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PUBLIC SERVICE COMMISSION

May 19, 2015

Director of Engineering Kentucky Public Service Commission P.O. Box 615 Frankfort, Kentucky 40602-0615

RE: Administrative Case No. 2011-00450

Enclosed are the original and five (5) copies of the 2014 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

Sincerely,

James Petreshock

Manager of Technology

Enclosures

Electric Distribution Utility Annual Reliability Report

SECTION 1: CONTACT INFORMATION

UTILITY NAME

Owen Electric Cooperative

REPORT PREPARED BY

James Petreshock

E-MAIL ADDRESS OF PREPARER

jpetreshock@owenelectric.com

PHONE NUMBER OF PREPARER

(502) 563-3492

SECTION 2: REPORT YEAR

CALENDAR YEAR OF REPORT

2014

SECTION 3: MAJOR EVENT DAYS

10.589

FIRST DATE USED TO DETERMINE TMED

1-Jan-2009

LAST DATE USED TO DETERMINE T_{MED}

31-Dec-2013

NUMBER OF MED IN REPORT YEAR

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 58,578

TOTAL CIRCUITS 108

Excluding MED

5 YEAR AVERAGE

REPORTING YEAR

SAIDI 135.29

SAIDI 141.80

SAIFI 1.395

SAIFI 1.43

Including MED

5 YEAR AVERAGE

REPORTING YEAR

SAIDI 325.2

SAIDI 153.95

SAIFI 1.695

SAIFI 1.484

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	DOWNING II, Sub No. 57
5.1.2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	Boone
5.1.3	CIRCUIT NAME AND NUMBER	DOWNING II, Circuit 7, 5707
5.1.4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	See Coop.
5.1.5	TOTAL CIRCUIT LENGTH (MILES)	4.4
5.1.6	CUSTOMER COUNT FOR THIS CIRCUIT	46
5.1.7	DATE OF LAST CIRCUIT TRIM (VM)	2011

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

		SAIFI	SAIDI
	Outage Cause	Contribution	Contribution
	Power Supplier	100.00%	100.00%
	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	0.00%	0.00%
	Weather	0.00%	0.00%
	Age/Deterioration	0.00%	0.00%
	R.O.W. Preventable	0.00%	0.00%
5.1.9	CIRCUIT 5 YEAR AVERAGE (SAIDI)	0.0	052
5.1.10	REPORTING YEAR (SAIDI)	0.0)71
5.1.11	CIRCUIT 5 YEAR AVERAGE (SAIFI)	0.0	001

0.001

5.1.13 CORRECTIVE ACTION PLAN:

5.1.12 REPORTING YEAR (SAIFI)

This circuit is serves a residential and commercial portion of northern Boone County. While the substation is owen and maintained by East Kentucky Power the tranmission feed and generation source for this substaiton is Duke Energy.

Actions:

Owen Electric and EKPC regularly meet to discuss reliability concerns and develop remediation plans. Owen Electric, through EKPC, has communicated with Duke Energy regarding the reliability concerns and Duke has drawn up plans to provide better switching and backfeeding capability to our northern substations. Owen Electric and EKPC will continue to hold dialog with Duke Energy.

Circuit # 2

5.2.1	SUBSTATION NAME AND NUMBER	BRISTOW II, Sub No. 56
5.2.2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	Kenton
5.2.3	CIRCUIT NAME AND NUMBER	BRISTOW II, Circuit 8, 5608
5.2.4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	See Coop.
5.2.5	TOTAL CIRCUIT LENGTH (MILES)	8.7
5.2.6	CUSTOMER COUNT FOR THIS CIRCUIT	665
5.2.7	DATE OF LAST CIRCUIT TRIM (VM)	2012

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

	HEI HESERTED DI EACH	CAUSE		
			SAIFI	SAIDI
		Outage Cause	Contribution	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	0.00%	0.00%
		Weather	47.62%	49.46%
		Age/Deterioration	0.00%	0.00%
		R.O.W. Preventable	52.38%	50.54%
5.2.9	CIRCUIT 5 YEAR AVERAGE	GE (SAIDI)	0.1	.88
5.2.10	REPORTING YEAR (SAID	I)	0.1	.70
5.2.11	CIRCUIT 5 YEAR AVERAGE	GE (SAIFI)	0.0	002
5.2.12	REPORTING YEAR (SAIF	1)	0.0	003

5.2.13 CORRECTIVE ACTION PLAN:

During a line of strong storms an over-current device was struck by lightning and nearly 50% of the overall member minutes off for the year. Additionally, there were two ROW relateed outages.

Action:

Owen Electric will continue to explore oppurtinities to design additional circuit tie points for backfeeding during such events to reduce outage duration for our membership. Owen Electric has a mid-cycle ROW trimming program that will address ROW Areas in 2015.

Circuit # 3

5.3.1	SUBSTATION NAME AND NUMBER	RICHARDSON II, Sub No. 55
5.3.2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	Kenton
5.3.3	CIRCUIT NAME AND NUMBER	RICHARDSON II, Circuit 4, 5504
5.3.4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	See Coop.
5.3.5	TOTAL CIRCUIT LENGTH (MILES)	7.7
5.3.6	CUSTOMER COUNT FOR THIS CIRCUIT	452
5.3.7	DATE OF LAST CIRCUIT TRIM (VM)	2013

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

		SAIFI	SAIDI
	Outage Cause	Contribution	Contribution
	Power Supplier	0.00%	0.00%
	Birds/Animals	15.55%	9.25%
	Equipment/Installation	2.47%	4.29%
	Member/Public	0.00%	0.00%
	R.O.W. Unpreventable	15.55%	9.40%
	Scheduled	0.00%	0.00%
	Unknown	32.16%	19.72%
	Weather	34.28%	57.34%
	Age/Deterioration	0.00%	0.00%
	R.O.W. Preventable	0.00%	0.00%
5.3.9 CIRCUIT 5 YEAR AVERA	GE (SAIDI)	0.5	81
5.3.10 REPORTING YEAR (SAID	01)	0.3	38
5.3.11 CIRCUIT 5 YEAR AVERA	GE (SAIFI)	0.0	04
5.3.12 REPORTING YEAR (SAIF	1)	0.0	05

5.3.13 CORRECTIVE ACTION PLAN:

During a series of strong storms an over-current device was struck by lightning and nearly 57% of the overall member minutes off for the year. Additionally, there were wilfdlife related outages and unidentified caueses.

Action:

Circuit # 4

5.4.1	SUBSTATION NAME AND NUMBER	DURO II, Sub No. 54
5.4.2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	Kenton
5.4.3	CIRCUIT NAME AND NUMBER	DURO II, Circuit 3, 5403
5.4.4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	See Coop.
5.4.5	TOTAL CIRCUIT LENGTH (MILES)	12.7
5.4.6	CUSTOMER COUNT FOR THIS CIRCUIT	414
5.4.7	DATE OF LAST CIRCUIT TRIM (VM)	2013

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

	C	Outage Cause	SAIFI Contribution	SAIDI Contribution
	P	ower Supplier	0.00%	0.00%
	В	Sirds/Animals	6.87%	11.00%
	E	quipment/Installation	0.00%	0.00%
	N	/lember/Public	0.00%	0.00%
	R	.O.W. Unpreventable	3.82%	4.07%
	S	cheduled	18.32%	28.36%
	U	Inknown	18.32%	11.49%
	V	Veather	52.67%	45.07%
	А	ge/Deterioration	0.00%	0.00%
	R	.O.W. Preventable	0.00%	0.00%
5.4.9	CIRCUIT 5 YEAR AVERAGE	(SAIDI)	1.3	84
5.4.10	REPORTING YEAR (SAIDI)		4.0)44
5.4.11	CIRCUIT 5 YEAR AVERAGE	(SAIFI)	0.0	008
5.4.12	REPORTING YEAR (SAIFI)		0.0	007

5.4.13 CORRECTIVE ACTION PLAN:

During a series of strong storms an over-current device was struck by lightning and nearly 45% of the overall member minutes off for the year. Additionally, there were scheduled outages necessary for the safe replacement small conductor or line equipment.

Action:

Circuit # 5

5.5.1	SUBSTATION NAME AND NUMBER	SMITH II, Sub No. 52
5.5.2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	Boone
5.5.3	CIRCUIT NAME AND NUMBER	SMITH II, Circuit 2, 5202
5.5.4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	See Coop.
5.5.5	TOTAL CIRCUIT LENGTH (MILES)	4.3
5.5.6	CUSTOMER COUNT FOR THIS CIRCUIT	240
5.5.7	DATE OF LAST CIRCUIT TRIM (VM)	2011

5.5.8 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	65.14%	44.42%
	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	26.76%	45.13%
	Unknown	7.30%	9.34%
	Weather	0.54%	0.99%
	Age/Deterioration	0.27%	0.12%
	R.O.W. Preventable	0.00%	0.00%
5.5.9 CIRCL	IT 5 YEAR AVERAGE (SAIDI)	0.6	579
5.5.10 REPO	RTING YEAR (SAIDI)	0.6	511
5.5.11 CIRCU	IT 5 YEAR AVERAGE (SAIFI)	0.0	005
5.5.12 REPO	RTING YEAR (SAIFI)	0.0	006

5.5.13 CORRECTIVE ACTION PLAN:

This circuit is serves a residential and commercial portion of northern Boone County. While the substation is owen and maintained by East Kentucky Power the tranmission feed and generation source for this substaiton is Duke Energy. Without these Power Supplier problems this circuit would have seen performance better than the 5yr rolling average.

Actions:

Owen Electric and EKPC regularly meet to discuss reliability concerns and develop remediation plans. Owen Electric, through EKPC, has communicated with Duke Energy regarding the reliability concerns and Duke has drawn up plans to provide better switching and backfeeding capability to our northern substations. Owen Electric and EKPC will continue to hold dialog with Duke Energy.

Circuit # 6

5.6.1	SUBSTATION NAME AND NUMBER	SMITH II, Sub No. 52
5.6.2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	Boone
5.6.3	CIRCUIT NAME AND NUMBER	SMITH II, Circuit 1, 5201
5.6.4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	See Coop.
5.6.5	TOTAL CIRCUIT LENGTH (MILES)	3.3
5.6.6	CUSTOMER COUNT FOR THIS CIRCUIT	74
5.6.7	DATE OF LAST CIRCUIT TRIM (VM)	2011

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

	MET MESERVIED DI EACH	CAUSE		
			SAIFI	SAIDI
		Outage Cause	Contribution	Contribution
		Power Supplier	39.64%	31.46%
		Birds/Animals	0.00%	0.00%
		Equipment/Installation	7.69%	5.85%
		Member/Public	0.00%	0.00%
		R.O.W. Unpreventable	0.00%	0.00%
		Scheduled	13.02%	39.75%
		Unknown	0.00%	0.00%
		Weather	39.64%	22.94%
		Age/Deterioration	0.00%	0.00%
		R.O.W. Preventable	0.00%	0.00%
5.6.9	CIRCUIT 5 YEAR AVERAGE	GE (SAIDI)	0.0)55
5.6.10	REPORTING YEAR (SAID	1)	0.1	111
5.6.11	CIRCUIT 5 YEAR AVERAG	GE (SAIFI)	0.0	000
5.6.12	REPORTING YEAR (SAIFI)	0.0	001

5.6.13 CORRECTIVE ACTION PLAN:

This circuit is serves a residential and commercial portion of northern Boone County. While the substation is owen and maintained by East Kentucky Power the tranmission feed and generation source for this substaiton is Duke Energy. Additionally, there were scheduled outages necessary for the safe replacement small conductor or line equipment.

Actions:

Owen Electric and EKPC regularly meet to discuss reliability concerns and develop remediation plans. Owen Electric, through EKPC, has communicated with Duke Energy regarding the reliability concerns and Duke has drawn up plans to provide better switching and backfeeding capability to our northern substations. Owen Electric and EKPC will continue to hold dialog with Duke Energy.

Circuit # 7

5.7.1	SUBSTATION NAME AND NUMBER	GRANTSLICK II, Sub No. 51
5.7.2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	Campbell
5.7.3	CIRCUIT NAME AND NUMBER	GRANTSLICK II, Circuit 1, 5101
5.7.4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	See Coop.
5.7.5	TOTAL CIRCUIT LENGTH (MILES)	132.5
5.7.6	CUSTOMER COUNT FOR THIS CIRCUIT	1486
5.7.7	DATE OF LAST CIRCUIT TRIM (VM)	2011

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

		5.1052	SAIFI	SAIDI
		Outage Cause	Contribution	Contribution
		Power Supplier	0.00%	0.00%
		Birds/Animals	1.02%	0.61%
		Equipment/Installation	10.17%	4.21%
		Member/Public	1.02%	0.50%
		R.O.W. Unpreventable	8.46%	17.84%
		Scheduled	1.16%	1.81%
		Unknown	64.86%	60.54%
		Weather	9.02%	10.94%
		Age/Deterioration	3.98%	3.09%
		R.O.W. Preventable	0.32%	0.47%
5.7.9	CIRCUIT 5 YEAR AVERAG	GE (SAIDI)	4.6	80
5.7.10	REPORTING YEAR (SAID	1)	5.5	82
5.7.11	CIRCUIT 5 YEAR AVERAG	GE (SAIFI)	0.0	36
5.7.12	REPORTING YEAR (SAIFI)	0.0	39

5.7.13 CORRECTIVE ACTION PLAN:

This circuit consists of 133 miles of primary conductor, mostly overhead, and serves a very rural portion of Campbell county with difficult cross-county terrain with few backfeeding oppurtunies. There causes were due to a combination of reasons, but mostly weather related.

Actions:

Owen Electric is reviewing the coordination scheme for new sectionalizing equipment that had been deployed on this circuit during the past few years. Coordination issues were identified as the culprit in some outages with unknonwn causes. Owen Electric will continue to monitor the circuit and is exploring backfeeding construction projects within our current construction work plan (2014-2017)

Circuit # 8

5.8.1	SUBSTATION NAME AND NUMBER	STERLING, Sub No. 25
5.8.2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	Gallatin
5.8.3	CIRCUIT NAME AND NUMBER	STERLING, Circuit 3, 2503
5.8.4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	See Coop.
5.8.5	TOTAL CIRCUIT LENGTH (MILES)	32.1
5.8.6	CUSTOMER COUNT FOR THIS CIRCUIT	321
5.8.7	DATE OF LAST CIRCUIT TRIM (VM)	2014

5.8.8 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	16.41%	28.47%
		Equipment/Installation	0.00%	0.00%
		Member/Public	0.00%	0.00%
		R.O.W. Unpreventable	0.62%	0.58%
		Scheduled	8.36%	5.87%
		Unknown	21.98%	11.92%
		Weather	50.77%	51.99%
		Age/Deterioration	0.00%	0.00%
		R.O.W. Preventable	1.86%	1.17%
5.8.9	CIRCUIT 5 YEAR AVERAG	GE (SAIDI)	1.9	24
5.8.10	REPORTING YEAR (SAID	1)	2.7	32
5.8.11	CIRCUIT 5 YEAR AVERAG	GE (SAIFI)	0.0	13
5.8.12	REPORTING YEAR (SAIFI)	0.0	23

5.8.13 CORRECTIVE ACTION PLAN:

This circuit serves rugged terrain in rural Gallatin County and during a series of strong storms an overcurrent device was adversely affected and resulted in nearly 52% of the overall member minutes off for the year. Additionally, there scheduled outages necessary for the safe replacement small conductor or line equipment.

Action:

Owen Electric will continue to explore oppurtinities to design additional circuit tie points for backfeeding during such events to reduce outage duration for our membership. C419+C433

Circuit # 9

5.9.1	SUBSTATION NAME AND NUMBER	STERLING, Sub No. 25
5.9.2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	Gallatin
5.9.3	CIRCUIT NAME AND NUMBER	STERLING, Circuit 1, 2501
5.9.4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	See Coop.
5.9.5	TOTAL CIRCUIT LENGTH (MILES)	43.2
5.9.6	CUSTOMER COUNT FOR THIS CIRCUIT	519
5.9.7	DATE OF LAST CIRCUIT TRIM (VM)	2014

5.9.8 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	0.14%	0.08%
Equipment/Installation	6.04%	3.45%
Member/Public	0.00%	0.00%
R.O.W. Unpreventable	0.00%	0.00%
Scheduled	6.31%	14.96%
Unknown	1.65%	1.19%
Weather	83.81%	76.61%
Age/Deterioration	0.41%	0.12%
R.O.W. Preventable	0.00%	0.00%
5 YEAR AVERAGE (SAIDI)	2.5	528
ING YEAR (SAIDI)	2.6	521
5 YEAR AVERAGE (SAIFI)	0.0)15
ING YEAR (SAIFI)	0.0	014
	Power Supplier Birds/Animals Equipment/Installation Member/Public R.O.W. Unpreventable Scheduled Unknown Weather Age/Deterioration	Outage Cause Contribution Power Supplier 0.00% Birds/Animals 0.14% Equipment/Installation 6.04% Member/Public 0.00% R.O.W. Unpreventable 0.00% Scheduled 6.31% Unknown 1.65% Weather 83.81% Age/Deterioration 0.41% R.O.W. Preventable 0.00% T5 YEAR AVERAGE (SAIDI) 2.5 T1NG YEAR (SAIDI) 2.6 T5 YEAR AVERAGE (SAIFI) 0.0

5.9.13 CORRECTIVE ACTION PLAN:

This circuit serves rugged terrain in rural Gallatin County and during a series of strong storms an overcurrent device was adversely affected and resulted in nearly 76% of the overall member minutes off for the year.

Action:

Circuit # 10

5.10.1	SUBSTATION NAME AND NUMBER	BURLINGTON, Sub No. 24
5.10.2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	Boone
5.10.3	CIRCUIT NAME AND NUMBER	BURLINGTON, Circuit 3, 2403
5.10.4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	See Coop.
5.10.5	TOTAL CIRCUIT LENGTH (MILES)	20.0
5.10.6	CUSTOMER COUNT FOR THIS CIRCUIT	1003
5.10.7	DATE OF LAST CIRCUIT TRIM (VM)	2014

5.10.8 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	17.46%	4.55%
	Equipment/Installation	0.79%	0.59%
	Member/Public	0.00%	0.00%
	R.O.W. Unpreventable	0.00%	0.00%
	Scheduled	22.22%	7.72%
	Unknown	20.63%	2.54%
	Weather	38.10%	83.75%
	Age/Deterioration	0.79%	0.84%
	R.O.W. Preventable	0.00%	0.00%
5.10.9	CIRCUIT 5 YEAR AVERAGE (SAIDI)	1.1	.42
5.10.10	REPORTING YEAR (SAIDI)	1.9	33
5.10.11	CIRCUIT 5 YEAR AVERAGE (SAIFI)	0.0	13
5.10.12	REPORTING YEAR (SAIFI)	0.0	22

5.10.13 CORRECTIVE ACTION PLAN:

This circuit serves suburban Boone County and during a series of strong storms an over-current device was adversely affected and resulted in nearly 84% of the overall member minutes off for the year. One outage was the result of a broken pole that was the primary contribution to the outage indicies as it required over 9 hrs to replace the broken pole.

Action:

Owen Electric will continue to explore oppurtinities to design additional circuit tie points for backfeeding during such events to reduce outage duration for our membership. Owen Electric has also begun utilizing a pole loading software package to aid with the design of our construction jobs.

Circuit # 11

5.11.1	SUBSTATION NAME AND NUMBER	BAVARIAN, Sub No. 23
5.11.2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	Boone
5.11.3	CIRCUIT NAME AND NUMBER	BAVARIAN, Circuit 1, 2301
5.11.4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	See Coop.
5.11.5	TOTAL CIRCUIT LENGTH (MILES)	24.7
5.11.6	CUSTOMER COUNT FOR THIS CIRCUIT	393
5.11.7	DATE OF LAST CIRCUIT TRIM (VM)	2014

5.11.8 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	45.52%	30.16%
	Equipment/Installation	3.73%	3.12%
	Member/Public	2.99%	7.16%
	R.O.W. Unpreventable	8.96%	8.21%
	Scheduled	0.00%	0.00%
	Unknown	8.96%	8.12%
	Weather	10.45%	10.61%
	Age/Deterioration	5.97%	18.93%
	R.O.W. Preventable	0.00%	0.00%
5.11.9	CIRCUIT 5 YEAR AVERAGE (SAIDI)	0.5	599
5.11.10	REPORTING YEAR (SAIDI)	0.6	535
5.11.11	CIRCUIT 5 YEAR AVERAGE (SAIFI)	0.0)12
5.11.12	REPORTING YEAR (SAIFI)	0.0	007

5.11.13 CORRECTIVE ACTION PLAN:

This circuit is serves rural and residential areas of Southern Boone County. The majority of outages were due to wildlife followed by a long outage due to a failed 7200KV transformer. There were no feeder level outages on this circuit, all outages were downline devices. Without the failed transformer this circuit would have performed better than the 5yr rollling average.

Actions:

Circuit # 12

5.12.1	SUBSTATION NAME AND NUMBER	DOWNING, Sub No. 20	
5.12.2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	Boone	
5.12.3	CIRCUIT NAME AND NUMBER	DOWNING, Circuit 1, 2001	
5.12.4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	See Coop.	
5.12.5	TOTAL CIRCUIT LENGTH (MILES)	17.2	
5.12.6	CUSTOMER COUNT FOR THIS CIRCUIT	1144	
5.12.7	DATE OF LAST CIRCUIT TRIM (VM)	2011	

5.12.8 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	18.57%	18.06%
	Birds/Animals	0.10%	0.12%
	Equipment/Installation	3.30%	2.72%
	Member/Public	0.00%	0.00%
	R.O.W. Unpreventable	55.63%	58.46%
	Scheduled	3.87%	2.94%
	Unknown	0.00%	0.00%
	Weather	0.00%	0.00%
	Age/Deterioration	18.53%	17.70%
	R.O.W. Preventable	0.00%	0.00%
5.12.9	CIRCUIT 5 YEAR AVERAGE (SAIDI)	1.6	501
5.12.10	REPORTING YEAR (SAIDI)	2.5	560
5.12.11	CIRCUIT 5 YEAR AVERAGE (SAIFI)	0.0)22
5.12.12	REPORTING YEAR (SAIFI)	0.0)39

5.12.13 CORRECTIVE ACTION PLAN:

This circuit is serves a residential and commercial portion of northern Boone County. While the substation is owen and maintained by East Kentucky Power the transmission feed and generation source for this substaiton is Duke Energy. A motor vehicle collided with a Duke Transmission pole resulting in an extended outage. Additionally, during a storm there was a tree that fell from outside the ROW on primary conductor resulting in a feeder level outage.

Actions:

Owen Electric and EKPC regularly meet to discuss reliability concerns and develop remediation plans. Owen Electric, through EKPC, has communicated with Duke Energy regarding the reliability concerns and Duke has drawn up plans to provide better switching and backfeeding capability to our northern substations. Owen Electric and EKPC will continue to hold dialog with Duke Energy.

Circuit # 13

5.13.1	SUBSTATION NAME AND NUMBER	RICHARDSON, Sub No. 19	
5.13.2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	Kenton	
5.13.3	CIRCUIT NAME AND NUMBER	RICHARDSON, Circuit 3, 1903	
5.13.4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	See Coop.	
5.13.5	TOTAL CIRCUIT LENGTH (MILES)	17.6	
5.13.6	CUSTOMER COUNT FOR THIS CIRCUIT	822	
5.13.7	DATE OF LAST CIRCUIT TRIM (VM)	2013	

5.13.8 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	8.16%	4.39%
	Equipment/Installation	12.24%	9.36%
	Member/Public	0.00%	0.00%
	R.O.W. Unpreventable	1.53%	0.39%
	Scheduled	0.00%	0.00%
	Unknown	6.12%	4.68%
	Weather	46.43%	53.52%
	Age/Deterioration	25.51%	27.65%
	R.O.W. Preventable	0.00%	0.00%
5.13.9	CIRCUIT 5 YEAR AVERAGE (SAIDI)	1.7	84
5.13.10	REPORTING YEAR (SAIDI)	6.0	53
5.13.11	CIRCUIT 5 YEAR AVERAGE (SAIFI)	0.0	19
5.13.12	REPORTING YEAR (SAIFI)	0.0	31

5.13.13 CORRECTIVE ACTION PLAN:

During a series of strong storms an over-current device was struck by lightning and nearly 54% of the overall member minutes off for the year. Additionally, there outages due to age/deterioration of line equipment, which primarily consisted of cut-outs failing.

Action:

Owen Electric will continue to explore oppurtinities to design additional circuit tie points for backfeeding during such events to reduce outage duration for our membership. Owen Electric has started a program to identify locations with problematic cut-outs and has program to replace this equipment.

Circuit # 14

5.14.1	SUBSTATION NAME AND NUMBER	RICHARDSON, Sub No. 19	
5.14.2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	Kenton	
5.14.3	CIRCUIT NAME AND NUMBER	RICHARDSON, Circuit 2, 1902	
5.14.4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	See Coop.	
5.14.5	TOTAL CIRCUIT LENGTH (MILES)	16.9	
5.14.6	CUSTOMER COUNT FOR THIS CIRCUIT	994	
5.14.7	DATE OF LAST CIRCUIT TRIM (VM)	2013	

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

		CAIFI	0.4.10.1
		SAIFI	SAIDI
	Outage Cause	Contribution	Contribution
	Power Supplier	0.00%	0.00%
	Birds/Animals	0.44%	0.21%
	Equipment/Install	ation 9.67%	8.16%
	Member/Public	87.91%	88.26%
	R.O.W. Unprevent	able 0.00%	0.00%
	Scheduled	0.00%	0.00%
	Unknown	0.66%	0.45%
	Weather	1.10%	2.61%
	Age/Deterioration	0.22%	0.31%
	R.O.W. Preventab	le 0.00%	0.00%
5.14.9	CIRCUIT 5 YEAR AVERAGE (SAIDI)	2	.766
5.14.10	REPORTING YEAR (SAIDI)	3	.329
5.14.11	CIRCUIT 5 YEAR AVERAGE (SAIFI)	0	.031
5.14.12	REPORTING YEAR (SAIFI)	0	.019

5.14.13 CORRECTIVE ACTION PLAN:

This circuit servers suburban Kenton County and would have performed above 5 year rolling averages if it were not for a motor vehicle accident that damaged a 3-phase primary pole that was also a switching point.

Action:

Owen Electric will continue to explore oppurtinities to design additional circuit tie points for backfeeding during such events to reduce outage duration for our membership.

Circuit # 15

5.15.1	SUBSTATION NAME AND NUMBER	GALLATIN, Sub No. 18	
5.15.2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	Gallatin	
5.15.3	CIRCUIT NAME AND NUMBER	GALLATIN, Circuit 3, 1803	
5.15.4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	See Coop.	
5.15.5	TOTAL CIRCUIT LENGTH (MILES)	5.6	
5.15.6	CUSTOMER COUNT FOR THIS CIRCUIT	38	
5.15.7	DATE OF LAST CIRCUIT TRIM (VM)	2013	

5.15.8 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	33.33%	54.90%
	Equipment/Installation	0.00%	0.00%
	Member/Public	16.67%	0.78%
	R.O.W. Unpreventable	0.00%	0.00%
	Scheduled	0.00%	0.00%
	Unknown	0.00%	0.00%
	Weather	50.00%	44.31%
	Age/Deterioration	0.00%	0.00%
	R.O.W. Preventable	0.00%	0.00%
5.15.9	CIRCUIT 5 YEAR AVERAGE (SAIDI)	0.0	013
5.15.10	REPORTING YEAR (SAIDI)	0.0)22
5.15.11	CIRCUIT 5 YEAR AVERAGE (SAIFI)	0.0	000
5.15.12	REPORTING YEAR (SAIFI)	0.0	000

5.15.13 CORRECTIVE ACTION PLAN:

This circuit serves Gallatin County along the Ohio River and experienced a series of strong storms with intense lightning resulting in nearly 44% of the overall member minutes off for the year. Additionally, there outages as a result of wildlife activity. There were no feeder level outages that affected this circuit.

Action:

Circuit # 16

5.16.1	SUBSTATION NAME AND NUMBER	SMOOT, Sub No. 16	
5.16.2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	Boone	
5.16.3	CIRCUIT NAME AND NUMBER	SMOOT, Circuit 3, 1603	
5.16.4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	See Coop.	
5.16.5	TOTAL CIRCUIT LENGTH (MILES)	4.8	
5.16.6	CUSTOMER COUNT FOR THIS CIRCUIT	306	
5.16.7	DATE OF LAST CIRCUIT TRIM (VM)	2013	

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

	NEI NESENTED DI EACH	CAUSE		
			SAIFI	SAIDI
		Outage Cause	Contribution	Contribution
		Dawas Comultan	0.000/	
		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%
5.16.9	CIRCUIT 5 YEAR AVERAGE	GE (SAIDI)	0.0	002
5.16.10	REPORTING YEAR (SAID	I)	0.0	004
5.16.11	CIRCUIT 5 YEAR AVERAGE	GE (SAIFI)	0.0	000
5.16.12	REPORTING YEAR (SAIFI)	0.0	000

5.16.13 CORRECTIVE ACTION PLAN:

This circuit serves suburban Boone County and this feeder experience only one outage. Without this outage the circuit would a have performed above feeder level performance for the running 5 year average. The outage was due to two blown fuses in an underground riser and no immediate cause was determined.

Action:

None at this time.

Circuit # 17

5.17.1	SUBSTATION NAME AND NUMBER	SMOOT, Sub No. 16	
5.17.2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	Boone	
5.17.3	CIRCUIT NAME AND NUMBER	SMOOT, Circuit 2, 1602	
5.17.4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	See Coop.	
5.17.5	TOTAL CIRCUIT LENGTH (MILES)	18.4	
5.17.6	CUSTOMER COUNT FOR THIS CIRCUIT	1273	
5.17.7	DATE OF LAST CIRCUIT TRIM (VM)	2013	

5.17.8 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	8.52%	14.76%
	Equipment/Installation	10.41%	4.24%
	Member/Public	0.00%	0.00%
	R.O.W. Unpreventable	8.20%	9.53%
	Scheduled	35.02%	22.37%
	Unknown	11.67%	18.75%
	Weather	25.87%	29.94%
	Age/Deterioration	0.32%	0.41%
	R.O.W. Preventable	0.00%	0.00%
5.17.9	CIRCUIT 5 YEAR AVERAGE (SAIDI)	2.2	.04
5.17.10	REPORTING YEAR (SAIDI)	3.3	15
5.17.11	CIRCUIT 5 YEAR AVERAGE (SAIFI)	0.0	17
5.17.12	REPORTING YEAR (SAIFI)	0.0	28

5.17.13 CORRECTIVE ACTION PLAN:

This circuit serves suburban Boone County and this feeder experience multiple outages. Causes ranged from lightning strikes taking out downline fuses, deenergization of lines for safe maintenance and upgrades.

Action:

Owen Electric will continue to explore oppurtinities to design additional circuit tie points for backfeeding during such events to reduce outage duration for our membership. This circuit Owen Electric will be mid-cycle trimming ROW on this circuit in 2015 and we maintain an aggressive sectionalizing program and wildlife guard deployment program.

Circuit # 18

5.18.1	SUBSTATION NAME AND NUMBER	SMITH, Sub No. 15	
5.18.2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	Boone	
5.18.3	CIRCUIT NAME AND NUMBER	SMITH, Circuit 5, 1505	
5.18.4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	See Coop.	
5.18.5	TOTAL CIRCUIT LENGTH (MILES)	8.4	
5.18.6	CUSTOMER COUNT FOR THIS CIRCUIT	97	
5.18.7	DATE OF LAST CIRCUIT TRIM (VM)	2011	

5.18.8 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	80.17%	49.41%
	Birds/Animals	0.00%	0.00%
	Equipment/Installation	0.00%	0.00%
	Member/Public	0.00%	0.00%
	R.O.W. Unpreventable	9.09%	34.18%
	Scheduled	0.83%	0.59%
	Unknown	4.96%	3.37%
	Weather	4.96%	12.44%
	Age/Deterioration	0.00%	0.00%
	R.O.W. Preventable	0.00%	0.00%
5.18.9	CIRCUIT 5 YEAR AVERAGE (SAIDI)	0.1	.54
5.18.10	REPORTING YEAR (SAIDI)	0.2	.93
5.18.11	CIRCUIT 5 YEAR AVERAGE (SAIFI)	0.0	002
5.18.12	REPORTING YEAR (SAIFI)	0.0	003

5.18.13 CORRECTIVE ACTION PLAN:

This circuit is serves a residential and commercial portion of northern Boone County. While the substation is owen and maintained by East Kentucky Power the tranmission feed and generation source for this substaiton is Duke Energy.

Actions:

Owen Electric and EKPC regularly meet to discuss reliability concerns and develop remediation plans. Owen Electric, through EKPC, has communicated with Duke Energy regarding the reliability concerns and Duke has drawn up plans to provide better switching and backfeeding capability to our northern substations. Owen Electric and EKPC will continue to hold dialog with Duke Energy.

Circuit # 19

5.19.1	SUBSTATION NAME AND NUMBER	SMITH, Sub No. 15	
5.19.2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	Boone	
5.19.3	CIRCUIT NAME AND NUMBER	SMITH, Circuit 3, 1503	
5.19.4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	See Coop.	
5.19.5	TOTAL CIRCUIT LENGTH (MILES)	5.1	
5.19.6	CUSTOMER COUNT FOR THIS CIRCUIT	68	
5.19.7	DATE OF LAST CIRCUIT TRIM (VM)	2011	

5.19.8 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	33.48%	34.72%
	Birds/Animals	0.00%	0.00%
	Equipment/Installation	12.50%	8.99%
	Member/Public	3.13%	4.76%
	R.O.W. Unpreventable	0.00%	0.00%
	Scheduled	4.46%	9.26%
	Unknown	12.95%	16.06%
	Weather	33.48%	26.21%
	Age/Deterioration	0.00%	0.00%
	R.O.W. Preventable	0.00%	0.00%
5.19.9	CIRCUIT 5 YEAR AVERAGE (SAIDI)	0.1	.48
5.19.10	REPORTING YEAR (SAIDI)	0.166	
5.19.11	CIRCUIT 5 YEAR AVERAGE (SAIFI)	CUIT 5 YEAR AVERAGE (SAIFI) 0.001	
5.19.12	REPORTING YEAR (SAIFI)	0.0	002

5.19.13 CORRECTIVE ACTION PLAN:

This circuit is serves a residential and commercial portion of northern Boone County. While the substation is owen and maintained by East Kentucky Power the tranmission feed and generation source for this substaiton is Duke Energy. Without these transmission level outages this circuit would have performed better than the rolling 5 year average.

Actions:

Owen Electric and EKPC regularly meet to discuss reliability concerns and develop remediation plans. Owen Electric, through EKPC, has communicated with Duke Energy regarding the reliability concerns and Duke has drawn up plans to provide better switching and backfeeding capability to our northern substations. Owen Electric and EKPC will continue to hold dialog with Duke Energy.

Circuit # 20

5.20.1	SUBSTATION NAME AND NUMBER	KEITH, Sub No. 13	
5.20.2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	Owen	
5.20.3	CIRCUIT NAME AND NUMBER	KEITH, Circuit 2, 1302	
5.20.4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	See Coop.	
5.20.5	TOTAL CIRCUIT LENGTH (MILES)	67.3	
5.20.6	CUSTOMER COUNT FOR THIS CIRCUIT	626	
5.20.7	DATE OF LAST CIRCUIT TRIM (VM)	2012	

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

	Outage Course	SAIFI	SAIDI
	Outage Cause	Contribution	Contribution
	Power Supplier	0.00%	0.00%
	Birds/Animals	9.40%	12.54%
	Equipment/Installation	0.90%	1.22%
	Member/Public	0.00%	0.00%
	R.O.W. Unpreventable	1.27%	0.83%
	Scheduled	8.87%	3.59%
	Unknown	2.85%	2.73%
	Weather	67.27%	49.26%
	Age/Deterioration	0.11%	0.15%
	R.O.W. Preventable	2.48%	2.09%
5.20.9	CIRCUIT 5 YEAR AVERAGE (SAIDI)	1.7	70
5.20.10	REPORTING YEAR (SAIDI)	2.013	
5.20.11	CIRCUIT 5 YEAR AVERAGE (SAIFI)	0.0	36
5.20.12	REPORTING YEAR (SAIFI)	0.0	26

5.20.13 CORRECTIVE ACTION PLAN:

This circuit serves rural Owen County and experienced a series of strong storms with intense lightning resulting in nearly 49% of the overall member minutes off for the year. Additionally, there outages as a result of wildlife activity. There were no feeder level outages that affected this circuit.

Action:

Circuit # 21

5.21.2 SUBSTATION LOCATION (COUNTY-ROAD-TOWN) 5.21.3 CIRCUIT NAME AND NUMBER 5.21.4 CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA) 5.21.5 TOTAL CIRCUIT LENGTH (MILES) 5.21.6 Substation (County-Road-Town) Boone BIG BONE, Circuit 4, 12 See Coop. 21.2	CURSTATION LOCATION (COUNTY DO LE TO	BIG BONE, Sub No. 12
5.21.4 CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA) See Coop.	SUBSTATION LOCATION (COUNTY-ROAD-TO	VN) Boone
The state of the s	CIRCUIT NAME AND NUMBER	BIG BONE, Circuit 4, 1204
5.21.5 TOTAL CIRCUIT LENGTH (MILES) 21.2	CIRCUIT LOCATION (TOWN-ROAD-GENERAL	AREA) See Coop.
	TOTAL CIRCUIT LENGTH (MILES)	21.2
5.21.6 CUSTOMER COUNT FOR THIS CIRCUIT 178	CUSTOMER COUNT FOR THIS CIRCUIT	178
5.21.7 DATE OF LAST CIRCUIT TRIM (VM) 2012	DATE OF LAST CIRCUIT TRIM (VM)	2012

5.21.8 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	31.71%	23.62%
	Equipment/Installation	0.49%	0.88%
	Member/Public	31.71%	29.33%
	R.O.W. Unpreventable	0.49%	0.72%
	Scheduled	0.00%	0.00%
	Unknown	0.00%	0.00%
	Weather	23.41%	33.61%
	Age/Deterioration	0.00%	0.00%
	R.O.W. Preventable	12.20%	11.85%
5.21.9	CIRCUIT 5 YEAR AVERAGE (SAIDI)	0.3	41
5.21.10	REPORTING YEAR (SAIDI)	0.243	
5.21.11	CIRCUIT 5 YEAR AVERAGE (SAIFI)	0.003	
5.21.12	REPORTING YEAR (SAIFI)	0.0	03

5.21.13 CORRECTIVE ACTION PLAN:

This circuit serves rural Boone County and experienced a series of strong storms with intense lightning resulting in nearly 33% of the overall member minutes off for the year. Additionally, an outage resulting from a tractor bush hogging a field results in nearly 29% of the overall member minutes off for this circuit. This circuit only met the reporting criteria for frequency.

Action:

Owen Electric completed mid-cycle trim on this circuit in 2014 and we also maintain an aggressive sectionalizing program and wildlife guard deployment program.

Circuit # 22

5.22.1	SUBSTATION NAME AND NUMBER	BIG BONE, Sub No. 12	
5.22.2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	Boone	
5.22.3	CIRCUIT NAME AND NUMBER	BIG BONE, Circuit 1, 1201	
5.22.4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	See Coop.	
5.22.5	TOTAL CIRCUIT LENGTH (MILES)	43.7	
5.22.6	CUSTOMER COUNT FOR THIS CIRCUIT	518	
5.22.7	DATE OF LAST CIRCUIT TRIM (VM)	2012	

5.22.8 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	11.49%	7.75%
	Equipment/Installation	0.85%	1.63%
	Member/Public	0.00%	0.00%
	R.O.W. Unpreventable	0.00%	0.00%
	Scheduled	0.00%	0.00%
	Unknown	37.02%	34.10%
	Weather	9.36%	7.28%
	Age/Deterioration	39.15%	45.61%
	R.O.W. Preventable	2.13%	3.64%
5.22.9	CIRCUIT 5 YEAR AVERAGE (SAIDI)	3.2	81
5.22.10	REPORTING YEAR (SAIDI)	1.146	
5.22.11	CIRCUIT 5 YEAR AVERAGE (SAIFI)	0.010	
5.22.12	REPORTING YEAR (SAIFI)	0.0)11

5.22.13 CORRECTIVE ACTION PLAN:

This circuit serves rural Boone County and experienced a series of strong storms may have damaged equipment resulting in age/deterioration of transformers as the this contributed to nearly 45% of the of the overall member minutes off for this circuit. This circuit only met the reporting criteria for frequency.

Action:

Owen Electric completed mid-cycle trim on this circuit in 2014 and we also maintain an aggressive sectionalizing program and wildlife guard deployment program.

Circuit # 23

5.23.1	SUBSTATION NAME AND NUMBER	CARSON, Sub No. 11	
5.23.2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	Gallatin	
5.23.3	CIRCUIT NAME AND NUMBER	CARSON, Circuit 3, 1103	
5.23.4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	See Coop.	
5.23.5	TOTAL CIRCUIT LENGTH (MILES)	85.2	
5.23.6	CUSTOMER COUNT FOR THIS CIRCUIT	820	
5.23.7	DATE OF LAST CIRCUIT TRIM (VM)	2011	

5.23.8 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	0.16%	0.06%
	Equipment/Installation	2.45%	0.79%
	Member/Public	0.00%	0.00%
	R.O.W. Unpreventable	6.64%	4.21%
	Scheduled	0.38%	0.28%
	Unknown	6.54%	1.50%
	Weather	77.89%	85.35%
	Age/Deterioration	0.76%	0.33%
	R.O.W. Preventable	0.76%	0.04%
5.23.9	CIRCUIT 5 YEAR AVERAGE (SAIDI)	3.5	57
5.23.10	REPORTING YEAR (SAIDI)	3.803	
5.23.11	CIRCUIT 5 YEAR AVERAGE (SAIFI)	0.0	33
5.23.12	REPORTING YEAR (SAIFI)	0.0	47

5.23.13 CORRECTIVE ACTION PLAN:

This circuit serves Gallatin County and experienced a series of strong storms with intense lightning resulting in nearly 85% of the overall member minutes off for the year. Additionally, there outages as a result of wildlife activity. There were no feeder level outages that affected this circuit.

Action:

Circuit # 24

5.24.1	SUBSTATION NAME AND NUMBER	CARSON, Sub No. 11	
5.24.2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	Gallatin	
5.24.3	CIRCUIT NAME AND NUMBER	CARSON, Circuit 2, 1102	
5.24.4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	See Coop.	
5.24.5	TOTAL CIRCUIT LENGTH (MILES)	57.8	
5.24.6	CUSTOMER COUNT FOR THIS CIRCUIT	585	
5.24.7	DATE OF LAST CIRCUIT TRIM (VM)	2011	

5.24.8 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	2.26%	1.33%
	Equipment/Installation	31.05%	35.28%
	Member/Public	0.00%	0.00%
	R.O.W. Unpreventable	0.00%	0.00%
	Scheduled	4.14%	6.84%
	Unknown	0.05%	0.03%
	Weather	48.96%	42.36%
	Age/Deterioration	9.24%	1.66%
	R.O.W. Preventable	0.10%	0.07%
5.24.9	CIRCUIT 5 YEAR AVERAGE (SAIDI)	3.43	54
5.24.10	REPORTING YEAR (SAIDI)	3.69	57
5.24.11	CIRCUIT 5 YEAR AVERAGE (SAIFI)	0.02	24
5.24.12	REPORTING YEAR (SAIFI)	0.03	31

5.24.13 CORRECTIVE ACTION PLAN:

This circuit serves Gallatin County and experienced a series of strong storms with intense lightning resulting in nearly 42% of the overall member minutes off for the year. Additionally, there outages as a result of wildlife activity. There were no feeder level outages that affected this circuit.

Action:

Circuit # 25

5.25.1	SUBSTATION NAME AND NUMBER	TURKEYFOOT, Sub No. 10
5.25.2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	Kenton
5.25.3	CIRCUIT NAME AND NUMBER	TURKEYFOOT, Circuit 9, 1009
5.25.4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	See Coop.
5.25.5	TOTAL CIRCUIT LENGTH (MILES)	4.5
5.25.6	CUSTOMER COUNT FOR THIS CIRCUIT	468
5.25.7	DATE OF LAST CIRCUIT TRIM (VM)	2012

5.25.8 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	37.50%	24.80%
	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	12.50%	9.08%
	Weather	37.50%	39.38%
	Age/Deterioration	12.50%	26.74%
	R.O.W. Preventable	0.00%	0.00%
5.25.9	CIRCUIT 5 YEAR AVERAGE (SAIDI)	0.7	⁷ 25
5.25.10	REPORTING YEAR (SAIDI)	1.980	
5.25.11	CIRCUIT 5 YEAR AVERAGE (SAIFI)	0.0	005
5.25.12	REPORTING YEAR (SAIFI)	0.0)12

5.25.13 CORRECTIVE ACTION PLAN:

This circuit serves urban Kenton County and experienced only 4 outages none of which were feeder level outages.

Action:

Circuit # 26

5.26.1	SUBSTATION NAME AND NUMBER	TURKEYFOOT, Sub No. 10
5.26.2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	Kenton
5.26.3	CIRCUIT NAME AND NUMBER	TURKEYFOOT, Circuit 4, 1004
5.26.4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	See Coop.
5.26.5	TOTAL CIRCUIT LENGTH (MILES)	13.6
5.26.6	CUSTOMER COUNT FOR THIS CIRCUIT	741
5.26.7	DATE OF LAST CIRCUIT TRIM (VM)	2012

5.26.8 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	37.17%	29.83%
	Equipment/Installa	tion 6.54%	3.56%
	Member/Public	0.00%	0.00%
	R.O.W. Unpreventa	able 0.00%	0.00%
	Scheduled	6.28%	15.44%
	Unknown	15.97%	11.33%
	Weather	24.61%	36.60%
	Age/Deterioration	9.42%	3.24%
	R.O.W. Preventable	0.00%	0.00%
5.26.9	CIRCUIT 5 YEAR AVERAGE (SAIDI)		2.221
5.26.10	REPORTING YEAR (SAIDI)		4.194
5.26.11	CIRCUIT 5 YEAR AVERAGE (SAIFI)		0.013
5.26.12	REPORTING YEAR (SAIFI)		0.016

5.26.13 CORRECTIVE ACTION PLAN:

This circuit serves urban Kenton County and experienced outages due to a varieity of reasons. The weather related outages occured during a large weather event that resulted in increased response times.

Action:

Circuit # 27

5.27.1	SUBSTATION NAME AND NUMBER	BULLITTSVILLE, Sub No. 8
5.27.2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	Boone
5.27.3	CIRCUIT NAME AND NUMBER	BULLITTSVILLE, Circuit 1, 0801
5.27.4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	See Coop.
5.27.5	TOTAL CIRCUIT LENGTH (MILES)	9.9
5.27.6	CUSTOMER COUNT FOR THIS CIRCUIT	264
5.27.7	DATE OF LAST CIRCUIT TRIM (VM)	2011

5.27.8 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	16.67%	9.52%
		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	50.00%	58.86%
		Weather	33.33%	31.62%
		Age/Deterioration	0.00%	0.00%
		R.O.W. Preventable	0.00%	0.00%
5.27.9	CIRCUIT 5 YEAR AVERAG	E (SAIDI)	0.1	92
5.27.10	REPORTING YEAR (SAIDI)		0.634	
5.27.11	CIRCUIT 5 YEAR AVERAG	E (SAIFI)	0.0	02
5.27.12	REPORTING YEAR (SAIFI)		0.0	09

5.27.13 CORRECTIVE ACTION PLAN:

This circuit serves suburban and rural areas of Boone County and experienced only 4 outages affecting a total of 6 members.

Action:

Circuit # 28

5.28.1	SUBSTATION NAME AND NUMBER	PENN, Sub No. 7
5.28.2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	Scott
5.28.3	CIRCUIT NAME AND NUMBER	PENN, Circuit 1, 0701
5.28.4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	See Coop.
5.28.5	TOTAL CIRCUIT LENGTH (MILES)	44.9
5.28.6	CUSTOMER COUNT FOR THIS CIRCUIT	369
5.28.7	DATE OF LAST CIRCUIT TRIM (VM)	2012

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

	NEI NESENTED DI LACIT	CAUSE		
			SAIFI	SAIDI
		Outage Cause	Contribution	Contribution
		Power Supplier	0.00%	0.00%
		Birds/Animals	3.16%	0.86%
		Equipment/Installation	14.62%	3.40%
		Member/Public	29.25%	27.21%
		R.O.W. Unpreventable	0.00%	0.00%
		Scheduled	5.93%	8.31%
		Unknown	0.00%	0.00%
		Weather	38.74%	54.10%
		Age/Deterioration	0.00%	0.00%
		R.O.W. Preventable	8.30%	6.11%
5.28.9	CIRCUIT 5 YEAR AVERAG	E (SAIDI)	0.9	98
5.28.10	REPORTING YEAR (SAIDI)		1.5	49
5.28.11	CIRCUIT 5 YEAR AVERAG	E (SAIFI)	0.0	09
5.28.12	REPORTING YEAR (SAIFI)		0.0	15

5.28.13 CORRECTIVE ACTION PLAN:

This circuit serves rural Owen and Scott counties and experienced outages due to a varieity of reasons. The weather related outages contributed to nearly 54% of the member minutes.

Action:

Circuit # 29

5.29.1	SUBSTATION NAME AND NUMBER	BROMLEY, Sub No. 6
5.29.2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	Owen
5.29.3	CIRCUIT NAME AND NUMBER	BROMLEY, Circuit 2, 0602
5.29.4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	See Coop.
5.29.5	TOTAL CIRCUIT LENGTH (MILES)	52.9
5.29.6	CUSTOMER COUNT FOR THIS CIRCUIT	440
5.29.7	DATE OF LAST CIRCUIT TRIM (VM)	2011

5.29.8 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	3.76%	1.70%
		Equipment/Installation	46.42%	25.80%
		Member/Public	0.00%	0.00%
		R.O.W. Unpreventable	0.09%	0.06%
		Scheduled	13.12%	36.14%
		Unknown	0.09%	0.08%
		Weather	32.57%	31.99%
		Age/Deterioration	0.18%	0.18%
		R.O.W. Preventable	1.19%	0.85%
5.29.9	CIRCUIT 5 YEAR AVERAC	GE (SAIDI)	0.5	71
5.29.10	REPORTING YEAR (SAID	1)	0.5	00
5.29.11	CIRCUIT 5 YEAR AVERAC	GE (SAIFI)	0.0	10
5.29.12	REPORTING YEAR (SAIFI)	0.0	12

5.29.13 CORRECTIVE ACTION PLAN:

This circuit serves rural Owen County and excluding outages resulting for de-energized circutis to safely improve circuit performance this circuit would have performed better then the 5 year rolling average.

Action:

Circuit # 30

5.30.1	SUBSTATION NAME AND NUMBER	MUNK, Sub No. 4
5.30.2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	Gallatin
5.30.3	CIRCUIT NAME AND NUMBER	MUNK, Circuit 2, 0402
5.30.4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	See Coop.
5.30.5	TOTAL CIRCUIT LENGTH (MILES)	51.3
5.30.6	CUSTOMER COUNT FOR THIS CIRCUIT	660
5.30.7	DATE OF LAST CIRCUIT TRIM (VM)	2012

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

	HEI HESEITTED DI EACH	CAUSE		
			SAIFI	SAIDI
		Outage Cause	Contribution	Contribution
		Power Supplier	0.00%	0.00%
		Birds/Animals	0.28%	0.20%
		Equipment/Installation	0.21%	0.18%
		Member/Public	3.70%	4.16%
		R.O.W. Unpreventable	0.00%	0.00%
		Scheduled	1.64%	0.16%
		Unknown	25.57%	12.57%
		Weather	53.49%	61.03%
		Age/Deterioration	4.99%	5.71%
		R.O.W. Preventable	0.00%	0.00%
5.30.9	CIRCUIT 5 YEAR AVERAGE	GE (SAIDI)	1.7	732
5.30.10	REPORTING YEAR (SAID	1)	2.:	153
5.30.11	CIRCUIT 5 YEAR AVERAGE	GE (SAIFI)	0.0	015
5.30.12	REPORTING YEAR (SAIF)	0.0	017

5.30.13 CORRECTIVE ACTION PLAN:

This circuit serves rural Gallatin County and experienced outages due to a varieity of reasons, but weather related contributed the primary source of outages with a 61% contribution to overall minutes without power.

Action:

Circuit # 31

5.31.1	SUBSTATION NAME AND NUMBER	MUNK, Sub No. 4
5.31.2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	Gallatin
5.31.3	CIRCUIT NAME AND NUMBER	MUNK, Circuit 1, 0401
5.31.4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	See Coop.
5.31.5	TOTAL CIRCUIT LENGTH (MILES)	28.6
5.31.6	CUSTOMER COUNT FOR THIS CIRCUIT	322
5.31.7	DATE OF LAST CIRCUIT TRIM (VM)	2013

5.31.8 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	18.43%	9.66%
	Equipment/Installation	0.16%	0.15%
	Member/Public	0.00%	0.00%
	R.O.W. Unpreventable	1.10%	1.78%
	Scheduled	4.09%	8.70%
	Unknown	8.19%	5.95%
	Weather	67.87%	73.57%
	Age/Deterioration	0.16%	0.19%
	R.O.W. Preventable	0.00%	0.00%
5.31.9	CIRCUIT 5 YEAR AVERAGE (SAIDI) 1.236		236
5.31.10	REPORTING YEAR (SAIDI)	2.004	
5.31.11	1 CIRCUIT 5 YEAR AVERAGE (SAIFI))11
5.31.12	REPORTING YEAR (SAIFI)	0.025	

5.31.13 CORRECTIVE ACTION PLAN:

This circuit serves rural Gallatin County and experienced outages due to a varieity of reasons, but weather related contributed the primary source of outages with a 73% contribution to overall minutes without power.

Action:

Circuit # 32

5.32.1	SUBSTATION NAME AND NUMBER	GRANTSLICK, Sub No. 3
5.32.2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	Campbell
5.32.3	CIRCUIT NAME AND NUMBER	GRANTSLICK, Circuit 2, 0302
5.32.4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	See Coop.
5.32.5	TOTAL CIRCUIT LENGTH (MILES)	56.8
5.32.6	CUSTOMER COUNT FOR THIS CIRCUIT	658
5.32.7	DATE OF LAST CIRCUIT TRIM (VM)	2013

5.32.8 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	2.32%	2.11%
	Equipment/Installation	9.17%	37.45%
	Member/Public	72.60%	27.40%
	R.O.W. Unpreventable	1.33%	3.01%
	Scheduled	3.76%	8.84%
	Unknown	0.66%	0.79%
	Weather	7.73%	15.46%
	Age/Deterioration	2.43%	4.93%
	R.O.W. Preventable	0.00%	0.00%
5.32.9	CIRCUIT 5 YEAR AVERAGE (SAIDI)	1.6	572
5.32.10	REPORTING YEAR (SAIDI)	1.902	
5.32.11	CIRCUIT 5 YEAR AVERAGE (SAIFI)	0.015	
5.32.12	REPORTING YEAR (SAIFI)	0.020	

5.32.13 CORRECTIVE ACTION PLAN:

This circuit consists of nearly 57 miles of primary conductor, mostly overhead, and serves a very rural portion of Campbell county with difficult cross-county terrain with few backfeeding oppurtunies. There causes were due to a combination of reasons, but mostly equipment issues with cut-outs breaking.

Actions:

Owen Electric will continue to monitor the circuit and is exploring backfeeding construction projects. Owen Electric has also started a program to identify locations with problematic cut-outs and has program to replace this equipment.

Circuit # 33

5.33.1 SUBSTATION NAME AND NUMBER	BANKLICK, Sub No. 2	
5.33.2 SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	Kenton	
5.33.3 CIRCUIT NAME AND NUMBER	BANKLICK, Circuit 5, 0205	
5.33.4 CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	See Coop.	
5.33.5 TOTAL CIRCUIT LENGTH (MILES)	17.7	
5.33.6 CUSTOMER COUNT FOR THIS CIRCUIT	884	
5.33.7 DATE OF LAST CIRCUIT TRIM (VM)	2014	

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

			42.00	
			SAIFI	SAIDI
		Outage Cause	Contribution	Contribution
		Power Supplier	0.00%	0.00%
		Birds/Animals	1.28%	0.64%
		Equipment/Installation	0.05%	0.15%
		Member/Public	0.00%	0.00%
		R.O.W. Unpreventable	1.68%	1.91%
		Scheduled	1.68%	3.96%
		Unknown	4.40%	2.46%
		Weather	90.22%	90.23%
		Age/Deterioration	0.69%	0.65%
		R.O.W. Preventable	0.00%	0.00%
5.33.9	CIRCUIT 5 YEAR AVERAGE	SE (SAIDI)	0.066	
5.33.10	0 REPORTING YEAR (SAIDI) 0.098		98	
5.33.11	CIRCUIT 5 YEAR AVERAGE (SAIFI)		0.001	
5.33.12	REPORTING YEAR (SAIFI)		0.002	

5.33.13 CORRECTIVE ACTION PLAN:

During a line of strong storms an over-current device was struck by lightning and nearly 90% of the overall member minutes off for the year due to feeder level outages.

Action:

Owen Electric will continue to explore oppurtinities to design additional circuit tie points for backfeeding during such events to reduce outage duration for our membership as well as continuing an aggressive sectionalizing program to improve overall reliability by isolating problems further.

Circuit # 34

5.34.1	SUBSTATION NAME AND NUMBER	BOONE, Sub No. 1
5.34.2	SUBSTATION LOCATION (COUNTY-ROAD-TOWN)	Boone
5.34.3	CIRCUIT NAME AND NUMBER	BOONE, Circuit 2, 0102
5.34.4	CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)	See Coop.
5.34.5	TOTAL CIRCUIT LENGTH (MILES)	74.3
5.34.6	CUSTOMER COUNT FOR THIS CIRCUIT	863
5.34.7	DATE OF LAST CIRCUIT TRIM (VM)	2013

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

N=1 N=2 = N = N = N = N = N = N = N = N = N					
			SAIFI	SAIDI	
		Outage Cause	Contribution	Contribution	
		Power Supplier	0.00%	0.00%	
		Birds/Animals	5.53%	3.08%	
		Equipment/Installation	1.12%	1.15%	
		Member/Public	0.00%	0.00%	
		R.O.W. Unpreventable	8.59%	7.96%	
		Scheduled	0.00%	0.00%	
		Unknown	5.30%	3.11%	
		Weather	5.38%	4.41%	
		Age/Deterioration	8.14%	7.31%	
		R.O.W. Preventable	65.94%	72.98%	
5.34.9	9 CIRCUIT 5 YEAR AVERAGE (SAIDI) 4.247		247		
5.34.10	REPORTING YEAR (SAIDI)		12.006		
5.34.11	CIRCUIT 5 YEAR AVERAGE (SAIFI)		0.039		
5.34.12	REPORTING YEAR (SAIFI)		0.090		

5.34.13 CORRECTIVE ACTION PLAN:

During a series of storms with strong winds several outages were caused by trees being blown into the overhead conductor. This results in nearly 73% of the overall member minutes off for the year due to feeder level outages.

Action:

This circuit is scheduled for a mid-cycle trim in 2015. Owen Electric will continue to explore oppurtinities to design additional circuit tie points for backfeeding during such events to reduce outage duration for our membership as well as continuing an aggressive sectionalizing program to improve overall reliability by isolating problems further.

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.

New in 2015 was a need for a Dead Ash Tree Policy. Additional machinery and manpower was brought on board for what is expected to be a 2-yr.eradication process of all ash trees in OEC rights-of-ways. Three phase lines will be cleared of ash trees first, then single phase lines, then single phase taps.

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.

SECTION 7: UTILITY COMMENTS

During the course of 2014 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 seventh 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 continue to operate a State-funded (DEDI) "smart-grid" self-healing project which was deployed in April of 2011 and two additional sites through a Federally funded DOE grant, to provide backup power to critical Sanitation District plants.

OEC, in cooperation with EKPC, had begun planning on a new substation in our southern territory that will reduce exposure on our long rural 25kv circuits should improve reliability significantly for our membership in this area of our service territory. 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.