

# KENTUCKY PUBLIC SERVICE COMMISSION

## Electric Distribution Utility Annual Reliability Report

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### **SECTION 1: CONTACT INFORMATION**

UTILITY NAME	Grayson Rural Electric Coop. Corp.
REPORT PREPARED BY	Kyle Clevenger/Mark Hutchinson/Robert Brown
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### **SECTION 2: REPORTING YEAR**

CALENDAR YEAR OF REPORT	2024
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### **SECTION 3: MAJOR EVENT DAYS (MED)**

T <sub>MED</sub>	35.93
FIRST DATE USED TO DETERMINE T <sub>MED</sub>	1/1/2024
LAST DATE USED TO DETERMINE T <sub>MED</sub>	12/31/2024
NUMBER OF MED IN REPORT YEAR	5

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NOTE: Per IEEE T<sub>med</sub> should be calculated using the daily SAIDI values for the five prior years. If five years of data are not available, then utilities should use what is available until five years are accumulated

# KENTUCKY PUBLIC SERVICE COMMISSION

## SECTION 4: SYSTEM RELIABILITY INFORMATION AND RESULTS

### **System-wide Information**

TOTAL CUSTOMERS:	<u>15,651</u>	TOTAL CIRCUITS	<u>43</u>
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### **Excluding MED**

	<b>5 YEAR AVERAGE</b>		<b>REPORTING YEAR</b>
SAIDI	<u>333.4</u>	SAIDI	<u>146.2</u>
SAIFI	<u>2.39</u>	SAIFI	<u>1.33</u>

### **Including MED**

	<b>5 YEAR AVERAGE</b>		<b>REPORTING YEAR</b>
SAIDI	<u>2704.0</u>	SAIDI	<u>338.2</u>
SAIFI	<u>3.14</u>	SAIFI	<u>2.03</u>

### NOTES:

- 1) All durations indices (SAIDI) are to be reported in units of minutes.
- 2) Reports are due on the first business day of April of each year.
- 3) Reports cover the calendar year ending in the December before the reports are due.
- 4) IEEE 1366 (latest version) issued to define SAIDI, SAIFI and T<sub>MED</sub>

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## SECTION 5: CIRCUIT REPORTING

### Continued

1. Airport Road (Sub #12)
2. Located approximately 0.2 miles off Rt. 7 on Rt. 986
3. Feeder 1
4. South along Rt. 7 toward Elliott County
5. There are approximately 77.25 miles of primary line.
6. 523 active consumers.
7. Circuit was cut in 2015
8. Causes of last years outages:

430 Tree failure from overhang or dead tree without ice/snow	12	24%
590 Weather, other	10	20%
110 Maintenance	6	12%
431 Tree Failure-off ROW	6	12%
300 Material or equipment fault/failure	3	6%
470 Borrower crew cuts tree	3	6%
600 Small animal/bird	3	6%
420 Tree growth	2	4%
999 Cause unknown	2	4%
100 Construction	1	2%
190 Other planned	1	2%
350 Miscoordination of protection devices	1	2%
500 Lightning	1	2%
9. The 5 year average SAIDI is 631.54
10. The SAIDI for 2024 was 744.18
11. The 5 year average SAIFI is 2.42
12. The SAIFI for 2024 was 3.92
13. Outages on this circuit was due to trees and weather. We plan on utilizing our hot spot ROW crews to clear out any critical trees along the circuit. We will place a ROW circuit crew on this circuit at the end of 2025 or the beginning of 2026. Animal guards are being installed on new construction and pole changes.

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## KENTUCKY PUBLIC SERVICE COMMISSION

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### SECTION 5: CIRCUIT REPORTING

#### Continued

1. Airport Road (Sub #12)
2. Located approximately 0.2 miles off Route 7 on Route 986.
3. Feeder 2
4. Airport Road ( RT 986)
5. There are approximately 70 miles of primary line.
6. 521 active consumers.
7. Circuit was cut in 2015
8. Causes of last years outages:

590 Weather, other	28	33%
431 Tree Failure-off ROW	13	15%
600 Small animal/bird	13	15%
110 Maintenance	11	13%
999 Cause unknown	6	7%
800 Other	3	4%
100 Construction	2	2%
300 Material or equipment fault/failure	2	2%
500 Lightning	2	2%
700 Customer-caused	2	2%
420 Tree growth	1	1%
430 Tree failure from overhang or dead tree without ice/snow	1	1%
750 Vandalism	1	1%
9. The 5 year average SAIDI is 227.46
10. The SAIDI for 2024 was 574.61
11. The 5 year average SAIFI is 2.21
12. The SAIFI for 2024 was 3.03
13. This circuits outages were caused by weather and trees off ROW. We plan to utilize a hot spot ROW crew to clear out any critical trees and are currently putting animal guards on critical assets along the circuit as well as on new construction and pole changes.

# KENTUCKY PUBLIC SERVICE COMMISSION

## SECTION 5: CIRCUIT REPORTING

### Continued

1. Argentum (Sub #1)
2. Located on Rt. 7, 0.6 miles north of the junction of AA Highway.
3. Feeder 1
4. North along Rt. 7 / Schultz
5. There are approximately 44.24 miles of primary line.
6. 477 active consumers.
7. Circuit was cut in 2022
8. Causes of last years outages:

590 Weather, other	13	34%
431 Tree Failure-off ROW	6	16%
110 Maintenance	4	11%
100 Construction	3	8%
800 Other	3	8%
300 Material or equipment fault/failure	2	5%
340 Overload	1	3%
420 Tree growth	1	3%
430 Tree failure from overhang or dead tree without ice/snow	1	3%
510 Wind, not trees	1	3%
600 Small animal/bird	1	3%
700 Customer-caused	1	3%
790 Public, other	1	3%
9. The 5 year average SAIDI is 265.08
10. The SAIDI for 2024 was 708.87
11. The 5 year average SAIFI is 1.66
12. The SAIFI for 2024 was 2.50
13. Circuit had outages with weather and tree off ROW. A hot spot crew has cut from the sub out 1 mile on this circuit so far in 2025. The crew also is looking for dead trees off the ROW on the circuit as well. We are utilizing animal guards on all new construction and pole changes.

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## SECTION 5: CIRCUIT REPORTING

### Continued

1. Argentum (Sub #1)
2. Located on Rt. 7, 0.6 miles north of the junction of AA Highway.
3. Feeder 2
4. South along Rt. 7 toward gas plant
5. There are approximately 94.15 miles of primary line.
6. 712 active consumers.
7. Circuit was cut in 2011
8. Causes of last years outages:

600 Small animal/bird	19	20%
431 Tree Failure-off ROW	16	16%
590 Weather, other	14	14%
110 Maintenance	7	7%
430 Tree failure from overhang or dead tree without ice/snow	5	5%
800 Other	5	5%
100 Construction	4	4%
510 Wind, not trees	4	4%
500 Lightning	3	3%
300 Material or equipment fault/failure	2	2%
190 Other planned	1	1%
420 Tree growth	1	1%
710 Motor vehicle	1	1%
730 Fire	1	1%
740 Public cuts tree	1	1%
999 Cause unknown	13	13%
9. The 5 year average SAIDI is 496.13
10. The SAIDI for 2024 was 501.73
11. The 5 year average SAIFI is 3.03
12. The SAIFI for 2024 was 3.11
13. Small animal guards are added on all new construction or pole change outs. We plan on adding more animal guards in critical places along the circuit. We still look for solutions to reduce small animal outages.

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## SECTION 5: CIRCUIT REPORTING

### Continued

1. Argentum (Sub #1)
2. Located on Rt. 7, 0.6 miles north of the junction of AA Highway.
3. Feeder 3
4. East Tygart Road
5. There are approximately 23.34 miles of primary line.
6. 245 active consumers.
7. Circuit was cut in 2020
8. Causes of last years outages:

110 Maintenance	5	22.73%
300 Material or equipment fault/failure	5	22.73%
600 Small animal/bird	5	22.73%
590 Weather, other	4	18.18%
400 Decay/age of material/equipment	1	4.55%
431 Tree Failure-off ROW	1	4.55%
610 Large animal	1	4.55%
9. The 5 year average SAIDI is 202.68
10. The SAIDI for 2024 was 754.63
11. The 5 year average SAIFI is 1.66
12. The SAIFI for 2024 was 3.16
13. Pole replacements and some breakers has caused some outages on this circuit. Animal guards are being installed on new construction and pole replacements. We are currently upgrading this circuit from the substation out 1 mile. A ROW crew has cut the circuit out in the first mile as well.

# KENTUCKY PUBLIC SERVICE COMMISSION

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## SECTION 5: CIRCUIT REPORTING

### Continued

1. Carter City (Sub #10)
2. Located approx 0.2 miles north of Jct of 474 on Rt. 2 & 7
3. Feeder 2
4. Rt. 2
5. There are approximately 44 miles of primary line.
6. 260 active consumers.
7. Circuit was cut in 2024
8. Causes of last years outages:

110 Maintenance	15	31.25%
590 Weather, other	11	22.92%
431 Tree Failure-off ROW	6	12.50%
600 Small animal/bird	5	10.42%
300 Material or equipment fault/failure	3	6.25%
999 Cause unknown	2	4.17%
000 Power supply	1	2.08%
420 Tree growth	1	2.08%
430 Tree failure from overhang or dead tree without ice/snow	1	2.08%
470 Borrower crew cuts tree	1	2.08%
700 Customer-caused	1	2.08%
800 Other	1	2.08%
9. The 5 year average SAIDI is 316.93
10. The SAIDI for 2024 was 409.97
11. The 5 year average SAIFI is 2.36
12. The SAIFI for 2024 was 4.44
13. Maintenance was the leading cause of outages on this circuit due to pole changes. Outage was taken when the lineman was unable to work the pole with the electric still on. Animal guards are installed on new construction and pole change outs. Additional animal guards installed at critical locations along the circuit. The maintenance outages were due to unable to preform hot work because of the location of the pole.



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## SECTION 5: CIRCUIT REPORTING

### Continued

1. Carter City (Sub #10)
2. Located approx 0.2 miles north of Jct of 474 on Rt. 2 & 7
3. Feeder 3
4. Smith Creek
5. There are approximately 24.6 miles of primary line.
6. 137 active consumers.
7. Circuit was cut in 2015
8. Causes of last years outages:

590 Weather, other	11	25.58%
431 Tree Failure-off ROW	6	13.95%
300 Material or equipment fault/failure	5	11.63%
600 Small animal/bird	5	11.63%
110 Maintenance	4	9.30%
800 Other	4	9.30%
770 Consumer's Problem	3	6.98%
100 Construction	1	2.33%
400 Decay/age of material/equipment	1	2.33%
420 Tree growth	1	2.33%
790 Public, other	1	2.33%
999 Cause unknown	1	2.33%
9. The 5 year average SAIDI is 372.23
10. The SAIDI for 2024 was 716.37
11. The 5 year average SAIFI is 2.28
12. The SAIFI for 2024 was 4.11
13. Weather was the main cause of outages on this circuit. We do plan to cut this circuit out in 2025. We continue to install animal guards and monitor and cut off ROW trees that are dead.

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## SECTION 5: CIRCUIT REPORTING

### Continued

1. Carter City (Sub #10)
2. Located approx 0.2 miles north of Jct of 474 on Rt. 2 & 7
3. Feeder 4
4. Rt. 2 & 7 North
5. There are approximately 68.46 miles of primary line.
6. 441 active consumers.
7. Circuit was cut in 2024
8. Causes of last years outages:

590 Weather, other	15	24.59%
431 Tree Failure-off ROW	11	18.03%
110 Maintenance	5	8.20%
400 Decay/age of material/equipment	4	6.56%
470 Borrower crew cuts tree	4	6.56%
600 Small animal/bird	4	6.56%
500 Lightning	3	4.92%
770 Consumer's Problem	3	4.92%
100 Construction	2	3.28%
800 Other	2	3.28%
300 Material or equipment fault/failure	1	1.64%
320 Conductor sag or inadequate clearance	1	1.64%
420 Tree growth	1	1.64%
430 Tree failure from overhang or dead tree without ice/snow	1	1.64%
510 Wind, not trees	1	1.64%
610 Large animal	1	1.64%
700 Customer-caused	1	1.64%
999 Cause unknown	1	1.64%
9. The 5 year average SAIDI is 175.00
10. The SAIDI for 2024 was 997.99
11. The 5 year average SAIFI is 1.74
12. The SAIFI for 2024 was 3.30
13. Off right of way trees continue to be a issue. When the trees fall it seems to give a domino effect, pushing into the lines . We did cut the trees that identified as dead as we completed the circuit cut.

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## SECTION 5: CIRCUIT REPORTING

### Continued

1. Elliottville (Sub #7)
2. Located at the end of Fouch Rd of Rt. 32 near Elliottville
3. Feeder 1
4. Rt. 32 toward Elliott Co/ Wagoner Corner
5. There are approximately 62.9 miles of primary line.
6. 451 active consumers.
7. Circuit was cut in Spot cut only
8. Causes of last years outages:

110 Maintenance	15	29.41%
590 Weather, other	12	23.53%
600 Small animal/bird	9	17.65%
400 Decay/age of material/equipment	5	9.80%
431 Tree Failure-off ROW	2	3.92%
100 Construction	1	1.96%
420 Tree growth	1	1.96%
430 Tree failure from overhang or dead tree without ice/snow	1	1.96%
470 Borrower crew cuts tree	1	1.96%
500 Lightning	1	1.96%
740 Public cuts tree	1	1.96%
770 Consumer's Problem	1	1.96%
790 Public, other	1	1.96%
9. The 5 year average SAIDI is 94.48
10. The SAIDI for 2024 was 164.68
11. The 5 year average SAIFI is 0.86
12. The SAIFI for 2024 was 0.85
13. Maintenance was the cause of most of the outages on this circuit. This entire substation was pole tested in 2024. The pole changes are determined from the results of our pole testing program; majority being decay related. Animal guards are being installed on all pole changes and new construction.

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## SECTION 5: CIRCUIT REPORTING

### Continued

1. Elliottville (Sub #7)
2. Located at the end of Fouch Rd of Rt. 32 near Elliottville
3. Feeder 2
4. Rt. 32 toward Morehead/Triangle Tower
5. There are approximately 35.25 miles of primary line.
6. 531 active consumers.
7. Circuit was cut in 2017
8. Causes of last years outages:

110 Maintenance	25	31%
590 Weather, other	16	20%
400 Decay/age of material/equipment	10	12%
600 Small animal/bird	7	9%
431 Tree Failure-off ROW	6	7%
999 Cause unknown	4	5%
190 Other planned	3	4%
500 Lightning	3	4%
430 Tree failure from overhang or dead tree without ice/snow	2	2%
510 Wind, not trees	2	2%
770 Consumer's Problem	2	2%
100 Construction	1	1%
9. The 5 year average SAIDI is 101.68
10. The SAIDI for 2024 was 291.28
11. The 5 year average SAIFI is 1.03
12. The SAIFI for 2024 was 3.55
13. Pole changes were the cause of most of the outages on this circuit. This entire substation was pole tested in 2024. The pole changes are due to the testing results found by the pole testers. Animal guards are being installed on pole changes and new construction.

# KENTUCKY PUBLIC SERVICE COMMISSION

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## SECTION 5: CIRCUIT REPORTING

### Continued

1. Elliottville (Sub #7)
2. Located at the end of Fouch Rd of Rt. 32 near Elliottville
3. Feeder 3
4. CCC Trail to Bangor
5. There are approximately 96.63 miles of primary line.
6. 776 active consumers.
7. Circuit was cut in 2019
8. Causes of last years outages:

590 Weather, other	37	25.52%
110 Maintenance	35	24.14%
431 Tree Failure-off ROW	26	17.93%
600 Small animal/bird	12	8.28%
100 Construction	7	4.83%
400 Decay/age of material/equipment	7	4.83%
500 Lightning	4	2.76%
420 Tree growth	3	2.07%
430 Tree failure from overhang or dead tree without ice/snow	3	2.07%
510 Wind, not trees	3	2.07%
190 Other planned	2	1.38%
999 Cause unknown	2	1.38%
300 Material or equipment fault/failure	1	0.69%
340 Overload	1	0.69%
700 Customer-caused	1	0.69%
800 Other	1	0.69%
9. The 5 year average SAIDI is 355.49
10. The SAIDI for 2024 was 1077.31
11. The 5 year average SAIFI is 2.53
12. The SAIFI for 2024 was 8.0
13. Maintenance is high on the outages due to pole changes that we were not able to safely preform hot work while rebuilding four miles of line. This entire substation was pole tested in 2024, as well as 4 miles of line rebuilt from the substation out.

# KENTUCKY PUBLIC SERVICE COMMISSION

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## SECTION 5: CIRCUIT REPORTING

### Continued

1. Elliottville (Sub #7)
2. Located at the end of Fouch Rd of Rt. 32 near Elliottville
3. Feeder 4
4. Rt. 504
5. There are approximately 72.28 miles of primary line.
6. 441 active consumers.
7. Circuit was cut in 2019
8. Causes of last years outages:

110 Maintenance	16	26.67%
600 Small animal/bird	16	26.67%
590 Weather, other	10	16.67%
500 Lightning	4	6.67%
999 Cause unknown	4	6.67%
100 Construction	2	3.33%
400 Decay/age of material/equipment	2	3.33%
431 Tree Failure-off ROW	2	3.33%
420 Tree growth	1	1.67%
470 Borrower crew cuts tree	1	1.67%
730 Fire	1	1.67%
800 Other	1	1.67%
9. The 5 year average SAIDI is 170.39
10. The SAIDI for 2024 was 176.41
11. The 5 year average SAIFI is 1.11
12. The SAIFI for 2024 was 1.45
13. Pole changes were the cause of most of the outages on this circuit. This entire substation was pole tested in 2024. The pole changes are due to the testing results on each circuit. Small animals and birds are a problem that we continue to work on. We install pole wraps on new construction and all pole changes.

# KENTUCKY PUBLIC SERVICE COMMISSION

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## SECTION 5: CIRCUIT REPORTING

### Continued

1. Leon (Sub #2)
2. The sub is located on Rt. 1661 approximately 1.8 miles from Jct Rt. 7
3. Feeder 1
4. North Rt. 7 toward Grayson
5. There are approximately 13.3 miles of primary line.
6. 176 active consumers.
7. Circuit was cut in 2009
8. Causes of last years outages:

590 Weather, other	10	37%
110 Maintenance	5	19%
600 Small animal/bird	5	19%
300 Material or equipment fault/failure	1	4%
420 Tree growth	1	4%
430 Tree failure from overhang or dead tree without ice/snow	1	4%
431 Tree Failure-off ROW	1	4%
510 Wind, not trees	1	4%
770 Consumer's Problem	1	4%
999 Cause unknown	1	4%
9. The 5 year average SAIDI is 194.80
10. The SAIDI for 2024 was 314.65
11. The 5 year average SAIFI is 1.89
12. The SAIFI for 2024 was 1.79
13. This circuit is in our 2025 plan to cut. Small animal guards placed on poles for new construction and pole changes.

# KENTUCKY PUBLIC SERVICE COMMISSION

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## SECTION 5: CIRCUIT REPORTING

### Continued

1. Low Gap (Sub #11)
2. Located just off Rt. 2 approximately 1 mile from the junction of Rt. 1459
3. Feeder 1
4. Rt. 2 toward North Fork/Warnock Sub
5. There are approximately 6.87 miles of primary line.
6. 88 active consumers.
7. Circuit was cut in 2014
8. Causes of last years outages:

590 Weather, other	2	40%
000 Power supply	1	20%
431 Tree Failure-off ROW	1	20%
600 Small animal/bird	1	20%
9. The 5 year average SAIDI is 36.47
10. The SAIDI for 2024 was 25.31
11. The 5 year average SAIFI is 0.59
12. The SAIFI for 2024 was 0.97
13. Circuit was out for weather twice and a tree off ROW. We continue to utilize our hot spot circuit crew to cut the ROW in needed areas. We have installed animal guards on critical assets along the circuit.



# KENTUCKY PUBLIC SERVICE COMMISSION

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## SECTION 5: CIRCUIT REPORTING

### Continued

1. Low Gap (Sub #11)
2. Located just off Rt. 2 approximately 1 mile from the junction of Rt. 1459
3. Feeder 2
4. Rt. 2 toward Whetstone/River Park
5. There are approximately 45.22 miles of primary line.
6. 686 active consumers.
7. Circuit was cut in 2010
8. Causes of last years outages:

110 Maintenance	8	14.29%
430 Tree failure from overhang or dead tree without ice/snow	8	14.29%
431 Tree Failure-off ROW	7	12.50%
590 Weather, other	7	12.50%
600 Small animal/bird	6	10.71%
300 Material or equipment fault/failure	4	7.14%
420 Tree growth	3	5.36%
100 Construction	2	3.57%
770 Consumer's Problem	2	3.57%
000 Power supply	1	1.79%
320 Conductor sag or inadequate clearance	1	1.79%
340 Overload	1	1.79%
400 Decay/age of material/equipment	1	1.79%
440 Trees with ice/snow	1	1.79%
700 Customer-caused	1	1.79%
790 Public, other	1	1.79%
800 Other	1	1.79%
999 Cause unknown	1	1.79%
9. The 5 year average SAIDI is 356.76
10. The SAIDI for 2024 was 307.32
11. The 5 year average SAIFI is 2.21
12. The SAIFI for 2024 was 2.89
13. Circuit has several outages from trees off the ROW. We will have a hot spot circuit crew cutting on this circuit. Animal guards are being installed on new construction and pole changes.

# KENTUCKY PUBLIC SERVICE COMMISSION

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## SECTION 5: CIRCUIT REPORTING

### Continued

1. Low Gap (Sub #11)
2. Located just off Rt. 2 approximately 1 mile from the junction of Rt. 1459
3. Feeder 3
4. Low Gap Rd to Rt. 1/Argillite
5. There are approximately 45.85 miles of primary line.
6. 447 active consumers.
7. Circuit was cut in 2024
8. Causes of last years outages:

431 Tree Failure-off ROW	18	27.69%
590 Weather, other	18	27.69%
600 Small animal/bird	10	15.38%
110 Maintenance	5	7.69%
500 Lightning	3	4.62%
100 Construction	2	3.08%
800 Other	2	3.08%
000 Power supply	1	1.54%
320 Conductor sag or inadequate clearance	1	1.54%
420 Tree growth	1	1.54%
430 Tree failure from overhang or dead tree without ice/snow	1	1.54%
470 Borrower crew cuts tree	1	1.54%
700 Customer-caused	1	1.54%
999 Cause unknown	1	1.54%
9. The 5 year average SAIDI is 379.82
10. The SAIDI for 2024 was 471.86
11. The 5 year average SAIFI is 3.50
12. The SAIFI for 2024 was 3.34
13. Circuit had several outages due to off ROW trees and was circuit cut in 2024. Plan to spray this circuit in 2026. We continue to use animal guards on new construction and pole changes.

# KENTUCKY PUBLIC SERVICE COMMISSION

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## SECTION 5: CIRCUIT REPORTING

### Continued

1. Mazie (Sub #4)
2. Located approximately 11.5 miles east of Sandy Hook on Rt. 32.
3. Feeder 1
4. Rt. 32 toward Isonville
5. There are approximately 60.56 miles of primary line.
6. 411 active consumers.
7. Circuit was cut in 2018
8. Causes of last years outages:

431 Tree Failure-off ROW	17	27.42%
590 Weather, other	16	25.81%
110 Maintenance	8	12.90%
100 Construction	4	6.45%
600 Small animal/bird	4	6.45%
300 Material or equipment fault/failure	3	4.84%
430 Tree failure from overhang or dead tree without ice/snow	2	3.23%
770 Consumer's Problem	2	3.23%
999 Cause unknown	2	3.23%
470 Borrower crew cuts tree	1	1.61%
510 Wind, not trees	1	1.61%
610 Large animal	1	1.61%
790 Public, other	1	1.61%
9. The 5 year average SAIDI is 514.38
10. The SAIDI for 2024 was 1333.14
11. The 5 year average SAIFI is 3.38
12. The SAIFI for 2024 was 7.04
13. Tree failure off ROW and Weather was the highest cause of outages on this circuit. We will utilize a Hot Spot ROW crew for clearing out any vegetation on the circuit. Animal guards are being used on pole changes and new construction. Pole testing this circuit will start in April of 2025.

# KENTUCKY PUBLIC SERVICE COMMISSION

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## SECTION 5: CIRCUIT REPORTING

### Continued

1. Mazie (Sub #4)
2. Located approximately 11.5 miles east of Sandy Hook on Rt. 32.
3. Feeder 2
4. Rt. 32 toward Blaine
5. There are approximately 92.22 miles of primary line.
6. 584 active consumers.
7. Circuit was cut in 2014
8. Causes of last years outages:

431 Tree Failure-off ROW	16	24.24%
110 Maintenance	10	15.15%
600 Small animal/bird	10	15.15%
430 Tree failure from overhang or dead tree without ice/snow	9	13.64%
590 Weather, other	9	13.64%
300 Material or equipment fault/failure	3	4.55%
800 Other	2	3.03%
100 Construction	1	1.52%
410 Corrosion/abrasion of material/equipment	1	1.52%
420 Tree growth	1	1.52%
470 Borrower crew cuts tree	1	1.52%
710 Motor vehicle	1	1.52%
790 Public, other	1	1.52%
999 Cause unknown	1	1.52%
9. The 5 year average SAIDI is 409.38
10. The SAIDI for 2024 was 921.19
11. The 5 year average SAIFI is 2.90
12. The SAIFI for 2024 was 4.25
13. We plan on cutting this circuit in 2026. Currently there are hot spot crews working this circuit to prevent trees off ROW and high vegetation areas. We plan on pole testing this circuit in 2026.

# KENTUCKY PUBLIC SERVICE COMMISSION

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## SECTION 5: CIRCUIT REPORTING

### Continued

1. Newfoundland (Sub #3)
2. Located on Rt. 32 just south of the Junction of Rt. 7
3. Feeder 1
4. Rt. 7 toward Bruin
5. There are approximately 74.86 miles of primary line.
6. 464 active consumers.
7. Circuit was cut in 2016
8. Causes of last years outages:

590 Weather, other	14	24%
600 Small animal/bird	11	19%
431 Tree Failure-off ROW	10	17%
110 Maintenance	7	12%
500 Lightning	5	8%
100 Construction	3	5%
420 Tree growth	2	3%
470 Borrower crew cuts tree	2	3%
000 Power supply	1	2%
300 Material or equipment fault/failure	1	2%
610 Large animal	1	2%
770 Consumer's Problem	1	2%
999 Cause unknown	1	2%
9. The 5 year average SAIDI is 152.65
10. The SAIDI for 2024 was 205.43
11. The 5 year average SAIFI is 1.50
12. The SAIFI for 2024 was 1.75
13. Several weather and small animal bird outages on this circuit due to storms we had over the year. We are utilizing a hot spot ROW crew and installing animal guards in critical areas along the circuit. Also the substation was rebuilt in 2024.

# KENTUCKY PUBLIC SERVICE COMMISSION

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## SECTION 5: CIRCUIT REPORTING

### Continued

1. Newfoundland (Sub #3)
2. Located on Rt. 32 just south of the Junction of Rt. 7
3. Feeder 3
4. follows Rt. 32 to Sandy Hook
5. There are approximately 16.9 miles of primary line.
6. 230 active consumers.
7. Circuit was cut in 2016
8. Causes of last years outages:

110 Maintenance	6	27%
590 Weather, other	5	23%
600 Small animal/bird	4	18%
300 Material or equipment fault/failure	2	9%
431 Tree Failure-off ROW	2	9%
100 Construction	1	5%
500 Lightning	1	5%
999 Cause unknown	1	5%
9. The 5 year average SAIDI is 73.55
10. The SAIDI for 2024 was 83.20
11. The 5 year average SAIFI is 0.61
12. The SAIFI for 2024 was 0.60
13. Maintenance outage's were due to pole changes on single line taps off this circuit. Poles were in a area that we could not perform hot work. This substation was rebuilt in 2024.

# KENTUCKY PUBLIC SERVICE COMMISSION

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## SECTION 5: CIRCUIT REPORTING

### Continued

1. Pactolus (Sub #8)
2. Located on Subsation Road about 0.4 miles south of Jct of Rt. 9 and 1959
3. Feeder 1
4. Everman's Creek toward Iron Hill
5. There are approximately 75.22 miles of primary line.
6. 630 active consumers.
7. Circuit was cut in 2012
8. Causes of last years outages:

600 Small animal/bird	15	21.43%
431 Tree Failure-off ROW	13	18.57%
110 Maintenance	9	12.86%
999 Cause unknown	7	10.00%
590 Weather, other	6	8.57%
100 Construction	4	5.71%
420 Tree growth	3	4.29%
000 Power supply	2	2.86%
300 Material or equipment fault/failure	2	2.86%
470 Borrower crew cuts tree	2	2.86%
700 Customer-caused	2	2.86%
800 Other	2	2.86%
190 Other planned	1	1.43%
500 Lightning	1	1.43%
770 Consumer's Problem	1	1.43%
9. The 5 year average SAIDI is 355.49
10. The SAIDI for 2024 was 223.30
11. The 5 year average SAIFI is 2.57
12. The SAIFI for 2024 was 3.53
13. Small animal bird and off ROW trees were the highest outage cause on this circuit. We continue to put animal guards on critical assets, and placing them on new construction and pole changes. A hot spot crew will be used to cut out the high vegetation areas.

# KENTUCKY PUBLIC SERVICE COMMISSION

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## SECTION 5: CIRCUIT REPORTING

### Continued

1. Pactolus (Sub #8)
2. Located on Subsation Road about 0.4 miles south of Jct of Rt. 9 and 1959
3. Feeder 4
4. Rt. 1 toward Oldtown
5. There are approximately 68.18 miles of primary line.
6. 618 active consumers.
7. Circuit was cut in 2015
8. Causes of last years outages:

600 Small animal/bird	16	19.05%
590 Weather, other	15	17.86%
431 Tree Failure-off ROW	11	13.10%
110 Maintenance	9	10.71%
420 Tree growth	7	8.33%
100 Construction	5	5.95%
430 Tree failure from overhang or dead tree without ice/snow	4	4.76%
000 Power supply	3	3.57%
400 Decay/age of material/equipment	3	3.57%
510 Wind, not trees	3	3.57%
500 Lightning	2	2.38%
999 Cause unknown	2	2.38%
300 Material or equipment fault/failure	1	1.19%
470 Borrower crew cuts tree	1	1.19%
710 Motor vehicle	1	1.19%
770 Consumer's Problem	1	1.19%
9. The 5 year average SAIDI is 207.85
10. The SAIDI for 2024 was 286.34
11. The 5 year average SAIFI is 1.98
12. The SAIFI for 2024 was 2.58
13. Small animal and weather was the most caused outages on this circuit. We started using a hot spot ROW crew in December 2024 to cut out the longer single phase taps and any high vegetation areas. Animal guards are being installed on new construction and pole changes.



# KENTUCKY PUBLIC SERVICE COMMISSION

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## SECTION 5: CIRCUIT REPORTING

### Continued

1. Pactolus (Sub #8)
2. Located on Subsation Road about 0.4 miles south of Jct of Rt. 9 and 1959
3. Feeder 3
4. Smithfield Processing Plant
5. There are approximately 1.6 miles of primary line.
6. 2 active consumers.
7. Circuit was cut in 2019
8. Causes of last years outages:  
    000 Power supply 1 100%
9. The 5 year average SAIDI is 11.0
10. The SAIDI for 2024 was 25.98
11. The 5 year average SAIFI is .08
12. The SAIFI for 2024 was 1.0
13. This outage was due to Generation and Transmission Company needing to change transmission pole just outside the substation. Consumer was notified in advance to plan for the outage.

# KENTUCKY PUBLIC SERVICE COMMISSION

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## SECTION 5: CIRCUIT REPORTING

### Continued

1. Pelfrey (Sub #5)
2. Located on US 60 0.8 miles west from the Junction of Grahn Road (Rt. 182)
3. Feeder 2
4. East toward Cascade Road/Biggs Hill
5. There are approximately 25.94 miles of primary line.
6. 353 active consumers.
7. Circuit was cut in 2017
8. Causes of last years outages:

600 Small animal/bird	17	36.17%
590 Weather, other	9	19.15%
110 Maintenance	5	10.64%
000 Power supply	3	6.38%
431 Tree Failure-off ROW	3	6.38%
500 Lightning	2	4.26%
800 Other	2	4.26%
300 Material or equipment fault/failure	1	2.13%
400 Decay/age of material/equipment	1	2.13%
490 Maintenance, other	1	2.13%
510 Wind, not trees	1	2.13%
770 Consumer's Problem	1	2.13%
999 Cause unknown	1	2.13%
9. The 5 year average SAIDI is 349.9
10. The SAIDI for 2024 was 402.10
11. The 5 year average SAIFI is 2.45
12. The SAIFI for 2024 was 3.25
13. Small animal bird and Weather was the cause of most outages for this circuit. We are currently installing animal guards on poles where we have had outages related to small animal bird. We are also installing animal guards on new construction and pole changes.

# KENTUCKY PUBLIC SERVICE COMMISSION

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## SECTION 5: CIRCUIT REPORTING

### Continued

1. Sandy Hook (Sub #9)
2. Located on Bank Street in Sandy Hook
3. Feeder 1
4. Rt. 7 South/Rt 173
5. There are approximately 72.24 miles of primary line.
6. 586 active consumers.
7. Circuit was cut in 2016
8. Causes of last years outages:

431 Tree Failure-off ROW	26	29%
590 Weather, other	19	21%
110 Maintenance	11	12%
600 Small animal/bird	8	9%
500 Lightning	4	4%
430 Tree failure from overhang or dead tree without ice/snow	3	3%
770 Consumer's Problem	3	3%
800 Other	3	3%
999 Cause unknown	3	3%
470 Borrower crew cuts tree	2	2%
000 Power supply	1	1%
100 Construction	1	1%
300 Material or equipment fault/failure	1	1%
400 Decay/age of material/equipment	1	1%
610 Large animal	1	1%
710 Motor vehicle	1	1%
790 Public, other	1	1%
9. The 5 year average SAIDI is 75.96
10. The SAIDI for 2024 was 402.75
11. The 5 year average SAIFI is 0.62
12. The SAIFI for 2024 was 1.32
13. Storms over the past year have caused most of the outages on this circuit. A hot spot crew is cutting the high vegetation areas and animal guards are being installed on this circuit.

# KENTUCKY PUBLIC SERVICE COMMISSION

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## SECTION 5: CIRCUIT REPORTING

### Continued

1. Warnock (Sub #6)
2. Located on Hoods Run Road located 1.7 miles from Jct of Rt. 7 & 2 off Rt. 2
3. Feeder 1
4. North to gas plant
5. There are approximately 65.09 miles of primary line.
6. 446 active consumers.
7. Circuit was cut in 2023
8. Causes of last years outages:

590 Weather, other	10	24.39%
600 Small animal/bird	10	24.39%
431 Tree Failure-off ROW	8	19.51%
000 Power supply	3	7.32%
110 Maintenance	2	4.88%
400 Decay/age of material/equipment	2	4.88%
790 Public, other	2	4.88%
100 Construction	1	2.44%
300 Material or equipment fault/failure	1	2.44%
420 Tree growth	1	2.44%
710 Motor vehicle	1	2.44%
9. The 5 year average SAIDI is 149.53
10. The SAIDI for 2024 was 284.75
11. The 5 year average SAIFI is 1.18
12. The SAIFI for 2024 was 1.64
13. Weather and small animal bird were the highest causes of the outages for this circuit. Animal guards are being installed on critical assets as well as on new construction and pole changes. A spray crew will spray the vegetation in 2026.

# KENTUCKY PUBLIC SERVICE COMMISSION

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## SECTION 5: CIRCUIT REPORTING

### Continued

1. Warnock (Sub #6)
2. Located on Hoods Run Road located 1.7 miles from Jct of Rt. 7 & 2 off Rt. 2
3. Feeder 2
4. Rt. 2 to Greenbo
5. There are approximately 7.36 miles of primary line.
6. 51 active consumers.
7. Circuit was cut in 2024
8. Causes of last years outages:

431 Tree Failure-off ROW	9	64.29%
590 Weather, other	3	21.43%
000 Power supply	1	7.14%
300 Material or equipment fault/failure	1	7.14%
9. The 5 year average SAIDI is 169.61
10. The SAIDI for 2024 was 620.02
11. The 5 year average SAIFI is 2.24
12. The SAIFI for 2024 was 2.37
13. The circuit was cut completely by December of 2024. The dead trees off of the ROW were cut along the circuit also.

# KENTUCKY PUBLIC SERVICE COMMISSION

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## SECTION 5: CIRCUIT REPORTING

### Continued

1. Warnock (Sub #6)
2. Located on Hoods Run Road located 1.7 miles from Jct of Rt. 7 & 2 off Rt. 2
3. Feeder 3
4. North Fork to Rt. 207
5. There are approximately 45.9 miles of primary line.
6. 355 active consumers.
7. Circuit was cut in 2022
8. Causes of last years outages:

431 Tree Failure-off ROW	23	34%
400 Decay/age of material/equipment	13	19%
000 Power supply	7	10%
600 Small animal/bird	7	10%
590 Weather, other	5	7%
110 Maintenance	4	6%
300 Material or equipment fault/failure	2	3%
500 Lightning	2	3%
800 Other	2	3%
100 Construction	1	1%
360 Other equipment installation/design	1	1%
9. The 5 year average SAIDI is 431.94
10. The SAIDI for 2024 was 963.85
11. The 5 year average SAIFI is 3.52
12. The SAIFI for 2024 was 4.60
13. Circuit had the most outages with tree off ROW. We are utilizing a hot spot crew to cut the areas that vegetation is causing the issues, and are replacing or have replaced the aging poles and equipment along the circuit.

## SECTION 6: VEGETATION MANAGEMENT PLAN REVIEW

### INCLUDE CURRENT VEGETATION MANAGEMENT PLAN

Additional pages may be attached as needed.

In 2024 our circuit crew cut 7.2 miles of line on the Warnock feeder 2. We also cut 68.5 miles of line on Carter City Feeder 4, and 9.0 miles on Carter City Feeder 2. Grayson had tree crews other parts of the system as well as trimming 14154 trees and cut 22500 individual trees across the system.

## SECTION 7: UTILITY COMMENTS

We continue to battle the small animals and birds along with off right of way trees. We continue to address both issues and continue to look for solutions that will reduce and, hopefully someday, make these types of outages negatable.