with an overhead transmission component causing a circuit breaker to trip to lockout. This outage affected 1,486 customers for up to 9 minutes resulting in 12,170 CMI.

On June 26, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 76 customers for up to 0 minutes resulting in 189,122 CMI.

On June 26, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 48 customers for up to 2,117 minutes resulting in 101,604 CMI.

On June 26, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 387 customers for up to 1,473 minutes resulting in 570,808 CMI.

On June 27, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 155 customers for up to 2,194 minutes resulting in 177,589 CMI.

In total, the GREENWOOD 06-01 circuit had 65 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (44); animal contacts (8); equipment failure (8); vehicles (3); nothing found (1); other (1).

Remedial Actions

- In 2024, a Smart Grid device was replaced.
- In 2024, two single-phase reclosers will be replaced.
- In 2024, additional fusing and single-phase reclosers will be evaluated.
- In 2024, relocating or rebuilding multiple sections of conductor will be evaluated.

04 Circuit 24602 -- VARDEN 46-02

Performance Analysis

The VARDEN 46-02 circuit experienced five outages of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On July 30, 2023, during a period of strong wind, a tree contacted an overhead conductor causing an interruption. This outage affected 351 customers for up to 608 minutes resulting in 213,337 CMI.

On March 24, 2024, during a period of strong wind, an equipment failure occurred on a pole or pole arm causing an interruption. This outage affected 433 customers for up to 442 minutes resulting in 179,632 CMI.

On April 3, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 89 customers for up to 1,949 minutes resulting in 173,427 CMI.

On April 3, 2024, during a period of strong wind, a tree contacted an overhead conductor causing an interruption. This outage affected 52 customers for up to 2,931 minutes resulting in 138,692 CMI.

On June 22, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 88 customers for up to 2,384 minutes resulting in 203,565 CMI.

In total, the VARDEN 46-02 circuit had 104 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (76); equipment failure (10); animal contacts (9); nothing found (4); vehicles (3); other (2).

Remedial Actions

- In 2023, two single-phase reclosers were installed.
- In 2023, several poles were replaced with more scheduled for 2024.
- In 2024, an existing recloser was upgraded to a Smart Grid device.
- In 2024, additional animal guarding will be installed.
- In 2024, full circuit trimming will be performed.
- In 2024, several cross-arms will be replaced.
- In 2024, proactive fault sensors will be installed.
- In 2024, a new Smart Grid device will be installed.

05 Circuit 13901 -- SEIDERSVILLE 39-01

Performance Analysis

The SEIDERSVILLE 39-01 circuit experienced three outages of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On August 7, 2023, during a period of strong wind, a tree contacted an overhead conductor causing a circuit breaker to trip to lockout. This outage affected 1,030 customers for up to 2,804 minutes resulting in 2,389,761 CMI.

On August 13, 2023, an equipment failure occurred on an overhead switch causing a circuit breaker to trip to lockout. This outage affected 3,501 customers for up to 388 minutes resulting in 414,462 CMI.

On August 21, 2023, an equipment failure occurred on an overhead splice causing a circuit breaker to trip to lockout. This outage affected 1,777 customers for up to 155 minutes resulting in 198,277 CMI.

In total, the SEIDERSVILLE 39-01 circuit had 27 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (15); equipment failure (10); animal contacts (1); nothing found (1).

Remedial Actions

- In 2023, a section of conductor was undergrounded.
- In 2023, a neighboring circuit was replaced, reducing tie exposure on this circuit.
- In 2023, a section of this circuit in a heavily wooded area was removed and the customers re-sourced.
- In 2023 several poles and cross-arms were replaced.
- In 2024, full circuit trimming will be performed.
- In 2024, load balancing will be performed.
- In 2024, multiple poles will be replaced.

06 Circuit 43401 -- BENTON 34-01

Performance Analysis

The BENTON 34-01 circuit experienced three outages of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On September 7, 2023, during a period of strong wind, a tree contacted an overhead conductor causing an interruption. This outage affected 747 customers for up to 4,169 minutes resulting in 562,495 CMI.

On September 7, 2023, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 51 customers for up to 2,181 minutes resulting in 111,195 CMI.

On June 22, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 419 customers for up to 1,488 minutes resulting in 611,780 CMI.

In total, the BENTON 34-01 circuit had 113 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (95); animal contacts (7); nothing found (6); equipment failure (5).

Remedial Actions

- In 2023, a Proactive Circuit Analysis was performed with several minor remediations implemented.
- In 2024, a section of difficult-to-access single-phase conductor was relocated.
- In 2024, coordination between a recloser and downstream fusing will be optimized.
- In 2024, relocating two sections of difficult-to-access conductor will be evaluated.
- In 2024, multiple cross-arms will be replaced.
- In 2024, additional fusing will be installed.
- In 2024, a section of three-phase will be evaluated for storm hardening.
- In 2024, an additional Smart Grid device will be installed.

07 Circuit 10601 -- BLOOMING GLEN 06-01

Performance Analysis

The BLOOMING GLEN 06-01 circuit experienced six outages of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On July 9, 2023, during a period of heavy rain, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 767 customers for up to 408 minutes resulting in 145,465 CMI.

On July 10, 2023, during a period of strong wind, a tree contacted an overhead conductor causing a load break fuse to operate. This outage affected 407 customers for up to 1,420 minutes resulting in 120,656 CMI.

On November 17, 2023, an equipment failure occurred on an overhead splice causing a circuit breaker to trip to lockout. This outage affected 1,104 customers for up to 178 minutes resulting in 62,858 CMI.

On November 18, 2023, a tree contacted a pole or pole arm causing a recloser to trip to lockout. This outage affected 364 customers for up to 867 minutes resulting in 136,932 CMI.

On January 14, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 84 customers for up to 2,664 minutes resulting in 138,121 CMI.

On April 3, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 347 customers for up to 3,339 minutes resulting in 607,288 CMI.

In total, the BLOOMING GLEN 06-01 circuit had 109 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (82); animal contacts (17); nothing found (5); equipment failure (3); vehicles (2).

Remedial Actions

- In 2023, additional fusing was installed.
- In 2023, proactive fault sensors were installed.
- In 2024, a dissimilar metal connection was identified by fault sensors and remediated.
- In 2024, two single-phase reclosers will be installed.
- In 2024, additional fusing will be installed.
- In 2024, additional animal guarding will be installed.
- In 2025, two sections of single-phase primary will be undergrounded.
- In 2025, a Smart Grid device will be installed.
- In 2025, a section of three-phase primary will be undergrounded.
- In 2025, a section of single-phase will be reconnected.
- In 2025, seven single-phase reclosers will be installed.

- In 2026, a section of single-phase will be reconductored.

08 Circuit 46004 -- BERWICK 60-04

Performance Analysis

The BERWICK 60-04 circuit experienced seven outages of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On July 21, 2023, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 1,173 customers for up to 140 minutes resulting in 164,220 CMI.

On January 13, 2024, during a period of strong wind, a tree contacted a pole or pole arm causing a recloser to trip to lockout. This outage affected 1,172 customers for up to 89 minutes resulting in 73,567 CMI.

On May 8, 2024, during a period of strong wind, a tree contacted an overhead conductor causing an outage. This outage affected 804 customers for up to 374 minutes resulting in 154,725 CMI.

On June 26, 2024, during a period of strong wind, a tree contacted an overhead switch causing an interruption. This outage affected 2,080 customers for up to 2,037 minutes resulting in 2,566,330 CMI.

On June 27, 2024, during a period of strong wind, a tree contacted a pole or pole arm causing a recloser to trip to lockout. This outage affected 200 customers for up to 2,461 minutes resulting in 257,272 CMI.

On June 28, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 108 customers for up to 994 minutes resulting in 107,319 CMI.

On June 28, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 142 customers for up to 1,921 minutes resulting in 256,250 CMI.

In total, the BERWICK 60-04 circuit had 69 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (51); animal contacts (8); nothing found (5); equipment failure (4); vehicles (1).

Remedial Actions

- In 2024, the coordination settings on this circuit were optimized.
- In 2024, full circuit trimming will be performed.
- In 2024, additional fusing will be evaluated.
- In 2024, a three-phase tie line will be evaluated.
- In 2025, a Proactive Circuit Review will be performed.

09 Circuit 28604 -- BLYTHEBURN 86-04

Performance Analysis

The BLYTHEBURN 86-04 circuit experienced four outages of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On January 6, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 1,213 customers for up to 318 minutes resulting in 385,734 CMI.

On April 3, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 1,069 customers for up to 1,001 minutes resulting in 749,157 CMI.

On May 27, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 1,217 customers for up to 154 minutes resulting in 186,992 CMI.

On June 26, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 82 customers for up to 1,660 minutes resulting in 136,110 CMI.

In total, the BLYTHEBURN 86-04 circuit had 99 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (70); animal contacts (15); equipment failure (6); nothing found (4); vehicles (3); contact or dig in (1).

Remedial Actions

- In 2024, fusing will be installed at over 35 locations.
- In 2024, a three-phase tie will be evaluated.
- In 2024, additional sectionalizing will be evaluated.
- In 2024, full circuit trimming will be performed.
- In 2024, a section of this circuit will be transferred to a neighboring circuit.

10 Circuit 49804 -- UNIVERSITY 98-04

Performance Analysis

The UNIVERSITY 98-04 circuit experienced five outages of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On July 12, 2023, during a period of strong wind, a tree contacted an overhead conductor causing a circuit breaker to trip to lockout. This outage affected 694 customers for up to 90 minutes resulting in 62,237 CMI.

On August 7, 2023, during a period of strong wind, a tree contacted an overhead conductor causing a circuit breaker to trip to lockout. This outage affected 1,318 customers for up to 2,861 minutes resulting in 974,347 CMI.

On February 13, 2024, during a period of ice/sleet/snow, a tree contacted a pole or pole arm causing a circuit breaker to trip to lockout. This outage affected 1,341 customers for up to 315 minutes resulting in 248,759 CMI.

On March 15, 2024, an improper operation occurred causing a circuit breaker to trip to lockout. This outage affected 1,112 customers for up to 266 minutes resulting in 61,982 CMI.

On June 26, 2024, during a period of strong wind, a tree contacted an overhead conductor causing an interruption. This outage affected 213 customers for up to 4,106 minutes resulting in 711,977 CMI.

In total, the UNIVERSITY 98-04 circuit had 105 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (69); animal contacts (15); equipment failure (11); nothing found (8); contact or dig in (1); Improper Design (1).

Remedial Actions

- In 2023, a three-phase sectionalizing device was installed.
- In 2023, a section of single-phase line was relocated underground.
- In 2023, several single-phase sectionalizing devices were installed.
- In 2024, a three-phase tie line will be constructed.
- In 2024, a section of single-phase will be re-fed.
- In 2024, a Proactive Circuit Analysis will be performed.
- In 2024, two Smart Grid devices will be installed.
- In 2024, a section of conductor will be undergrounded.
- In 2024, the protection settings on this circuit will be evaluated and optimized.
- In 2024, lines will be reframed outside of the substation.

11 Circuit 10904 -- COOPERSBURG 09-04

Performance Analysis

The COOPERSBURG 09-04 circuit experienced four outages of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On July 29, 2023, an equipment failure occurred on a pole or pole arm causing a recloser to trip to lockout. This outage affected 510 customers for up to 324 minutes resulting in 22,648 CMI.

On August 7, 2023, during a period of heavy rain, an unidentified issue occurred causing a recloser to trip to lockout. This outage affected 1,499 customers for up to 581 minutes resulting in 809,265 CMI.

On April 3, 2024, during a period of strong wind, a tree contacted an overhead conductor causing an interruption. This outage affected 65 customers for up to 2,963 minutes resulting in 192,595 CMI.

On April 3, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 38 customers for up to 3,213 minutes resulting in 118,294 CMI.

In total, the COOPERSBURG 09-04 circuit had 218 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (178); equipment failure (15); animal contacts (12); nothing found (7); other (3); vehicles (3).

Remedial Actions

- In 2023, additional fusing was installed.
- In 2023, a cross-arm was replaced.
- In 2023, proactive fault sensors were installed.
- In 2024, several poles will be replaced.
- In 2024, several sections of this circuit were reconductored.
- In 2024, targeted tree trimming is being performed.
- In 2024, additional poles will be installed to harden the circuit.
- In 2024, an additional Smart Grid device will be installed.
- In 2024, additional animal guarding will be installed.
- In 2024, additional fusing will be installed.
- In 2025, multiple single-phase reclosers will be installed for single-phase tie points.
- In 2025, a Smart Grid device will be installed.
- In 2025, multiple single-phase sections of primary will be reconductored.
- In 2025, a section of single-phase will be refed.
- In 2026, full circuit trimming will be performed.
- In 2026, a new substation will be built to remove this substation from the flood plain.

12 Circuit 23401 -- HONESDALE 34-01

Performance Analysis

The HONESDALE 34-01 circuit experienced six outages of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On October 10, 2023, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 504 customers for up to 92 minutes resulting in 46,368 CMI.

On December 11, 2023, an unidentified issue occurred causing a recloser to trip to lockout. This outage affected 848 customers for up to 467 minutes resulting in 119,107 CMI.

On December 18, 2023, during a period of heavy rain, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 681 customers for up to 213 minutes resulting in 67,236 CMI.

On January 14, 2024, during a period of strong wind, an equipment failure occurred on an overhead conductor causing a circuit breaker to trip to lockout. This outage affected 823 customers for up to 666 minutes resulting in 195,653 CMI.

On June 21, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 500 customers for up to 379 minutes resulting in 189,095 CMI.

On June 26, 2024, during a period of strong wind, a tree contacted an overhead fuse causing a recloser to trip to lockout. This outage affected 501 customers for up to 381 minutes resulting in 119,649 CMI.

In total, the HONESDALE 34-01 circuit had 109 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (69); animal contacts (17); equipment failure (14); nothing found (4); other (4); vehicles (1).

Remedial Actions

- In 2023, several poles were replaced with more to be replaced in 2024.
- In 2023, a section of underground conductor was replaced.
- In 2023, additional animal guarding was installed.
- In 2024, additional fusing was installed.
- In 2024, a section of this circuit was reconductored.
- In 2024, numerous porcelain cutouts will be replaced.
- In 2024, a single-phase recloser will be installed.
- In 2024, proactive fault sensors will be installed.
- In 2024, additional storm hardening will be evaluated.

13 Circuit 25501 -- MADISONVILLE 55-01

Performance Analysis

The MADISONVILLE 55-01 circuit experienced three outages of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On February 28, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 198 customers for up to 1,081 minutes resulting in 214,036 CMI.

On March 3, 2024, an equipment failure occurred on an overhead conductor causing an interruption. This outage affected 542 customers for up to 240 minutes resulting in 31,602 CMI.

On April 3, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 200 customers for up to 1,064 minutes resulting in 212,758 CMI.

In total, the MADISONVILLE 55-01 circuit had 129 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (96); equipment failure (14); animal contacts (12); nothing found (5); other (2).

Remedial Actions

- In 2023, a section of underground conductor was replaced.
- In 2024, two Smart Grid devices were installed.
- In 2024, a single-phase recloser was replaced.
- In 2024, several poles were replaced.
- In 2024, additional animal guarding will be installed.
- In 2024, proactive fault sensors will be installed.
- In 2025, an existing recloser will be upgraded to a Smart Grid device.
- In 2026, full circuit trimming will be performed.

14 Circuit 20402 -- ASHFIELD 04-02

Performance Analysis

The ASHFIELD 04-02 circuit experienced three outages of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On December 28, 2023, during a period of heavy rain, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 1,217 customers for up to 920 minutes resulting in 685,793 CMI.

On February 13, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 178 customers for up to 1,812 minutes resulting in 322,438 CMI.

On March 16, 2024, an equipment failure occurred on an overhead transformer causing a circuit breaker to trip to lockout. This outage affected 1,238 customers for up to 200 minutes resulting in 161,974 CMI.

In total, the ASHFIELD 04-02 circuit had 45 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (30); equipment failure (7); animal contacts (4); other (2); nothing found (1); vehicles (1).

Remedial Actions

- In 2024, additional fusing was installed at five locations.
- In 2024, transferring a section of this circuit will be evaluated.
- In 2024, additional sectionalizing will be evaluated.
- In 2024, relocating a section of difficult-to-access conductor will be evaluated.
- In 2024, a three-phase tie line will be evaluated.
- In 2025, full circuit trimming will be performed.

15 Circuit 54101 -- S SHERMANSDALE 41-01

Performance Analysis

The S SHERMANSDALE 41-01 circuit experienced five outages of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On July 18, 2023, an equipment failure occurred on an overhead switch causing a recloser to trip to lockout. This outage affected 265 customers for up to 466 minutes resulting in 113,786 CMI.

On August 22, 2023, a tree contacted an overhead conductor causing an interruption. This outage affected 1,702 customers for up to 214 minutes resulting in 117,351 CMI.

On January 14, 2024, during a period of heavy rain, a vehicle contact caused a temporary open point to be interrupted. This outage affected 834 customers for up to 217 minutes resulting in 180,969 CMI.

On February 13, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 196 customers for up to 1,866 minutes resulting in 365,563 CMI.

On February 13, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 252 customers for up to 738 minutes resulting in 127,842 CMI.

In total, the S SHERMANSDALE 41-01 circuit had 121 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (84); animal contacts (15); equipment failure (14); nothing found (5); vehicles (3).

Remedial Actions

- In 2023, proactive fault sensors were installed on this circuit.
- In 2024, four additional fuses were installed.
- In 2024, full circuit trimming will be performed.
- In 2024, an additional single-phase recloser will be installed.
- In 2024, additional fusing will be installed.
- In 2025, an existing recloser was converted to remote operability with another to be upgraded.

16 Circuit 28303 -- NEWFOUNDLAND 83-03

Performance Analysis

The NEWFOUNDLAND 83-03 circuit experienced seven outages of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On December 11, 2023, during a period of ice/sleet/snow, an unidentified issue occurred with an overhead switch causing a recloser to trip to lockout. This outage affected 1,484 customers for up to 613 minutes resulting in 324,680 CMI.

On January 9, 2024, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 999 customers for up to 122 minutes resulting in 45,501 CMI.

On January 13, 2024, an equipment failure occurred on an overhead switch causing a recloser to trip to lockout. This outage affected 1,920 customers for up to 168 minutes resulting in 164,028 CMI.

On January 14, 2024, during a period of strong wind, a tree contacted an overhead conductor causing an interruption. This outage affected 348 customers for up to 1,005 minutes resulting in 315,124 CMI.

On February 28, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 172 customers for up to 1,549 minutes resulting in 209,311 CMI.

On February 28, 2024, during a period of strong wind, a tree contacted a pole or pole arm causing a recloser to trip to lockout. This outage affected 362 customers for up to 1,505 minutes resulting in 165,578 CMI.

On March 11, 2024, during a period of strong wind, a tree contacted a pole or pole arm causing a recloser to trip to lockout. This outage affected 362 customers for up to 470 minutes resulting in 170,140 CMI.

In total, the NEWFOUNDLAND 83-03 circuit had 120 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (79); animal contacts (19); equipment failure (14); nothing found (5); other (2); vehicles (1).

Remedial Actions

- In 2024, an existing recloser was replaced with a Smart Grid device.
- In 2024, full circuit trimming will be performed.
- In 2024, several poles will be replaced.
- In 2024, a single-phase recloser will be installed.
- In 2024, proactive fault sensors will be installed.
- In 2024, additional animal guarding will be installed.
- In 2024, a section of this circuit will be reconductored.
- In 2024, additional storm hardening will be evaluated.

- In 2025, a Smart Grid device will be upgraded.

17 Circuit 16101 -- BINGEN 61-01

Performance Analysis

The BINGEN 61-01 circuit experienced five outages of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On July 15, 2023, during a period of strong wind, a tree contacted an overhead splice causing a recloser to trip to lockout. This outage affected 538 customers for up to 219 minutes resulting in 21,347 CMI.

On August 7, 2023, during a period of heavy rain, an unidentified issue occurred with an overhead transmission component causing a circuit breaker to trip to lockout. This outage affected 1,563 customers for up to 6 minutes resulting in 9,378 CMI.

On January 13, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 172 customers for up to 1,445 minutes resulting in 233,904 CMI.

On April 3, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 85 customers for up to 1,526 minutes resulting in 129,710 CMI.

On May 4, 2024, during a period of heavy rain, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 1,022 customers for up to 125 minutes resulting in 126,963 CMI.

In total, the BINGEN 61-01 circuit had 154 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (121); animal contacts (18); equipment failure (9); nothing found (4); other (2).

Remedial Actions

- In 2024, additional single-phase switches will be installed.
- In 2024, additional lightening arrestors will be installed.
- In 2024, additional animal guarding will be installed.
- In 2024, hot spot tree trimming will be performed.
- In 2024, several poles will be replaced.
- In 2024, a section of single-phase will be reconfigured.
- In 2025, four single-phase reclosers will be installed creating multiple single-phase ties.
- In 2025, several sections of single-phase will be reconductored.

18 Circuit 45402 -- WEST BLOOMSBURG 54-02

Performance Analysis

The WEST BLOOMSBURG 54-02 circuit experienced nine outages of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On August 7, 2023, during a period of strong wind, a tree contacted an overhead transformer causing an interruption. This outage affected 291 customers for up to 2,635 minutes resulting in 129,213 CMI.

On August 9, 2023, during a period of strong wind, a tree contacted an overhead conductor causing an interruption. This outage affected 291 customers for up to 405 minutes resulting in 117,648 CMI.

On December 10, 2023, during a period of heavy rain, an animal interfered with an overhead transformer causing a recloser to trip to lockout. This outage affected 538 customers for up to 123 minutes resulting in 60,976 CMI.

On January 9, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 142 customers for up to 1,021 minutes resulting in 144,882 CMI.

On January 9, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 898 customers for up to 2,116 minutes resulting in 244,763 CMI.

On February 13, 2024, during a period of ice/sleet/snow, a tree contacted an overhead switch causing a recloser to trip to lockout. This outage affected 92 customers for up to 1,355 minutes resulting in 124,581 CMI.

On February 13, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 137 customers for up to 1,720 minutes resulting in 203,757 CMI.

On February 28, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a circuit breaker to trip to lockout. This outage affected 522 customers for up to 1,122 minutes resulting in 306,828 CMI.

On June 26, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 142 customers for up to 1,196 minutes resulting in 152,102 CMI.

In total, the WEST BLOOMSBURG 54-02 circuit had 131 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (107); equipment failure (8); animal contacts (7); nothing found (5); other (2); contact or dig in (1); vehicles (1).

Remedial Actions

- In 2023, the protection settings on this circuit were reviewed and optimized.
- In 2023, a Proactive Circuit Analysis was performed with several minor remediations implemented.
- In 2024, hot spot trimming will be performed.
- In 2024, multiple sections of three-phase line will be evaluated for storm hardening.
- In 2024, moving a section of single-phase conductor to underground will be evaluated.

19 Circuit 47002 -- HUGHESVILLE 70-02

Performance Analysis

The HUGHESVILLE 70-02 circuit experienced five outages of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On August 15, 2023, during a period of heavy rain, a tree contacted an overhead conductor causing an interruption. This outage affected 2,030 customers for up to 128 minutes resulting in 91,014 CMI.

On April 17, 2024, an equipment failure occurred on a substation component causing a circuit breaker to trip to lockout. This outage affected 2,029 customers for up to 8 minutes resulting in 16,252 CMI.

On June 9, 2024, an equipment failure occurred on an overhead splice causing a circuit breaker to trip to lockout. This outage affected 2,004 customers for up to 136 minutes resulting in 130,710 CMI.

On June 22, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 174 customers for up to 658 minutes resulting in 114,490 CMI.

On June 26, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 84 customers for up to 2,562 minutes resulting in 135,575 CMI.

In total, the HUGHESVILLE 70-02 circuit had 110 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (68); equipment failure (18); animal contacts (13); vehicles (6); nothing found (4); other (1).

Remedial Actions

- In 2024, additional animal guarding will be installed.
- In 2024, a section of single-phase will be evaluated for relocation.
- In 2024, three sections of three-phase conductor will be evaluated for relocation.
- In 2024, the circuit breaker will be replaced.
- In 2024, a section of single-phase will be evaluated for undergrounding.
- In 2025, a section of single-phase will be relocated underground or reconducted.

20 Circuit 65904 -- SOUTH AKRON 59-04

Performance Analysis

The SOUTH AKRON 59-04 circuit experienced two outages of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On July 28, 2023, an equipment failure occurred on an overhead conductor causing a circuit breaker to trip to lockout. This outage affected 3,389 customers for up to 416 minutes resulting in 454,557 CMI.

On January 9, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a circuit breaker to trip to lockout. This outage affected 771 customers for up to 247 minutes resulting in 190,282 CMI.

In total, the SOUTH AKRON 59-04 circuit had 17 outages between July 2023 and June 2024, with the causes breaking down as follows: equipment failure (10); animal contacts (5); nothing found (1); tree related (1).

Remedial Actions

- In 2023, this circuit was infrared scanned for vulnerabilities when carrying higher load. Several remediations were performed including replacing crimps.
- In 2023, additional fusing was installed.
- In 2024, additional animal guarding will be installed.
- In 2024, additional fusing will be installed.
- In 2024, a section of line will be evaluated for reconductoring or relocation.

21 Circuit 28102 -- TWIN LAKES 81-02

Performance Analysis

The TWIN LAKES 81-02 circuit experienced four outages of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On July 14, 2023, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 212 customers for up to 1,318 minutes resulting in 153,538 CMI.

On March 11, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 133 customers for up to 0 minutes resulting in 191,312 CMI.

On March 11, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 211 customers for up to 1,200 minutes resulting in 253,200 CMI.

On June 27, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 213 customers for up to 710 minutes resulting in 129,294 CMI.

In total, the TWIN LAKES 81-02 circuit had 77 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (53); animal contacts (12); equipment failure (6); nothing found (6).

Remedial Actions

- In 2023, a single-phase recloser was installed.
- In 2023, proactive fault sensors were installed.
- In 2023, several poles were replaced with more scheduled for 2024.
- In 2024, a single-phase recloser was installed.
- In 2024, a new Smart Grid device will be installed.
- In 2024, numerous porcelain cutouts will be replaced.
- In 2024, additional animal guarding will be installed.
- In 2026, full circuit trimming will be performed.

22 Circuit 61704 -- ELIZABETHTOWN 17-04

Performance Analysis

The ELIZABETHTOWN 17-04 circuit experienced two outages of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On July 28, 2023, during a period of strong wind, a tree contacted an overhead conductor causing a circuit breaker to trip to lockout. This outage affected 1,810 customers for up to 215 minutes resulting in 341,454 CMI.

On April 9, 2024, a vehicle contacted a pole causing an interruption. This outage affected 837 customers for up to 645 minutes resulting in 214,451 CMI.

In total, the ELIZABETHTOWN 17-04 circuit had 28 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (12); animal contacts (8); equipment failure (6); nothing found (1); vehicles (1).

Remedial Actions

- In 2024, a section of line will be evaluated for reconfiguration.
- In 2024, additional fusing will be installed.
- In 2024, hot spot tree trimming will be evaluated.

23 Circuit 52102 -- MEISERVILLE 21-02

Performance Analysis

The MEISERVILLE 21-02 circuit experienced four outages of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On July 2, 2023, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 333 customers for up to 595 minutes resulting in 113,114 CMI.

On August 30, 2023, an animal interfered with an overhead conductor causing a motor operated switch to be interrupted. This outage affected 622 customers for up to 25 minutes resulting in 15,550 CMI.

On February 13, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 434 customers for up to 4,969 minutes resulting in 634,534 CMI.

On April 12, 2024, during a period of heavy rain, a tree contacted an overhead conductor causing an interruption. This outage affected 433 customers for up to 283 minutes resulting in 111,299 CMI.

In total, the MEISERVILLE 21-02 circuit had 78 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (52); equipment failure (16); animal contacts (8); nothing found (1); vehicles (1).

Remedial Actions

- In 2024, six additional fuses were installed.
- In 2024, a switch was upgraded to a protective device.
- In 2024, full circuit trimming will be performed.
- In 2025, a single-phase recloser will be installed.
- In 2025, additional fusing will be installed.

24 Circuit 16801 -- WAGNERS 68-01

Performance Analysis

The WAGNERS 68-01 circuit experienced five outages of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On January 14, 2024, during a period of strong wind, a tree contacted an overhead conductor causing an interruption. This outage affected 732 customers for up to 396 minutes resulting in 262,194 CMI.

On April 3, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 716 customers for up to 248 minutes resulting in 177,224 CMI.

On April 4, 2024, during a period of strong wind, an unidentified issue occurred with an overhead conductor causing a recloser to trip to lockout. This outage affected 719 customers for up to 31 minutes resulting in 22,289 CMI.

On April 4, 2024, during a period of strong wind, an equipment failure occurred on an overhead conductor causing a recloser to trip to lockout. This outage affected 720 customers for up to 345 minutes resulting in 247,845 CMI.

On June 26, 2024, during a period of strong wind, a tree contacted an overhead conductor causing an interruption. This outage affected 845 customers for up to 173 minutes resulting in 49,917 CMI.

In total, the WAGNERS 68-01 circuit had 72 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (63); equipment failure (3); nothing found (3); animal contacts (1); other (1); vehicles (1).

Remedial Actions

- In 2024, a Smart Grid device was replaced.
- In 2024, several poles were replaced.
- In 2025, a section of single-phase will be reconductored.
- In 2025, additional animal guarding will be installed.
- In 2025, two single-phase reclosers will be installed.
- In 2025, two additional reclosers will be installed.
- In 2025, a single-phase tie line will be constructed.

25 Circuit 25801 -- SULLIVAN TRAIL 58-01

Performance Analysis

The SULLIVAN TRAIL 58-01 circuit experienced two outages of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On September 7, 2023, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 99 customers for up to 1,183 minutes resulting in 117,048 CMI.

On April 3, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 164 customers for up to 2,838 minutes resulting in 465,432 CMI.

In total, the SULLIVAN TRAIL 58-01 circuit had 119 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (79); animal contacts (20); equipment failure (12); vehicles (5); nothing found (3).

Remedial Actions

- In 2023, settings on an existing recloser were optimized.
- In 2023, additional fusing was installed.
- In 2023, two single-phase reclosers were installed.
- In 2024, additional hazard tree removal will be evaluated.
- In 2024, a single-phase tap will be evaluated for additional protective devices.
- In 2024, a section of single-phase will be extended.
- In 2024, two sections of single-phase conductor in a heavily wooded area will be relocated.
- In 2024, proactive fault sensors will be installed.
- In 2024, transferring a section of this circuit to a neighboring circuit will be evaluated.
- In 2025, a section of single-phase conductor will be relocated.
- In 2025, three sections of single-phase will be undergrounded.

26 Circuit 67803 -- WEST LANCASTER 78-03

Performance Analysis

The WEST LANCASTER 78-03 circuit experienced two outages of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On November 26, 2023, an equipment failure occurred on an overhead switch. This outage affected 1,552 customers for up to 237 minutes resulting in 367,824 CMI.

On February 16, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 487 customers for up to 522 minutes resulting in 161,987 CMI.

In total, the WEST LANCASTER 78-03 circuit had 32 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (13); equipment failure (10); animal contacts (6); nothing found (2); other (1).

Remedial Actions

- In 2024, a failed switch was replaced.
- In 2024, additional animal guarding was installed.
- In 2024, full circuit trimming will be performed.
- In 2024, additional fusing will be installed.
- In 2024, a single-phase recloser will be installed.
- In 2025, a section of this circuit will be reconducted.

27 Circuit 25402 -- LAKE HARMONY 54-02

Performance Analysis

The LAKE HARMONY 54-02 circuit experienced five outages of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On November 15, 2023, an animal interfered with an overhead conductor causing a recloser to trip to lockout. This outage affected 504 customers for up to 123 minutes resulting in 61,992 CMI.

On December 3, 2023, during a period of heavy rain, an equipment failure occurred on an overhead transformer causing a recloser to trip to lockout. This outage affected 511 customers for up to 438 minutes resulting in 169,222 CMI.

On December 3, 2023, during a period of heavy rain, a vehicle contacted a pole causing a recloser to trip to lockout. This outage affected 354 customers for up to 314 minutes resulting in 110,957 CMI.

On April 3, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a load break fuse to operate. This outage affected 71 customers for up to 1,619 minutes resulting in 114,890 CMI.

On May 8, 2024, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 540 customers for up to 17 minutes resulting in 9,185 CMI.

In total, the LAKE HARMONY 54-02 circuit had 92 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (57); animal contacts (19); equipment failure (14); nothing found (1); vehicles (1).

Remedial Actions

- In 2024, a section of conductor will be evaluated for relocation.
- In 2024, additional fusing will be installed.
- In 2024, additional Smart Grid devices will be evaluated.
- In 2024, proactive fault sensors will be installed.
- In 2024, additional hazard tree removal will be evaluated.
- In 2024, two sections of conductor will be relocated.
- In 2024, a section of this circuit will be transferred to a neighboring circuit.
- In 2025, a section of difficult-to-access conductor will be relocated.
- In 2025, three sections of single-phase conductor will be undergrounded.
- In 2026, full circuit trimming will be performed.

28 Circuit 44505 -- HAMILTON 45-05

Performance Analysis

The HAMILTON 45-05 circuit experienced four outages of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On August 17, 2023, an animal interfered with an overhead conductor causing a circuit breaker to trip to lockout. This outage affected 909 customers for up to 81 minutes resulting in 13,959 CMI.

On January 14, 2024, during a period of strong wind, a tree contacted a pole or pole arm causing a recloser to trip to lockout. This outage affected 376 customers for up to 1,992 minutes resulting in 540,089 CMI.

On February 13, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 913 customers for up to 2,185 minutes resulting in 1,015,252 CMI.

On April 29, 2024, a tree contacted an overhead conductor causing a circuit breaker to trip to lockout. This outage affected 900 customers for up to 100 minutes resulting in 58,005 CMI.

In total, the HAMILTON 45-05 circuit had 60 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (32); animal contacts (15); equipment failure (9); vehicles (3); nothing found (1).

Remedial Actions

- In 2024, hot spot tree trimming was performed.
- In 2024, additional fusing will be installed.
- In 2025, a section of difficult-to-access multi-phase line will be evaluated for re-sourcing.
- In 2025, additional sectionalizing devices will be evaluated.
- In 2026, full circuit trimming will be performed.
- In 2026, the substation relays will be upgraded.

29 Circuit 18001 -- ZIONSVILLE 80-01

Performance Analysis

The ZIONSVILLE 80-01 circuit experienced two outages of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On January 29, 2024, during a period of strong wind, a tree contacted an overhead conductor causing an interruption. This outage affected 389 customers for up to 363 minutes resulting in 116,085 CMI.

On February 28, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 698 customers for up to 1,405 minutes resulting in 519,916 CMI.

In total, the ZIONSVILLE 80-01 circuit had 95 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (79); animal contacts (5); nothing found (5); equipment failure (2); other (2); contact or dig in (1); vehicles (1).

Remedial Actions

- In 2024, several poles will be replaced.
- In 2024, two crossarms will be replaced.
- In 2024, an additional Smart Grid device will be installed.
- In 2024, proactive fault sensors will be installed.
- In 2025, full circuit trimming will be performed.
- In 2025, two sections of difficult-to-access single-phase line will be relocated.
- In 2024, two sections of this circuit will be evaluated for reconductoring and relocation.

30 Circuit 45002 -- LIMESTONE 50-02

Performance Analysis

The LIMESTONE 50-02 circuit experienced five outages of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On November 10, 2023, a tree contacted a pole or pole arm causing a recloser to trip to lockout. This outage affected 1,384 customers for up to 79 minutes resulting in 109,336 CMI.

On January 14, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 1,384 customers for up to 166 minutes resulting in 227,630 CMI.

On March 14, 2024, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 1,382 customers for up to 26 minutes resulting in 35,558 CMI.

On April 20, 2024, during a period of strong wind, a tree contacted a pole or pole arm causing a circuit breaker to trip to lockout. This outage affected 1,455 customers for up to 228 minutes resulting in 158,333 CMI.

On June 26, 2024, during a period of strong wind, an unidentified issue occurred with an overhead switch causing a recloser to trip to lockout. This outage affected 1,377 customers for up to 131 minutes resulting in 178,634 CMI.

In total, the LIMESTONE 50-02 circuit had 41 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (24); equipment failure (9); animal contacts (4); vehicles (2); contact or dig in (1); nothing found (1).

Remedial Actions

- In 2023, proactive fault sensors were installed.
- In 2023, additional fusing was installed.
- In 2023, a Proactive Circuit Analysis was performed.
- In 2023, eighteen poles were replaced.
- In 2024, additional fusing was installed.
- In 2024, additional fusing will be installed.
- In 2024, an existing Smart Grid device will be upgraded to single-phase operation.
- In 2026, a three-phase tie will be constructed.
- In 2026, full circuit rimming will be performed.

31 Circuit 14008 -- SELLERSVILLE 40-08

Performance Analysis

The SELLERSVILLE 40-08 circuit experienced one outage of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On July 19, 2023, a vehicle contacted a pole causing a transformer to be interrupted. This outage affected 690 customers for up to 676 minutes resulting in 87,347 CMI.

In total, the SELLERSVILLE 40-08 circuit had 81 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (67); animal contacts (6); equipment failure (3); nothing found (3); other (1); vehicles (1).

Remedial Actions

- In 2023, a section of single-phase line was extended.
- In 2023, proactive fault sensors were installed.
- In 2024, a section of single-phase was reconfigured.
- In 2024, additional animal guarding will be installed.
- In 2024, additional fusing will be installed.
- In 2025, three single-phase reclosers will be installed.
- In 2024, an additional Smart Grid device will be installed.
- In 2025, a fuse will be replaced with a single-phase recloser, and additional fusing will be installed.
- In 2024, a section of single-phase will be evaluated for relocation.
- In 2024, a single-phase tie will be evaluated.
- In 2024, a section of single-phase will be reconfigured.
- In 2026, full circuit trimming will be performed.

32 Circuit 24603 -- VARDEN 46-03

Performance Analysis

The VARDEN 46-03 circuit experienced two outages of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On August 7, 2023, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 81 customers for up to 1,257 minutes resulting in 101,769 CMI.

On February 28, 2024, during a period of strong wind, a tree contacted a pole or pole arm causing a recloser to trip to lockout. This outage affected 671 customers for up to 1,470 minutes resulting in 787,079 CMI.

In total, the VARDEN 46-03 circuit had 86 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (59); equipment failure (11); animal contacts (9); nothing found (4); other (2); vehicles (1).

Remedial Actions

- In 2024, several poles were replaced.
- In 2024, two reclosers will be replaced.
- In 2024, proactive fault sensors will be installed.
- In 2024, two single-phase reclosers will be installed.
- In 2024, numerous cutouts will be replaced.
- In 2026, full circuit trimming will be performed.

33 Circuit 45602 -- WOOLRICH 56-02

Performance Analysis

The WOOLRICH 56-02 circuit experienced three outages of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On July 2, 2023, during a period of strong wind, a tree contacted an overhead conductor causing an interruption. This outage affected 729 customers for up to 273 minutes resulting in 38,041 CMI.

On January 26, 2024, a vehicle contacted a pole causing a recloser to trip to lockout. This outage affected 1,008 customers for up to 530 minutes resulting in 462,795 CMI.

On April 14, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a sectionalizing device to be interrupted. This outage affected 1,012 customers for up to 2,071 minutes resulting in 847,119 CMI.

In total, the WOOLRICH 56-02 circuit had 71 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (37); animal contacts (18); equipment failure (10); nothing found (3); vehicles (3).

Remedial Actions

- In 2023, additional animal guarding was installed.
- In 2023, two additional single-phase reclosers were installed.
- In 2023, proactive fault sensors were installed.
- In 2023, full circuit trimming was performed.
- In 2024, a section of three-phase conductor will be relocated.
- In 2024, an existing three-phase recloser will be upgraded to a Smart Grid device.
- In 2024, a three-phase tie line will be evaluated.
- In 2025, a section of difficult-to-access three-phase line will be relocated.

34 Circuit 53901 -- HALIFAX 39-01

Performance Analysis

The HALIFAX 39-01 circuit experienced five outages of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On July 17, 2023, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 264 customers for up to 568 minutes resulting in 141,336 CMI.

On July 24, 2023, during a period of heavy rain, an equipment failure occurred on a pole or pole arm causing a recloser to trip to lockout. This outage affected 239 customers for up to 1,864 minutes resulting in 202,990 CMI.

On July 25, 2023, during a period of heavy rain, a tree contacted a pole or pole arm causing a recloser to trip to lockout. This outage affected 435 customers for up to 233 minutes resulting in 100,819 CMI.

On December 26, 2023, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 717 customers for up to 272 minutes resulting in 45,344 CMI.

On February 13, 2024, during a period of ice/sleet/snow, a tree contacted a pole or pole arm causing a recloser to trip to lockout. This outage affected 117 customers for up to 1,659 minutes resulting in 194,031 CMI.

In total, the HALIFAX 39-01 circuit had 67 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (43); equipment failure (10); nothing found (6); animal contacts (5); contact or dig in (1); other (1); vehicles (1).

Remedial Actions

- In 2023, two single-phase reclosers were installed.
- In 2023, additional fusing was installed.
- In 2024, two additional fuses were installed with another one to be installed.
- In 2024, a new Smart Grid device will be installed.
- In 2024, substation protection capabilities will be upgraded.
- In 2024, poles at a river-crossing location will be upgraded to a larger class and from wood to steel.
- In 2024, proactive fault sensors will be installed.

35 Circuit 40602 -- PINE GROVE 06-02

Performance Analysis

The PINE GROVE 06-02 circuit experienced nine outages of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On February 13, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 158 customers for up to 2,124 minutes resulting in 335,489 CMI.

On February 13, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a load break disconnect switch to be interrupted. This outage affected 38 customers for up to 3,269 minutes resulting in 124,222 CMI.

On February 13, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 409 customers for up to 875 minutes resulting in 337,746 CMI.

On February 13, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 215 customers for up to 4,724 minutes resulting in 327,252 CMI.

On February 13, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 102 customers for up to 3,566 minutes resulting in 243,016 CMI.

On February 16, 2024, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 547 customers for up to 28 minutes resulting in 15,310 CMI.

On March 2, 2024, during a period of heavy rain, an equipment failure occurred on an overhead conductor causing a circuit breaker to trip to lockout. This outage affected 686 customers for up to 119 minutes resulting in 81,380 CMI.

On April 11, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a circuit breaker to trip to lockout. This outage affected 687 customers for up to 353 minutes resulting in 242,462 CMI.

On June 26, 2024, during a period of strong wind, a tree contacted an overhead splice causing a load break fuse to operate. This outage affected 29 customers for up to 4,292 minutes resulting in 124,450 CMI.

In total, the PINE GROVE 06-02 circuit had 106 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (71); equipment failure (16); animal contacts (13); nothing found (5); other (1).

Remedial Actions

- In 2023, full circuit trimming was performed.
- In 2024, proactive fault sensors will be installed.
- In 2024, additional fusing will be installed.
- In 2024, two sections of difficult-to-access conductor will be relocated.
- In 2024, hot spot trimming will be evaluated.

36 Circuit 12402 -- MILFORD 24-02

Performance Analysis

The MILFORD 24-02 circuit experienced six outages of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On August 18, 2023, during a period of strong wind, a tree contacted an overhead conductor causing a circuit breaker to trip to lockout. This outage affected 556 customers for up to 90 minutes resulting in 48,276 CMI.

On January 10, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 125 customers for up to 1,376 minutes resulting in 116,720 CMI.

On January 10, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 105 customers for up to 1,487 minutes resulting in 156,135 CMI.

On April 1, 2024, a vehicle contacted a pole causing a recloser to trip to lockout. This outage affected 370 customers for up to 458 minutes resulting in 169,430 CMI.

On April 3, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 126 customers for up to 1,459 minutes resulting in 147,562 CMI.

On April 3, 2024, during a period of heavy rain, an unidentified issue occurred with an overhead conductor causing a circuit breaker to trip to lockout. This outage affected 559 customers for up to 2,041 minutes resulting in 460,535 CMI.

In total, the MILFORD 24-02 circuit had 74 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (56); animal contacts (6); nothing found (5); contact or dig in (2); equipment failure (2); other (2); vehicles (1).

Remedial Actions

- In 2023, additional fusing was installed.
- In 2024, additional animal guarding will be installed.
- In 2024, a section of single-phase will be evaluated for relocation.
- In 2024, four single-phase reclosers will be installed.
- In 2024, additional fusing will be installed.
- In 2024, a single-phase recloser will be replaced.
- In 2024, multiple sections of single-phase will be evaluated for reconductoring.
- In 2025, full circuit trimming will be performed.

37 Circuit 40601 -- PINE GROVE 06-01

Performance Analysis

The PINE GROVE 06-01 circuit experienced five outages of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On January 14, 2024, during a period of strong wind, a tree contacted a pole or pole arm causing a circuit breaker to trip to lockout. This outage affected 871 customers for up to 1,391 minutes resulting in 696,960 CMI.

On January 16, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a circuit breaker to trip to lockout. This outage affected 871 customers for up to 528 minutes resulting in 36,370 CMI.

On February 13, 2024, during a period of ice/sleet/snow, a tree contacted a pole or pole arm causing a recloser to trip to lockout. This outage affected 747 customers for up to 4,968 minutes resulting in 995,957 CMI.

On February 22, 2024, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 748 customers for up to 207 minutes resulting in 91,704 CMI.

On April 3, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 635 customers for up to 413 minutes resulting in 261,417 CMI.

In total, the PINE GROVE 06-01 circuit had 43 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (32); equipment failure (3); animal contacts (2); nothing found (2); other (2); vehicles (2).

Remedial Actions

- In 2023, full circuit trimming was performed.
- In 2023, a failed pole was replaced.
- In 2024, hot spot tree trimming was performed.
- In 2024, multiple poles were replaced with more to be completed.
- In 2024, additional storm hardening will be performed.
- In 2024, proactive fault sensors will be installed.
- In 2024, additional fusing will be installed.
- In 2025, a new Smart Grid device will be installed.

38 Circuit 46302 -- ROHRSBURG 63-02

Performance Analysis

The ROHRSBURG 63-02 circuit experienced five outages of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On September 7, 2023, during a period of strong wind, a tree contacted a pole or pole arm causing a load break disconnect switch to be interrupted. This outage affected 182 customers for up to 867 minutes resulting in 157,794 CMI.

On November 22, 2023, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 247 customers for up to 1,534 minutes resulting in 248,289 CMI.

On January 10, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 226 customers for up to 493 minutes resulting in 101,639 CMI.

On June 26, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 47 customers for up to 3,004 minutes resulting in 129,239 CMI.

On June 26, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 249 customers for up to 3,284 minutes resulting in 359,547 CMI.

In total, the ROHRSBURG 63-02 circuit had 94 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (67); equipment failure (11); animal contacts (8); nothing found (6); contact or dig in (1); other (1).

Remedial Actions

- In 2024, proactive fault sensors were installed on this circuit.
- In 2024, additional fusing will be installed.
- In 2024, a section of difficult-to-access conductor will be relocated.
- In 2025, full circuit trimming will be performed.

39 Circuit 14403 -- SO SLATINGTON 44-03

Performance Analysis

The SO SLATINGTON 44-03 circuit experienced five outages of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On August 16, 2023, an equipment failure occurred on an overhead splice causing an interruption. This outage affected 555 customers for up to 134 minutes resulting in 35,820 CMI.

On August 18, 2023, during a period of heavy rain, an equipment failure occurred on an overhead conductor causing an interruption. This outage affected 908 customers for up to 399 minutes resulting in 270,781 CMI.

On January 13, 2024, during a period of strong wind, an unidentified issue occurred with an overhead conductor causing a recloser to trip to lockout. This outage affected 294 customers for up to 437 minutes resulting in 128,313 CMI.

On February 13, 2024, during a period of ice/sleet/snow, an unidentified issue occurred with an overhead conductor causing a recloser to trip to lockout. This outage affected 902 customers for up to 961 minutes resulting in 69,223 CMI.

On February 28, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 665 customers for up to 1,843 minutes resulting in 156,800 CMI.

In total, the SO SLATINGTON 44-03 circuit had 112 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (63); equipment failure (21); animal contacts (17); other (6); nothing found (4); vehicles (1).

Remedial Actions

- In 2023, multiple poles were replaced.
- In 2023, a cross-arm and insulator were replaced.
- In 2023, proactive fault sensors were installed.
- In 2023, an existing recloser was replaced with a Smart Grid device.
- In 2023, several dissimilar metal connections were remediated.
- In 2024, several cross arms were replaced after being identified by proactive fault sensors.
- In 2024, two additional Smart Grid devices will be installed.

- In 2024, a section of single-phase will be re-sourced.
- In 2024, a single-phase recloser will be installed.
- In 2024, several sections of conductor will be replaced or relocated.
- In 2024, the protection settings for this circuit will be reviewed.
- In 2025, two new three-phase ties will be constructed.
- In 2025, a section of single-phase will be reconducted.
- In 2026, two sections of single-phase will be reconducted.

40 Circuit 27402 -- KEYSER AVENUE 74-02

Performance Analysis

The KEYSER AVENUE 74-02 circuit experienced three outages of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On September 10, 2023, during a period of heavy rain, the circuit was taken out of service at the direction of a non-PPL authority. This outage affected 772 customers for up to 1,304 minutes resulting in 488,821 CMI.

On June 22, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 215 customers for up to 2,741 minutes resulting in 262,916 CMI.

On June 22, 2024, during a period of strong wind, a tree contacted a pole or pole arm causing an interruption. This outage affected 236 customers for up to 1,472 minutes resulting in 337,071 CMI.

In total, the KEYSER AVENUE 74-02 circuit had 34 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (23); animal contacts (6); nothing found (3); other (1); vehicles (1).

Remedial Actions

- In 2024, an existing recloser was upgraded to a Smart Grid device.
- In 2024, full circuit trimming was performed.
- In 2024, a single-phase recloser will be installed.
- In 2024, additional animal guarding will be installed.
- In 2024, numerous porcelain cutouts will be replaced.
- In 2024, several poles will be replaced.

41 Circuit 67702 -- WERNERSVILLE 77-02

Performance Analysis

The WERNERSVILLE 77-02 circuit experienced three outages of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On July 7, 2023, a tree contacted an overhead conductor causing an interruption. This outage affected 513 customers for up to 368 minutes resulting in 109,720 CMI.

On January 10, 2024, during a period of strong wind, a tree contacted a pole or pole arm causing a circuit breaker to trip to lockout. This outage affected 762 customers for up to 276 minutes resulting in 128,529 CMI.

On April 3, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a circuit breaker to trip to lockout. This outage affected 251 customers for up to 1,681 minutes resulting in 298,574 CMI.

In total, the WERNERSVILLE 77-02 circuit had 44 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (31); equipment failure (5); animal contacts (4); nothing found (2); vehicles (2).

Remedial Actions

- In 2023, an additional fuse was installed.
- In 2024, additional fusing was installed.
- In 2024, several sections of single-phase will be evaluated for reconductoring.
- In 2024 an additional single-phase protective device will be evaluated.
- In 2024, proactive fault sensors will be installed.
- In 2025, a section of single-phase will be recondotored.
- In 2026, full circuit trimming will be performed.

42 Circuit 41802 -- GOWEN CITY 18-02

Performance Analysis

The GOWEN CITY 18-02 circuit experienced three outages of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On November 21, 2023, during a period of heavy rain, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 311 customers for up to 571 minutes resulting in 177,581 CMI.

On December 11, 2023, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 519 customers for up to 420 minutes resulting in 159,372 CMI.

On June 30, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 525 customers for up to 731 minutes resulting in 98,722 CMI.

In total, the GOWEN CITY 18-02 circuit had 58 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (43); animal contacts (7); nothing found (6); equipment failure (1); vehicles (1).

Remedial Actions

- In 2024, tree shielding cable will be installed.
- In 2024, a section of difficult-to-access conductor will be relocated.
- In 2024, a section of three-phase conductor will be storm hardened.
- In 2024, additional animal guarding will be installed.
- In 2024, proactive fault sensors will be installed.
- In 2024, a three-phase tie line will be evaluated.
- In 2025, a section of difficult-to-access conductor will be relocated.

43 Circuit 23101 -- MOSCOW 31-01

Performance Analysis

The MOSCOW 31-01 circuit experienced four outages of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On October 11, 2023, an equipment failure occurred on a pole or pole arm causing a recloser to trip to lockout. This outage affected 453 customers for up to 589 minutes resulting in 229,763 CMI.

On January 9, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing an interruption. This outage affected 453 customers for up to 1,250 minutes resulting in 121,361 CMI.

On April 3, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 309 customers for up to 1,317 minutes resulting in 406,854 CMI.

On April 3, 2024, during a period of strong wind, a tree contacted a pole or pole arm causing a recloser to trip to lockout. This outage affected 372 customers for up to 414 minutes resulting in 153,918 CMI.

In total, the MOSCOW 31-01 circuit had 90 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (59); animal contacts (12); equipment failure (12); nothing found (3); vehicles (3); contact or dig in (1).

Remedial Actions

- In 2024, additional animal guarding was installed.
- In 2024, several poles will be replaced.
- In 2024, an existing recloser will be upgraded to a Smart Grid device.
- In 2025, full circuit trimming will be performed.

44 Circuit 27502 -- WEISSPORT 75-02

Performance Analysis

The WEISSPORT 75-02 circuit experienced four outages of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On September 10, 2023, during a period of strong wind, a tree contacted an overhead conductor causing a load break disconnect switch to be interrupted. This outage affected 1,609 customers for up to 130 minutes resulting in 88,983 CMI.

On October 7, 2023, during a period of heavy rain, a tree contacted a pole or pole arm causing a recloser to trip to lockout. This outage affected 1,607 customers for up to 647 minutes resulting in 230,137 CMI.

On April 11, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 2,789 customers for up to 321 minutes resulting in 214,986 CMI.

On June 24, 2024, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 2,802 customers for up to 394 minutes resulting in 935,348 CMI.

In total, the WEISSPORT 75-02 circuit had 46 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (30); animal contacts (8); equipment failure (7); nothing found (1).

Remedial Actions

- In 2024, additional fusing was installed with more to be evaluated.
- In 2024, a sectionalizing device will be relocated and another installed.
- In 2024, a three-phase tie line will be evaluated.
- In 2024, two single-phase reclosers will be installed.
- In 2025, full circuit trimming will be performed.

45 Circuit 44701 -- MUNCY 47-01

Performance Analysis

The MUNCY 47-01 circuit experienced three outages of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On July 18, 2023, an equipment failure occurred on a pole or pole arm causing a circuit breaker to trip to lockout. This outage affected 1,170 customers for up to 281 minutes resulting in 100,530 CMI.

On January 28, 2024, during a period of heavy rain, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 715 customers for up to 131 minutes resulting in 58,052 CMI.

On June 29, 2024, during a period of strong wind, a tree contacted an overhead conductor causing an interruption. This outage affected 159 customers for up to 744 minutes resulting in 119,082 CMI.

In total, the MUNCY 47-01 circuit had 62 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (38); animal contacts (11); equipment failure (9); vehicles (2); contact or dig in (1); nothing found (1).

Remedial Actions

- In 2024, a set of two-phase manual disconnects was installed.
- In 2024, additional animal guarding will be installed.
- In 2024, an additional line inspection will be performed for high-risk segments.
- In 2026, full circuit trimming will be performed.

46 Circuit 13501 -- MC MICHAELS 35-01

Performance Analysis

The MC MICHAELS 35-01 circuit experienced four outages of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On September 8, 2023, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 131 customers for up to 830 minutes resulting in 108,602 CMI.

On November 25, 2023, an equipment failure occurred on an overhead splice causing an interruption. This outage affected 718 customers for up to 280 minutes resulting in 68,542 CMI.

On December 30, 2023, a vehicle contacted a pole causing a recloser to trip to lockout. This outage affected 573 customers for up to 1,023 minutes resulting in 450,204 CMI.

On June 26, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 168 customers for up to 983 minutes resulting in 165,086 CMI.

In total, the MC MICHAELS 35-01 circuit had 38 outages between July 2023 and June 2024, with the causes breaking down as follows: animal contacts (13); tree related (11); equipment failure (10); vehicles (2); contact or dig in (1); nothing found (1).

Remedial Actions

- In 2023, the substation getaway was rebuilt and relocated.
- In 2024, full circuit trimming was performed.
- In 2024, additional animal guarding will be installed.
- In 2024, an additional Smart Grid device will be installed.
- In 2024, a section of this circuit will be undergrounded.
- In 2024, numerous porcelain cutouts will be replaced.
- In 2024, proactive fault sensors will be installed.

47 Circuit 15704 -- TANNERSVILLE 57-04

Performance Analysis

The TANNERSVILLE 57-04 circuit experienced three outages of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On January 13, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 109 customers for up to 975 minutes resulting in 106,275 CMI.

On March 11, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 653 customers for up to 637 minutes resulting in 273,842 CMI.

On June 2, 2024, a vehicle contacted a pole causing a recloser to trip to lockout. This outage affected 533 customers for up to 559 minutes resulting in 294,823 CMI.

In total, the TANNERSVILLE 57-04 circuit had 80 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (51); animal contacts (24); equipment failure (3); nothing found (1); vehicles (1).

Remedial Actions

- In 2024, several poles were replaced.
- In 2024, additional animal guarding will be installed.
- In 2025, three single-phase reclosers will be installed.
- In 2025, a voltage regulator will be installed.
- In 2025, an existing recloser will be replaced with a Smart Grid device.
- In 2025, several new sectionalizing devices will be installed.

48 Circuit 28801 -- LAKEVILLE 88-01

Performance Analysis

The LAKEVILLE 88-01 circuit experienced six outages of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On February 29, 2024, during a period of strong wind, an equipment failure occurred on a pole or pole arm causing a recloser to trip to lockout. This outage affected 1,820 customers for up to 24 minutes resulting in 41,860 CMI.

On March 11, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 719 customers for up to 1,665 minutes resulting in 776,200 CMI.

On March 11, 2024, during a period of strong wind, a tree contacted a pole or pole arm causing a recloser to trip to lockout. This outage affected 456 customers for up to 1,605 minutes resulting in 731,880 CMI.

On March 11, 2024, during a period of strong wind, a tree contacted an overhead conductor causing an interruption. This outage affected 92 customers for up to 1,634 minutes resulting in 150,238 CMI.

On April 3, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a load break fuse to operate. This outage affected 40 customers for up to 2,683 minutes resulting in 107,294 CMI.

On April 3, 2024, during a period of strong wind, a tree contacted an overhead conductor causing an interruption. This outage affected 1,048 customers for up to 2,800 minutes resulting in 670,900 CMI.

In total, the LAKEVILLE 88-01 circuit had 89 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (58); animal contacts (20); equipment failure (7); nothing found (2); other (1); vehicles (1).

Remedial Actions

- In 2024, several cross-arms were replaced.
- In 2025, two single-phase reclosers will be installed.
- In 2025, an existing recloser will be upgraded to a Smart Grid device.

49 Circuit 16402 -- MOUNT POCONO 64-02

Performance Analysis

The MOUNT POCONO 64-02 circuit experienced three outages of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On August 8, 2023, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 138 customers for up to 1,041 minutes resulting in 143,525 CMI.

On September 7, 2023, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 281 customers for up to 511 minutes resulting in 119,083 CMI.

On March 11, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a sectionalizing device to be interrupted. This outage affected 280 customers for up to 1,771 minutes resulting in 290,915 CMI.

In total, the MOUNT POCONO 64-02 circuit had 104 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (75); animal contacts (11); equipment failure (10); nothing found (4); vehicles (4).

Remedial Actions

- In 2023, several poles were replaced.
- In 2023, proactive fault sensors were installed.
- In 2023, several poles were replaced.
- In 2023, a section of underground conductor was replaced.
- In 2024, additional animal guarding will be installed.
- In 2025, additional fusing will be installed.
- In 2025, a single-phase tie will be installed.
- In 2025, a section of three-phase conductor will be replaced.
- In 2025, several poles will be replaced.

50 Circuit 16802 -- WAGNERS 68-02

Performance Analysis

The WAGNERS 68-02 circuit experienced four outages of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On October 18, 2023, a vehicle contact caused an interruption. This outage affected 308 customers for up to 346 minutes resulting in 106,497 CMI.

On April 3, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 57 customers for up to 2,411 minutes resulting in 137,424 CMI.

On June 24, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 695 customers for up to 305 minutes resulting in 187,726 CMI.

On June 26, 2024, during a period of strong wind, a tree contacted an overhead conductor causing an interruption. This outage affected 84 customers for up to 1,443 minutes resulting in 120,351 CMI.

In total, the WAGNERS 68-02 circuit had 70 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (51); animal contacts (9); equipment failure (4); nothing found (4); vehicles (2).

Remedial Actions

- In 2023, an existing recloser was replaced.
- In 2023, several poles were replaced or reinforced.
- In 2024, additional animal guarding will be installed.
- In 2024, an existing recloser will be replaced.
- In 2024, an additional sectionalizing device will be installed.

51 Circuit 27102 -- GREENFIELD 71-02

Performance Analysis

The GREENFIELD 71-02 circuit experienced five outages of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On September 9, 2023, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 418 customers for up to 453 minutes resulting in 189,354 CMI.

On January 9, 2024, during a period of strong wind, a tree contacted a pole or pole arm causing a recloser to trip to lockout. This outage affected 403 customers for up to 1,292 minutes resulting in 103,244 CMI.

On January 14, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a circuit breaker to trip to lockout. This outage affected 895 customers for up to 277 minutes resulting in 36,452 CMI.

On April 3, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a load break fuse to operate. This outage affected 897 customers for up to 3,187 minutes resulting in 1,348,043 CMI.

On April 4, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 96 customers for up to 1,340 minutes resulting in 112,066 CMI.

In total, the GREENFIELD 71-02 circuit had 82 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (60); animal contacts (9); equipment failure (6); vehicles (5); contact or dig in (1); nothing found (1).

Remedial Actions

- In 2023, three single-phase reclosers were installed.
- In 2023, additional animal guarding was installed with more to be installed this year.
- In 2023, several porcelain cutouts were replaced.
- In 2024, several poles will be replaced.
- In 2024, a section of this circuit will be reconductored or relocated.
- In 2024, four single-phase reclosers will be installed.
- In 2024, proactive fault sensors will be installed.
- In 2024, a section of this circuit will be transferred to a neighboring circuit.
- In 2025, a section of this circuit will be reconductored.
- In 2025, an additional Smart Grid device will be installed.

52 Circuit 26401 -- INDIAN ORCHARD 64-01

Performance Analysis

The INDIAN ORCHARD 64-01 circuit experienced five outages of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On September 16, 2023, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 616 customers for up to 141 minutes resulting in 86,732 CMI.

On September 24, 2023, during a period of strong wind, a tree contacted an overhead conductor causing a load break disconnect switch to be interrupted. This outage affected 722 customers for up to 345 minutes resulting in 37,250 CMI.

On March 11, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 616 customers for up to 194 minutes resulting in 119,504 CMI.

On April 3, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a load break fuse to operate. This outage affected 47 customers for up to 2,701 minutes resulting in 126,913 CMI.

On June 27, 2024, during a period of lightning, an unidentified issue occurred with an overhead splice causing a recloser to trip to lockout. This outage affected 1,461 customers for up to 560 minutes resulting in 475,320 CMI.

In total, the INDIAN ORCHARD 64-01 circuit had 124 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (72); animal contacts (26); equipment failure (14); nothing found (7); other (5).

Remedial Actions

- In 2023, a section of difficult-to-access conductor was relocated.
- In 2024, several poles were replaced with more to be replaced this year.
- In 2024, additional animal guarding will be installed.
- In 2024, proactive fault sensors will be installed.
- In 2024, a section of difficult-to-access conductor will be relocated.
- In 2025, full circuit trimming will be performed.
- In 2025, four single-phase reclosers will be installed.

53 Circuit 40101 -- HUNTER 01-01

Performance Analysis

The HUNTER 01-01 circuit experienced nine outages of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On December 19, 2023, a vehicle contacted a pole causing a circuit breaker to trip to lockout. This outage affected 925 customers for up to 448 minutes resulting in 380,719 CMI.

On January 9, 2024, during a period of strong wind, a tree contacted an overhead switch causing a recloser to trip to lockout. This outage affected 637 customers for up to 156 minutes resulting in 99,372 CMI.

On January 9, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a load break fuse to operate. This outage affected 687 customers for up to 1,249 minutes resulting in 182,906 CMI.

On January 13, 2024, during a period of heavy rain, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 688 customers for up to 64 minutes resulting in 43,708 CMI.

On February 13, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 53 customers for up to 3,388 minutes resulting in 141,168 CMI.

On February 13, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 691 customers for up to 4,792 minutes resulting in 739,528 CMI.

On February 13, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a circuit breaker to trip to lockout. This outage affected 2,170 customers for up to 7 minutes resulting in 15,190 CMI.

On February 28, 2024, during a period of strong wind, an equipment failure occurred on an overhead conductor causing a recloser to trip to lockout. This outage affected 692 customers for up to 14 minutes resulting in 9,224 CMI.

On June 26, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 692 customers for up to 651 minutes resulting in 450,436 CMI.

In total, the HUNTER 01-01 circuit had 82 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (54); equipment failure (11); nothing found (8); animal contacts (6); vehicles (2); contact or dig in (1).

Remedial Actions

- In 2023, a pole was replaced.
- In 2024, a single-phase recloser will be installed.
- In 2024, two sections of this circuit will be storm hardened.
- In 2024, proactive fault sensors will be installed.
- In 2024, additional fusing will be installed.
- In 2024, several cross-arms will be replaced.
- In 2024, a section of three-phase will be evaluated for reconductoring.
- In 2025, full circuit trimming will be performed.
- In 2026, a new tie line will be constructed.

54 Circuit 28402 -- HARTLAND 84-02

Performance Analysis

The HARTLAND 84-02 circuit experienced two outages of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On July 8, 2023, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 912 customers for up to 440 minutes resulting in 212,082 CMI.

On February 13, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 408 customers for up to 365 minutes resulting in 148,907 CMI.

In total, the HARTLAND 84-02 circuit had 72 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (52); equipment failure (9); animal contacts (4); vehicles (4); nothing found (2); contact or dig in (1).

Remedial Actions

- In 2024, the protection settings on this circuit were reviewed and optimized.
- In 2024, a section of line that was contacting trees due to a foreign utility pole issue was remediated.
- In 2024, a line clearance issue will be remediated.
- In 2024, additional fusing will be installed.
- In 2024, additional fusing will be evaluated.
- In 2024, a section of conductor will be evaluated for undergrounding.
- In 2024, additional sectionalizing will be evaluated.
- In 2024, two new reclosers will be evaluated.
- In 2026, two sections of difficult-to-access single-phase conductor will be relocated.

55 Circuit 24502 -- GOULDSBORO 45-02

Performance Analysis

The GOULDSBORO 45-02 circuit experienced two outages of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On April 3, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 183 customers for up to 1,296 minutes resulting in 219,960 CMI.

On June 24, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 185 customers for up to 587 minutes resulting in 108,570 CMI.

In total, the GOULDSBORO 45-02 circuit had 73 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (53); animal contacts (9); equipment failure (7); other (3); vehicles (1).

Remedial Actions

- In 2023, a section of difficult-to-access conductor was relocated.
- In 2024, numerous porcelain cutouts will be replaced.
- In 2024, additional animal guarding will be installed.
- In 2025, full circuit trimming will be performed.

56 Circuit 59202 -- THOMPSONTOWN 92-02

Performance Analysis

The THOMPSONTOWN 92-02 circuit experienced five outages of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On August 27, 2023, during a period of strong wind, a tree contacted an overhead conductor causing an interruption. This outage affected 1,632 customers for up to 165 minutes resulting in 38,985 CMI.

On January 10, 2024, during a period of strong wind, a tree contacted an overhead conductor causing an interruption. This outage affected 902 customers for up to 305 minutes resulting in 155,098 CMI.

On January 17, 2024, an equipment failure occurred on an overhead splice causing an interruption. This outage affected 972 customers for up to 187 minutes resulting in 29,799 CMI.

On March 15, 2024, an equipment failure occurred on an overhead conductor causing an interruption. This outage affected 963 customers for up to 174 minutes resulting in 77,508 CMI.

On June 26, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 163 customers for up to 1,368 minutes resulting in 222,850 CMI.

In total, the THOMPSONTOWN 92-02 circuit had 86 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (54); equipment failure (16); nothing found (8); animal contacts (5); vehicles (3).

Remedial Actions

- In 2023, a recloser was upgraded to remote operability.
- In 2024, repairs were made to damaged conductor.
- In 2024, proactive fault sensors will be installed.
- In 2024, a damaged switch and associated insulators will be replaced.
- In 2024, a single-phase recloser will be installed.
- In 2024, resourcing a section of this line will be evaluated.
- In 2025, a recloser will be replaced.

57 Circuit 13905 -- SEIDERSVILLE 39-05

Performance Analysis

The SEIDERSVILLE 39-05 circuit experienced three outages of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On August 7, 2023, during a period of strong wind, a tree contacted an overhead conductor causing a load break fuse to operate. This outage affected 146 customers for up to 2,432 minutes resulting in 245,868 CMI.

On March 23, 2024, during a period of heavy rain, a tree contacted an overhead conductor causing an interruption. This outage affected 3,110 customers for up to 173 minutes resulting in 153,929 CMI.

On June 26, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 93 customers for up to 1,488 minutes resulting in 126,528 CMI.

In total, the SEIDERSVILLE 39-05 circuit had 53 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (27); animal contacts (14); equipment failure (6); other (3); nothing found (2); vehicles (1).

Remedial Actions

- In 2024, the circuit breaker was replaced.
- In 2024, full circuit trimming will be performed.
- In 2024, several poles will be replaced.
- In 2024, proactive fault sensors will be installed.
- In 2024, a Smart Grid device will be installed.
- In 2024, hot spot tree trimming will be performed.

58 Circuit 41901 -- REED 19-01

Performance Analysis

The REED 19-01 circuit experienced two outages of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On July 20, 2023, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 310 customers for up to 365 minutes resulting in 108,019 CMI.

On February 13, 2024, during a period of ice/sleet/snow, a tree contacted an overhead transformer causing a recloser to trip to lockout. This outage affected 424 customers for up to 2,342 minutes resulting in 817,829 CMI.

In total, the REED 19-01 circuit had 30 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (23); equipment failure (3); animal contacts (2); nothing found (1); vehicles (1).

Remedial Actions

- In 2023, approximately 50 poles were replaced along a section of three-phase conductor.
- In 2024, a three-phase Smart Grid device was replaced.
- In 2024, proactive fault sensors will be installed.
- In 2024, a three-phase recloser will be replaced with a Smart Grid device.
- In 2024, an additional three-phase sectionalizing device will be installed.
- In 2024, additional fusing will be installed.
- In 2024, an additional recloser will be evaluated for this circuit.

59 Circuit 22601 -- KIMBLES 26-01

Performance Analysis

The KIMBLES 26-01 circuit experienced two outages of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On December 11, 2023, during a period of strong wind, a tree contacted an overhead conductor causing a circuit breaker to trip to lockout. This outage affected 1,253 customers for up to 385 minutes resulting in 292,818 CMI.

On February 16, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 323 customers for up to 597 minutes resulting in 110,162 CMI.

In total, the KIMBLES 26-01 circuit had 48 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (22); animal contacts (13); equipment failure (8); nothing found (4); vehicles (1).

Remedial Actions

- In 2024, two single-phase reclosers will be installed.
- In 2024, an existing recloser will be replaced.
- In 2024, additional animal guarding will be installed.

60 Circuit 61001 -- DONERVILLE 10-01

Performance Analysis

The DONERVILLE 10-01 circuit experienced two outages of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On July 27, 2023, during a period of strong wind, a tree contacted a pole or pole arm causing a circuit breaker to trip to lockout. This outage affected 2,020 customers for up to 371 minutes resulting in 176,980 CMI.

On January 8, 2024, a vehicle contacted a pole causing a circuit breaker to trip to lockout. This outage affected 682 customers for up to 251 minutes resulting in 171,147 CMI.

In total, the DONERVILLE 10-01 circuit had 16 outages between July 2023 and June 2024, with the causes breaking down as follows: animal contacts (6); tree related (6); equipment failure (2); nothing found (1); vehicles (1).

Remedial Actions

- In 2024, additional fusing was installed.
- In 2024, animal guarding was installed with more to be performed.
- In 2024, an additional three-phase recloser will be installed.
- In 2024, an additional Smart Grid device will be installed.
- In 2024, an existing three-phase recloser will be reprogrammed for single-phase operation.
- In 2024, a pole with multiple strikes will be relocated.
- In 2025, full circuit trimming will be performed.

61 Circuit 20401 -- ASHFIELD 04-01

Performance Analysis

The ASHFIELD 04-01 circuit experienced four outages of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On January 13, 2024, during a period of strong wind, a tree contacted an overhead conductor. This outage affected 919 customers for up to 707 minutes resulting in 649,733 CMI.

On January 21, 2024, during a period of strong wind, an equipment failure occurred on an overhead conductor causing an interruption. This outage affected 1,249 customers for up to 242 minutes resulting in 52,483 CMI.

On March 11, 2024, an unidentified issue occurred with an overhead conductor causing a circuit breaker to trip to lockout. This outage affected 322 customers for up to 338 minutes resulting in 108,771 CMI.

On June 26, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 193 customers for up to 1,147 minutes resulting in 221,307 CMI.

In total, the ASHFIELD 04-01 circuit had 88 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (58); equipment failure (13); nothing found (9); animal contacts (7); vehicles (1).

Remedial Actions

- In 2023, remotely operable tie devices were commissioned.
- In 2023, a remotely operable device was reprogrammed.
- In 2024, a new single-phase recloser was installed.
- In 2024, an additional Smart Grid device was installed with another to be installed this year.
- In 2024, a section of conductor was removed.
- In 2024, single-phase fuse coordination will be optimized.
- In 2024, ten additional fuses will be installed.
- In 2024, proactive fault sensors will be installed.
- In 2025, a single-phase tie to the ASHFIELD 04-03 circuit will be re-evaluated.

62 Circuit 15701 -- TANNERSVILLE 57-01

Performance Analysis

The TANNERSVILLE 57-01 circuit experienced one outage of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On March 11, 2024, during a period of strong wind, a tree contacted an overhead conductor causing an interruption. This outage affected 145 customers for up to 1,617 minutes resulting in 234,391 CMI.

In total, the TANNERSVILLE 57-01 circuit had 59 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (37); equipment failure (11); animal contacts (6); other (3); contact or dig in (1); vehicles (1).

Remedial Actions

- In 2024, additional fusing was installed.
- In 2024, additional animal guarding will be installed.
- In 2024, a section of three-phase will be extended.
- In 2025, a single-phase recloser will be installed.
- In 2025, a section of this circuit in a difficult-to-access location will be relocated.
- In 2025, an existing recloser will be replaced with a Smart Grid device.

63 Circuit 58402 -- MOUNT ROCK 84-02

Performance Analysis

The MOUNT ROCK 84-02 circuit experienced one outage of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On June 29, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 746 customers for up to 285 minutes resulting in 211,916 CMI.

In total, the MOUNT ROCK 84-02 circuit had 88 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (51); animal contacts (17); equipment failure (14); nothing found (5); other (1).

Remedial Actions

- In 2023, additional fusing was installed.
- In 2024, six additional fuses were installed.
- In 2024, full circuit trimming will be performed.
- In 2024, a new tie line will be installed.
- In 2024, a three-phase tie will be evaluated for upgrade to remote operability.
- In 2024, an additional three-phase sectionalizing device will be evaluated
- In 2024, proactive fault sensors will be installed.

64 Circuit 63403 -- HONEYBROOK 34-03

Performance Analysis

The HONEYBROOK 34-03 circuit experienced one outage of over 100,000 CMI or 500 CI between July 2023 and June 2024.

On July 21, 2023, during a period of lightning, an unidentified issue occurred with an overhead switch causing a recloser to trip to lockout. This outage affected 2,649 customers for up to 256 minutes resulting in 141,154 CMI.

In total, the HONEYBROOK 34-03 circuit had 63 outages between July 2023 and June 2024, with the causes breaking down as follows: tree related (35); equipment failure (14); animal contacts (7); contact or dig in (2); nothing found (2); other (2); vehicles (1).

Remedial Actions

- In 2023, additional fusing was installed.
- In 2024, additional fusing will be installed.
- In 2024, proactive fault sensors will be installed.
- In 2024, a single-phase protective device will be evaluated.
- In 2024, several sections of this line will be evaluated for reconductoring.

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.*

The following table shows a breakdown of service interruption causes for the 12 months ended at the current quarter.

Cause Description	Trouble Cases	Percent of Trouble Cases	Customer Interruptions	Percent of Customer Interruptions	Customer Minutes	Percent of Customer Minutes
Animals	4,953	16.0%	77,369	4.6%	6,485,478	1.2%
Contact / Dig-In	182	0.6%	8,483	0.5%	1,042,401	0.2%
Directed by Non-PPL Authority	55	0.2%	3,675	0.2%	1,135,684	0.2%
Equipment Failures	5,357	17.3%	294,220	17.6%	45,280,015	8.5%
Improper Design	3	0.0%	1,226	0.1%	71,848	0.0%
Improper Installation	5	0.0%	3,647	0.2%	351,180	0.1%
Improper Operation	9	0.0%	2,510	0.2%	97,552	0.0%
Nothing Found	1,449	4.7%	93,617	5.6%	14,554,300	2.7%
Other Controllable	65	0.2%	4,420	0.3%	234,495	0.0%
Other Non-Control	524	1.7%	48,291	2.9%	10,684,383	2.0%
Other Public	33	0.1%	7,620	0.5%	424,870	0.1%
Tree Related	17,566	56.7%	1,020,649	61.2%	435,403,646	81.8%
Unknown	1	0.0%	5	0.0%	547	0.0%
Vehicles	787	2.5%	101,322	6.1%	16,436,464	3.1%
Total	30,989	100.0%	1,667,054	100.0%	532,202,862	100.0%

Analysis of causes contributing to the majority of service interruptions:

Weather Conditions: PPL Electric records weather conditions, such as wind or lightning, as contributing factors to service interruptions, but does not code them as direct interruption causes. Therefore, some fluctuations in cause categories, especially tree- and equipment-related causes, are attributable to weather variations. For the current reporting period, weather was considered a significant contributing cause in 59% of cases, 70% of customer interruptions, and 89% of CMI.

Tree Related: Vegetation is one of the largest single contributors to the number of cases of trouble, customer interruptions and customer minutes. For the current reporting period, approximately 86% of the cases of trouble, 89% of the customer interruptions and 96% of the customer minutes attributed to tree related outages were weather-related.

Animals: Animals accounted for approximately 19% of PPL Electric's cases of trouble. Although this represents a significant number of cases, the effect on SAIFI and CAIDI is small because approximately 74% of the number of cases of trouble were associated with individual distribution transformers. However, when animal contacts affect substation equipment, the effect may be widespread and potentially can interrupt thousands of customers on multiple circuits. In addition to guarding new distribution transformers and substations, PPL Electric initiated distribution and substation animal guarding programs in 2009 to focus systematically on protecting existing facilities most at risk of incurring animal-caused interruptions. A complete effectiveness review of this strategy is being evaluated.

Vehicles: Although vehicles cause a small percentage of the number of cases of trouble, they can account for a larger percentage of customer interruptions and customer minutes, because main distribution lines generally are located along major thoroughfares with higher traffic densities. In addition, vehicle-related cases often result in extended repair times to replace broken poles. PPL Electric has a program to identify and relocate poles that are subject to multiple vehicle hits.

Equipment Failure: Equipment failure is one of the largest single contributors to the number of cases of trouble, customer interruptions and customer minutes. However, approximately 34% of the cases of trouble, 40% of the customer interruptions and 60% of the customer minutes attributed to equipment failure were weather-related and, as such, are not considered to be strong indicators of equipment condition or performance.

Nothing Found: This description is recorded when the responding crew can find no cause for the interruption. That is, when there is no evidence of equipment failure, damage, or contact after a line patrol is completed. For example, during heavy thunderstorms, when a line fuse blows or a single-phase OCR locks open and when closed for test, the fuse holds, or the OCR remains closed, and a patrol reveals nothing.

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.)*

Inspection & Maintenance Goals/Objectives	Annual Budget (units)	2nd Quarter		Year-to-date	
		Budget	Actual	Budget	Actual
Transmission					
Transmission C-tag poles (# of poles)	57	8	8	11	11
Transmission arm replacements (# of arms)	2	1	1	1	1
Transmission air break switch inspections (# of switches)	1	0	0	0	0
Transmission surge arrester installations (# of sets)	4	0	0	1	1
Transmission structure inspections (# of activities)	6,859	6,859	1,125	1,125	4,653
Transmission tree side trim-Bulk Power (linear feet)	N/A	N/A	13,753	N/A	18,198
Transmission herbicide-Bulk Power (# of acres)	N/A	N/A	1	N/A	43
Transmission reclearing (# of miles) BES Only	823	134	134	438	438
Transmission reclearing (# of miles) 69 kV	1,642	104	104	658	658
Transmission reclearing (# of miles) 138 kV	88	0	0	45	45
Transmission danger tree removals-Bulk Power (# of trees)	N/A	N/A	631	N/A	1,310
Substation					
Substation batteries (# of activities) ³	122	0	0	122	122
Circuit breakers (# of activities)	0	0	3	0	3
Substation inspections (# of activities)	1250	313	433	626	855
Transformer maintenance (# of activities)	374	94	427	188	524

³ An issue was identified with closing out substation maintenance activities in 2023 leading to artificially low numbers in 2023 and high numbers in 2024. We are working on correcting this issue. Inspection and maintenance activities in both years were generally executed according to schedule

Inspection & Maintenance Goals/Objectives	Annual Budget (units)	2nd Quarter		Year-to-date	
		Budget	Actual	Budget	Actual
Distribution					
Distribution C-tag poles replaced (# of poles)	2,250	563	142	1,126	293
C-truss distribution poles (# of poles) ⁴	14,000	0	0	0	0
Capacitor (MVAR added)	N/A	0	0	0	0
OCR Replacements (# of)	104	22	27	44	31
Distribution pole inspections (# of poles)	50,000	16,750	16,750	28,409	28,409
Distribution line inspections (miles)	7,528	700	1,565	2,582	2,808
Group re-lamping (# of lamps)	0	0	0	0	0
Test sections of underground distribution cable	N/A	N/A	28	N/A	46
Distribution tree trimming (# of miles)	4,028	1,097	1,097	2,355	2,355
Distribution herbicide (# of acres)	N/A	N/A	212	N/A	393
Distribution >18" removals within R/W (# of trees)	N/A				
Distribution hazard tree removals outside R/W (# of trees)	N/A	N/A	2,536	N/A	4,834
LTN manhole inspections (# of) ⁵	0	0	0	0	0
LTN vault inspections (# of)	0	0	0	0	0
LTN network protector overhauls (# of)	0	0	0	0	0
LTN reverse power trip testing (# of)	0	0	0	0	0

⁴ C-truss poles will begin in early Q3.

⁵ Due to planned 2024 LTN upgrades, inspections will not be required.

- 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 or FERC account code as available.*

The following table provides the operation and maintenance (O&M) expenses for PPL Electric which includes the work identified in response to Item (6).

Activity	2nd Quarter			Year-to-date	
	Annual Budget (000s)	Budget (\$000)	Actual (\$000)	Budget (\$000)	Actual (\$000)
Provide Electric Service	6,371	1,754	2,474	3,478	3,842
Vegetation Management	29,115	8,490	9,428	16,029	23,534
Customer Response	54,995	13,281	29,309	25,908	45,331
Reliability Maintenance	19,034	5,027	6,172	9,810	11,024
System Upgrade	194	100	17	100	16
Customer Service/Accounts	67,720	11,108	36,136	30,817	100,617
Others	47,948	13,240	11,943	27,257	26,644
Total O&M Expenses	225,376	53,000	95,479	113,398	211,008

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.*

The following table provides the capital expenditures for PPL Electric which includes transmission and distribution (“T&D”) activities.

Activity	2nd Quarter			Year-to-date	
	Annual Budget (000s)	Budget (\$000)	Actual (\$000)	Budget (\$000)	Actual (\$000)
New Service/Revenue	118,093	31,957	33,696	58,743	70,348
System Upgrade	388,584	116,886	90,396	184,440	143,072
Reliability & Maintenance	530,530	123,494	133,811	237,385	241,359
Customer Response	63,181	14,708	33,268	28,136	76,387
Other	22,823	5,097	(2,541)	9,567	6,411
Total	1,123,211	292,142	288,630	518,271	537,577

PPL Electric Utilities Corporation

Worst Performing Circuit Definition

PPL Electric uses an equal weighting of circuit SAIDI and system SAIFI contribution over the previous four quarters to define the worst performing circuits on its system. IEEE Major Event days are excluded. This ranking system was put in place as of the first quarter of 2020, for the following reasons:

- Increased targeting of problem areas versus circuits that may be reasonable performers but are simply long circuits that have been in storms.
- It prioritizes the circuits contributing the most toward system SAIFI.
- It is less biased towards long, rural circuits and more reflective of the customer experience.

PPL Electric Utilities Corporation

Job Descriptions

Transmission and Distribution

Groundhand	<ul style="list-style-type: none">• Performs manual labor and assists employees in higher job classifications.
Helper	<ul style="list-style-type: none">• Performs semi-skilled labor at any work location on de-energized overhead and underground transmission, and distribution facilities to prepare the employee for entrance into the Journeyman Lineman Apprenticeship Program.
Journeyman Lineman	<ul style="list-style-type: none">• Works alone or as part of a crew on the maintenance, operation, and construction activities of the transmission and distribution systems associated with, but not limited to, PPL Electric facilities.
Journeyman Lineman-Trainee	<ul style="list-style-type: none">• Works alone or as part of a crew on the maintenance, operation, and construction activities of the transmission and distribution systems associated with, but not limited to, PPL Electric facilities.
Lineman Leader	<ul style="list-style-type: none">• Responsible for completing assigned work by directing one or multiple groups of employees involved in the maintenance, operation, and construction activities of the transmission and distribution systems associated with, but not limited to, PPL Electric facilities.• Engage in and perform work along with providing the necessary leadership, all-around knowledge, program, judgment, and experience to produce a quality job.• Performs all the direct duties of the Journeyman Lineman when not acting as a Lineman Leader.
Troubleman	<ul style="list-style-type: none">• Investigates and resolves trouble calls, voltage abnormalities on transmission and distribution systems associated with, but not limited to, PPL Electric facilities.

Appendix B

Electrical

Electrician Leader - Substation - Network - Underground	<ul style="list-style-type: none">• Responsible for completing assigned work by directing one or multiple groups of employees involved in the construction and maintenance activities of the transmission and distribution systems associated with, but not limited to, PPL Electric facilities.• Engage in and perform work along with providing the necessary leadership, all-around knowledge, program, judgment, and experience to produce a quality job.• Performs all direct duties of the Journeyman Electrician when not acting as a leader.
Helper - Substation - Network - Underground	<ul style="list-style-type: none">• Performs manual labor at any work location including those areas containing non-exposed energized electrical equipment, and to prepare the employee for entrance into the Apprenticeship Program.
Laborer - Substation - Network - Underground	<ul style="list-style-type: none">• Performs manual labor and assists employees in higher job classifications.
Journeyman Electrician - Substation - Network - Underground	<ul style="list-style-type: none">• Normally under limited supervision performs and is responsible for work associated with, but not limited to, PPL Electric facilities involving the highest degree of skill in construction and maintenance work associated with substations, LTN or underground distribution and transmission.• Uses microprocessor-based equipment for troubleshooting and revising relay logic and its control systems related to the field services electrical discipline.

Appendix B

<p>Journeyman Electrician - Trainee</p> <ul style="list-style-type: none">- Substation- Network- Underground	<ul style="list-style-type: none">• Normally under limited supervision performs and is responsible for work associated with, but not limited to, PPL Electric facilities involving the highest degree of skill in construction and maintenance work associated with substations, LTN or underground distribution and transmission.• Uses microprocessor-based equipment for troubleshooting and revising relay logic and its control systems related to the field services electrical discipline.
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