

# 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/Mike Martin/Brian Poling
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### **SECTION 2: REPORTING YEAR**

CALENDAR YEAR OF REPORT	2022
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### **SECTION 3: MAJOR EVENT DAYS (MED)**

	T <sub>MED</sub>	40.06
FIRST DATE USED TO DETERMINE	T <sub>MED</sub>	1/1/2022
LAST DATE USED TO DETERMINE	T <sub>MED</sub>	12/31/2022
NUMBER OF MED IN REPORT YEAR		1

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NOTE: Per IEEE Tmed 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>14,743</u>	TOTAL CIRCUITS	<u>43</u>
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### **Excluding MED**

	<b>5 YEAR AVERAGE</b>		<b>REPORTING YEAR</b>
SAIDI	<u>350.6</u>	SAIDI	<u>375.7</u>
SAIFI	<u>2.56</u>	SAIFI	<u>2.65</u>

### **Including MED**

	<b>5 YEAR AVERAGE</b>		<b>REPORTING YEAR</b>
SAIDI	<u>2.680.16</u>	SAIDI	<u>566.7</u>
SAIFI	<u>3.16</u>	SAIFI	<u>3.05</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

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

1. Airport Road (Sub #12)
2. Located approximately 0.2 miles off Rt. 7 on Rt. 986
3. Feeder 2
4. Airport Road (Rt 986)
5. There are approximately 70.5 miles of primary line.
6. 516 active consumers.
7. Circuit was cut in 2015
8. Causes of last years outages:

431 Tree Failure-off ROW	26	34%
999 Cause unknown	8	10%
510 Wind, not trees	8	10%
800 Other	7	9%
110 Maintenance	6	8%
590 Weather, other	5	6%
400 Decay/age of material/equipment	4	5%
600 Small animal/bird	3	4%
520 Ice, sleet, frost, not trees	3	4%
500 Lightning	3	4%
300 Material or equipment fault/failure	1	1%
310 Installation fault	1	1%
430 Tree failure from overhang or dead tree without ice/snow	1	1%
770 Consumer's Problem	1	1%
9. The 5 year average SAIDI is 327.51
10. The SAIDI for 2022 was 424.52
11. The 5 year averageSAIFI is 3.15
12. The SAIFI for 2022 was 3.10
13. Off right-of-way trees continue to be an issue. We have a crew that is dedicated to cutting those that appear to be at risk. Those trees that fell were in area that were hard to access taking longer to restore power.

# KENTUCKY PUBLIC SERVICE COMMISSION

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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 93.62 miles of primary line.
6. 702 active consumers.
7. Circuit was cut in 2011
8. Causes of last years outages:

431 Tree Failure-off ROW	15	31%
600 Small animal/bird	13	27%
110 Maintenance	5	10%
430 Tree failure from overhang or dead tree without ice/snow	4	8%
700 Customer-caused	2	4%
500 Lightning	2	4%
770 Consumer's Problem	1	2%
400 Decay/age of material/equipment	1	2%
740 Public cuts tree	1	2%
999 Cause unknown	1	2%
340 Overload	1	2%
790 Public, other	1	2%
520 Ice, sleet, frost, not trees	1	2%
510 Wind, not trees	1	2%
9. The 5 year average SAIDI is 495.88
10. The SAIDI for 2022 was 637.70
11. The 5 year average SAIFI is 3.26
12. The SAIFI for 2022 was 2.57
13. Off right-of-way trees continue to be an issue. We have a crew that is dedicated to cutting those that appear to be at risk. This area experienced some strong winds in July that attributed to several off-right-way tree failures taking longer than normal to restore power.

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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 22.27 miles of primary line.
6. 243 active consumers.
7. Circuit was cut in 2020
8. Causes of last years outages:

300 Material or equipment fault/failure	3	43%
999 Cause unknown	1	14%
600 Small animal/bird	1	14%
110 Maintenance	1	14%
431 Tree Failure-off ROW	1	14%
9. The 5 year average SAIDI is 154.77
10. The SAIDI for 2022 was 249.16
11. The 5 year average SAIFI is 1.21
12. The SAIFI for 2022 was 1.08
13. A controller in the substation failed causing a 4 hour outage to 242 consumers which increased our SAIDI for that feeder over the previous 5 years.

# 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 43.93 miles of primary line.
6. 248 active consumers.
7. Circuit was cut in 2010
8. Causes of last years outages:

600 Small animal/bird	10	24%
431 Tree Failure-off ROW	8	20%
110 Maintenance	7	17%
590 Weather, other	4	10%
800 Other	2	5%
999 Cause unknown	2	5%
470 Borrower crew cuts tree	1	2%
710 Motor vehicle	1	2%
420 Tree growth	1	2%
320 Conductor sag or inadequate clearance	1	2%
530 Flood	1	2%
430 Tree failure from overhang or dead tree without ice/snow	1	2%
510 Wind, not trees	1	2%
500 Lightning	1	2%
9. The 5 year average SAIDI is 234.17
10. The SAIDI for 2022 was 466.44
11. The 5 year average SAIFI is 1.73
12. The SAIFI for 2022 was 3.04
13. Off right-of-way trees continue to be an issue. We have a crew that is dedicated to cutting those that appear to be at risk. We are constantly adding animal guards to try to eliminate the small animal outage problems.

# 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 3
4. Smith Creek
5. There are approximately 24.84 miles of primary line.
6. 134 active consumers.
7. Circuit was cut in 2015
8. Causes of last years outages:

600 Small animal/bird	10	38%
431 Tree Failure-off ROW	7	27%
110 Maintenance	2	8%
500 Lightning	2	8%
770 Consumer's Problem	1	4%
999 Cause unknown	1	4%
300 Material or equipment fault/failure	1	4%
590 Weather, other	1	4%
510 Wind, not trees	1	4%
9. The 5 year average SAIDI is 357.18
10. The SAIDI for 2022 was 260.30
11. The 5 year average SAIFI is 1.73
12. The SAIFI for 2022 was 2.56
13. Off right-of-way trees continue to be an issue. We have a crew that is dedicated to cutting those that appear to be at risk. We are constantly adding animal guards to try to eliminate the small animal outage problems.

# 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 4
4. Rt. 2 & 7 North
5. There are approximately 67.55 miles of primary line.
6. 483 active consumers.
7. Circuit was cut in 2009
8. Causes of last years outages:

600 Small animal/bird	16	31%
431 Tree Failure-off ROW	15	29%
110 Maintenance	5	10%
420 Tree growth	2	4%
590 Weather, other	2	4%
400 Decay/age of material/equipment	2	4%
500 Lightning	2	4%
999 Cause unknown	1	2%
790 Public, other	1	2%
770 Consumer's Problem	1	2%
510 Wind, not trees	1	2%
800 Other	1	2%
430 Tree failure from overhang or dead tree without ice/snow	1	2%
100 Construction	1	2%
300 Material or equipment fault/failure	1	2%
9. The 5 year average SAIDI is 145.19
10. The SAIDI for 2022 was 241.78
11. The 5 year average SAIFI is 0.98
12. The SAIFI for 2022 was 3.59
13. Off right-of-way trees continue to be an issue. We have a crew that is dedicated to cutting those that appear to be at risk. We are constantly adding animal guards to attempt to reduce the number of small animal outages



# 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 1
4. Rt. 32 toward Elliott Co/ Wagoner Corner
5. There are approximately 56.44 miles of primary line.
6. 428 active consumers.
7. Circuit was cut in Spot cut only
8. Causes of last years outages:

600 Small animal/bird	13	28%
431 Tree Failure-off ROW	6	13%
110 Maintenance	4	9%
999 Cause unknown	4	9%
730 Fire	3	6%
400 Decay/age of material/equipment	3	6%
500 Lightning	3	6%
790 Public, other	2	4%
430 Tree failure from overhang or dead tree without ice/snow	2	4%
740 Public cuts tree	1	2%
100 Construction	1	2%
590 Weather, other	1	2%
800 Other	1	2%
470 Borrower crew cuts tree	1	2%
700 Customer-caused	1	2%
300 Material or equipment fault/failure	1	2%
9. The 5 year average SAIDI is 57.97
10. The SAIDI for 2022 was 182.18
11. The 5 year average SAIFI is 0.71
12. The SAIFI for 2022 was 1.01
13. Off right-of-way trees continue to be an issue. We have a crew that is dedicated to cutting those that appear to be at risk. We are constantly adding animal guards to attempt to reduce the number of small animal outages

# KENTUCKY PUBLIC SERVICE COMMISSION

## 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 100.7 miles of primary line.
6. 769 active consumers.
7. Circuit was cut in 2019
8. Causes of last years outages:
 

431 Tree Failure-off ROW	38	39%
590 Weather, other	8	8%
600 Small animal/bird	7	7%
999 Cause unknown	7	7%
110 Maintenance	6	6%
430 Tree failure from overhang or dead tree without ice/snow	6	6%
500 Lightning	4	4%
400 Decay/age of material/equipment	3	3%
420 Tree growth	3	3%
510 Wind, not trees	3	3%
100 Construction	2	2%
610 Large animal	2	2%
800 Other	2	2%
190 Other planned	1	1%
340 Overload	1	1%
490 Maintenance, other	1	1%
620 Animal damage-gnawing or boring	1	1%
740 Public cuts tree	1	1%
770 Consumer's Problem	1	1%
790 Public, other	1	1%
9. The 5 year average SAIDI is 248.54
10. The SAIDI for 2022 was 747.17
11. The 5 year average SAIFI is 2.11
12. The SAIFI for 2022 was 3.78
13. This feeder is very long and goes through the Daniel Boone National Forest.  
 The terrain and dense woodlands make it difficult to identify and get permission  
 We will be going over that line again this year to identify more trees that can be 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 4
4. Rt. 504
5. There are approximately 72.07 miles of primary line.
6. 441 active consumers.
7. Circuit was cut in 2019
8. Causes of last years outages:

431 Tree Failure-off ROW	10	20%
600 Small animal/bird	9	18%
400 Decay/age of material/equipment	7	14%
420 Tree growth	4	8%
999 Cause unknown	3	6%
100 Construction	3	6%
430 Tree failure from overhang or dead tree without ice/snow	2	4%
500 Lightning	2	4%
770 Consumer's Problem	2	4%
110 Maintenance	2	4%
590 Weather, other	2	4%
340 Overload	1	2%
800 Other	1	2%
790 Public, other	1	2%
470 Borrower crew cuts tree	1	2%
9. The 5 year average SAIDI is 152.86
10. The SAIDI for 2022 was 177.52
11. The 5 year average SAIFI is 1.16
12. The SAIFI for 2022 was 0.94
13. Off right-of-way trees continue to be an issue. We have a crew that is dedicated to cutting those that appear to be at risk. We are constantly adding animal guards to try to eliminate the small animal outage problems.

# 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 13.08 miles of primary line.
6. 175 active consumers.
7. Circuit was cut in 2009
8. Causes of last years outages:

431 Tree Failure-off ROW	5	29%
590 Weather, other	3	18%
600 Small animal/bird	3	18%
420 Tree growth	2	12%
110 Maintenance	1	6%
400 Decay/age of material/equipment	1	6%
430 Tree failure from overhang or dead tree without ice/snow	1	6%
300 Material or equipment fault/failure	1	6%
9. The 5 year average SAIDI is 161.95
10. The SAIDI for 2022 was 130.72
11. The 5 year average SAIFI is 1.31
12. The SAIFI for 2022 was 1.78
13. Off right-of-way trees continue to be an issue. We have a crew that is dedicated to cutting those that appear to be at risk. We are constantly adding animal guards to try to eliminate the small animal outage problems.

# 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 3
4. South Rt. 7 toward Lake
5. There are approximately 23.86 miles of primary line.
6. 253 active consumers.
7. Circuit was cut in 2013
8. Causes of last years outages:

590 Weather, other	6	21%
600 Small animal/bird	5	18%
431 Tree Failure-off ROW	4	14%
420 Tree growth	3	11%
510 Wind, not trees	2	7%
500 Lightning	2	7%
800 Other	2	7%
110 Maintenance	2	7%
430 Tree failure from overhang or dead tree without ice/snow	1	4%
470 Borrower crew cuts tree	1	4%
9. The 5 year average SAIDI is 263.23
10. The SAIDI for 2022 was 120.10
11. The 5 year average SAIFI is 2.17
12. The SAIFI for 2022 was 4.15
13. We had a couple weather events in this area that were difficult to access for repairs.  
We are still adding small animal guards to attempt to prevent those types of outages.

# 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 45.14 miles of primary line.
6. 689 active consumers.
7. Circuit was cut in 2010
8. Causes of last years outages:

600 Small animal/bird	13	23%
431 Tree Failure-off ROW	9	16%
110 Maintenance	9	16%
430 Tree failure from overhang or dead tree without ice/snow	5	9%
420 Tree growth	4	7%
300 Material or equipment fault/failure	4	7%
400 Decay/age of material/equipment	3	5%
700 Customer-caused	3	5%
500 Lightning	2	4%
800 Other	1	2%
510 Wind, not trees	1	2%
590 Weather, other	1	2%
999 Cause unknown	1	2%
470 Borrower crew cuts tree	1	2%
9. The 5 year average SAIDI is 428.93
10. The SAIDI for 2022 was 349.23
11. The 5 year average SAIFI is 2.54
12. The SAIFI for 2022 was 2.59
13. We are continuing to add small animal guards to our poles and transformers in an attempt to reduce these types of outages.

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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 60.94 miles of primary line.
6. 416 active consumers.
7. Circuit was cut in 2018
8. Causes of last years outages:

590 Weather, other	15	29%
431 Tree Failure-off ROW	14	27%
300 Material or equipment fault/failure	4	8%
110 Maintenance	4	8%
800 Other	3	6%
999 Cause unknown	3	6%
430 Tree failure from overhang or dead tree without ice/snow	2	4%
440 Trees with ice/snow	2	4%
190 Other planned	1	2%
400 Decay/age of material/equipment	1	2%
520 Ice, sleet, frost, not trees	1	2%
600 Small animal/bird	1	2%
770 Consumer's Problem	1	2%
9. The 5 year average SAIDI is 505.62
10. The SAIDI for 2022 was 608.68
11. The 5 year average SAIFI is 3.91
12. The SAIFI for 2022 was 3.54
13. Off right-of-way trees continue to be an issue. We have a crew that is dedicated to cutting those that appear to be at risk. We are constantly adding animal guards to try to eliminate the small animal outage problems.

# 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 74.97 miles of primary line.
6. 459 active consumers.
7. Circuit was cut in 2016
8. Causes of last years outages:

431 Tree Failure-off ROW	10	18%
400 Decay/age of material/equipment	8	15%
590 Weather, other	8	15%
110 Maintenance	5	9%
500 Lightning	5	9%
600 Small animal/bird	4	7%
999 Cause unknown	3	5%
800 Other	3	5%
790 Public, other	2	4%
510 Wind, not trees	2	4%
100 Construction	2	4%
770 Consumer's Problem	1	2%
430 Tree failure from overhang or dead tree without ice/snow	1	2%
340 Overload	1	2%
9. The 5 year average SAIDI is 92.89
10. The SAIDI for 2022 was 373.14
11. The 5 year average SAIFI is 0.96
12. The SAIFI for 2022 was 2.72
13. Off right-of-way trees continue to be an issue. We have a crew that is dedicated to cutting those that appear to be at risk. We are constantly adding animal guards to try to eliminate the small animal outage problems.



# 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 2
4. Rt. 32 toward Brown Ridge
5. There are approximately 28.62 miles of primary line.
6. 196 active consumers.
7. Circuit was cut in 2017
8. Causes of last years outages:

600 Small animal/bird	5	21%
431 Tree Failure-off ROW	4	17%
430 Tree failure from overhang or dead tree without ice/snow	2	8%
110 Maintenance	2	8%
770 Consumer's Problem	2	8%
800 Other	2	8%
999 Cause unknown	2	8%
500 Lightning	2	8%
400 Decay/age of material/equipment	1	4%
590 Weather, other	1	4%
510 Wind, not trees	1	4%
9. The 5 year average SAIDI is 118.09
10. The SAIDI for 2022 was 183.56
11. The 5 year average SAIFI is 1.46
12. The SAIFI for 2022 was 1.99
13. Off right-of-way trees continue to be an issue. We have a crew that is dedicated to cutting those that appear to be at risk. We are constantly adding animal guards to try to eliminate the small animal outage problems.

# 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 4
4. toward Rt. 755 (Ruin)
5. There are approximately 40.45 miles of primary line.
6. 304 active consumers.
7. Circuit was cut in 2017
8. Causes of last years outages:

600 Small animal/bird	9	28%
431 Tree Failure-off ROW	5	16%
430 Tree failure from overhang or dead tree without ice/snow	5	16%
110 Maintenance	3	9%
500 Lightning	2	6%
590 Weather, other	2	6%
790 Public, other	1	3%
700 Customer-caused	1	3%
800 Other	1	3%
999 Cause unknown	1	3%
400 Decay/age of material/equipment	1	3%
520 Ice, sleet, frost, not trees	1	3%
9. The 5 year average SAIDI is 154.86
10. The SAIDI for 2022 was 372.78
11. The 5 year average SAIFI is 1.71
12. The SAIFI for 2022 was 2.77
13. Off right-of-way trees continue to be an issue. We have a crew that is dedicated to cutting those that appear to be at risk. We are constantly adding animal guards to try to eliminate the small animal outage problems.

# 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 74.3 miles of primary line.
6. 607 active consumers.
7. Circuit was cut in 2012
8. Causes of last years outages:

600 Small animal/bird	22	28%
431 Tree Failure-off ROW	22	28%
590 Weather, other	7	9%
110 Maintenance	6	8%
510 Wind, not trees	5	6%
999 Cause unknown	5	6%
800 Other	4	5%
100 Construction	3	4%
440 Trees with ice/snow	2	3%
430 Tree failure from overhang or dead tree without ice/snow	1	1%
610 Large animal	1	1%
470 Borrower crew cuts tree	1	1%
9. The 5 year average SAIDI is 451.00
10. The SAIDI for 2022 was 238.44
11. The 5 year average SAIFI is 2.82
12. The SAIFI for 2022 was 3.21
13. Analysis shows these events are not isolated to one location so we will continue to apply animal guards and work on the off ROW issues.

# 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 1
4. West to West Carter/Rt. 2
5. There are approximately 74.63 miles of primary line.
6. 612 active consumers.
7. Circuit was cut in 2012
8. Causes of last years outages:

431 Tree Failure-off ROW	20	21%
600 Small animal/bird	20	21%
110 Maintenance	12	13%
300 Material or equipment fault/failure	8	9%
400 Decay/age of material/equipment	5	5%
800 Other	4	4%
590 Weather, other	4	4%
500 Lightning	4	4%
420 Tree growth	4	4%
999 Cause unknown	3	3%
770 Consumer's Problem	2	2%
510 Wind, not trees	2	2%
190 Other planned	1	1%
470 Borrower crew cuts tree	1	1%
360 Other equipment installation/design	1	1%
320 Conductor sag or inadequate clearance	1	1%
100 Construction	1	1%
430 Tree failure from overhang or dead tree without ice/snow	1	1%
9. The 5 year average SAIDI is 366.38
10. The SAIDI for 2022 was 1004.56
11. The 5 year average SAIFI is 2.26
12. The SAIFI for 2022 was 7.25
13. Off right-of-way trees continue to be an issue. We have a crew that is dedicated to cutting those that appear to be at risk. We are constantly adding animal guards to try to eliminate the small animal outage problems.

# 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 3
4. Rock Crusher
5. There are approximately 0.6 miles of primary line.
6. 8 active consumers.
7. Circuit was cut in N/A
8. Causes of last years outages:

590 Weather, other	1	50%
000 Power supply	1	50%
9. The 5 year average SAIDI is 0.0
10. The SAIDI for 2022 was 1.74
11. The 5 year average SAIFI is 0.0
12. The SAIFI for 2022 was 0.01
13. Not much you can say about this one, just unfortunate events.

# 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 72.47 miles of primary line.
6. 576 active consumers.
7. Circuit was cut in 2016
8. Causes of last years outages:

600 Small animal/bird	15	23%
431 Tree Failure-off ROW	9	14%
590 Weather, other	8	12%
110 Maintenance	6	9%
420 Tree growth	5	8%
800 Other	3	5%
999 Cause unknown	3	5%
430 Tree failure from overhang or dead tree without ice/snow	3	5%
500 Lightning	3	5%
400 Decay/age of material/equipment	2	3%
000 Power supply	2	3%
190 Other planned	2	3%
100 Construction	1	2%
510 Wind, not trees	1	2%
790 Public, other	1	2%
470 Borrower crew cuts tree	1	2%
9. The 5 year average SAIDI is 129.71
10. The SAIDI for 2022 was 207.39
11. The 5 year average SAIFI is 0.96
12. The SAIFI for 2022 was 1.55
13. Off right-of-way trees continue to be an issue. We have a crew that is dedicated to cutting those that appear to be at risk. We are constantly adding animal guards to try to eliminate the small animal outage problems.

# 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 3
4. Rt. 32 toward Isonville
5. There are approximately 33.55 miles of primary line.
6. 218 active consumers.
7. Circuit was cut in 2018
8. Causes of last years outages:

431 Tree Failure-off ROW	13	46%
520 Ice, sleet, frost, not trees	5	18%
590 Weather, other	4	14%
110 Maintenance	2	7%
800 Other	1	4%
999 Cause unknown	1	4%
420 Tree growth	1	4%
400 Decay/age of material/equipment	1	4%
9. The 5 year average SAIDI is 322.19
10. The SAIDI for 2022 was 249.49
11. The 5 year average SAIFI is 2.08
12. The SAIFI for 2022 was 2.35
13. Off right-of-way trees continue to be an issue. We have a crew that is dedicated to cutting those that appear to be at risk. We are constantly adding animal guards to try to eliminate the small animal outage problems.

# 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 45.88 miles of primary line.
6. 352 active consumers.
7. Circuit was cut in 2022
8. Causes of last years outages:

431 Tree Failure-off ROW	31	41%
800 Other	16	21%
600 Small animal/bird	12	16%
110 Maintenance	3	4%
999 Cause unknown	3	4%
100 Construction	2	3%
510 Wind, not trees	2	3%
470 Borrower crew cuts tree	2	3%
500 Lightning	2	3%
790 Public, other	1	1%
400 Decay/age of material/equipment	1	1%
590 Weather, other	1	1%
9. The 5 year average SAIDI is 468.25
10. The SAIDI for 2022 was 318.87
11. The 5 year average SAIFI is 3.09
12. The SAIFI for 2022 was 3.29
13. Off right-of-way trees continue to be an issue. We have a crew that is dedicated to cutting those that appear to be at risk. We are constantly adding animal guards to try to eliminate the small animal outage problems.



# 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 4
4. Rt. 2 & 7 South toward Lost Creek
5. There are approximately 80.92 miles of primary line.
6. 503 active consumers.
7. Circuit was cut in 2009
8. Causes of last years outages:

431 Tree Failure-off ROW	17	33%
600 Small animal/bird	9	18%
110 Maintenance	8	16%
999 Cause unknown	7	14%
500 Lightning	2	4%
470 Borrower crew cuts tree	2	4%
700 Customer-caused	1	2%
100 Construction	1	2%
800 Other	1	2%
590 Weather, other	1	2%
420 Tree growth	1	2%
300 Material or equipment fault/failure	1	2%
9. The 5 year average SAIDI is 462.15
10. The SAIDI for 2022 was 428.09
11. The 5 year average SAIFI is 2.48
12. The SAIFI for 2022 was 5.0
13. This circuit will be cut in 2023 and off right of way trees will be addressed.  
We are also adding animal guards trying to reduce the small animal outage issues.

## SECTION 6: VEGETATION MANAGEMENT PLAN REVIEW

### INCLUDE CURRENT VEGETATION MANAGEMENT PLAN

Additional pages may be attached as needed.

In 2022 we cleared 90.2 miles of line in our circuit cutting program on Argentum Feeder 1 and Warnock Feeder 3. We also trimmed 12,476 yard trees and cut 22,031 trees along the right-of-ways.

Our dedicated crew for off right of way trees has been over 11 of our 13 substations. They will be working on Argentum and Warnock in 2023.

## SECTION 7: UTILITY COMMENTS

We had a few events throughout the year that caused multiple outages but were not severe enough to be classified as major events. When wind/storm bursts hit an area(s) it takes additional time to get personnel to the proper locations therefore increasing our SAIDI. We are determined to reduce our reliability indices in the coming years.