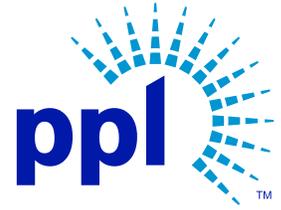


Kimberly A. Klock
Assistant General Counsel

PPL
645 Hamilton Street, Suite 700
Allentown, PA 18101
Tel. 610.774.5696 Fax 610.774.4102
KKlock@pplweb.com



E-FILE

February 3, 2025

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 December 31, 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 December 31, 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 February 3, 2025, 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 written in a cursive, flowing style.

Kimberly A. Klock

Enclosures

cc via email: Melanie El Atieh, Esquire
NazAarah Sabree

Mr. Daniel Searfoorce



PPL Electric Utilities

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

January 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 fourth quarter of 2024.

However, it is worth noting that PPL Electric saw six storms of over 1,000 cases in 2024. Prior to the implementation of FLISR (Fault Location, Isolation and Service Restoration), with one exception every storm of 1,000 or more cases qualified as an excludable PUC Major Event. Since the implementation of FLISR, with one exception every storm of 1,000 or more cases did **not** qualify as an excludable PUC Major Event.

| Event Start Year | Event Type | Event Description | # Cases | # Customers | SAIDI | |
|------------------|-----------------------|---------------------------------------|--------------|----------------|------------|-----------|
| 2002 | PUC Major | 12/25/02 - Snow/Ice/Wind | 1,469 | 184,198 | 74 | PRE FLISR |
| 2003 | PUC Major | 09/18/03 - Hurricane Isabel | 3,940 | 495,721 | 207 | |
| 2003 | PUC Major | 11/13/03 - Wind | 1,723 | 185,210 | 39 | |
| 2003 | PUC Major | 07/21/03 - Wind, T&L | 1,436 | 202,781 | 44 | |
| 2003 | PUC Major | 10/15/03 - Wind | 1,136 | 135,528 | 23 | |
| 2004 | PUC Reportable | 09/17/04 - Hurricane Ivan | 1,292 | 111,709 | 42 | |
| 2005 | PUC Major | 01/06/05 - Snow, Sleet, Freezing Rain | 1,886 | 230,980 | 146 | |
| 2007 | PUC Major | 12/16/07 - Snow & Ice | 1,410 | 179,522 | 81 | |
| 2011 | PUC Major | 08/27/2011 - Hurricane Irene | 3,104 | 428,572 | 297 | |
| 2011 | PUC Major | 10/29/2011 - Heavy Wet Snow | 2,888 | 389,689 | 347 | |
| 2011 | PUC Major | 05/26/2011 - Wind | 1,341 | 182,719 | 104 | |
| 2012 | PUC Major | 10/29/2012 - Hurricane Sandy | 3,824 | 528,231 | 842 | |
| 2018 | PUC Major | 2018-03-02 MAJ WND RILEY | 2,796 | 260,037 | 243 | |
| 2018 | PUC Reportable | 2018-05-15 PUC T&L | 1,516 | 122,086 | 53 | |
| 2019 | PUC Reportable | 2019-02-24 PUC WND | 1,183 | 79,014 | 18 | |
| 2019 | PUC Reportable | 2019-10-31 PUC WND | 1,049 | 81,339 | 22 | |
| 2021 | PUC Reportable | 2021-09-01 PUC TRP IDA | 1,212 | 84,698 | 27 | |
| 2022 | PUC Reportable | 2022-12-22 PUC WND ELLIOTT | 1,192 | 75,652 | 16 | |
| 2024 | PUC Reportable | 2024-02-13 PUC SNW | 1,689 | 128,744 | 63 | |
| 2024 | PUC Reportable | 2024-01-12 PUC WND | 1,451 | 93,583 | 21 | |
| 2024 | PUC Reportable | 2024-06-26 PUC T&L | 1,282 | 117,898 | 57 | |
| 2024 | PUC Reportable | 2024-08-09 PUC TRP DEBBY | 1,096 | 61,309 | 18 | |
| 2024 | PUC Reportable | 2024-04-03 PUC WND RAN | 1,095 | 71,668 | 31 | |
| 2024 | PUC Reportable | 2024-11-21 PUC SNW | 1,771 | 118,389 | 96 | |

The six 1,000+ case storms in 2024, some or all of which may have qualified as excludable PUC Major Events prior to the implementation of FLISR, contribute a combined 592,000 Customer Interruptions and over 417 million Customer Minutes Interrupted¹.

¹ This is over half of all CMI for the reporting period.

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 December 31, 2024.

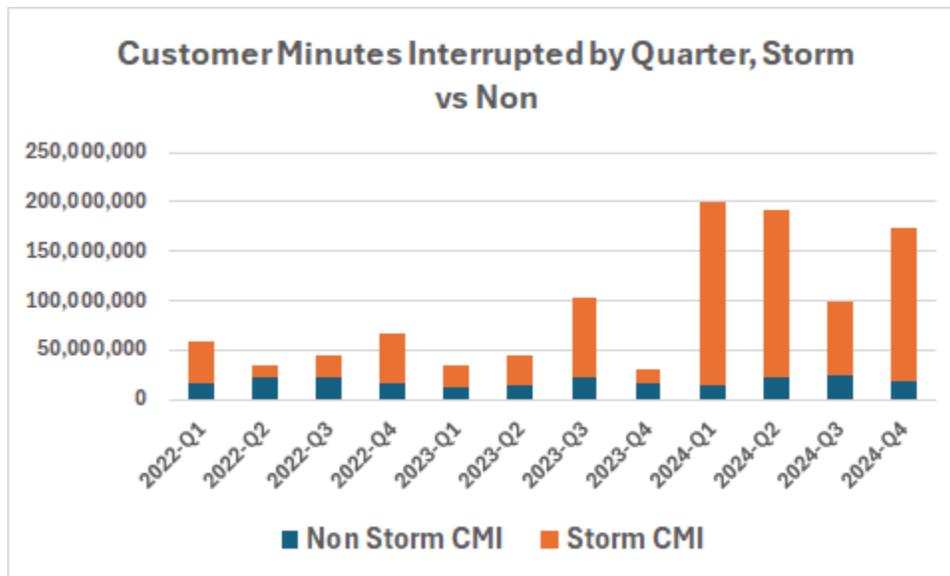
| | | |
|--|----------|-------------|
| SAIFI | BM 0.98 | 1.22 |
| | STD 1.18 | 1.22 |
| CAIDI (Benchmark = 145; Rolling 12-month Std. = 174) | BM 145 | 371 |
| | STD 174 | 371 |
| SAIDI (Benchmark = 142; Rolling 12-month Std. = 205) | BM 142 | 451 |
| | STD 205 | 451 |
| MAIFI | | 9.7 |
| Average Number of Customers Served ² | | 1,470,254 |
| Number of Sustained Customer Interruptions (Trouble Cases) | | 32,294 |
| Number of Customers Affected | | 1,791,362 |
| Customer Minutes of Interruptions (CMI) | | 663,783,475 |
| Number of Customer Momentary Interruptions | | 14,308,908 |

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 fourth quarter, there were no (0) PUC Major Events, three (3) PUC reportable events, and eight (8) other storms that did not rise to the level of reportability.

For the rolling four quarters ending on 12/31/2024, storm impacts remain highly elevated by historical standards. In 2024 alone, PPL Electric has seen eleven storms of 600 cases or higher, including six storms of over 1,000 cases. As mentioned in section (1), the five 1,000+ case events, which may have been excludable prior to the implementation of FLISR, account for over half of all Customer Minutes Interrupted in the reporting period.

The chart below demonstrates the outsized impact of storms in 2024.



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 2023 performance quartiles for large utilities nationally, as issued by the IEEE Annual Reliability Survey³. This survey comprises 73 utilities serving 74 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 12/31/2024 | 137 | 0.66 | 90 |
| IEEE First Quartile Ceiling | 110 | 0.74 | 85 |
| IEEE Second Quartile Ceiling | 136 | 0.98 | 119 |

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

³ <https://cmte.ieee.org/pes-drwg/benchmarking/>

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 | 28602 | 1,007 | 2.95 | 342 | 1,977 | 91 | 1,992,305 | 5,823 |
| 2 | 40601 | 1,031 | 4.75 | 217 | 875 | 44 | 902,305 | 4,157 |
| 3 | 24602 | 737 | 3.21 | 230 | 1,452 | 79 | 1,070,239 | 4,660 |
| 4 | 28604 | 574 | 3.20 | 180 | 1,851 | 84 | 1,063,219 | 5,915 |
| 5 | 18501 | 1,048 | 2.60 | 403 | 1,466 | 58 | 1,536,442 | 3,815 |
| 6 | 46701 | 699 | 5.80 | 120 | 671 | 35 | 469,237 | 3,893 |
| 7 | 25801 | 398 | 2.64 | 151 | 1,870 | 84 | 744,351 | 4,936 |
| 8 | 15704 | 431 | 2.96 | 146 | 1,298 | 72 | 559,906 | 3,838 |
| 9 | 63403 | 543 | 2.23 | 243 | 1,516 | 48 | 824,475 | 3,381 |
| 10 | 43401 | 590 | 3.05 | 193 | 1,017 | 73 | 600,655 | 3,105 |
| 11 | 20601 | 338 | 3.17 | 107 | 1,489 | 40 | 503,761 | 4,719 |
| 12 | 54101 | 356 | 2.36 | 151 | 1,708 | 91 | 608,980 | 4,038 |
| 13 | 59202 | 323 | 2.95 | 110 | 1,800 | 67 | 582,306 | 5,301 |
| 14 | 16801 | 323 | 2.88 | 112 | 1,673 | 69 | 542,047 | 4,815 |
| 15 | 16803 | 578 | 2.37 | 243 | 1,142 | 91 | 661,086 | 2,711 |
| 16 | 64802 | 317 | 3.33 | 95 | 1,304 | 76 | 414,334 | 4,347 |
| 17 | 45002 | 294 | 3.69 | 80 | 1,461 | 61 | 430,149 | 5,385 |
| 18 | 25501 | 340 | 1.93 | 176 | 1,721 | 101 | 585,290 | 3,327 |
| 19 | 24603 | 548 | 1.89 | 289 | 1,406 | 72 | 771,175 | 2,663 |
| 20 | 46004 | 363 | 1.50 | 241 | 2,092 | 125 | 759,514 | 3,146 |
| 21 | 13601 | 406 | 2.45 | 166 | 1,139 | 51 | 463,251 | 2,787 |
| 22 | 58402 | 320 | 2.11 | 152 | 1,784 | 61 | 570,988 | 3,765 |
| 23 | 12402 | 1,665 | 4.08 | 408 | 569 | 64 | 947,880 | 2,320 |
| 24 | 23401 | 406 | 1.55 | 262 | 1,756 | 85 | 713,686 | 2,726 |

| WPC Rank | Feeder ID | SAIDI | SAIFI | CAIDI | Customers | Cases of Trouble | Customer Minutes Interrupted (CMI) | Customer Interruptions (CI) |
|----------|-----------|-------|-------|-------|-----------|------------------|------------------------------------|-----------------------------|
| 25 | 59401 | 356 | 1.62 | 219 | 1,813 | 62 | 646,701 | 2,942 |
| 26 | 22601 | 378 | 2.23 | 170 | 1,252 | 45 | 473,853 | 2,791 |
| 27 | 28801 | 286 | 2.77 | 103 | 1,407 | 73 | 402,666 | 3,898 |
| 28 | 26001 | 549 | 1.66 | 330 | 1,473 | 87 | 809,888 | 2,450 |
| 29 | 14302 | 310 | 2.72 | 114 | 1,246 | 6 | 386,449 | 3,388 |
| 30 | 50302 | 347 | 1.59 | 218 | 1,726 | 24 | 600,488 | 2,747 |
| 31 | 49804 | 331 | 2.01 | 165 | 1,366 | 69 | 452,736 | 2,740 |
| 32 | 16101 | 336 | 1.62 | 207 | 1,582 | 86 | 532,119 | 2,570 |
| 33 | 47002 | 227 | 3.15 | 72 | 2,064 | 72 | 469,953 | 6,506 |
| 34 | 26704 | 839 | 2.02 | 415 | 937 | 53 | 786,770 | 1,895 |
| 35 | 59003 | 260 | 2.04 | 127 | 1,589 | 34 | 413,774 | 3,249 |
| 36 | 40602 | 251 | 1.45 | 174 | 2,492 | 78 | 626,239 | 3,604 |
| 37 | 15601 | 383 | 1.79 | 214 | 1,183 | 64 | 453,274 | 2,117 |
| 38 | 14204 | 327 | 1.76 | 186 | 1,395 | 13 | 456,762 | 2,449 |
| 39 | 13603 | 576 | 3.47 | 166 | 550 | 21 | 316,858 | 1,911 |
| 40 | 53601 | 333 | 2.06 | 161 | 1,121 | 66 | 373,752 | 2,312 |
| 41 | 18001 | 678 | 2.53 | 268 | 699 | 67 | 474,266 | 1,766 |
| 42 | 17805 | 242 | 1.55 | 156 | 1,951 | 60 | 473,075 | 3,031 |
| 43 | 28102 | 637 | 1.59 | 401 | 1,102 | 66 | 703,006 | 1,751 |
| 44 | 45602 | 299 | 0.96 | 311 | 2,471 | 58 | 740,179 | 2,375 |
| 45 | 24401 | 338 | 1.60 | 211 | 1,276 | 79 | 431,452 | 2,043 |
| 46 | 21203 | 368 | 1.57 | 234 | 1,204 | 74 | 443,522 | 1,891 |
| 47 | 28303 | 236 | 1.43 | 165 | 1,957 | 83 | 463,584 | 2,796 |
| 48 | 26602 | 339 | 2.88 | 118 | 665 | 21 | 226,092 | 1,914 |
| 49 | 40201 | 280 | 1.36 | 206 | 1,692 | 93 | 475,231 | 2,295 |
| 50 | 63602 | 277 | 1.36 | 203 | 1,687 | 54 | 467,330 | 2,297 |
| 51 | 64101 | 254 | 1.47 | 173 | 1,700 | 38 | 432,932 | 2,491 |
| 52 | 27901 | 295 | 1.76 | 167 | 1,195 | 50 | 353,319 | 2,109 |
| 53 | 56504 | 197 | 1.78 | 111 | 1,988 | 88 | 392,712 | 3,530 |
| 54 | 10504 | 330 | 1.14 | 289 | 1,605 | 14 | 529,817 | 1,830 |
| 55 | 18502 | 215 | 1.51 | 142 | 1,881 | 103 | 405,907 | 2,846 |
| 56 | 14008 | 292 | 2.53 | 115 | 801 | 46 | 234,319 | 2,028 |
| 57 | 51502 | 207 | 1.54 | 134 | 1,931 | 18 | 399,985 | 2,978 |
| 58 | 29701 | 209 | 2.48 | 84 | 1,166 | 50 | 244,147 | 2,893 |
| 59 | 46302 | 304 | 1.72 | 177 | 1,115 | 64 | 339,359 | 1,919 |
| 60 | 45902 | 339 | 1.29 | 263 | 1,355 | 56 | 459,467 | 1,746 |
| 61 | 20401 | 227 | 1.85 | 123 | 1,332 | 52 | 302,404 | 2,467 |
| 62 | 45702 | 239 | 1.33 | 180 | 1,727 | 49 | 413,512 | 2,297 |
| 63 | 56802 | 173 | 2.42 | 72 | 1,594 | 67 | 277,067 | 3,853 |
| 64 | 27502 | 163 | 1.60 | 102 | 2,988 | 38 | 489,994 | 4,795 |

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

01 Circuit 28602 -- BLYTHEBURN 86-02

Performance Analysis

The BLYTHEBURN 86-02 circuit experienced six outages of over 100,000 CMI or 500 CI between January 2024 and December 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 772 customers for up to 212 minutes resulting in 159,753 CMI.

On June 14, 2024, during a period of heavy rain, a tree contacted an overhead conductor causing an interruption. This outage affected 548 customers for up to 139 minutes resulting in 76,172 CMI.

On June 22, 2024, a tree contacted an overhead conductor causing an interruption. This outage affected 548 customers for up to 244 minutes resulting in 133,268 CMI.

On July 17, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 1,551 customers for up to 1,225 minutes resulting in 1,224,283 CMI.

On November 9, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 245 customers for up to 807 minutes resulting in 189,335 CMI.

On November 25, 2024, a vehicle contacted a pole causing a recloser to trip to lockout. This outage affected 1,560 customers for up to 74 minutes resulting in 115,440 CMI.

In total, the BLYTHEBURN 86-02 circuit had 67 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (46); animal contacts (10); equipment failure (5); nothing found (3); vehicles (3).⁴

Remedial Actions

- In 2024, full circuit trimming was performed.
- In 2024, hot spot trimming was performed.
- In 2024, additional sectionalizing devices were installed.
- In 2025, the coordination and protection settings will be reviewed and optimized.
- In 2025, 18 fuses will be installed.

⁴ Outage counts in this paragraph are IEEE filtered in accordance with the WPC score calculation. However, all large outages are included in the Performance Analysis and all outages are counted in the table on pages 7-8.

- In 2025, a three-phase tie line will be constructed.

02 Circuit 40601 -- PINE GROVE 06-01

Performance Analysis

The PINE GROVE 06-01 circuit experienced seven outages of over 100,000 CMI or 500 CI between January 2024 and December 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.

On August 11, 2024, during a period of strong wind, a tree contacted an overhead splice causing a recloser to trip to lockout. This outage affected 747 customers for up to 16 minutes resulting in 11,339 CMI.

On December 11, 2024, during a period of strong wind, a tree contacted an overhead conductor causing an interruption. This outage affected 750 customers for up to 1,689 minutes resulting in 521,699 CMI.

In total, the PINE GROVE 06-01 circuit had 53 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (33); animal contacts (9); equipment failure (3); other (3); vehicles (3); contact or dig in (1); nothing found (1).

Remedial Actions

- In 2024, hot spot tree trimming was performed.
- In 2024, multiple poles were replaced with more to be done in 2025.
- In 2025, proactive fault sensors will be installed.
- In 2025, additional fusing will be installed.
- In 2025, a new Smart Grid device will be installed.
- In 2025, this circuit will be evaluated for significant storm hardening.

03 Circuit 24602 -- VARDEN 46-02

Performance Analysis

The VARDEN 46-02 circuit experienced more than ten outages of over 100,000 CMI or 500 CI between January 2024 and December 2024.

On March 24, 2024, during a period of strong wind, an equipment failure occurred 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 an interruption. This outage affected 52 customers for up to 2,931 minutes resulting in 138,692 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 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.

On July 15, 2024, during a period of strong wind, a tree contacted an overhead fuse causing a recloser to trip to lockout. This outage affected 425 customers for up to 2,540 minutes resulting in 802,988 CMI.

On July 15, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 265 customers for up to 459 minutes resulting in 121,635 CMI.

On July 31, 2024, during a period of strong wind, an unidentified issue occurred with an overhead transmission component causing a recloser to trip to lockout. This outage affected 1,210 customers for up to 6 minutes resulting in 7,260 CMI.

On August 3, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 485 customers for up to 400 minutes resulting in 166,946 CMI.

On November 11, 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 1,038 minutes resulting in 418,565 CMI.

On November 22, 2024, during a period of ice/sleet/snow, a tree contacted an overhead fuse causing a recloser to trip to lockout. This outage affected 46 customers for up to 3,346 minutes resulting in 145,513 CMI.

On November 22, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 205 customers for up to 547 minutes resulting in 112,042 CMI.

On November 22, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing an interruption. This outage affected 56 customers for up to 3,381 minutes resulting in 189,282 CMI.

On November 22, 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 90 customers for up to 1,989 minutes resulting in 178,929 CMI.

In total, the VARDEN 46-02 circuit had 138 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (110); equipment failure (12); animal contacts (8); nothing found (5); vehicles (2); other (1).

Remedial Actions

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

04 Circuit 28604 -- BLYTHEBURN 86-04

Performance Analysis

The BLYTHEBURN 86-04 circuit experienced seven outages of over 100,000 CMI or 500 CI between January 2024 and December 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.

On August 14, 2024, a tree contacted a pole or pole arm causing a circuit breaker to trip to lockout. This outage affected 1,834 customers for up to 6 minutes resulting in 11,004 CMI.

On August 15, 2024, a vehicle contact caused an interruption. This outage affected 403 customers for up to 441 minutes resulting in 125,425 CMI.

On October 13, 2024, during a period of heavy rain, a vehicle contacted a pole causing a recloser to trip to lockout. This outage affected 631 customers for up to 422 minutes resulting in 266,288 CMI.

In total, the BLYTHEBURN 86-04 circuit had 95 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (61); animal contacts (20); equipment failure (5); vehicles (5); other (2); contact or dig in (1); nothing found (1).

Remedial Actions

- In 2024, full circuit trimming was performed.
- In 2025, three additional Smart Grid devices will be installed.
- In 2025, a section of this circuit will be transferred to a neighboring circuit.
- In 2025, fusing will be installed at over 35 locations.
- In 2025, a three-phase tie will be constructed.
- In 2025, a section of difficult-to-access three-phase will be relocated and upgraded with insulated conductor.
- In 2025, two sections of single-phase conductor will be relocated and upgraded with insulated conductor.

05 Circuit 18501 -- CANADENSIS 85-01

Performance Analysis

The CANADENSIS 85-01 circuit experienced five outages of over 100,000 CMI or 500 CI between January 2024 and December 2024.

On January 14, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a load break fuse to operate. This outage affected 84 customers for up to 1,254 minutes resulting in 105,307 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 185 customers for up to 1,564 minutes resulting in 196,092 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 368 customers for up to 1,850 minutes resulting in 179,403 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 165 customers for up to 798 minutes resulting in 135,574 CMI.

On December 23, 2024, during a period of ice/sleet/snow, an equipment failure occurred on an overhead switch causing a circuit breaker to trip to lockout. This outage affected 2,561 customers for up to 787 minutes resulting in 1,329,504 CMI.

In total, the CANADENSIS 85-01 circuit had 76 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (57); animal contacts (9); equipment failure (7); nothing found (1); other (1); vehicles (1).

Remedial Actions

- In 2024, several poles were replaced.
- In 2024, several crossarms were replaced.
- In 2024, hot spot tree trimming was performed.
- In 2024, a Smart Grid device was replaced.
- In 2025, a Smart Grid device will be replaced.
- In 2025, several reclosers will be replaced.
- In 2025, several poles will be replaced.
- In 2025, additional animal guarding will be installed.
- In 2025, tree shielding cable will be evaluated for portions of this circuit.
- In 2026, full circuit trimming will be performed.

06 Circuit 46701 -- RENOVO 67-01

Performance Analysis

The RENOVO 67-01 circuit experienced three outages of over 100,000 CMI or 500 CI between January 2024 and December 2024.

On August 10, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 240 customers for up to 716 minutes resulting in 142,586 CMI.

On August 17, 2024, a tree contacted an overhead transmission component causing a circuit breaker to trip to lockout. This outage affected 661 customers for up to 8 minutes resulting in 5,083 CMI.

On December 5, 2024, during a period of strong wind, an unidentified issue occurred with an overhead transmission component causing a circuit breaker to trip to lockout. This outage affected 1,932 customers for up to 47 minutes resulting in 89,072 CMI.

In total, the RENOVO 67-01 circuit had 42 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (30); equipment failure (5); animal contacts (3); nothing found (3); vehicles (1).

Remedial Actions

- In 2024, proactive fault sensors were installed.
- In 2024, an existing recloser was upgraded to a Smart Grid device.
- In 2024, additional animal guarding was installed.
- In 2025, the substation getaway will be evaluated for reconductoring and relocation.
- In 2025, hot spot trimming will be evaluated.
- In 2025, an additional sectionalizing device will be installed.
- In 2025, tree wire will be evaluated for this circuit.

07 Circuit 25801 -- SULLIVAN TRAIL 58-01

Performance Analysis

The SULLIVAN TRAIL 58-01 circuit experienced six outages of over 100,000 CMI or 500 CI between January 2024 and December 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 164 customers for up to 2,838 minutes resulting in 465,432 CMI.

On July 15, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 800 customers for up to 928 minutes resulting in 337,123 CMI.

On August 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 1,861 customers for up to 746 minutes resulting in 349,395 CMI.

On August 15, 2024, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 642 customers for up to 27 minutes resulting in 17,334 CMI.

On September 9, 2024, a vehicle contact caused a motor operated switch to be interrupted. This outage affected 672 customers for up to 19 minutes resulting in 12,761 CMI.

On November 22, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 134 customers for up to 981 minutes resulting in 131,336 CMI.

In total, the SULLIVAN TRAIL 58-01 circuit had 129 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (93); animal contacts (13); equipment failure (12); vehicles (7); nothing found (4).

Remedial Actions

- In 2024, proactive fault sensors were installed.
- In 2024, two sections of single-phase conductor in a heavily wooded area were relocated.
- In 2024, additional hazard tree removal was performed.
- In 2024, a single-phase tap was relocated.
- In 2025, a three-phase tie line will be evaluated.
- In 2025, transferring a section of this circuit to a neighboring circuit will be evaluated.
- In 2026, several sections of three-phase conductor will be undergrounded.
- In 2026, a section of single-phase conductor will be relocated.
- In 2026, three sections of single-phase conductor will be undergrounded.

08 Circuit 15704 -- TANNERSVILLE 57-04

Performance Analysis

The TANNERSVILLE 57-04 circuit experienced six outages of over 100,000 CMI or 500 CI between January 2024 and December 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.

On October 12, 2024, during a period of strong wind, a tree contacted an overhead splice causing a recloser to trip to lockout. This outage affected 1,097 customers for up to 239 minutes resulting in 57,847 CMI.

On November 22, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 101 customers for up to 1,514 minutes resulting in 152,914 CMI.

On December 24, 2024, an equipment failure occurred on an overhead conductor causing a recloser to trip to lockout. This outage affected 565 customers for up to 30 minutes resulting in 16,950 CMI.

In total, the TANNERSVILLE 57-04 circuit had 84 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (50); animal contacts (26); equipment failure (7); vehicles (1).

Remedial Actions

- In 2024, several poles were replaced.
- In 2024, a Smart Grid device was replaced.
- In 2025, additional animal guarding will be installed.
- In 2025, full circuit trimming will be performed.
- In 2025, two single-phase reclosers will be installed.
- In 2025, a section of difficult-to-access conductor will be relocated.
- In 2025, a voltage regulator will be installed.
- In 2025, three Smart Grid devices will be installed.

09 Circuit 63403 -- HONEYBROOK 34-03

Performance Analysis

The HONEYBROOK 34-03 circuit experienced three outages of over 100,000 CMI or 500 CI between January 2024 and December 2024.

On July 16, 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 1,279 customers for up to 3,913 minutes resulting in 1,698,850 CMI.

On July 31, 2024, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 1,049 customers for up to 477 minutes resulting in 213,052 CMI.

On August 1, 2024, an equipment failure occurred on an overhead conductor causing an interruption. This outage affected 1,499 customers for up to 638 minutes resulting in 347,077 CMI.

In total, the HONEYBROOK 34-03 circuit had 71 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (43); equipment failure (14); animal contacts (6); nothing found (3); vehicles (2); contact or dig in (1); Improper Design (1); other (1).

Remedial Actions

- In 2024, additional fusing was installed.
- In 2024, hot spot trimming was performed.
- In 2025, proactive fault sensors will be installed.
- In 2025, additional fusing will be installed.
- In 2025, two crossarms will be replaced.
- In 2025, one pole will be replaced.
- In 2025, a single-phase protective device will be installed.
- In 2025, a section of line will be evaluated for reconductoring.
- In 2025, a section of single-phase conductor will be evaluated for transfer to a neighboring circuit.

10 Circuit 43401 -- BENTON 34-01

Performance Analysis

The BENTON 34-01 circuit experienced four outages of over 100,000 CMI or 500 CI between January 2024 and December 2024.

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 2,817 minutes resulting in 657,397 CMI.

On July 15, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 615 customers for up to 1,459 minutes resulting in 265,484 CMI.

On August 7, 2024, an equipment failure occurred on an overhead switch causing a recloser to trip to lockout. This outage affected 618 customers for up to 334 minutes resulting in 175,898 CMI.

On August 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 651 customers for up to 575 minutes resulting in 327,823 CMI.

In total, the BENTON 34-01 circuit had 117 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (96); nothing found (8); equipment failure (7); animal contacts (6).

Remedial Actions

- In 2024, a section of difficult-to-access single-phase conductor was relocated.
- In 2024, coordination between a recloser and downstream fusing was optimized.
- In 2025, two additional sectionalizing devices will be installed.
- In 2025, two sections of difficult-to-access conductor will be relocated and reconductored.
- In 2025, additional fusing will be installed.
- In 2025, numerous difficult-to-access conductor spans will be removed.
- In 2025, 30 spans of three-phase conductor will be undergrounded.

11 Circuit 20601 -- GREENWOOD 06-01

Performance Analysis

The GREENWOOD 06-01 circuit experienced eight outages of over 100,000 CMI or 500 CI between January 2024 and December 2024.

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 an interruption. 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 unidentified 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 463 customers for up to 2,489 minutes resulting in 758,956 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 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 175,596 CMI.

In total, the GREENWOOD 06-01 circuit had 55 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (34); animal contacts (9); equipment failure (8); vehicles (2); nothing found (1); other (1).

Remedial Actions

- In 2024, a Smart Grid device was replaced.
- In 2024, two single-phase reclosers were replaced.
- In 2026, three sections of conductor will be relocated or rebuilt.
- In 2026, two sections of difficult-to-access conductor will be relocated and upgraded with insulated conductor.
- In 2026, an existing sectionalizer will be upgraded to a Smart Grid device.
- In 2026, a three-phase tie will be constructed.

12 Circuit 54101 -- S SHERMANSDALE 41-01

Performance Analysis

The S SHERMANSDALE 41-01 circuit experienced four outages of over 100,000 CMI or 500 CI between January 2024 and December 2024.

On January 14, 2024, during a period of heavy rain, a vehicle contact caused an interruption. 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.

On September 29, 2024, during a period of heavy rain, a tree contacted an overhead switch causing a recloser to trip to lockout. This outage affected 605 customers for up to 484 minutes resulting in 274,622 CMI.

In total, the S SHERMANSDALE 41-01 circuit had 126 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (85); equipment failure (19); animal contacts (13); nothing found (6); vehicles (3).

Remedial Actions

- In 2023, proactive fault sensors were installed on this circuit.
- In 2024, five additional fuses were installed.
- In 2024, full circuit trimming was performed.
- In 2025, an additional single-phase recloser will be installed.
- In 2025, additional fusing will be installed.
- In 2025, an existing recloser will be converted to remote operability.
- In 2025, a three-phase tie will be evaluated.
- In 2025, three relocations of single-phase conductor will be evaluated.
- In 2025, reconductoring a single-phase line will be evaluated.

- In 2025, re-sourcing a section of single-phase line will be evaluated.
- In 2025, a single-phase tie will be evaluated.
- In 2025, upgrading two reclosers to remote operability will be evaluated.
- In 2025, a new three-phase recloser will be evaluated.

13 Circuit 59202 -- THOMPSONTOWN 92-02

Performance Analysis

The THOMPSONTOWN 92-02 circuit experienced seven outages of over 100,000 CMI or 500 CI between January 2024 and December 2024.

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.

On August 6, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 97 customers for up to 1,104 minutes resulting in 107,017 CMI.

On August 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 660 customers for up to 633 minutes resulting in 317,276 CMI.

On August 29, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 1,133 customers for up to 116 minutes resulting in 130,383 CMI.

In total, the THOMPSONTOWN 92-02 circuit had 99 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (56); equipment failure (26); animal contacts (10); nothing found (5); vehicles (2).

Remedial Actions

- In 2024, proactive fault sensors were installed.
- In 2024, a section of damaged conductor was repaired.
- In 2025, a switch and associated insulators will be replaced.
- In 2025, a single-phase recloser will be installed.

- In 2025, resourcing a section of this line will be evaluated.
- In 2025, upgrading a recloser to remote operability will be evaluated.
- In 2025, installing a new three-phase recloser will be evaluated.
- In 2025, installing a new single-phase recloser will be evaluated.
- In 2025, reconductoring eight sections of single-phase line will be evaluated.
- In 2025, the relocation of two sections of single-phase line will be evaluated.
- In 2025, undergrounding a section of overhead single-phase line will be evaluated.
- In 2025, re-sourcing and relocating a section of single-phase line will be evaluated.
- In 2025, a recloser will be replaced.

14 Circuit 16801 -- WAGNERS 68-01

Performance Analysis

The WAGNERS 68-01 circuit experienced eight outages of over 100,000 CMI or 500 CI between January 2024 and December 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 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 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 June 26, 2024, during a period of strong wind, a tree contacted an overhead conductor causing an interruption. This outage affected 1,478 customers for up to 1,285 minutes resulting in 82,251 CMI.

On August 14, 2024, a tree contacted an overhead conductor. This outage affected 949 customers for up to 16 minutes resulting in 15,184 CMI.

On November 22, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a load break fuse to operate. This outage affected 76 customers for up to 1,364 minutes resulting in 103,639 CMI.

On November 24, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 584 customers for up to 18 minutes resulting in 10,266 CMI.

In total, the WAGNERS 68-01 circuit had 125 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (119); equipment failure (3); animal contacts (1); nothing found (1); other (1).

Remedial Actions

- In 2024, a Smart Grid device was replaced.
- In 2024, several poles were replaced.
- In 2025, additional animal guarding will be installed.
- In 2026, a section of single-phase line will be reconducted.
- In 2026, a single-phase tie line will be constructed.
- In 2026, tree shielding cable will be installed on sections of this circuit.
- In 2026, five Smart Grid devices will be installed.
- In 2026, two single-phase reclosers will be installed.

15 Circuit 16803 -- WAGNERS 68-03

Performance Analysis

The WAGNERS 68-03 circuit experienced two outages of over 100,000 CMI or 500 CI between January 2024 and December 2024.

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 110 customers for up to 1,467 minutes resulting in 161,290 CMI.

On July 17, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a load break fuse to operate. This outage affected 90 customers for up to 1,743 minutes resulting in 156,784 CMI.

In total, the WAGNERS 68-03 circuit had 107 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (93); equipment failure (10); animal contacts (4).

Remedial Actions

- In 2024, additional sectionalizing devices were installed.
- In 2024, several poles were replaced.
- In 2025, a new tie line will be evaluated.
- In 2025, additional animal guarding will be installed.
- In 2025, two single-phase reclosers will be installed.
- In 2025, several poles will be replaced.

16 Circuit 64802 -- MOUNT NEBO 48-02

Performance Analysis

The MOUNT NEBO 48-02 circuit experienced four outages of over 100,000 CMI or 500 CI between January 2024 and December 2024.

On July 9, 2024, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 569 customers for up to 96 minutes resulting in 33,595 CMI.

On July 16, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 269 customers for up to 797 minutes resulting in 214,393 CMI.

On August 9, 2024, during a period of heavy rain, a tree contacted a pole or pole arm causing a recloser to trip to lockout. This outage affected 1,096 customers for up to 439 minutes resulting in 43,884 CMI.

On November 3, 2024, an equipment failure occurred on a substation component causing a circuit breaker to trip to lockout. This outage affected 1,305 customers for up to 7 minutes resulting in 9,135 CMI.

In total, the MOUNT NEBO 48-02 circuit had 98 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (74); animal contacts (16); equipment failure (5); nothing found (2); other (1).

Remedial Actions

- In 2024, hot spot trimming was performed.
- In 2025, single-phase proactive fault sensors will be installed.
- In 2025, a three-phase protective device will be installed.
- In 2025, a three-phase protective device will be replaced with a Smart Grid device.
- In 2026, full circuit trimming will be performed.

17 Circuit 45002 -- LIMESTONE 50-02

Performance Analysis

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

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.

On September 27, 2024, a tree contact caused a circuit breaker to trip to lockout. This outage affected 1,451 customers for up to 359 minutes resulting in 118,630 CMI.

In total, the LIMESTONE 50-02 circuit had 48 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (27); equipment failure (10); animal contacts (6); contact or dig in (2); nothing found (2); vehicles (1).

Remedial Actions

- In 2024, additional fusing was installed.
- In 2025, a new Smart Grid device will be installed.
- In 2025, additional storm hardening will be evaluated.
- In 2025, hot spot tree trimming will be evaluated.
- In 2026, a substation transformer will be upgraded.
- In 2027, a three-phase tie will be constructed.

18 Circuit 25501 -- MADISONVILLE 55-01

Performance Analysis

The MADISONVILLE 55-01 circuit experienced more than ten outages of over 100,000 CMI or 500 CI between January 2024 and December 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.

On November 22, 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 0 minutes resulting in 538,105 CMI.

On November 22, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 40 customers for up to 0 minutes resulting in 189,930 CMI.

On November 22, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 61 customers for up to 2,276 minutes resulting in 138,803 CMI.

On November 22, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing an interruption. This outage affected 813 customers for up to 3,620 minutes resulting in 1,427,139 CMI.

On November 22, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 78 customers for up to 1,865 minutes resulting in 145,431 CMI.

On November 22, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 117 customers for up to 3,448 minutes resulting in 388,631 CMI.

On November 22, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a load break fuse to operate. This outage affected 59 customers for up to 2,418 minutes resulting in 142,647 CMI.

On November 22, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing an interruption. This outage affected 158 customers for up to 2,230 minutes resulting in 244,361 CMI.

On November 22, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a load break fuse to operate. This outage affected 200 customers for up to 2,666 minutes resulting in 517,995 CMI.

On November 23, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 59 customers for up to 1,929 minutes resulting in 113,753 CMI.

In total, the MADISONVILLE 55-01 circuit had 175 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (130); animal contacts (21); equipment failure (16); nothing found (5); other (2); vehicles (1).

Remedial Actions

- In 2024, two Smart Grid devices were installed.
- In 2024, a single-phase recloser was replaced.
- In 2024, several poles were replaced.
- In 2025, proactive fault sensors will be installed.
- In 2025, additional animal guarding will be installed.
- In 2025, two existing reclosers will be upgraded to Smart Grid devices.

19 Circuit 24603 -- VARDEN 46-03

Performance Analysis

The VARDEN 46-03 circuit experienced more than ten outages of over 100,000 CMI or 500 CI between January 2024 and December 2024.

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.

On July 15, 2024, during a period of lightning, a tree contacted an overhead conductor causing a load break fuse to operate. This outage affected 123 customers for up to 1,194 minutes resulting in 111,551 CMI.

On July 15, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 147 customers for up to 817 minutes resulting in 119,987 CMI.

On August 9, 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 911 minutes resulting in 113,866 CMI.

On August 9, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 148 customers for up to 1,805 minutes resulting in 257,792 CMI.

On November 22, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 147 customers for up to 1,007 minutes resulting in 147,989 CMI.

On November 22, 2024, during a period of ice/sleet/snow, a tree contacted an overhead fuse causing a recloser to trip to lockout. This outage affected 124 customers for up to 1,354 minutes resulting in 167,841 CMI.

On November 22, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 62 customers for up to 3,062 minutes resulting in 140,443 CMI.

On November 22, 2024, during a period of ice/sleet/snow, a tree contacted an unknown component causing an interruption. This outage affected 179 customers for up to 929 minutes resulting in 166,192 CMI.

On November 22, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 117 customers for up to 2,141 minutes resulting in 232,248 CMI.

On November 22, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 69 customers for up to 2,391 minutes resulting in 164,923 CMI.

On November 22, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 74 customers for up to 1,626 minutes resulting in 114,762 CMI.

On November 22, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 63 customers for up to 3,861 minutes resulting in 243,234 CMI.

On November 22, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 81 customers for up to 2,503 minutes resulting in 164,698 CMI.

On November 24, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a load break disconnect switch to be interrupted. This outage affected 84 customers for up to 1,609 minutes resulting in 106,070 CMI.

In total, the VARDEN 46-03 circuit had 129 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (99); equipment failure (11); animal contacts (10); nothing found (8); other (1).

Remedial Actions

- In 2024, several poles were replaced.
- In 2024, a recloser was replaced.
- In 2024, a section of difficult-to-access conductor was removed.
- In 2025, two reclosers will be replaced.
- In 2025, several poles will be replaced.
- In 2025, proactive fault sensors will be installed.
- In 2025, two single-phase reclosers will be installed.
- In 2025, numerous cutouts will be replaced.
- In 2026, full circuit trimming will be performed.

20 Circuit 46004 -- BERWICK 60-04

Performance Analysis

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

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. 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 a pole or pole arm causing a recloser to trip to lockout. This outage affected 2,067 customers for up to 2,029 minutes resulting in 2,697,080 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 2,456 minutes resulting in 254,752 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 984 minutes resulting in 106,240 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.

On August 6, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 1,170 customers for up to 45 minutes resulting in 52,650 CMI.

In total, the BERWICK 60-04 circuit had 82 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (55); equipment failure (11); animal contacts (8); nothing found (6); contact or dig in (1); other (1).

Remedial Actions

- In 2024, the coordination settings on this circuit were optimized.
- In 2024, full circuit trimming was performed.
- In 2025, a three-phase tie line will be evaluated.
- In 2025, a Proactive Circuit Review will be performed.
- In 2026, several sections of this line will be relocated and reconducted.
- In 2026, several sections of this circuit will be undergrounded.

21 Circuit 13601 -- RICHLAND 36-01

Performance Analysis

The RICHLAND 36-01 circuit experienced four outages of over 100,000 CMI or 500 CI between January 2024 and December 2024.

On January 13, 2024, during a period of strong wind, a vehicle contacted a pole causing a recloser to trip to lockout. This outage affected 597 customers for up to 221 minutes resulting in 131,945 CMI.

On July 16, 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 1,193 minutes resulting in 214,499 CMI.

On July 16, 2024, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 595 customers for up to 2,941 minutes resulting in 221,519 CMI.

On December 12, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a circuit breaker to trip to lockout. This outage affected 929 customers for up to 483 minutes resulting in 187,983 CMI.

In total, the RICHLAND 36-01 circuit had 77 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (53); animal contacts (9); equipment failure (7); nothing found (6); vehicles (2).

Remedial Actions

- In 2024, an existing recloser was replaced.
- In 2025, a new Smart Grid device will be evaluated.
- In 2025, additional fusing will be evaluated.
- In 2025, reconductoring a section of this circuit will be evaluated.
- In 2025, a new tie line will be evaluated.

22 Circuit 58402 -- MOUNT ROCK 84-02

Performance Analysis

The MOUNT ROCK 84-02 circuit experienced two outages of over 100,000 CMI or 500 CI between January 2024 and December 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 618 minutes resulting in 225,902 CMI.

On July 10, 2024, a vehicle contacted a pole causing a circuit breaker to trip to lockout. This outage affected 1,329 customers for up to 78 minutes resulting in 85,817 CMI.

In total, the MOUNT ROCK 84-02 circuit had 81 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (53); animal contacts (11); equipment failure (9); nothing found (4); vehicles (2); contact or dig in (1); other (1).

Remedial Actions

- In 2023, full circuit trimming was performed.
- In 2024, six additional fuses were installed.
- In 2025, a new tie line will be installed.
- In 2025, a three-phase tie will be evaluated for upgrade to remote operability.
- In 2025, an additional three-phase sectionalizing device will be installed.
- In 2024, proactive fault sensors will be installed.
- In 2025, resourcing a section of single-phase line will be evaluated.
- In 2025, two sections of line will be evaluated for reconductoring.
- In 2026, an additional single-phase recloser will be installed.

23 Circuit 12402 -- MILFORD 24-02

Performance Analysis

The MILFORD 24-02 circuit experienced eight outages of over 100,000 CMI or 500 CI between January 2024 and December 2024.

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 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.

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 July 17, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a circuit breaker to trip to lockout. This outage affected 563 customers for up to 533 minutes resulting in 197,727 CMI.

On November 8, 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 125 customers for up to 1,156 minutes resulting in 144,500 CMI.

On December 25, 2024, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 375 customers for up to 316 minutes resulting in 118,361 CMI.

In total, the MILFORD 24-02 circuit had 88 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (66); animal contacts (10); equipment failure (5); nothing found (4); other (2); vehicles (1).

Remedial Actions

- In 2024, full circuit trimming was performed.
- In 2024, a recloser was replaced.
- In 2025, additional animal guarding will be installed.
- In 2025, a section of single-phase will be evaluated for relocation.
- In 2025, four single-phase reclosers will be installed.
- In 2025, additional fusing will be installed.
- In 2025, a single-phase recloser will be replaced.
- In 2025, a new Smart Grid device will be installed.
- In 2025, tree shielding cable will be evaluated for a section of this circuit.
- In 2026, multiple sections of single-phase will be reconductored.
- In 2026, several poles will be upgraded in class.

24 Circuit 23401 -- HONESDALE 34-01

Performance Analysis

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

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.

On July 15, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 789 customers for up to 538 minutes resulting in 422,314 CMI.

On November 22, 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 130 customers for up to 2,101 minutes resulting in 273,040 CMI.

On November 22, 2024, during a period of ice/sleet/snow, a tree contacted an overhead switch causing a recloser to trip to lockout. This outage affected 501 customers for up to 2,481 minutes resulting in 702,024 CMI.

In total, the HONESDALE 34-01 circuit had 145 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (109); equipment failure (14); nothing found (12); animal contacts (10).

Remedial Actions

- In 2024, additional fusing was installed.
- In 2024, hot spot tree trimming was performed.
- In 2024, a section of this circuit was reconductored.
- In 2025, several poles will be replaced.
- In 2025, two reclosers will be replaced.
- In 2025, numerous porcelain cutouts will be replaced.
- In 2025, proactive fault sensors will be installed.
- In 2025, additional animal guarding will be installed.
- In 2025, full circuit trimming will be performed.

25 Circuit 59401 -- RICHFIELD 94-01

Performance Analysis

The RICHFIELD 94-01 circuit experienced three outages of over 100,000 CMI or 500 CI between January 2024 and December 2024.

On February 13, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a load break fuse to operate. This outage affected 142 customers for up to 1,880 minutes resulting in 216,376 CMI.

On April 30, 2024, a tree contacted an overhead conductor causing a circuit breaker to trip to lockout. This outage affected 860 customers for up to 85 minutes resulting in 70,202 CMI.

On July 25, 2024, a tree contacted an overhead conductor causing an interruption. This outage affected 810 customers for up to 410 minutes resulting in 331,839 CMI.

In total, the RICHFIELD 94-01 circuit had 84 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (51); equipment failure (22); animal contacts (6); nothing found (3); vehicles (2).

Remedial Actions

- In 2024, targeted hazard tree removal was performed.
- In 2025, a two-phase recloser will be upgraded to remote operability.
- In 2025, a single-phase recloser will be upgraded to remote operability.
- In 2025, an additional fuse will be installed.

26 Circuit 22601 -- KIMBLES 26-01

Performance Analysis

The KIMBLES 26-01 circuit experienced six outages of over 100,000 CMI or 500 CI between January 2024 and December 2024.

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.

On July 15, 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 1,092 customers for up to 436 minutes resulting in 365,676 CMI.

On July 31, 2024, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 538 customers for up to 481 minutes resulting in 95,120 CMI.

On November 22, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 62 customers for up to 2,133 minutes resulting in 132,224 CMI.

On November 22, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 67 customers for up to 3,813 minutes resulting in 255,471 CMI.

On November 22, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 556 customers for up to 2,603 minutes resulting in 549,474 CMI.

In total, the KIMBLES 26-01 circuit had 80 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (47); equipment failure (13); animal contacts (12); nothing found (6); vehicles (2).

Remedial Actions

- In 2025, two single-phase reclosers will be installed.
- In 2025, an existing recloser will be replaced.
- In 2025, additional animal guarding will be installed.
- In 2025, several poles will be replaced.

27 Circuit 28801 -- LAKEVILLE 88-01

Performance Analysis

The LAKEVILLE 88-01 circuit experienced ten outages of over 100,000 CMI or 500 CI between January 2024 and December 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 an interruption. This outage affected 92 customers for up to 1,634 minutes resulting in 150,238 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 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.

On November 22, 2024, during a period of strong wind, a tree contacted an overhead transformer causing a recloser to trip to lockout. This outage affected 719 customers for up to 890 minutes resulting in 639,917 CMI.

On November 22, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a load break fuse to operate. This outage affected 41 customers for up to 2,574 minutes resulting in 105,497 CMI.

On November 22, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 50 customers for up to 3,212 minutes resulting in 160,594 CMI.

On December 23, 2024, an improper operation occurred causing a recloser to trip to lockout. This outage affected 720 customers for up to 32 minutes resulting in 23,040 CMI.

In total, the LAKEVILLE 88-01 circuit had 113 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (83); animal contacts (17); equipment failure (8); nothing found (3); Improper Operation (1); vehicles (1).

Remedial Actions

- In 2024, several cross-arms were replaced with more to be replaced in 2025.
- In 2025, proactive fault sensors will be installed.
- In 2025, additional animal guarding will be installed.
- In 2025, several poles will be replaced.
- In 2025, two single-phase reclosers will be installed.
- In 2025, an existing recloser will be upgraded to a Smart Grid device.

28 Circuit 26001 -- WEST DAMASCUS 60-01

Performance Analysis

The WEST DAMASCUS 60-01 circuit experienced more than ten outages of over 100,000 CMI or 500 CI between January 2024 and December 2024.

On March 11, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a load break fuse to operate. This outage affected 559 customers for up to 3,572 minutes resulting in 163,993 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 344 customers for up to 486 minutes resulting in 166,970 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 97 customers for up to 2,963 minutes resulting in 114,810 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 47 customers for up to 3,746 minutes resulting in 176,035 CMI.

On July 15, 2024, during a period of strong wind, a tree contacted an overhead splice causing a recloser to trip to lockout. This outage affected 73 customers for up to 1,385 minutes resulting in 101,090 CMI.

On August 9, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 45 customers for up to 2,478 minutes resulting in 105,307 CMI.

On November 8, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a circuit breaker to trip to lockout. This outage affected 1,473 customers for up to 2,413 minutes resulting in 496,272 CMI.

On November 22, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing an interruption. This outage affected 438 customers for up to 4,803 minutes resulting in 599,845 CMI.

On November 22, 2024, during a period of ice/sleet/snow, a tree contacted an unknown component causing a recloser to trip to lockout. This outage affected 74 customers for up to 2,457 minutes resulting in 156,918 CMI.

On November 22, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 48 customers for up to 3,679 minutes resulting in 176,575 CMI.

On November 22, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 183 customers for up to 885 minutes resulting in 159,680 CMI.

On November 22, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a load break fuse to operate. This outage affected 32 customers for up to 3,692 minutes resulting in 118,136 CMI.

In total, the WEST DAMASCUS 60-01 circuit had 151 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (121); animal contacts (15); equipment failure (7); nothing found (6); contact or dig in (1); vehicles (1).

Remedial Actions

- In 2024, several cross arms were replaced.
- In 2024, additional animal guarding was installed.
- In 2024, two reclosers were replaced.
- In 2025, numerous porcelain cutouts will be replaced.
- In 2025, several poles will be replaced.
- In 2025, three reclosers will be replaced.
- In 2025, an existing Smart Grid device will be upgraded.
- In 2025, proactive fault sensors will be installed.
- In 2026, additional storm hardening will be evaluated.

29 Circuit 14302 -- SUMNER 43-02

Performance Analysis

The SUMNER 43-02 circuit experienced two outages of over 100,000 CMI or 500 CI between January 2024 and December 2024.

On January 17, 2024, an equipment failure occurred on an overhead splice causing a circuit breaker to trip to lockout. This outage affected 2,544 customers for up to 204 minutes resulting in 231,624 CMI.

On December 26, 2024, an unidentified issue occurred causing a recloser to trip to lockout. This outage affected 778 customers for up to 260 minutes resulting in 140,153 CMI.

In total, the SUMNER 43-02 circuit had 7 outages between January 2024 and December 2024, with the causes breaking down as follows: equipment failure (4); other (2); tree related (1).

Remedial Actions

- In 2024, full circuit trimming was performed.
- In 2025, proactive fault sensors will be installed.
- In 2025, a new tie line will be constructed.

30 Circuit 50302 -- CEDAR 03-02

Performance Analysis

The CEDAR 03-02 circuit experienced two outages of over 100,000 CMI or 500 CI between January 2024 and December 2024.

On October 1, 2024, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 1,113 customers for up to 237 minutes resulting in 263,781 CMI.

On November 10, 2024, during a period of heavy rain, an equipment failure occurred on an overhead conductor causing an interruption. This outage affected 1,113 customers for up to 280 minutes resulting in 301,033 CMI.

In total, the CEDAR 03-02 circuit had 24 outages between January 2024 and December 2024, with the causes breaking down as follows: equipment failure (14); tree related (5); animal contacts (4); nothing found (1).

Remedial Actions

- In 2024, a fuse was installed.
- In 2025, additional ties lines will be evaluated at three potential locations.
- In 2025, additional fusing will be evaluated.
- In 2026, full circuit trimming will be performed.

31 Circuit 49804 -- UNIVERSITY 98-04

Performance Analysis

The UNIVERSITY 98-04 circuit experienced four outages of over 100,000 CMI or 500 CI between January 2024 and December 2024.

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.

On July 11, 2024, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 407 customers for up to 499 minutes resulting in 202,690 CMI.

In total, the UNIVERSITY 98-04 circuit had 81 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (49); animal contacts (16); equipment failure (9); nothing found (4); contact or dig in (1); Improper Design (1); vehicles (1).

Remedial Actions

- In 2024, a three-phase tie line was constructed.
- In 2024, additional fusing was installed.
- In 2024, a Proactive Circuit Analysis was performed with several minor remediations implemented.
- In 2024, the protection settings on this circuit were evaluated and optimized.
- In 2025, lines will be reframed outside of the substation.
- In 2025, a section of this circuit will be relocated with another to be evaluated.
- In 2025, a section of conductor will be undergrounded.
- In 2025, full circuit tree trimming will be performed.
- In 2025, a three-phase tie line will be evaluated.
- In 2026, storm hardening will be performed.

32 Circuit 16101 -- BINGEN 61-01

Performance Analysis

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

On August 9, 2024, during a period of strong wind, a tree contact caused a load break fuse to operate. This outage affected 215 customers for up to 1,405 minutes resulting in 216,042 CMI.

On August 9, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 518 customers for up to 256 minutes resulting in 109,615 CMI.

In total, the BINGEN 61-01 circuit had 143 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (108); animal contacts (20); equipment failure (8); nothing found (7).

Remedial Actions

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

33 Circuit 47002 -- HUGHESVILLE 70-02

Performance Analysis

The HUGHESVILLE 70-02 circuit experienced four outages of over 100,000 CMI or 500 CI between January 2024 and December 2024.

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 113 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (71); equipment failure (18); animal contacts (11); nothing found (6); vehicles (6); other (1).

Remedial Actions

- In 2024, a section of single-phase was relocated.
- In 2025, additional animal guarding will be installed.
- In 2025, a section of single-phase will be relocated underground or reconducted.
- In 2025, an existing recloser will be upgraded to a Smart Grid device.
- In 2025, an existing Smart Grid device will be upgraded.
- In 2026, a section of this circuit will be reconducted.
- In 2026, several sections of difficult-to-access conductor will be removed.
- In 2026, a tie line will be constructed.

34 Circuit 26704 -- HEMLOCK FARMS 67-04

Performance Analysis

The HEMLOCK FARMS 67-04 circuit experienced five outages of over 100,000 CMI or 500 CI between January 2024 and December 2024.

On April 30, 2024, an equipment failure occurred on an underground conductor causing a recloser to trip to lockout. This outage affected 272 customers for up to 1,800 minutes resulting in 171,024 CMI.

On November 22, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 295 customers for up to 5,289 minutes resulting in 935,855 CMI.

On November 23, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 223 customers for up to 715 minutes resulting in 159,445 CMI.

On November 24, 2024, a tree contacted an overhead conductor. This outage affected 72 customers for up to 2,858 minutes resulting in 144,516 CMI.

On November 24, 2024, during a period of ice/sleet/snow, a tree contacted an overhead switch causing a recloser to trip to lockout. This outage affected 106 customers for up to 1,659 minutes resulting in 116,349 CMI.

In total, the HEMLOCK FARMS 67-04 circuit had 63 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (47); equipment failure (8); animal contacts (5); nothing found (3).

Remedial Actions

- In 2024, several poles were replaced.
- In 2024, a three-phase tie was constructed.
- In 2024, a section of difficult-to-access conductor was removed.
- In 2024, a recloser was replaced.
- In 2025, additional fusing will be installed.
- In 2025, proactive fault sensors will be installed.
- In 2025, additional animal guarding will be installed.

35 Circuit 59003 -- MIFFLINTOWN 90-03

Performance Analysis

The MIFFLINTOWN 90-03 circuit experienced two outages of over 100,000 CMI or 500 CI between January 2024 and December 2024.

On January 20, 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 1,076 customers for up to 149 minutes resulting in 159,732 CMI.

On July 31, 2024, a tree contacted an overhead conductor causing an interruption. This outage affected 1,420 customers for up to 180 minutes resulting in 58,104 CMI.

In total, the MIFFLINTOWN 90-03 circuit had 40 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (25); equipment failure (7); animal contacts (5); nothing found (2); other (1).

Remedial Actions

- In 2024, a three-phase recloser was installed.
- In 2025, an additional single-phase recloser will be installed.
- In 2025, an additional fuse will be installed.
- In 2025, additional fusing will be evaluated.

36 Circuit 40602 -- PINE GROVE 06-02

Performance Analysis

The PINE GROVE 06-02 circuit experienced more than ten outages of over 100,000 CMI or 500 CI between January 2024 and December 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 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 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 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 conductor causing a load break fuse to operate. This outage affected 29 customers for up to 4,292 minutes resulting in 124,450 CMI.

On August 6, 2024, during a period of heavy rain, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 159 customers for up to 680 minutes resulting in 108,032 CMI.

On August 9, 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 1,322 minutes resulting in 126,895 CMI.

In total, the PINE GROVE 06-02 circuit had 104 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (65); animal contacts (18); equipment failure (13); nothing found (5); vehicles (2); other (1).

Remedial Actions

- In 2023, full circuit trimming was performed.
- In 2024, additional fusing was installed.
- In 2025, proactive fault sensors will be installed.
- In 2025, two sections of difficult-to-access conductor will be relocated.
- In 2025, several poles will be replaced.
- In 2025, this circuit will be evaluated for additional storm hardening.

37 Circuit 15601 -- NO STROUDSBURG 56-01

Performance Analysis

The NO STROUDSBURG 56-01 circuit experienced three outages of over 100,000 CMI or 500 CI between January 2024 and December 2024.

On January 15, 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 415 customers for up to 298 minutes resulting in 123,665 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 136 customers for up to 905 minutes resulting in 123,063 CMI.

On November 9, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 177 customers for up to 880 minutes resulting in 125,504 CMI.

In total, the NO STROUDSBURG 56-01 circuit had 62 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (40); equipment failure (10); animal contacts (8); vehicles (3); nothing found (1).

Remedial Actions

- In 2024, a new Smart Grid device was installed.
- In 2024, two reclosers were replaced.
- In 2025, proactive fault sensors will be installed.
- In 2025, a new Smart Grid device will be installed.
- In 2025, additional animal guarding will be installed.
- In 2026, a section of difficult-to-access single-phase conductor will be relocated.
- In 2026, full circuit trimming will be performed.

38 Circuit 14204 -- EAST ALLENTOWN 42-04

Performance Analysis

The EAST ALLENTOWN 42-04 circuit experienced three outages of over 100,000 CMI or 500 CI between January 2024 and December 2024.

On May 5, 2024, a vehicle contacted a pole causing a recloser to trip to lockout. This outage affected 478 customers for up to 220 minutes resulting in 104,729 CMI.

On June 26, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a load break fuse to operate. This outage affected 111 customers for up to 1,291 minutes resulting in 143,217 CMI.

On August 12, 2024, an equipment failure occurred on an overhead conductor causing a circuit breaker to trip to lockout. This outage affected 1,385 customers for up to 398 minutes resulting in 283,726 CMI.

In total, the EAST ALLENTOWN 42-04 circuit had 15 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (7); equipment failure (4); nothing found (2); animal contacts (1); vehicles (1).

Remedial Actions

- In 2024, full circuit trimming was performed.
- In 2025, an additional single-phase recloser will be evaluated.
- In 2025, additional fusing will be installed.

39 Circuit 13603 -- RICHLAND 36-03

Performance Analysis

The RICHLAND 36-03 circuit experienced four outages of over 100,000 CMI or 500 CI between January 2024 and December 2024.

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 182 customers for up to 954 minutes resulting in 173,628 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 183 customers for up to 816 minutes resulting in 149,181 CMI.

On November 9, 2024, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 487 customers for up to 325 minutes resulting in 106,241 CMI.

On December 30, 2024, during a period of heavy rain, a tree contacted an overhead conductor causing a circuit breaker to trip to lockout. This outage affected 461 customers for up to 235 minutes resulting in 107,887 CMI.

In total, the RICHLAND 36-03 circuit had 34 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (27); animal contacts (4); nothing found (2); vehicles (1).

Remedial Actions

- In 2024, proactive fault sensors were installed.
- In 2024, an existing recloser was replaced.
- In 2025, additional fusing will be evaluated.
- In 2025, a section of this circuit will be evaluated for reconductoring.
- In 2025, single-phase reclosers will be evaluated for several locations.
- In 2025, a single-phase tie will be evaluated.

- In 2025, a three-phase tie will be evaluated.
- In 2025, a pole with multiple hits will be relocated.
- In 2025, a section of this circuit will be evaluated for reconductoring.

40 Circuit 53601 -- DALMATIA 36-01

Performance Analysis

The DALMATIA 36-01 circuit experienced three outages of over 100,000 CMI or 500 CI between January 2024 and December 2024.

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 87 customers for up to 2,206 minutes resulting in 191,921 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 129 customers for up to 3,479 minutes resulting in 426,614 CMI.

On February 13, 2024, during a period of ice/sleet/snow, a tree contacted an overhead switch causing an interruption. This outage affected 174 customers for up to 858 minutes resulting in 149,292 CMI.

In total, the DALMATIA 36-01 circuit had 80 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (56); animal contacts (11); equipment failure (11); other (1); vehicles (1).

Remedial Actions

- In 2024, a new three-phase recloser was installed.
- In 2024, proactive fault sensors were installed.
- In 2025, two additional fuses will be installed.
- In 2025, 18 sections of single-phase line will be evaluated for reconductoring.
- In 2025, 2 sections of three-phase line will be evaluated for reconductoring.
- In 2025, 2 inaccessible sections of single-phase line will be evaluated for relocation.
- In 2026, a three-phase tie will be constructed to the HUNTER circuit.
- In 2027, full circuit trimming will be performed.

41 Circuit 18001 -- ZIONSVILLE 80-01

Performance Analysis

The ZIONSVILLE 80-01 circuit experienced three outages of over 100,000 CMI or 500 CI between January 2024 and December 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.

On July 16, 2024, during a period of strong wind, a tree contacted an overhead conductor causing an interruption. This outage affected 700 customers for up to 458 minutes resulting in 178,591 CMI.

In total, the ZIONSVILLE 80-01 circuit had 98 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (73); animal contacts (14); nothing found (6); equipment failure (2); contact or dig in (1); other (1); vehicles (1).

Remedial Actions

- In 2024, proactive fault sensors were installed.
- In 2024, several poles were replaced.
- In 2024, two crossarms were replaced.
- In 2024, full circuit trimming was performed.
- In 2025, an additional Smart Grid device will be installed.
- In 2025, several poles will be replaced.
- In 2025, two sections of difficult-to-access single-phase line will be relocated with another to be evaluated.
- In 2025, two sections of conductor will be evaluated for undergrounding.

42 Circuit 17805 -- GILBERT 78-05

Performance Analysis

The GILBERT 78-05 circuit experienced six outages of over 100,000 CMI or 500 CI between January 2024 and December 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 136 customers for up to 894 minutes resulting in 121,452 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 418 customers for up to 318 minutes resulting in 118,656 CMI.

On March 24, 2024, a vehicle contacted a pole. This outage affected 1,265 customers for up to 243 minutes resulting in 42,632 CMI.

On July 17, 2024, during a period of heavy rain, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 129 customers for up to 873 minutes resulting in 102,161 CMI.

On July 17, 2024, during a period of strong wind, an unidentified issue occurred causing a recloser to trip to lockout. This outage affected 443 customers for up to 322 minutes resulting in 142,486 CMI.

On August 9, 2024, during a period of strong wind, a tree contacted an overhead splice causing a load break fuse to operate. This outage affected 115 customers for up to 1,529 minutes resulting in 175,741 CMI.

In total, the GILBERT 78-05 circuit had 76 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (33); animal contacts (16); equipment failure (13); vehicles (6); nothing found (4); other (4).

Remedial Actions

- In 2024, proactive fault sensors were installed.
- In 2024, full circuit trimming was performed.
- In 2024, several poles were replaced.
- In 2024, additional animal guarding was installed.
- In 2025, additional fusing will be installed.
- In 2025, several poles will be replaced.
- In 2025, two single-phase reclosers will be installed.

43 Circuit 28102 -- TWIN LAKES 81-02

Performance Analysis

The TWIN LAKES 81-02 circuit experienced ten outages of over 100,000 CMI or 500 CI between January 2024 and December 2024.

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 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 resulting in 191,312 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.

On November 21, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 1,101 customers for up to 2,701 minutes resulting in 1,961,194 CMI.

On November 21, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 216 customers for up to 4,142 minutes resulting in 828,031 CMI.

On November 22, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 83 customers for up to 4,817 minutes resulting in 355,068 CMI.

On November 22, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a load break fuse to operate. This outage affected 42 customers for up to 2,895 minutes resulting in 211,022 CMI.

On November 22, 2024, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 132 customers for up to 0 minutes resulting in 144,012 CMI.

On November 22, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 223 customers for up to 3,497 minutes resulting in 779,831 CMI.

On November 24, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 55 customers for up to 2,182 minutes resulting in 119,968 CMI.

In total, the TWIN LAKES 81-02 circuit had 96 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (75); nothing found (8); animal contacts (7); equipment failure (6).

Remedial Actions

- In 2024, a single-phase recloser was installed.
- In 2024, several poles were replaced.
- In 2024, proactive fault sensors were installed.
- In 2025, a new Smart Grid device will be installed.
- In 2025, numerous porcelain cutouts will be replaced.
- In 2025, additional animal guarding will be installed.
- In 2025, a Proactive Circuit Analysis will be performed.
- In 2026, full circuit trimming will be performed.

44 Circuit 45602 -- WOOLRICH 56-02

Performance Analysis

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

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 an interruption. This outage affected 1,012 customers for up to 2,071 minutes resulting in 847,119 CMI.

On July 23, 2024, a tree contacted an overhead conductor causing an interruption. This outage affected 375 customers for up to 428 minutes resulting in 158,991 CMI.

In total, the WOOLRICH 56-02 circuit had 72 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (38); animal contacts (14); equipment failure (12); nothing found (5); vehicles (3).

Remedial Actions

- In 2024, an existing three-phase recloser was upgraded to a Smart Grid device.
- In 2025, a new substation will be evaluated.
- In 2025, a three-phase tie line will be evaluated.
- In 2025, a section of difficult-to-access three-phase line will be relocated.
- In 2026, storm hardening will be performed on this circuit.

45 Circuit 24401 -- TINKER 44-01

Performance Analysis

The TINKER 44-01 circuit experienced three outages of over 100,000 CMI or 500 CI between January 2024 and December 2024.

On January 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 1,216 customers for up to 191 minutes resulting in 113,064 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 648 customers for up to 935 minutes resulting in 400,466 CMI.

On November 22, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a circuit breaker to trip to lockout. This outage affected 1,262 customers for up to 6,107 minutes resulting in 5,710,059 CMI.

In total, the TINKER 44-01 circuit had 119 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (91); animal contacts (9); equipment failure (9); nothing found (8); other (2).

Remedial Actions

- In 2024, a voltage regulator was replaced.
- In 2025, several poles will be replaced.
- In 2025, three single-phase reclosers will be installed.
- In 2025, numerous porcelain cutouts will be replaced.
- In 2025, a section of underground cable will be replaced.
- In 2026, an existing recloser will be replaced.

46 Circuit 21203 -- EAST CARBONDALE 12-03

Performance Analysis

The EAST CARBONDALE 12-03 circuit experienced five outages of over 100,000 CMI or 500 CI between January 2024 and December 2024.

On April 12, 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 336 customers for up to 644 minutes resulting in 216,363 CMI.

On July 15, 2024, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 342 customers for up to 1,678 minutes resulting in 156,916 CMI.

On November 22, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 349 customers for up to 3,473 minutes resulting in 1,105,297 CMI.

On November 22, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 104 customers for up to 0 minutes resulting in 378,367 CMI.

On November 22, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 919 customers for up to 3,007 minutes resulting in 1,310,860 CMI.

In total, the EAST CARBONDALE 12-03 circuit had 74 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (49); equipment failure (15); animal contacts (8); contact or dig in (1); nothing found (1).

Remedial Actions

- In 2025, proactive fault sensors will be installed.
- In 2025, an existing recloser will be replaced.
- In 2025, hot spot tree trimming will be performed.
- In 2026, an existing recloser will be replaced.
- In 2026, full circuit trimming will be performed.

47 Circuit 28303 -- NEWFOUNDLAND 83-03

Performance Analysis

The NEWFOUNDLAND 83-03 circuit experienced more than ten outages of over 100,000 CMI or 500 CI between January 2024 and December 2024.

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 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 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 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.

On August 9, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a load break fuse to operate. This outage affected 91 customers for up to 1,368 minutes resulting in 124,422 CMI.

On November 22, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a transformer to be interrupted. This outage affected 201 customers for up to 1,109 minutes resulting in 200,508 CMI.

On November 22, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 95 customers for up to 2,199 minutes resulting in 208,824 CMI.

On November 22, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor. This outage affected 45 customers for up to 2,903 minutes resulting in 130,626 CMI.

On November 22, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a load break fuse to operate. This outage affected 34 customers for up to 3,741 minutes resulting in 107,804 CMI.

On November 22, 2024, during a period of ice/sleet/snow, a tree contacted an overhead splice causing a recloser to trip to lockout. This outage affected 30 customers for up to 3,909 minutes resulting in 117,262 CMI.

On November 22, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 1,751 customers for up to 2,004 minutes resulting in 2,476,630 CMI.

On November 23, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a load break fuse to operate. This outage affected 70 customers for up to 2,782 minutes resulting in 194,679 CMI.

On November 23, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a load break fuse to operate. This outage affected 98 customers for up to 2,688 minutes resulting in 263,400 CMI.

On November 23, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a load break fuse to operate. This outage affected 40 customers for up to 2,991 minutes resulting in 119,615 CMI.

In total, the NEWFOUNDLAND 83-03 circuit had 149 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (120); equipment failure (14); nothing found (7); animal contacts (6); other (1); vehicles (1).

Remedial Actions

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

48 Circuit 26602 -- BROOKSIDE 66-02

Performance Analysis

The BROOKSIDE 66-02 circuit experienced two outages of over 100,000 CMI or 500 CI between January 2024 and December 2024.

On August 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 116 customers for up to 1,695 minutes resulting in 193,164 CMI.

On November 22, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 1,551 customers for up to 917 minutes resulting in 1,106,541 CMI.

In total, the BROOKSIDE 66-02 circuit had 32 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (25); equipment failure (6); animal contacts (1).

Remedial Actions

- In 2025, full circuit trimming will be performed.
- In 2025, proactive fault sensors will be installed.
- In 2025, the protection settings on this circuit will be reviewed.

49 Circuit 40201 -- BEAR GAP 02-01

Performance Analysis

The BEAR GAP 02-01 circuit experienced two outages of over 100,000 CMI or 500 CI between January 2024 and December 2024.

On February 13, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing an interruption. This outage affected 84 customers for up to 3,622 minutes resulting in 202,123 CMI.

On June 18, 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 312 customers for up to 459 minutes resulting in 143,064 CMI.

In total, the BEAR GAP 02-01 circuit had 129 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (87); animal contacts (19); equipment failure (9); nothing found (9); vehicles (3); other (2).

Remedial Actions

- In 2024, proactive fault sensors were installed.
- In 2024, additional fusing was installed.
- In 2024, hot spot trimming was performed.
- In 2024, several poles were replaced.
- In 2025, additional storm hardening projects will be evaluated.
- In 2026, full circuit trimming will be performed.
- In 2026, several sections of difficult-to-access conductor will be relocated.

50 Circuit 63602 -- LETORT 36-02

Performance Analysis

The LETORT 36-02 circuit experienced three outages of over 100,000 CMI or 500 CI between January 2024 and December 2024.

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 527 customers for up to 113 minutes resulting in 59,551 CMI.

On August 1, 2024, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 529 customers for up to 254 minutes resulting in 134,366 CMI.

On August 3, 2024, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 529 customers for up to 235 minutes resulting in 123,971 CMI.

In total, the LETORT 36-02 circuit had 47 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (28); equipment failure (10); animal contacts (7); nothing found (2).

Remedial Actions

- In 2025, additional fusing will be evaluated.
- In 2025, 12 three-phase proactive fault sensors will be installed.
- In 2025, 8 single-phase proactive fault sensors will be installed.
- In 2025, full circuit trimming will be performed.

51 Circuit 64101 -- RED FRONT 41-01

Performance Analysis

The RED FRONT 41-01 circuit experienced two outages of over 100,000 CMI or 500 CI between January 2024 and December 2024.

On July 16, 2024, during a period of strong wind, a tree contacted an overhead conductor causing an interruption. This outage affected 726 customers for up to 1,474 minutes resulting in 482,201 CMI.

On August 1, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a circuit breaker to trip to lockout. This outage affected 1,704 customers for up to 667 minutes resulting in 295,512 CMI.

In total, the RED FRONT 41-01 circuit had 52 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (33); equipment failure (11); animal contacts (4); nothing found (4).

Remedial Actions

- In 2024, full circuit trimming was performed.
- In 2024, a three-phase sectionalizing device was replaced with a Smart Grid device.
- In 2025, single-phase sectionalizing devices will be installed.
- In 2025, additional fusing will be installed.
- In 2025, a three-phase protective device will be replaced with a Smart Grid device.

52 Circuit 27901 -- BEAR CREEK 79-01

Performance Analysis

The BEAR CREEK 79-01 circuit experienced eight outages of over 100,000 CMI or 500 CI between January 2024 and December 2024.

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 1,494 customers for up to 56 minutes resulting in 83,215 CMI.

On July 17, 2024, during a period of heavy rain, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 330 customers for up to 459 minutes resulting in 124,575 CMI.

On August 28, 2024, a vehicle contacted a pole causing a circuit breaker to trip to lockout. This outage affected 1,200 customers for up to 184 minutes resulting in 50,274 CMI.

On November 22, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a load break fuse to operate. This outage affected 49 customers for up to 2,619 minutes resulting in 128,321 CMI.

On November 22, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 29 customers for up to 5,409 minutes resulting in 152,020 CMI.

On November 22, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 328 customers for up to 4,884 minutes resulting in 908,335 CMI.

On November 22, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a load break fuse to operate. This outage affected 62 customers for up to 2,450 minutes resulting in 151,898 CMI.

On November 23, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 165 customers for up to 3,148 minutes resulting in 302,749 CMI.

In total, the BEAR CREEK 79-01 circuit had 89 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (73); equipment failure (6); animal contacts (5); nothing found (3); vehicles (2).

Remedial Actions

- In 2024, multiple dead-ends were replaced.
- In 2024, a tie line was upgraded to remote operability.
- In 2024, proactive fault sensors were installed.
- In 2025, a new Smart Grid device will be installed with more to be evaluated.

- In 2025, additional fusing will be evaluated.
- In 2025, full circuit trimming will be performed.

53 Circuit 56504 -- ROCKVILLE 65-04

Performance Analysis

The ROCKVILLE 65-04 circuit experienced five outages of over 100,000 CMI or 500 CI between January 2024 and December 2024.

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 1,418 customers for up to 172 minutes resulting in 79,837 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 69 customers for up to 2,079 minutes resulting in 143,432 CMI.

On July 30, 2024, during a period of lightning, a tree contacted an overhead conductor causing an interruption. This outage affected 1,990 customers for up to 580 minutes resulting in 132,624 CMI.

On August 9, 2024, during a period of strong wind, a tree contacted an overhead conductor causing an interruption. This outage affected 305 customers for up to 2,449 minutes resulting in 171,363 CMI.

On August 9, 2024, during a period of strong wind, a tree contacted an overhead conductor causing an interruption. This outage affected 247 customers for up to 558 minutes resulting in 137,542 CMI.

In total, the ROCKVILLE 65-04 circuit had 150 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (104); animal contacts (20); equipment failure (19); nothing found (4); vehicles (2); other (1).

Remedial Actions

- In 2023, proactive fault sensors were installed.
- In 2024, single-phase predictive failure sensors were installed on this circuit.
- In 2024, two additional fuses were installed.
- In 2025, two single-phase reclosers will be upgraded for remote operability.
- In 2025, ten sections of single-phase will be evaluated for reconductoring.
- In 2025, a section of single-phase will be evaluated for relocation.
- In 2025, three sections of single-phase will be evaluated for resourcing.
- In 2025, four additional fuses will be evaluated.
- In 2025, three additional fuses will be installed.

54 Circuit 10504 -- CRACKERSPORT 05-04

Performance Analysis

The CRACKERSPORT 05-04 circuit experienced one outage of over 100,000 CMI or 500 CI between January 2024 and December 2024.

On September 3, 2024, an equipment failure occurred on a pole or pole arm causing a circuit breaker to trip to lockout. This outage affected 1,605 customers for up to 935 minutes resulting in 475,559 CMI.

In total, the CRACKERSPORT 05-04 circuit had 12 outages between January 2024 and December 2024, with the causes breaking down as follows: equipment failure (5); animal contacts (4); tree related (3).

Remedial Actions

- In 2024, additional fusing will be installed.
- In 2024, an existing recloser will be evaluated for replacement.
- In 2025, several sections of underground conductor will be replaced.
- In 2025, proactive fault sensors will be installed.

55 Circuit 18502 -- CANADENSIS 85-02

Performance Analysis

The CANADENSIS 85-02 circuit experienced seven outages of over 100,000 CMI or 500 CI between January 2024 and December 2024.

On February 13, 2024, during a period of ice/sleet/snow, an unidentified issue occurred with an overhead transmission component causing a circuit breaker to trip to lockout. This outage affected 1,888 customers for up to 109 minutes resulting in 204,696 CMI.

On March 11, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a load break fuse to operate. This outage affected 289 customers for up to 1,908 minutes resulting in 518,552 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 101 customers for up to 1,454 minutes resulting in 120,508 CMI.

On March 11, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a load break fuse to operate. This outage affected 72 customers for up to 1,441 minutes resulting in 103,726 CMI.

On November 22, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 189 customers for up to 2,457 minutes resulting in 407,685 CMI.

On November 22, 2024, during a period of ice/sleet/snow, a tree contacted an overhead transformer causing a transformer to be interrupted. This outage affected 50 customers for up to 3,382 minutes resulting in 160,146 CMI.

On November 22, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 58 customers for up to 1,926 minutes resulting in 111,701 CMI.

In total, the CANADENSIS 85-02 circuit had 120 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (91); animal contacts (17); equipment failure (8); nothing found (3); other (1).

Remedial Actions

- In 2024, proactive fault sensors were installed.
- In 2024, additional animal guarding was installed.
- In 2024, several poles were replaced.
- In 2024, several crossarms were replaced.
- In 2025, two new Smart Grid devices will be installed.
- In 2025, tree shielding cable will be installed on portions of this circuit.
- In 2025, several poles will be replaced.

56 Circuit 14008 -- SELLERSVILLE 40-08

Performance Analysis

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

On September 17, 2024, a tree contacted an overhead switch causing a circuit breaker to trip to lockout. This outage affected 688 customers for up to 54 minutes resulting in 36,615 CMI.

In total, the SELLERSVILLE 40-08 circuit had 76 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (63); animal contacts (7); nothing found (4); equipment failure (1); other (1).

Remedial Actions

- In 2024, a section of single-phase was reconfigured.
- In 2024, proactive fault sensors were installed.
- In 2025, additional animal guarding will be installed.
- In 2025, additional fusing will be installed.
- In 2025, a section of single-phase will be evaluated for relocation.
- In 2025, a single-phase tie will be evaluated.
- In 2025, a section of single-phase will be reconfigured.
- In 2025, two Smart Grid devices will be installed.

- In 2025, three single-phase reclosers will be installed.
- In 2025, a fuse will be replaced with a single-phase recloser, and additional fusing will be installed.
- In 2026, full circuit trimming will be performed.

57 Circuit 51502 -- SWATARA 15-02

Performance Analysis

The SWATARA 15-02 circuit experienced four outages of over 100,000 CMI or 500 CI between January 2024 and December 2024.

On February 13, 2024, during a period of ice/sleet/snow, a tree contacted a conductor causing a circuit breaker to trip to lockout. This outage affected 210 customers for up to 823 minutes resulting in 172,764 CMI.

On February 13, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a circuit breaker to trip to lockout. This outage affected 590 customers for up to 958 minutes resulting in 224,951 CMI.

On June 30, 2024, a vehicle contact caused a recloser to trip to lockout. This outage affected 449 customers for up to 580 minutes resulting in 188,213 CMI.

On September 21, 2024, during a period of heavy rain, an equipment failure occurred on an overhead switch causing a circuit breaker to trip to lockout. This outage affected 1,927 customers for up to 298 minutes resulting in 153,788 CMI.

In total, the SWATARA 15-02 circuit had 17 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (9); animal contacts (4); equipment failure (2); contact or dig in (1); vehicles (1).

Remedial Actions

- In 2023, proactive fault sensors were installed on this circuit.
- In 2025, resourcing sections of line will be evaluated.
- In 2025, a tie with the SWATARA 15-01 will be evaluated.
- In 2025, sections of line will be evaluated for reconductoring.
- In 2025, three additional fuses will be evaluated

58 Circuit 29701 -- ANGELS 91-01

Performance Analysis

The ANGELS 91-01 circuit experienced seven outages of over 100,000 CMI or 500 CI between January 2024 and December 2024.

On January 16, 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 588 customers for up to 45 minutes resulting in 26,460 CMI.

On January 26, 2024, during a period of heavy rain, a tree contacted an overhead conductor causing an interruption. This outage affected 576 customers for up to 407 minutes resulting in 33,854 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 592 customers for up to 15 minutes resulting in 8,880 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 1,670 minutes resulting in 148,583 CMI.

On August 9, 2024, during a period of heavy rain, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 582 customers for up to 403 minutes resulting in 234,284 CMI.

On November 22, 2024, during a period of ice/sleet/snow, a tree contacted an overhead conductor causing a load break fuse to operate. This outage affected 45 customers for up to 3,380 minutes resulting in 152,068 CMI.

On November 23, 2024, during a period of ice/sleet/snow, a tree contacted a pole or pole arm causing a transformer to be interrupted. This outage affected 597 customers for up to 3,225 minutes resulting in 62,378 CMI.

In total, the ANGELS 91-01 circuit had 88 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (69); animal contacts (9); equipment failure (9); vehicles (1).

Remedial Actions

- In 2024, three-phase proactive fault sensors were installed.
- In 2025, additional animal guarding will be installed.
- In 2025, single-phase proactive fault sensors will be installed.
- In 2025, several poles will be replaced.
- In 2025, two single-phase reclosers will be installed.

59 Circuit 46302 -- ROHRSBURG 63-02

Performance Analysis

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

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 249 customers for up to 3,284 minutes resulting in 359,547 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 2,816 minutes resulting in 128,099 CMI.

On June 27, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a load break fuse to operate. This outage affected 52 customers for up to 2,663 minutes resulting in 138,476 CMI.

On August 6, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a circuit breaker to trip to lockout. This outage affected 1,115 customers for up to 2,462 minutes resulting in 1,239,572 CMI.

In total, the ROHRSBURG 63-02 circuit had 96 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (75); equipment failure (12); animal contacts (5); nothing found (2); contact or dig in (1); other (1).

Remedial Actions

- In 2024, proactive fault sensors were installed on this circuit.
- In 2025, additional fusing will be installed.
- In 2025, full circuit trimming will be performed.
- In 2026, a section of three-phase conductor will be extended.
- In 2026, several sections of difficult-to-access conductor will be relocated or undergrounded.
- In 2026, storm hardening will be performed.

60 Circuit 45902 -- AUBURN 59-02

Performance Analysis

The AUBURN 59-02 circuit experienced four outages of over 100,000 CMI or 500 CI between January 2024 and December 2024.

On February 13, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 40 customers for up to 2,522 minutes resulting in 100,880 CMI.

On February 13, 2024, during a period of ice/sleet/snow, an equipment failure occurred on an overhead conductor causing a recloser to trip to lockout. This outage affected 113 customers for up to 1,208 minutes resulting in 136,396 CMI.

On June 28, 2024, a vehicle contacted a pole causing a recloser to trip to lockout. This outage affected 442 customers for up to 577 minutes resulting in 206,151 CMI.

On September 23, 2024, during a period of heavy rain, a tree contacted an overhead conductor causing an interruption. This outage affected 458 customers for up to 378 minutes resulting in 102,222 CMI.

In total, the AUBURN 59-02 circuit had 77 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (51); animal contacts (9); equipment failure (8); nothing found (4); vehicles (3); other (2).

Remedial Actions

- In 2024, full circuit trimming was performed.
- In 2024, several poles were replaced.
- In 2024, proactive fault sensors were installed.
- In 2024, two sections of difficult-to-access conductor were relocated.
- In 2025, a section of difficult-to-access three-phase conductor will be evaluated for relocation.
- In 2025, additional fusing will be installed.
- In 2025, a section of difficult-to-access conductor will be relocated.
- In 2025, this circuit will be evaluated for storm hardening projects.

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 January 2024 and December 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 79 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (55); nothing found (8); equipment failure (7); animal contacts (6); vehicles (2); other (1).

Remedial Actions

- In 2024, a new single-phase recloser was installed.
- In 2024, an additional Smart Grid device was installed.
- In 2024, a section of conductor was removed.
- In 2024, ten additional fuses were installed.
- In 2024, proactive fault sensors were installed.
- In 2025, an additional Smart Grid device will be installed.
- In 2025, a Smart Grid device will be replaced and relocated.
- In 2026, a three-phase tie will be built.
- In 2026, four sections of difficult-to-access single-phase tap will be rebuilt and relocated.
- In 2026, a section of difficult-to-access single-phase will be rebuilt to three-phase insulated conductor and relocated.
- In 2026, a difficult-to-access two-phase tap will be rebuilt to three-phase and relocated to the road.
- In 2026, a large single-phase tap with multiple sections of difficult-to-access conductor will be split up, refed, and relocated to the road.

62 Circuit 45702 -- LINDEN 57-02

Performance Analysis

The LINDEN 57-02 circuit experienced five outages of over 100,000 CMI or 500 CI between January 2024 and December 2024.

On January 9, 2024, during a period of strong wind, a tree contacted an overhead conductor causing an interruption. This outage affected 494 customers for up to 1,308 minutes resulting in 213,426 CMI.

On May 8, 2024, during a period of strong wind, a tree contacted an overhead conductor causing an interruption. This outage affected 502 customers for up to 422 minutes resulting in 128,939 CMI.

On July 7, 2024, a tree contacted a pole or pole arm causing an interruption. This outage affected 220 customers for up to 604 minutes resulting in 127,866 CMI.

On August 9, 2024, during a period of heavy rain, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 106 customers for up to 1,973 minutes resulting in 160,113 CMI.

On September 5, 2024, a vehicle contacted a pole causing an interruption. This outage affected 986 customers for up to 205 minutes resulting in 69,623 CMI.

In total, the LINDEN 57-02 circuit had 69 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (44); equipment failure (14); animal contacts (8); contact or dig in (1); other (1); vehicles (1).

Remedial Actions

- In 2024, additional animal guarding was installed with more scheduled for 2025.
- In 2024, additional fusing was installed.
- In 2024, numerous porcelain cutouts were replaced.
- In 2025, an existing recloser will be upgraded to a Smart Grid device.
- In 2025, full circuit trimming will be performed.
- In 2025, additional sectionalizing will be evaluated.
- In 2025, a section of three-phase will be evaluated for relocation.

63 Circuit 56802 -- BENVENUE 68-02

Performance Analysis

The BENVENUE 68-02 circuit experienced five outages of over 100,000 CMI or 500 CI between January 2024 and December 2024.

On May 22, 2024, an equipment failure occurred on a pole or pole arm causing a circuit breaker to trip to lockout. This outage affected 1,581 customers for up to 535 minutes resulting in 84,919 CMI.

On June 6, 2024, during a period of heavy rain, a tree contacted an overhead conductor causing a circuit breaker to trip to lockout. This outage affected 1,353 customers for up to 118 minutes resulting in 35,718 CMI.

On June 26, 2024, during a period of strong wind, a tree contacted an overhead conductor causing an interruption. This outage affected 937 customers for up to 1,558 minutes resulting in 563,202 CMI.

On June 26, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a load break fuse to operate. This outage affected 932 customers for up to 227 minutes resulting in 149,236 CMI.

On August 6, 2024, during a period of strong wind, a tree contacted an overhead conductor causing a recloser to trip to lockout. This outage affected 210 customers for up to 1,050 minutes resulting in 220,424 CMI.

In total, the BENVENUE 68-02 circuit had 111 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (74); equipment failure (18); animal contacts (9); nothing found (5); other (2); vehicles (2); contact or dig in (1).

Remedial Actions

- In 2023, full circuit trimming was performed.
- In 2024, two additional fuses were installed.
- In 2025, three additional fuses will be installed.
- In 2025, an additional single-phase recloser will be installed.
- In 2025, a single-phase recloser will be upgraded to remote operability.
- In 2025, eight sections of single-phase will be evaluated for reconductoring.
- In 2025, two sections of single-phase will be evaluated for relocating underground.
- In 2025, five sections of inaccessible single-phase will be evaluated for relocation.
- In 2025, two sections of single-phase will be evaluated for reconfiguration.
- In 2025, 16 additional fuses will be evaluated.
- In 2025, an additional single-phase recloser will be evaluated.
- In 2025, an additional three-phase recloser will be evaluated.

64 Circuit 27502 -- WEISSPORT 75-02

Performance Analysis

The WEISSPORT 75-02 circuit experienced three outages of over 100,000 CMI or 500 CI between January 2024 and December 2024.

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 2,824 customers for up to 356 minutes resulting in 974,938 CMI.

On July 31, 2024, an equipment failure occurred on a pole or pole arm causing a recloser to trip to lockout. This outage affected 1,617 customers for up to 207 minutes resulting in 217,128 CMI.

In total, the WEISSPORT 75-02 circuit had 45 outages between January 2024 and December 2024, with the causes breaking down as follows: tree related (25); equipment failure (9); animal contacts (8); vehicles (2); other (1).

Remedial Actions

- In 2024, two new Smart Grid devices were installed.
- In 2025, additional fusing will be installed in several locations.
- In 2025, a single-phase recloser will be installed.
- In 2025, full circuit trimming will be performed.
- In 2026, a three-phase tie line will be constructed.

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 | 4,888 | 15.1% | 80,984 | 4.5% | 6,720,270 | 1.0% |
| Contact / Dig-In | 193 | 0.6% | 7,295 | 0.4% | 787,210 | 0.1% |
| Directed by Non-PPL Authority | 50 | 0.2% | 3,192 | 0.2% | 662,142 | 0.1% |
| Equipment Failures | 5,594 | 17.3% | 320,826 | 17.9% | 48,632,327 | 7.3% |
| Improper Design | 6 | 0.0% | 2,907 | 0.2% | 119,888 | 0.0% |
| Improper Installation | 6 | 0.0% | 4,076 | 0.2% | 371,971 | 0.1% |
| Improper Operation | 7 | 0.0% | 939 | 0.1% | 48,779 | 0.0% |
| Nothing Found | 1,498 | 4.6% | 86,679 | 4.8% | 16,680,980 | 2.5% |
| Other Controllable | 71 | 0.2% | 10,798 | 0.6% | 1,358,215 | 0.2% |
| Other Non-Control | 472 | 1.5% | 40,457 | 2.3% | 8,075,581 | 1.2% |
| Other Public | 30 | 0.1% | 12,079 | 0.7% | 1,962,596 | 0.3% |
| Tree Related | 18,707 | 57.9% | 1,111,027 | 62.0% | 563,453,361 | 84.9% |
| Unknown | - | 0.0% | - | 0.0% | - | 0.0% |
| Vehicles | 772 | 2.4% | 110,103 | 6.1% | 14,910,158 | 2.2% |
| Total | 32,294 | 100.0% | 1,791,362 | 100.0% | 663,783,475 | 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 60% of cases, 69% of customer interruptions, and 90% 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, 88% of the customer interruptions and 96% of the customer minutes attributed to tree related outages were weather-related.

Animals: Animals accounted for approximately 15% 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. PPL Electric has distribution and substation animal guarding programs to focus on systematically protecting existing facilities most at risk of incurring animal-caused interruptions. All PPL Electric substations are animal guarded.

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 35% of the cases of trouble, 37% of the customer interruptions and 58% 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 and, when closed for test, the fuse holds, 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) | 4th Quarter | | Year-to-date | |
|---|-----------------------|-------------|--------|--------------|--------|
| | | Budget | Actual | Budget | Actual |
| Transmission | | | | | |
| Transmission C-tag poles (# of poles) | 61 | 15 | 15 | 61 | 61 |
| Transmission arm replacements (# of arms) | 2 | 1 | 1 | 2 | 2 |
| Transmission air break switch inspections (# of switches) | 1 | 0 | 0 | 1 | 1 |
| Transmission surge arrester installations (# of sets) | 6 | 0 | 0 | 6 | 6 |
| Transmission structure inspections (# of activities) | 6,859 | 0 | 0 | 6,859 | 4,653 |
| Transmission tree side trim-Bulk Power (linear feet) | N/A | | 99 | | 18,666 |
| Transmission herbicide-Bulk Power (# of acres) | N/A | | 39 | | 1,883 |
| Transmission reclearing (# of miles) BES Only | 823 | | 34 | | 820 |
| Transmission reclearing (# of miles) 69 kV | 1,642 | 171 | 171 | 1,375 | 1,375 |
| Transmission reclearing (# of miles) 138 kV | 88 | | 14 | | 88 |
| Transmission danger tree removals-Bulk Power (# of trees) | N/A | | 39 | | 1,526 |
| Substation | | | | | |
| Substation batteries (# of activities) ⁵ | 122 | 0 | 0 | 122 | 122 |
| Circuit breakers (# of activities) | 0 | 0 | 1 | 0 | 6 |
| Substation inspections (# of activities) | 1,250 | 313 | 325 | 1,250 | 1,489 |
| Transformer maintenance (# of activities) | 374 | 94 | 138 | 374 | 780 |

⁵ 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) | 4th Quarter | | Year-to-date | |
|--|-----------------------|-------------|--------|--------------|--------|
| | | Budget | Actual | Budget | Actual |
| Distribution | | | | | |
| Distribution C-tag poles replaced (# of poles) | 2,250 | 563 | 623 | 2,250 | 1,171 |
| C-truss distribution poles (# of poles) ⁶ | 1,261 | 315 | 1,033 | 1,261 | 1,393 |
| Capacitor (MVAR added) | N/A | | 0.6 | | 1.1 |
| OCR Replacements (# of) | 104 | 30 | 18 | 104 | 74 |
| Distribution pole inspections (# of poles) | 61,029 | 17,715 | 23,544 | 45,787 | 70,029 |
| Distribution line inspections (miles) | 7,526 | 0 | 0 | 7,526 | 7,526 |
| Group re-lamping (# of lamps) | 0 | 0 | 0 | 0 | 0 |
| Test sections of underground distribution cable | N/A | | 23 | | 69 |
| Distribution tree trimming (# of miles) | 4,028 | | 1,438 | | 4,877 |
| Distribution herbicide (# of acres) | N/A | | 600 | | 1,371 |
| Distribution >18" removals within R/W (# of trees) | N/A | | | | |
| Distribution hazard tree removals outside R/W (# of trees) | N/A | | 5,411 | | 13,519 |
| LTN manhole inspections (# of) ⁷ | 0 | 0 | 0 | 0 | 0 |
| LTN vault inspections (# of) | 0 | 0 | 0 | 0 | 1 |
| LTN network protector overhauls (# of) | 0 | 0 | 0 | 0 | 0 |
| LTN reverse power trip testing (# of) | 0 | 0 | 5 | 0 | 10 |

⁶ C-truss poles began in early Q3.

⁷ 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 | 4th Quarter | | | Year-to-date | |
|-------------------------------|-------------------------|-------------------|-------------------|-------------------|-------------------|
| | Annual Budget (000s) | Budget (\$000) | Actual (\$000) | Budget (\$000) | Actual (\$000) |
| Provide Electric Service | 6,371 | 1,450 | 1,784 | 6,371 | 5,998 |
| Vegetation Management | 29,115 | 4,944 | 13,725 | 29,115 | 49,078 |
| Customer Response | 54,995 | 11,925 | 16,839 | 54,995 | 65,085 |
| Reliability Maintenance | 19,034 | 4,917 | 4,582 | 19,034 | 20,318 |
| System Upgrade | 194 | 3 | (12) | 194 | 7 |
| Customer Service/Accounts | 67,720 | 19,899 | 52,639 | 67,720 | 200,538 |
| Others | 47,948 | 7,228 | 21,765 | 47,948 | 68,133 |
| Total O&M Expenses | 225,376 | 50,365 | 111,323 | 225,376 | 409,158 |

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 | 4th Quarter | | | Year-to-date | |
|------------------------------|-------------------------|-------------------|-------------------|-------------------|-------------------|
| | Annual Budget (000s) | Budget (\$000) | Actual (\$000) | Budget (\$000) | Actual (\$000) |
| New Service/Revenue | 118,093 | 28,344 | 32,506 | 118,093 | 146,249 |
| System Upgrade | 388,584 | 113,303 | 133,908 | 388,584 | 368,577 |
| Reliability & Maintenance | 530,530 | 132,812 | 149,853 | 530,530 | 536,010 |
| Customer Response | 63,181 | 15,764 | 24,953 | 63,181 | 136,262 |
| Other | 22,823 | 4,476 | (11,165) | 22,823 | 3,640 |
| Total | 1,123,211 | 294,699 | 330,054 | 1,123,211 | 1,190,738 |

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. |
|--|--|