

OWEN Electric

A Touchstone Energy Cooperative 

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Public Service
Commission

April 26, 2017

Ms. Talina Mathews
Executive Director
Kentucky Public Service Commission
P.O. Box 615
Frankfort, Kentucky 40602-0615

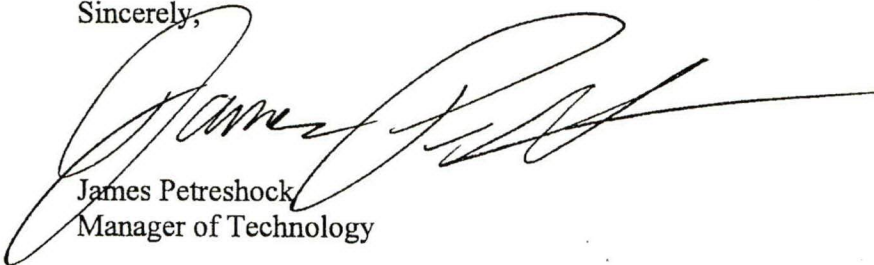
RE: Administrative Case No. 2011-00450

Dear Ms. Mathews,

Enclosed are the original and one (1) electronic copy of the 2016 Distribution Reliability Report, for Owen Electric Cooperative, as requested in the revisions to the aforementioned order.

Should you have any questions or need further information, please contact our office at 1-800-372-7612.

Sincerely,


James Petreshock
Manager of Technology

Enclosures

KENTUCKY PUBLIC SERVICE COMMISSION

Electric Distribution Utility Annual Reliability Report

SECTION 1: CONTACT INFORMATION

UTILITY NAME	<u>Owen Electric Cooperative</u>
REPORT PREPARED BY	<u>James Petreshock</u>
E-MAIL ADDRESS OF PREPARER	<u>jpetreshock@owenelectric.com</u>
PHONE NUMBER OF PREPARER	<u>(502) 563-3492</u>

SECTION 2: REPORT YEAR

CALENDAR YEAR OF REPORT	<u>2016</u>
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SECTION 3: MAJOR EVENT DAYS

T_{MED}	<u>7.663</u>
FIRST DATE USED TO DETERMINE T_{MED}	<u>1-Jan-2011</u>
LAST DATE USED TO DETERMINE T_{MED}	<u>31-Dec-2015</u>
NUMBER OF MED IN REPORT YEAR	<u>3</u>

NOTE: Per IEEE 1366 T_{MED} 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.

SECTION 4: SYSTEM RELIABILITY INFORMATION AND RESULTS

System-wide Information			
TOTAL CUSTOMERS	<u>60,120</u>	TOTAL CIRCUITS	<u>125</u>
Excluding MED			
5 YEAR AVERAGE		REPORTING YEAR	
SAIDI	<u>131.63</u>	SAIDI	<u>82.34</u>
SAIFI	<u>1.34</u>	SAIFI	<u>0.93</u>
Including MED			
5 YEAR AVERAGE		REPORTING YEAR	
SAIDI	<u>191.41</u>	SAIDI	<u>104.83</u>
SAIFI	<u>1.53</u>	SAIFI	<u>1.00</u>

Notes:

- 1) All duration 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) is used to define SAIDI, SAIFI, and T_{MED}

Electric Distribution Utility Annual Reliability Report

Circuit # 1

5.1.1 SUBSTATION NAME AND NUMBER	BRISTOW II(56)
5.1.2 SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	Kenton
5.1.3 CIRCUIT NAME AND NUMBER	BRISTOW II(56), Circuit 7, 5607
5.1.4 CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	See Coop.
5.1.5 TOTAL CIRCUIT LENGTH (MILES)	5.0
5.1.6 CUSTOMER COUNT FOR THIS CIRCUIT	489
5.1.7 DATE OF LAST CIRCUIT TRIM (VM)	2016

5.1.23 LIST OF OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS REPRESENTED BY EACH CAUSE

Outage Cause	SAIFI Contribution	SAIDI Contribution
Power Supplier	0.00%	0.00%
Birds/Animals	0.00%	0.00%
Equipment/Installation	95.26%	73.88%
Member/Public	0.00%	0.00%
R.O.W. Unpreventable	0.00%	0.00%
Scheduled	0.00%	0.00%
Unknown	3.23%	14.79%
Weather	0.00%	0.00%
Age/Deterioration	1.52%	11.33%
R.O.W. Preventable	0.00%	0.00%

5.1.9 CIRCUIT 5 YEAR AVERAGE (SAIDI)	0.360
5.1.10 REPORTING YEAR (SAIDI)	0.338
5.1.11 CIRCUIT 5 YEAR AVERAGE (SAIFI)	0.004
5.1.12 REPORTING YEAR (SAIFI)	0.009

5.1.13 CORRECTIVE ACTION PLAN:

This circuit serves mostly underground residential services. One event was the major driver for the SAIDI/SAIFI contributions. An underground equipment malfunction led to a large outage.

Action:
The underground line in the area was inspected to make sure there was no further damage. At this time there is no additional corrective action.

Circuit # 2

5.2.1	SUBSTATION NAME AND NUMBER	DURO II(54)
5.2.2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	Kenton
5.2.3	CIRCUIT NAME AND NUMBER	DURO II(54), Circuit 2, 5402
5.2.4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	See Coop.
5.2.5	TOTAL CIRCUIT LENGTH (MILES)	12.7
5.2.6	CUSTOMER COUNT FOR THIS CIRCUIT	614
5.2.7	DATE OF LAST CIRCUIT TRIM (VM)	2013

5.2.23 LIST OF OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS REPRESENTED BY EACH CAUSE

Outage Cause	SAIFI Contribution	SAIDI Contribution
Power Supplier	0.00%	0.00%
Birds/Animals	29.41%	21.65%
Equipment/Installation	11.18%	3.71%
Member/Public	0.59%	1.23%
R.O.W. Unpreventable	10.59%	10.54%
Scheduled	0.00%	0.00%
Unknown	14.71%	11.68%
Weather	33.53%	51.18%
Age/Deterioration	0.00%	0.00%
R.O.W. Preventable	0.00%	0.00%

5.2.9	CIRCUIT 5 YEAR AVERAGE (SAIDI)	0.196
5.2.10	REPORTING YEAR (SAIDI)	0.224
5.2.11	CIRCUIT 5 YEAR AVERAGE (SAIFI)	0.004
5.2.12	REPORTING YEAR (SAIFI)	0.003

5.2.13 CORRECTIVE ACTION PLAN:

The circuit feeds mostly residential subdivisions next to industrial loads. Most outages were identified as birds or lightning. A consumer also cut a tree down onto a line.

Action:
Continue line inspection and right of way schedule to help prevent right of way problems. Also, Owen Electric will review circuit to find potential areas for lightning arrestors and/or wildlife protection.

Circuit # 3

5.3.1	SUBSTATION NAME AND NUMBER	SMITH II(52)
5.3.2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	Boone
5.3.3	CIRCUIT NAME AND NUMBER	SMITH II(52), Circuit 1, 5201
5.3.4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	See Coop.
5.3.5	TOTAL CIRCUIT LENGTH (MILES)	6.1
5.3.6	CUSTOMER COUNT FOR THIS CIRCUIT	106
5.3.7	DATE OF LAST CIRCUIT TRIM (VM)	2015

5.3.23 LIST OF OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS REPRESENTED BY EACH CAUSE

Outage Cause	SAIFI Contribution	SAIDI Contribution
Power Supplier	0.00%	0.00%
Birds/Animals	0.00%	0.00%
Equipment/Installation	2.13%	0.58%
Member/Public	0.00%	0.00%
R.O.W. Unpreventable	0.00%	0.00%
Scheduled	0.00%	0.00%
Unknown	0.00%	0.00%
Weather	80.85%	95.45%
Age/Deterioration	0.00%	0.00%
R.O.W. Preventable	17.02%	3.97%

5.3.9	CIRCUIT 5 YEAR AVERAGE (SAIDI)	0.083
5.3.10	REPORTING YEAR (SAIDI)	0.151
5.3.11	CIRCUIT 5 YEAR AVERAGE (SAIFI)	0.001
5.3.12	REPORTING YEAR (SAIFI)	0.001

5.3.13 CORRECTIVE ACTION PLAN:

This feeds both residential and industrial loads near the airport in Boone County. Lightning during storms was indicated to be the prevalent cause of outages.

Action:
Review locations of lightning arrestors to see if the area warrants any additional lightning protection. No other action planned at this time.

Circuit # 4

5.4.1	SUBSTATION NAME AND NUMBER	BELLEVIEW(27)
5.4.2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	Boone
5.4.3	CIRCUIT NAME AND NUMBER	BELLEVIEW(27), Circuit 4, 2704
5.4.4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	See Coop.
5.4.5	TOTAL CIRCUIT LENGTH (MILES)	17.2
5.4.6	CUSTOMER COUNT FOR THIS CIRCUIT	159
5.4.7	DATE OF LAST CIRCUIT TRIM (VM)	2015

5.4.23 LIST OF OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS REPRESENTED BY EACH CAUSE

Outage Cause	SAIFI Contribution	SAIDI Contribution
Power Supplier	0.00%	0.00%
Birds/Animals	18.85%	25.18%
Equipment/Installation	4.92%	2.64%
Member/Public	0.00%	0.00%
R.O.W. Unpreventable	2.05%	2.53%
Scheduled	2.05%	3.46%
Unknown	0.00%	0.00%
Weather	72.13%	66.18%
Age/Deterioration	0.00%	0.00%
R.O.W. Preventable	0.00%	0.00%

5.4.9	CIRCUIT 5 YEAR AVERAGE (SAIDI)	0.435
5.4.10	REPORTING YEAR (SAIDI)	0.257
5.4.11	CIRCUIT 5 YEAR AVERAGE (SAIFI)	0.001
5.4.12	REPORTING YEAR (SAIFI)	0.004

5.4.13 CORRECTIVE ACTION PLAN:

This circuit feeds the rural, hilly portions of the territory near the Ohio River in Boone County. Weather has been indicated as the largest cause of outages.

Action:

Continue right of way program to help trees from blowing into lines. Also, review coordination to make sure feeder is operating properly during faulted conditions.

Circuit # 5

5.5.1	SUBSTATION NAME AND NUMBER	BELLEVIEW(27)
5.5.2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	Boone
5.5.3	CIRCUIT NAME AND NUMBER	BELLEVIEW(27), Circuit 3, 2703
5.5.4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	See Coop.
5.5.5	TOTAL CIRCUIT LENGTH (MILES)	18.6
5.5.6	CUSTOMER COUNT FOR THIS CIRCUIT	159
5.5.7	DATE OF LAST CIRCUIT TRIM (VM)	2015

5.5.23 LIST OF OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS REPRESENTED BY EACH CAUSE

Outage Cause	SAIFI Contribution	SAIDI Contribution
Power Supplier	0.00%	0.00%
Birds/Animals	29.82%	16.95%
Equipment/Installation	0.00%	0.00%
Member/Public	5.26%	6.03%
R.O.W. Unpreventable	1.75%	2.20%
Scheduled	0.00%	0.00%
Unknown	1.75%	2.77%
Weather	61.40%	72.05%
Age/Deterioration	0.00%	0.00%
R.O.W. Preventable	0.00%	0.00%

5.5.9	CIRCUIT 5 YEAR AVERAGE (SAIDI)	0.320
5.5.10	REPORTING YEAR (SAIDI)	0.354
5.5.11	CIRCUIT 5 YEAR AVERAGE (SAIFI)	0.002
5.5.12	REPORTING YEAR (SAIFI)	0.002

5.5.13 CORRECTIVE ACTION PLAN:

This circuit feeds the rural, hilly portions of the territory near the Ohio River in Boone County. Weather has been indicated as the largest cause of outages.

Action:
Continue right of way program to help trees from blowing into lines. Also, review locations of lightning arrestors as lightning was indicated to be a cause of multiple outages.

Circuit # 6

5.6.1	SUBSTATION NAME AND NUMBER	RICHWOOD(26)
5.6.2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	Boone
5.6.3	CIRCUIT NAME AND NUMBER	RICHWOOD(26), Circuit 4, 2604
5.6.4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	See Coop.
5.6.5	TOTAL CIRCUIT LENGTH (MILES)	15.9
5.6.6	CUSTOMER COUNT FOR THIS CIRCUIT	456
5.6.7	DATE OF LAST CIRCUIT TRIM (VM)	2015

5.6.23 LIST OF OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS REPRESENTED BY EACH CAUSE

Outage Cause	SAIFI Contribution	SAIDI Contribution
Power Supplier	0.00%	0.00%
Birds/Animals	21.32%	15.45%
Equipment/Installation	0.00%	0.00%
Member/Public	0.74%	0.77%
R.O.W. Unpreventable	0.00%	0.00%
Scheduled	7.35%	7.17%
Unknown	38.97%	36.92%
Weather	30.15%	35.51%
Age/Deterioration	1.47%	4.18%
R.O.W. Preventable	0.00%	0.00%

5.6.9	CIRCUIT 5 YEAR AVERAGE (SAIDI)	0.445
5.6.10	REPORTING YEAR (SAIDI)	1.420
5.6.11	CIRCUIT 5 YEAR AVERAGE (SAIFI)	0.002
5.6.12	REPORTING YEAR (SAIFI)	0.006

5.6.13 CORRECTIVE ACTION PLAN:

This circuit feeds a large suburban portion of Boone County which is the Triple Crown subdivision, with some other residential overhead as well. The feeder experienced multiple types of outages. Some were planned outages as construction in Triple Crown continues. Weather, animals, and unknown outages also played a role.

Action:
Wire upgrades occurred on portions of Richwood substation which could potentially help some of the weather and unknown related outages. One storm in October contributed to a large portion of the weather related outage. There will be no further action at this time.

Circuit # 7

5.7.1	SUBSTATION NAME AND NUMBER	RICHWOOD(26)
5.7.2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	Boone
5.7.3	CIRCUIT NAME AND NUMBER	RICHWOOD(26), Circuit 1, 2601
5.7.4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	See Coop.
5.7.5	TOTAL CIRCUIT LENGTH (MILES)	14.5
5.7.6	CUSTOMER COUNT FOR THIS CIRCUIT	708
5.7.7	DATE OF LAST CIRCUIT TRIM (VM)	2015

5.7.23 LIST OF OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS REPRESENTED BY EACH CAUSE

Outage Cause	SAIFI Contribution	SAIDI Contribution
Power Supplier	0.00%	0.00%
Birds/Animals	0.00%	0.00%
Equipment/Installation	0.00%	0.00%
Member/Public	100.00%	100.00%
R.O.W. Unpreventable	0.00%	0.00%
Scheduled	0.00%	0.00%
Unknown	0.00%	0.00%
Weather	0.00%	0.00%
Age/Deterioration	0.00%	0.00%
R.O.W. Preventable	0.00%	0.00%

5.7.9	CIRCUIT 5 YEAR AVERAGE (SAIDI)	0.708
5.7.10	REPORTING YEAR (SAIDI)	0.036
5.7.11	CIRCUIT 5 YEAR AVERAGE (SAIFI)	0.002
5.7.12	REPORTING YEAR (SAIFI)	0.012

5.7.13 CORRECTIVE ACTION PLAN:

This circuit feeds a suburban portion of Boone County. Two vehicle accidents were the cause for all outages on this circuit during the reporting time

Action:
 There are no corrective actions as the only two outages on the circuit were caused by the public with car wrecks.

Circuit # 8

5.8.1	SUBSTATION NAME AND NUMBER	STERLING(25)
5.8.2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	Gallatin
5.8.3	CIRCUIT NAME AND NUMBER	STERLING(25), Circuit 1, 2501
5.8.4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	See Coop.
5.8.5	TOTAL CIRCUIT LENGTH (MILES)	44.1
5.8.6	CUSTOMER COUNT FOR THIS CIRCUIT	541
5.8.7	DATE OF LAST CIRCUIT TRIM (VM)	2014

5.8.23 LIST OF OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS REPRESENTED BY EACH CAUSE

Outage Cause	SAIFI Contribution	SAIDI Contribution
Power Supplier	0.00%	0.00%
Birds/Animals	0.10%	0.08%
Equipment/Installation	0.00%	0.00%
Member/Public	5.65%	13.99%
R.O.W. Unpreventable	2.80%	1.52%
Scheduled	0.00%	0.00%
Unknown	9.88%	7.07%
Weather	80.88%	76.91%
Age/Deterioration	0.00%	0.00%
R.O.W. Preventable	0.69%	0.43%

5.8.9	CIRCUIT 5 YEAR AVERAGE (SAIDI)	3.453
5.8.10	REPORTING YEAR (SAIDI)	3.910
5.8.11	CIRCUIT 5 YEAR AVERAGE (SAIFI)	0.019
5.8.12	REPORTING YEAR (SAIFI)	0.034

5.8.13 CORRECTIVE ACTION PLAN:

This circuit has a lot of cross county (i.e. difficult to access) line just outside the substation in Gallatin and Southern Boone County which make it difficult to access and repair ROW related outages. Weather was the driver for the increased SAIDI/SAIFI numbers over the 5 year rolling average, with some being due to trees being blown in the line.

Action:
 Right of Way trimming was last completed in 2014. Owen Electric will continue to employ its contractors to continue to follow the Right of Way trimming plan to help remove any potential trees that could fall into the lines during storms. There are currently no other corrective plans.

Circuit # 9

5.9.1	SUBSTATION NAME AND NUMBER	BURLINGTON(24)
5.9.2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	Boone
5.9.3	CIRCUIT NAME AND NUMBER	BURLINGTON(24), Circuit 2, 2402
5.9.4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	See Coop.
5.9.5	TOTAL CIRCUIT LENGTH (MILES)	10.8
5.9.6	CUSTOMER COUNT FOR THIS CIRCUIT	764
5.9.7	DATE OF LAST CIRCUIT TRIM (VM)	2014

5.9.23 LIST OF OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS REPRESENTED BY EACH CAUSE

Outage Cause	SAIFI Contribution	SAIDI Contribution
Power Supplier	0.00%	0.00%
Birds/Animals	0.00%	0.00%
Equipment/Installation	18.92%	11.21%
Member/Public	0.00%	0.00%
R.O.W. Unpreventable	0.00%	0.00%
Scheduled	0.00%	0.00%
Unknown	18.92%	18.95%
Weather	0.00%	0.00%
Age/Deterioration	62.16%	69.84%
R.O.W. Preventable	0.00%	0.00%

5.9.9	CIRCUIT 5 YEAR AVERAGE (SAIDI)	0.127
5.9.10	REPORTING YEAR (SAIDI)	0.241
5.9.11	CIRCUIT 5 YEAR AVERAGE (SAIFI)	0.003
5.9.12	REPORTING YEAR (SAIFI)	0.002

5.9.13 CORRECTIVE ACTION PLAN:

This circuit is in Central Boone County and almost exclusively feeds underground subdivisions. The cause for a SAIDI over the 5 year rolling average was reportedly due to age or deterioration of the equipment. There were only three outages on the circuit for the year.

Action:

A bad underground cabinet was found which caused a nearly 2 hour outage for 92 people while the problem was fixed. If it would not have been for this outage, the SAIDI would have been less than the 5 year rolling average. Aged conductor+C461 was noted in the 2014-2017 work plan to be changed out. In addition, the line inspection will continue as scheduled to hopefully find any equipment that may show damage.

Circuit # 10

5.10.1	SUBSTATION NAME AND NUMBER	BAVARIAN(23)
5.10.2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	Boone
5.10.3	CIRCUIT NAME AND NUMBER	BAVARIAN(23), Circuit 2, 2302
5.10.4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	See Coop.
5.10.5	TOTAL CIRCUIT LENGTH (MILES)	35.1
5.10.6	CUSTOMER COUNT FOR THIS CIRCUIT	416
5.10.7	DATE OF LAST CIRCUIT TRIM (VM)	2014

5.10.23 LIST OF OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS REPRESENTED BY EACH CAUSE

Outage Cause	SAIFI Contribution	SAIDI Contribution
Power Supplier	0.00%	0.00%
Birds/Animals	3.00%	0.36%
Equipment/Installation	0.00%	0.00%
Member/Public	6.00%	1.06%
R.O.W. Unpreventable	14.00%	4.16%
Scheduled	0.00%	0.00%
Unknown	8.00%	3.58%
Weather	8.00%	8.45%
Age/Deterioration	0.00%	0.00%
R.O.W. Preventable	61.00%	82.39%

5.10.9	CIRCUIT 5 YEAR AVERAGE (SAIDI)	0.427
5.10.10	REPORTING YEAR (SAIDI)	0.539
5.10.11	CIRCUIT 5 YEAR AVERAGE (SAIFI)	0.006
5.10.12	REPORTING YEAR (SAIFI)	0.002

5.10.13 CORRECTIVE ACTION PLAN:

This circuit is in Central Boone County feeding along I-71. It is almost entirely overhead residential services. One extended outage due to a tree on the line was the main contributor to SAIDI being over the 5 year rolling average, but the SAIFI was lower than the last 5 year average.

Action:
 A tree taking out 61 consumers for over 7 hours was the main issue for this circuit. The circuit was last trimmed in 2014. The ROW trimming schedule will continue to help prevent any additional trees falling and damaging the distribution lines.

Circuit # 11

5.11.1	SUBSTATION NAME AND NUMBER	NOEL(21)
5.11.2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	Grant
5.11.3	CIRCUIT NAME AND NUMBER	NOEL(21), Circuit 4, 2104
5.11.4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	See Coop.
5.11.5	TOTAL CIRCUIT LENGTH (MILES)	37.1
5.11.6	CUSTOMER COUNT FOR THIS CIRCUIT	474
5.11.7	DATE OF LAST CIRCUIT TRIM (VM)	2013

5.11.23 LIST OF OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS REPRESENTED BY EACH CAUSE

Outage Cause	SAIFI Contribution	SAIDI Contribution
Power Supplier	0.00%	0.00%
Birds/Animals	3.45%	5.42%
Equipment/Installation	41.95%	5.20%
Member/Public	39.20%	51.28%
R.O.W. Unpreventable	0.18%	0.58%
Scheduled	4.07%	12.87%
Unknown	4.51%	9.94%
Weather	6.64%	14.71%
Age/Deterioration	0.00%	0.00%
R.O.W. Preventable	0.00%	0.00%

5.11.9	CIRCUIT 5 YEAR AVERAGE (SAIDI)	3.055
5.11.10	REPORTING YEAR (SAIDI)	0.607
5.11.11	CIRCUIT 5 YEAR AVERAGE (SAIFI)	0.011
5.11.12	REPORTING YEAR (SAIFI)	0.019

5.11.13 CORRECTIVE ACTION PLAN:

This circuit is in Central Grant County feeding mostly rural overhead residential loads. The SAIDI vs the 5 year rolling average was lower, while the SAIFI was slightly higher. This is due in large part to member caused incidents. A kite blew a fuse, a car struck a 3 phase pole, and a customer's meter pole fell over. There were also some scheduled outages to change out wire.

Action:
There are no corrective actions at this time as a major cause was public outages in addition to some scheduled outages for maintenance, with a few weather related outages.

Circuit # 12

5.12.1	SUBSTATION NAME AND NUMBER	SMOOT(16)
5.12.2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	Boone
5.12.3	CIRCUIT NAME AND NUMBER	SMOOT(16), Circuit 3, 1603
5.12.4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	See Coop.
5.12.5	TOTAL CIRCUIT LENGTH (MILES)	5.0
5.12.6	CUSTOMER COUNT FOR THIS CIRCUIT	305
5.12.7	DATE OF LAST CIRCUIT TRIM (VM)	2013

5.12.23 LIST OF OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS REPRESENTED BY EACH CAUSE

Outage Cause	SAIFI Contribution	SAIDI Contribution
Power Supplier	0.00%	0.00%
Birds/Animals	0.00%	0.00%
Equipment/Installation	0.00%	0.00%
Member/Public	0.00%	0.00%
R.O.W. Unpreventable	0.00%	0.00%
Scheduled	0.00%	0.00%
Unknown	100.00%	100.00%
Weather	0.00%	0.00%
Age/Deterioration	0.00%	0.00%
R.O.W. Preventable	0.00%	0.00%

5.12.9	CIRCUIT 5 YEAR AVERAGE (SAIDI)	0.014
5.12.10	REPORTING YEAR (SAIDI)	0.452
5.12.11	CIRCUIT 5 YEAR AVERAGE (SAIFI)	0.001
5.12.12	REPORTING YEAR (SAIFI)	0.005

5.12.13 CORRECTIVE ACTION PLAN:

This circuit is in Central Boone County, feeding mostly underground residential services. Only one outage was reported during the reporting period, but it had 305 consumers out for nearly two hours, which caused the SAIDI to be higher than the 5 year rolling average. A splice was found to be the cause of the outage

Action:

Line inspection will continue as planned to try and find any potential problems, but no further action at this time.

Circuit # 13

5.13.1	SUBSTATION NAME AND NUMBER	BRISTOW(14)
5.13.2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	Kenton
5.13.3	CIRCUIT NAME AND NUMBER	BRISTOW(14), Circuit 4, 1404
5.13.4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	See Coop.
5.13.5	TOTAL CIRCUIT LENGTH (MILES)	23.1
5.13.6	CUSTOMER COUNT FOR THIS CIRCUIT	1814
5.13.7	DATE OF LAST CIRCUIT TRIM (VM)	2016

5.13.23 LIST OF OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS REPRESENTED BY EACH CAUSE

Outage Cause	SAIFI Contribution	SAIDI Contribution
Power Supplier	0.00%	0.00%
Birds/Animals	2.71%	0.86%
Equipment/Installation	0.40%	0.07%
Member/Public	62.84%	87.71%
R.O.W. Unpreventable	0.00%	0.00%
Scheduled	2.90%	4.88%
Unknown	0.76%	0.26%
Weather	30.24%	6.10%
Age/Deterioration	0.15%	0.11%
R.O.W. Preventable	0.00%	0.00%

5.13.9	CIRCUIT 5 YEAR AVERAGE (SAIDI)	3.985
5.13.10	REPORTING YEAR (SAIDI)	14.796
5.13.11	CIRCUIT 5 YEAR AVERAGE (SAIFI)	0.045
5.13.12	REPORTING YEAR (SAIFI)	0.103

5.13.13 CORRECTIVE ACTION PLAN:

This circuit is in the northern part of Kenton County. There were several drivers to the increased SAIDI/SAIFI as opposed to the five year rolling average. One being the public; there were a couple of vehicle accidents which caused outages. A Pole fire also took over 1,000 members out of service. That outage lasted over 6 hours, which was caused by lightning.

Action:
Continue to use lightning arrestors to help mitigate lightning. Look for additional places to add switches for potential back feed opportunities. There will be no additional corrective actions at this time.

Circuit # 14

5.14.1	SUBSTATION NAME AND NUMBER	KEITH(13)
5.14.2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	Owen
5.14.3	CIRCUIT NAME AND NUMBER	KEITH(13), Circuit 4, 1304
5.14.4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	See Coop.
5.14.5	TOTAL CIRCUIT LENGTH (MILES)	46.6
5.14.6	CUSTOMER COUNT FOR THIS CIRCUIT	387
5.14.7	DATE OF LAST CIRCUIT TRIM (VM)	2015

5.14.23 LIST OF OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS REPRESENTED BY EACH CAUSE

Outage Cause	SAIFI Contribution	SAIDI Contribution
Power Supplier	0.00%	0.00%
Birds/Animals	0.13%	0.26%
Equipment/Installation	0.00%	0.00%
Member/Public	0.00%	0.00%
R.O.W. Unpreventable	0.00%	0.00%
Scheduled	1.45%	9.60%
Unknown	17.52%	34.65%
Weather	0.92%	3.28%
Age/Deterioration	79.97%	52.21%
R.O.W. Preventable	0.00%	0.00%

5.14.9	CIRCUIT 5 YEAR AVERAGE (SAIDI)	0.827
5.14.10	REPORTING YEAR (SAIDI)	0.430
5.14.11	CIRCUIT 5 YEAR AVERAGE (SAIFI)	0.010
5.14.12	REPORTING YEAR (SAIFI)	0.013

5.14.13 CORRECTIVE ACTION PLAN:

This circuit is in Owen County feeding mostly rural overhead residential consumers. The SAIDI for the reporting period was under the five year reporting period, with the SAIFI being just higher. A jumper taking 607 consumers out of service was the largest contributor, but there were also several fuses blown due to unknown outages

Action:
 Line inspection will continue to be done at the scheduled time to try and preemptively find any potential issues. Right of Way will also continue as scheduled interval as some of the unknown outages may stem from trees contacting the lines.

Circuit # 15

5.15.1	SUBSTATION NAME AND NUMBER	BIG BONE(12)
5.15.2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	Boone
5.15.3	CIRCUIT NAME AND NUMBER	BIG BONE(12), Circuit 2, 1202
5.15.4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	See Coop.
5.15.5	TOTAL CIRCUIT LENGTH (MILES)	17.1
5.15.6	CUSTOMER COUNT FOR THIS CIRCUIT	190
5.15.7	DATE OF LAST CIRCUIT TRIM (VM)	2016

5.15.23 LIST OF OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS REPRESENTED BY EACH CAUSE

Outage Cause	SAIFI Contribution	SAIDI Contribution
Power Supplier	0.00%	0.00%
Birds/Animals	0.00%	0.00%
Equipment/Installation	0.00%	0.00%
Member/Public	2.70%	1.84%
R.O.W. Unpreventable	0.00%	0.00%
Scheduled	0.00%	0.00%
Unknown	0.00%	0.00%
Weather	97.30%	98.16%
Age/Deterioration	0.00%	0.00%
R.O.W. Preventable	0.00%	0.00%

5.15.9	CIRCUIT 5 YEAR AVERAGE (SAIDI)	1.257
5.15.10	REPORTING YEAR (SAIDI)	1.658
5.15.11	CIRCUIT 5 YEAR AVERAGE (SAIFI)	0.006
5.15.12	REPORTING YEAR (SAIFI)	0.002

5.15.13 CORRECTIVE ACTION PLAN:

This feeds the south western end of Boone County which has hilly, difficult terrain, making ROW and outage restoration more difficult. The main cause for the increased SAIDI over the 5 year rolling average was due to a 21 hour outage caused by high wind taking down 3 spans of wire.

Action:
 Without the duration of the 21 hour outage, SAIDI would have been under the 5 year rolling average. Owen Electric designs to RUS and NESC specifications, as such, there is no further action that is to be taken at this time.

Circuit # 16

5.16.1	SUBSTATION NAME AND NUMBER	CARSON(11)
5.16.2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	Gallatin
5.16.3	CIRCUIT NAME AND NUMBER	CARSON(11), Circuit 3, 1103
5.16.4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	See Coop.
5.16.5	TOTAL CIRCUIT LENGTH (MILES)	83.8
5.16.6	CUSTOMER COUNT FOR THIS CIRCUIT	810
5.16.7	DATE OF LAST CIRCUIT TRIM (VM)	2015

5.16.23 LIST OF OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS REPRESENTED BY EACH CAUSE

Outage Cause	SAIFI Contribution	SAIDI Contribution
Power Supplier	39.88%	33.94%
Birds/Animals	0.05%	0.09%
Equipment/Installation	40.53%	4.45%
Member/Public	2.55%	6.65%
R.O.W. Unpreventable	3.05%	11.61%
Scheduled	0.00%	0.00%
Unknown	2.75%	7.71%
Weather	6.80%	20.56%
Age/Deterioration	0.10%	0.56%
R.O.W. Preventable	4.30%	14.42%

5.16.9	CIRCUIT 5 YEAR AVERAGE (SAIDI)	4.852
5.16.10	REPORTING YEAR (SAIDI)	1.212
5.16.11	CIRCUIT 5 YEAR AVERAGE (SAIFI)	0.032
5.16.12	REPORTING YEAR (SAIFI)	0.033

5.16.13 CORRECTIVE ACTION PLAN:

This feeder is located in rural rugged terrain in Gallatin and Carroll counties on the perimeter of our service territory with limited back feeding opportunities. A power supplier outage caused 798 consumers to be out, which was 30% of the total outage hours on the circuit. There were also several storm related outages that added to the increased SAIDI and SAIFI numbers.

Action:
 Owen Electric and East Kentucky Power continue to have a good working relationship and open lines of communication. EKPC has a good maintenance program and continues to work on providing the best cost effective solution to serve Owen Electric as well as our membership. Line inspection will also continue as scheduled in addition to the ROW trimming schedule.

Circuit # 17

5.17.1	SUBSTATION NAME AND NUMBER	BANKLICK(2)
5.17.2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	Kenton
5.17.3	CIRCUIT NAME AND NUMBER	BANKLICK(2), Circuit 3, 0203
5.17.4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	See Coop.
5.17.5	TOTAL CIRCUIT LENGTH (MILES)	38.1
5.17.6	CUSTOMER COUNT FOR THIS CIRCUIT	405
5.17.7	DATE OF LAST CIRCUIT TRIM (VM)	2014

5.17.23 LIST OF OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS REPRESENTED BY EACH CAUSE

Outage Cause	SAIFI Contribution	SAIDI Contribution
Power Supplier	0.00%	0.00%
Birds/Animals	4.18%	3.83%
Equipment/Installation	44.44%	44.69%
Member/Public	0.44%	0.48%
R.O.W. Unpreventable	0.11%	0.11%
Scheduled	1.32%	3.12%
Unknown	3.08%	1.94%
Weather	0.22%	0.73%
Age/Deterioration	0.11%	0.26%
R.O.W. Preventable	46.09%	44.84%

5.17.9	CIRCUIT 5 YEAR AVERAGE (SAIDI)	1.614
5.17.10	REPORTING YEAR (SAIDI)	2.326
5.17.11	CIRCUIT 5 YEAR AVERAGE (SAIFI)	0.018
5.17.12	REPORTING YEAR (SAIFI)	0.022

5.17.13 CORRECTIVE ACTION PLAN:

This circuit is located in central Kenton County, serving a rural portion of the county at 14.4KV which extends throughout most of the southern half of the county. It is a long feeder with a lot of right of way and difficult access points. A bad hot line clamp caused 404 consumers to be out for over 3 hours, contributing to the higher SAIDI and SAIFI numbers as compared to the 5 year rolling average. Also, there were several trees in the lines that caused additional smaller outages over the reporting period.

Action:

Owen Electric continues to work with their distributors to make sure the equipment received is the best quality for the value. Also, right of way was last done in 2014, so will continue the Right of Way trimming schedule to help prevent trees from contacting the lines.

Circuit # 18

5.18.1	SUBSTATION NAME AND NUMBER	BANKLICK(2)
5.18.2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	Kenton
5.18.3	CIRCUIT NAME AND NUMBER	BANKLICK(2), Circuit 2, 0202
5.18.4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	See Coop.
5.18.5	TOTAL CIRCUIT LENGTH (MILES)	66.5
5.18.6	CUSTOMER COUNT FOR THIS CIRCUIT	943
5.18.7	DATE OF LAST CIRCUIT TRIM (VM)	2014

5.18.23 LIST OF OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS REPRESENTED BY EACH CAUSE

Outage Cause	SAIFI Contribution	SAIDI Contribution
Power Supplier	0.00%	0.00%
Birds/Animals	3.91%	2.03%
Equipment/Installation	8.07%	0.73%
Member/Public	0.00%	0.00%
R.O.W. Unpreventable	1.05%	0.64%
Scheduled	0.00%	0.00%
Unknown	7.15%	3.55%
Weather	48.65%	38.44%
Age/Deterioration	0.57%	0.49%
R.O.W. Preventable	30.60%	54.12%

5.18.9	CIRCUIT 5 YEAR AVERAGE (SAIDI)	2.726
5.18.10	REPORTING YEAR (SAIDI)	8.806
5.18.11	CIRCUIT 5 YEAR AVERAGE (SAIFI)	0.023
5.18.12	REPORTING YEAR (SAIFI)	0.059

5.18.13 CORRECTIVE ACTION PLAN:

This circuit is located in central Kenton County, serving a rural portion of the county. The circuit has a lot of Right of Way. The largest contributor was a tree that fell on the mainline 3 phase operating the substation breakers, taking 942 consumers out of service. This in addition to weather was the main causes of all outages on this circuit.

Action:

The Right of Way was last trimmed in 2014. The Right of Way cycle will continue as scheduled to help remove potential problem trees. Line inspection will also continue on the 2 year cycle and will help call out any trees that could be an immediate issue for the right of way crew to remove earlier than the scheduled trimming cycle.

Circuit # 19

5.19.1	SUBSTATION NAME AND NUMBER	BANKLICK(2)
5.19.2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	Kenton
5.19.3	CIRCUIT NAME AND NUMBER	BANKLICK(2), Circuit 1, 0201
5.19.4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	See Coop.
5.19.5	TOTAL CIRCUIT LENGTH (MILES)	18.5
5.19.6	CUSTOMER COUNT FOR THIS CIRCUIT	914
5.19.7	DATE OF LAST CIRCUIT TRIM (VM)	2014

5.19.23 LIST OF OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS REPRESENTED BY EACH CAUSE

Outage Cause	SAIFI Contribution	SAIDI Contribution
Power Supplier	0.00%	0.00%
Birds/Animals	3.42%	0.92%
Equipment/Installation	39.22%	46.66%
Member/Public	1.91%	0.86%
R.O.W. Unpreventable	34.29%	27.19%
Scheduled	1.99%	3.35%
Unknown	2.86%	1.71%
Weather	15.67%	18.99%
Age/Deterioration	0.00%	0.00%
R.O.W. Preventable	0.64%	0.32%

5.19.9	CIRCUIT 5 YEAR AVERAGE (SAIDI)	0.773
5.19.10	REPORTING YEAR (SAIDI)	4.824
5.19.11	CIRCUIT 5 YEAR AVERAGE (SAIFI)	0.007
5.19.12	REPORTING YEAR (SAIFI)	0.036

5.19.13 CORRECTIVE ACTION PLAN:

This circuit is located in central Kenton County, serving a rural portion of the county. The circuit had a broken cut-out which required the main three phase to be powered off while the cutout was fixed. Also, a dump truck contacted a line causing another outage. Also, trees caused additional outages. All of these contributions added to the increased SAIDI and SAIFI.

Action:
 The porcelain cutout change outs are still occurring, removing potential damaged cutouts from the system. The Right of Way was last trimmed in 2014. The Right of Way cycle will continue as scheduled to help remove potential problem trees. Line inspection will also continue on the 2 year cycle and will help call out any trees that could be an immediate issue for the right of way crew to remove earlier than the scheduled trimming cycle.

Circuit # 20

5.20.1	SUBSTATION NAME AND NUMBER	BOONE(1)
5.20.2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	Boone
5.20.3	CIRCUIT NAME AND NUMBER	BOONE(1), Circuit 5, 0105
5.20.4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	See Coop.
5.20.5	TOTAL CIRCUIT LENGTH (MILES)	30.2
5.20.6	CUSTOMER COUNT FOR THIS CIRCUIT	1591
5.20.7	DATE OF LAST CIRCUIT TRIM (VM)	2013

5.20.23 LIST OF OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS REPRESENTED BY EACH CAUSE

Outage Cause	SAIFI Contribution	SAIDI Contribution
Power Supplier	0.00%	0.00%
Birds/Animals	2.74%	1.37%
Equipment/Installation	0.00%	0.00%
Member/Public	9.39%	14.76%
R.O.W. Unpreventable	1.32%	0.40%
Scheduled	0.00%	0.00%
Unknown	0.00%	0.00%
Weather	86.55%	83.47%
Age/Deterioration	0.00%	0.00%
R.O.W. Preventable	0.00%	0.00%

5.20.9	CIRCUIT 5 YEAR AVERAGE (SAIDI)	2.819
5.20.10	REPORTING YEAR (SAIDI)	4.945
5.20.11	CIRCUIT 5 YEAR AVERAGE (SAIFI)	0.036
5.20.12	REPORTING YEAR (SAIFI)	0.034

5.20.13 CORRECTIVE ACTION PLAN:

This circuit is in central Boone County between the suburban and rural sections. This circuit feeds both overhead and underground residential consumers. A member struck a pole and an underground transformer, taking 146 consumers out of power lasting nearly 5 hours. A concrete truck also took four spans of line down on another incident. These incidents, along with trees, weather, and birds are the cause of the increased SAIDI over the 5 year rolling average. The SAIFI for this reporting period is less than the 5 year rolling average.

Action:
 The Right of Way was last trimmed in 2013. The Right of Way cycle will continue as scheduled to help remove potential problem trees. Line inspection will also continue on the 2 year cycle and will help call out any trees that could be an immediate issue; will also review to see if the circuit needs additional wildlife protection.

Circuit # 21

5.21.1	SUBSTATION NAME AND NUMBER	BOONE(1)
5.21.2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	Boone
5.21.3	CIRCUIT NAME AND NUMBER	BOONE(1), Circuit 3, 0103
5.21.4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	See Coop.
5.21.5	TOTAL CIRCUIT LENGTH (MILES)	16.6
5.21.6	CUSTOMER COUNT FOR THIS CIRCUIT	806
5.21.7	DATE OF LAST CIRCUIT TRIM (VM)	2013

5.21.23 LIST OF OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS REPRESENTED BY EACH CAUSE

Outage Cause	SAIFI Contribution	SAIDI Contribution
Power Supplier	0.00%	0.00%
Birds/Animals	0.00%	0.00%
Equipment/Installation	0.00%	0.00%
Member/Public	0.00%	0.00%
R.O.W. Unpreventable	99.14%	94.58%
Scheduled	0.00%	0.00%
Unknown	0.00%	0.00%
Weather	0.73%	4.61%
Age/Deterioration	0.12%	0.82%
R.O.W. Preventable	0.00%	0.00%

5.21.9	CIRCUIT 5 YEAR AVERAGE (SAIDI)	0.227
5.21.10	REPORTING YEAR (SAIDI)	0.455
5.21.11	CIRCUIT 5 YEAR AVERAGE (SAIFI)	0.002
5.21.12	REPORTING YEAR (SAIFI)	0.014

5.21.13 CORRECTIVE ACTION PLAN:

This circuit is in central Boone County between the suburban and rural sections. This circuit feeds both overhead and underground residential consumers. Trees on lines was the biggest cause of outages for the reporting period, with the main contributor being a dead tree taking 794 consumer out of power.

Action:
 The Right of Way was last trimmed in 2013. The Right of Way cycle will continue as scheduled to help remove potential problem trees. Line inspection will also continue on the 2 year cycle and will help call out any trees that could be an immediate issue for the right of way crew to remove earlier than the scheduled trimming cycle. There is no other action at this time, as without the large outage, SAIDI would be in alignment with the 5 year rolling average.

Circuit # 22

5.22.1	SUBSTATION NAME AND NUMBER	BOONE(1)
5.22.2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	Boone
5.22.3	CIRCUIT NAME AND NUMBER	BOONE(1), Circuit 1, 0101
5.22.4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	See Coop.
5.22.5	TOTAL CIRCUIT LENGTH (MILES)	31.1
5.22.6	CUSTOMER COUNT FOR THIS CIRCUIT	364
5.22.7	DATE OF LAST CIRCUIT TRIM (VM)	2013

5.22.23 LIST OF OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS REPRESENTED BY EACH CAUSE

Outage Cause	SAIFI Contribution	SAIDI Contribution
Power Supplier	0.00%	0.00%
Birds/Animals	19.81%	8.14%
Equipment/Installation	11.04%	19.61%
Member/Public	0.97%	0.58%
R.O.W. Unpreventable	11.36%	19.06%
Scheduled	0.00%	0.00%
Unknown	28.57%	33.64%
Weather	28.25%	18.97%
Age/Deterioration	0.00%	0.00%
R.O.W. Preventable	0.00%	0.00%

5.22.9	CIRCUIT 5 YEAR AVERAGE (SAIDI)	0.866
5.22.10	REPORTING YEAR (SAIDI)	0.903
5.22.11	CIRCUIT 5 YEAR AVERAGE (SAIFI)	0.007
5.22.12	REPORTING YEAR (SAIFI)	0.006

5.22.13 CORRECTIVE ACTION PLAN:

This circuit is in central Boone County between the suburban and rural sections. This circuit feeds both overhead and underground residential consumers. There was no main contributor to increasing the SAIDI over the 5 year rolling average. SAIFI for this reporting period was under the 5 year rolling average. Animals, weather, Right of Way, and equipment failure all contributed to some outages.

Action:
 The Right of Way was last trimmed in 2013. The Right of Way cycle will continue as scheduled to help remove potential problem trees. Line inspection will also continue on the 2 year cycle and will help call out any trees that could be an immediate issue for the right of way crew to remove earlier than the scheduled trimming cycle. SAIDI is just over the 5 yr rolling average, with the Right of Way program scheduled to take place, there is no additional corrective action at this point.

KENTUCKY PUBLIC SERVICE COMMISSION

Electric Distribution Utility Annual Reliability Report

Additional pages may be attached as necessary

SECTION 6: VEGETATION MANAGEMENT PLAN REVIEW

INCLUDE CURRENT VEGETATION MANAGEMENT PLAN

Additional pages may be attached as necessary

OEC'S Vegetation Management Plan, depending on budget and need, is an aggressive 4-yr. trim cycle covering our operating territory. OEC maintains a 2-yr intermediate trim cycle on all three-phase line extending from the substation to at least the first set of breakers and generally includes all of the three-phase line.

In 2015 OEC established a Dead Ash Tree Policy. All ash trees in OEC operating territory were to be eradicated. Additional machinery and manpower was brought on board for what was expected to be a 2-yr. eradication process of all ash trees in OEC rights-of-ways. Three phase lines were to be cleared of ash trees first, then single phase lines, then single phase taps. OEC's goal for eradication remains the end of 2017.

Owen Electric employs a comprehensive IVM program using manual, mechanical, and chemical methods to control problematic trees and brush based on environmental impact, safety, effectiveness, and cost. Our herbicide program is a 4-yr cycle also, allowing OEC to apply the proper herbicides to a circuit that was trimmed the previous year. Our vegetation management plan is fluid and can be adjusted easily to allow for rainfall, drought, and differences in soil fertility and soil structure. If a circuit needs attention sooner than scheduled, or later, it can easily be done.

KENTUCKY PUBLIC SERVICE COMMISSION

SECTION 7: UTILITY COMMENTS

During the course of 2016 OEC continued to support several initiatives designed to minimize the extent of outages and speed in the restoration of outages caused by weather. Owen Electric's Feeder Hardening program is in its eighth year. OEC has also implemented an ongoing over-current protection review of each feeder prioritized by operational feedback and length of feeder. These programs will continue into the 2014-2017 Construction Work Plan.

We continued to operate two self-healing sites that were Federally funded as part of a DOE grant and they provide backup power to critical Sanitation District plants. In December of 2016 we deactivated the State-funded (DEDI) "smart-grid" self-healing site in our southern service area. This was justified due to the completion of a new substation that allowed for the shortening of distribution feeders to the area which reduced the overall exposure for the feeder that was the focus of this project.

OEC continues working on future plans to address other feeders with plans for new substations that will shorten the feeder lengths and provide improvements in reliability. Until these substations can be implemented, initiatives such as feeder hardening, focused ROW clearing, and increased sectionalizing will continue to be considered.