

# FLEMING-MASON ENERGY COOPERATIVE, INC.

P.O. BOX 328 • FLEMINGSBURG, KENTUCKY 41041 • (606) 845-2661 • F AX (606) 845-1008

March 29, 2018

RECEIVED

APR 02 2018

Jeff DeRouen Executive Director Public Service Commission P.O. Box 615 Frankfort, KY 40602-0615

PUBLIC SERVICE COMMISSION

Dear Mr. DeRouen:

Enclosed is Fleming Mason Energy's Reliability Report for the calendar year of 2017 requested by the Public Service Commission's Order dated May 30, 2013 for Case No. 2011-00450.

If you have any questions or comments, please contact the office at, 1-800-464-3144 or by email at bhunt@fme.coop.

Sincerely,

Brandon Hunt, P.E. Engineering Manager

# Electric Distribution Utility Annual Reliability Report

## **SECTION 1: CONTACT INFORMATION**

UTILITY NAME
REPORT PREPARED BY
E-MAIL ADDRESS OF PREPARER
PHONE NUMBER OF PREPARER

FLEMING MASON ENERGY
BRANDON HUNT
bhunt@fme.coop
606-845-2661

## **SECTION 2: REPORTING YEAR**

CALENDAR YEAR OF REPORT 2

2017

## **SECTION 3: MAJOR EVENT DAYS (MED)**

T<sub>MED</sub> 8.88

FIRST DATE USED TO DETERMINE T<sub>MED</sub> 1/1/2012

LAST DATE USED TO DETERMINE T<sub>MED</sub> 12/31/2017

NUMBER OF MED IN REPORT YEAR 5

NOTE: Per IEEE 1366  $T_{\text{MED}}$  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 24,366 TOTAL CIRCUITS 42

#### **Excluding MED**

	5 YEAR AVERAGE		REPORTING YEAR
SAIDI	140.78	SAIDI	95.62
SAIFI	1.09	SAIFI	0.88

# **Including MED**

	5 YEAR AVERAGE		REPORTING YEAR
SAIDI	283.6	SAIDI	275.6
SAIFI	1.5	SAIFI	1.36

#### Notes:

- 1) All duration indices (SAIDI) are to be reported in units of minutes.
- 2) Reports are due on the first business day of May 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<sub>MED</sub>

## **SECTION 5: CIRCUIT REPORTING**

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

# (CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

## **CIRCUIT #1:**

1. SUBSTATION NAME AND NUMBER

HILDA

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

**KY 32, ROWAN COUNTY, MOREHEAD** 

3. CIRCUIT NAME AND NUMBER

**CRANSTON OCR 104** 

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

**CRANSTON RD. MORHEAD** 

5. TOTAL CIRCUIT LENGTH (MILES)

63

6. CUSTOMER COUNT FOR THIS CIRCUIT

729

7.. DATE OF LAST CIRCUIT TRIM (VM)

2013

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

<b>Equipment Failure</b>	1.72	Tree Failure	29.69	<b>Cust Caused</b>	1.55
Installation Fault	0	Tree w/ Ice	0	<b>Motor Vehicle</b>	0.071
Conductor Sag	0	In-house Tree	0	Public Cut Tree	0
Overload	0	Lightning	0.057	Public Other	0
Decay/Age Equip	0	Wind	0	Other	0
Corrosion/Abrasion	0	Small Animal	0.299	Cause Unknown	2.77
Tree Growth	0	Animal	0		

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

42.09

10. REPORTING YEAR (SAIDI)

36.21

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.209

12. REPORTING YEAR (SAIFI)

0.288

13. CORRECTIVE ACTION PLAN

Tree failure highest of causes. Due to be cut next year.

#### **SECTION 5: CIRCUIT REPORTING**

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

# (CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

## **CIRCUIT #1:**

1. SUBSTATION NAME AND NUMBER

**FLEMINGSBURG** 

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

FLEMING, ENERGY RD, FLEMINGSBURG

3. CIRCUIT NAME AND NUMBER

**HOSPITAL CKT - OCR124** 

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

FLEMINGSBURG, KY 32 BYPASS, FLEMINGSBURG

5. TOTAL CIRCUIT LENGTH (MILES)

5

6. CUSTOMER COUNT FOR THIS CIRCUIT

165

7.. DATE OF LAST CIRCUIT TRIM (VM)

2014

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

Equipment Failure	0	Tree Fallure	0.006	Cust Caused	0
Installation Fault	0	Tree w/ Ice	0	<b>Motor Vehicle</b>	0
Conductor Sag	0	In-house Tree	0	Public Cut Tree	0
Overload	0	Lightning	1.94	Public Other	0
Decay/Age Equip	0	Wind	0	Other	0
Corrosion/Abrasion	0	Small Animal	1.49	Cause Unknown	0.048
Tree Growth	0	Animal	0		

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

1.59

10. REPORTING YEAR (SAIDI)

3.48

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.0358

12. REPORTING YEAR (SAIFI)

0.038

13. CORRECTIVE ACTION PLAN

SHORT CIRCUIT WITH VERY FEW OUTAGES. LIGHTING WAS THE LARGEST CAUSE.

#### **SECTION 5: CIRCUIT REPORTING**

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

## (CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

## **CIRCUIT #1:**

1. SUBSTATION NAME AND NUMBER

**HILDA** 

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

**ROWAN, KY 32, MOREHEAD** 

3. CIRCUIT NAME AND NUMBER

**INTERCHANGE - OCR 114** 

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

**MOREHEAD, KY 32** 

5. TOTAL CIRCUIT LENGTH (MILES)

17.9

6. CUSTOMER COUNT FOR THIS CIRCUIT

563

7.. DATE OF LAST CIRCUIT TRIM (VM)

2012

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

Equipment Failure	0.137	Tree Failure	8.19	Cust Caused	0
Installation Fault	0	Tree w/ Ice	0	Motor Vehicle	0
Conductor Sag	0	In-house Tree	0	Public Cut Tree	0
Overload	0	Lightning	0.14	Public Other	0
Decay/Age Equip	0	Wind	0	Other	0
Corrosion/Abrasion	0	Small Animal	1.86	Cause Unknown	0.223
Tree Growth	0	Animal	0		

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

7.2

10. REPORTING YEAR (SAIDI)

10.55

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.091

12. REPORTING YEAR (SAIFI)

0.14

13. CORRECTIVE ACTION PLAN

TREE FAILURE WAS LARGEST CAUSE. CIRCUIT WILL BE CUT IN 2018

#### **SECTION 5: CIRCUIT REPORTING**

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

## (CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

## **CIRCUIT #1:**

1. SUBSTATION NAME AND NUMBER

**PLUMERS LANDING** 

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

FLEMING, KY 32, PLUMMERS LANDING

3. CIRCUIT NAME AND NUMBER

**MUSES MILL - OCR 124** 

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

MUSES MILL, KY 1013, MUSES MILL

5. TOTAL CIRCUIT LENGTH (MILES)

72.2

6. CUSTOMER COUNT FOR THIS CIRCUIT

489

7.. DATE OF LAST CIRCUIT TRIM (VM)

2013

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

<b>Equipment Failure</b>	1.23	Tree Failure	39.88	<b>Cust Caused</b>	0.003
Installation Fault	0	Tree w/ Ice	0	<b>Motor Vehicle</b>	36.08
Conductor Sag	0	In-house Tree	0	Public Cut Tree	0
Overload	0.07	Lightning	35.43	Public Other	0
Decay/Age Equip	0	Wind	0	Other	0.11
Corrosion/Abrasion	0	Small Animal	0	Cause Unknown	4.405
Tree Growth	n	Animal	n		

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

62.14

10. REPORTING YEAR (SAIDI)

118.2

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.56

12. REPORTING YEAR (SAIFI)

1.37

13. CORRECTIVE ACTION PLAN

THREE MAIN CAUSES, TREE, LIGHTING, AND VEHICLE. CIRCUIT IS DUE TO BE CUT IN 2019.

#### **SECTION 5: CIRCUIT REPORTING**

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

#### (CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

#### **CIRCUIT #1:**

1. SUBSTATION NAME AND NUMBER

**OAK RIDGE** 

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

LEWIS, OAK RIDGE, KILBRETH LANE

3. CIRCUIT NAME AND NUMBER

**PETERSVILLE - OCR 134** 

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

PETERSVILLE, KY 344

5. TOTAL CIRCUIT LENGTH (MILES)

32.8

6. CUSTOMER COUNT FOR THIS CIRCUIT

166

7.. DATE OF LAST CIRCUIT TRIM (VM)

2012

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

<b>Equipment Fallure</b>	11.8	Tree Failure	6.3	Cust Caused	0
Installation Fault	0	Tree w/ Ice	0	Motor Vehicle	0
Conductor Sag	0	In-house Tree	0	Public Cut Tree	0
Overload	0	Lightning	14.95	Public Other	0
Decay/Age Equip	0	Wind	0	Other	0
Corrosion/Abrasion	0	Small Animal	0.38	Cause Unknown	0.41
Tree Growth	0	Animal	0		

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

18.5

10. REPORTING YEAR (SAIDI)

33.83

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.11

12. REPORTING YEAR (SAIFI)

0.185

13. CORRECTIVE ACTION PLAN

LIGHTNING WAS THE LARGEST CAUSE. INVESTIGATE THE PLACEMENT OF ARRESTERS.

## **SECTION 5: CIRCUIT REPORTING**

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

#### (CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

#### **CIRCUIT #1:**

1. SUBSTATION NAME AND NUMBER

**RECTORVILLE** 

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

**OWL HOLLOW RD, RECTORVILLE** 

3. CIRCUIT NAME AND NUMBER

**PLUMVILLE - OCR 134** 

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

**PLUMVILLE, AA HWY/KY 10** 

5. TOTAL CIRCUIT LENGTH (MILES)

76.2

6. CUSTOMER COUNT FOR THIS CIRCUIT

924

7.. DATE OF LAST CIRCUIT TRIM (VM)

2017

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

Equipment Failure	67.6	Tree Failure	5.1	Cust Caused	0.179
Installation Fault	0	Tree w/ Ice	0	Motor Vehicle	0.159
Conductor Sag	0	In-house Tree	0.11	Public Cut Tree	0
Overload	0	Lightning	0.35	Public Other	0
Decay/Age Equip	0	Wind	0	Other	0
Corrosion/Abrasion	0	Small Animal	0.22	Cause Unknown	0.659
Tree Growth	0	Animal	0		

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

39.64

10. REPORTING YEAR (SAIDI)

74.38

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.366

12. REPORTING YEAR (SAIFI)

0.508

13. CORRECTIVE ACTION PLAN

#### INSULATOR FAILURE WAS THE LARGEST CAUSE.

#### **SECTION\_5: CIRCUIT REPORTING**

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

#### (CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

#### **CIRCUIT #1:**

1. SUBSTATION NAME AND NUMBER

**HILLSBORO** 

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

FLEMING, KY 111, HILLSBORO

3. CIRCUIT NAME AND NUMBER

**POPLAR PLAINS - OCR 134** 

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

**POPLAR PLAINS, KY 111** 

5. TOTAL CIRCUIT LENGTH (MILES)

71.3

6. CUSTOMER COUNT FOR THIS CIRCUIT

433

7.. DATE OF LAST CIRCUIT TRIM (VM)

2013

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

Equipment Failure	2.19	Tree Failure	0.065	Cust Caused	0.501
Installation Fault	0	Tree w/ Ice	0	<b>Motor Vehicle</b>	0.39
Conductor Sag	0	In-house Tree	0	Public Cut Tree	0
Overload	0.27	Lightning	16.9	Public Other	0
Decay/Age Equip	0.047	Wind	0	Other	0
Corrosion/Abrasion	0	Small Animal	0.3	Cause Unknown	0.12
Tree Growth	0	Animal	0.056		

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

27.01

10. REPORTING YEAR (SAIDI)

20.9

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.37

12. REPORTING YEAR (SAIFI)

0.38

13. CORRECTIVE ACTION PLAN

LIGHTNING WAS THE LARGEST CAUSE. CIRCUIT WAS ONLY NARROWLY OVER 5 YEAR AVERAGE.

#### **SECTION 5: CIRCUIT REPORTING**

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

## (CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

#### **CIRCUIT #1:**

1. SUBSTATION NAME AND NUMBER

**HILLSBORO** 

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

FLEMING, KY 111, HILLSBORO

3. CIRCUIT NAME AND NUMBER

**RINGOS - OCR 144** 

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

**RINGO MILLS, KY 158** 

5. TOTAL CIRCUIT LENGTH (MILES)

34.8

6. CUSTOMER COUNT FOR THIS CIRCUIT

258

7.. DATE OF LAST CIRCUIT TRIM (VM)

2013

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

<b>Equipment Failure</b>	11.6	Tree Failure	0.267	Cust Caused	0.088
Installation Fault	0	Tree w/ Ice	0	Motor Vehicle	0.06
Conductor Sag	0	In-house Tree	0	Public Cut Tree	0
Overload	0	Lightning	0	Public Other	0
Decay/Age Equip	0	Wind	0	Other	0
Corrosion/Abrasion	0	Small Animal	1.78	Cause Unknown	1.23
Tree Growth	0	Animal	0		

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

21.1

10. REPORTING YEAR (SAIDI)

15.1

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.113

12. REPORTING YEAR (SAIFI)

0.179

13. CORRECTIVE ACTION PLAN

MATERIAL FAILURE. BAD AUTO TRANSFORMER. WILL INVESTIGATE A VOLTAGE CONVERSION.

#### **SECTION 5: CIRCUIT REPORTING**

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

## (CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

#### CIRCUIT #1:

1. SUBSTATION NAME AND NUMBER

**HILLSBORO** 

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

FLEMING, KY 111, HILLSBORO

3. CIRCUIT NAME AND NUMBER

**SHERBURNE - OCR 124** 

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

SHERBURNE, KY 11, SHERBURNE

5. TOTAL CIRCUIT LENGTH (MILES)

123.4

6. CUSTOMER COUNT FOR THIS CIRCUIT

565

7.. DATE OF LAST CIRCUIT TRIM (VM)

2013

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

<b>Equipment Failure</b>	8.52	Tree Failure	41.9	<b>Cust Caused</b>	0.154
Installation Fault	0	Tree w/ Ice	0	<b>Motor Vehicle</b>	0.075
Conductor Sag	0	In-house Tree	0	<b>Public Cut Tree</b>	0
Overload	0	Lightning	0.18	Public Other	0
Decay/Age Equip	0.18	Wind	0	Other	0
Corrosion/Abrasion	0	Small Anlmal	0.55	Cause Unknown	0.55
Tree Growth	0	Animal	0		

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

62.6

10. REPORTING YEAR (SAIDI)

52.2

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.469

12. REPORTING YEAR (SAIFI)

0.473

13. CORRECTIVE ACTION PLAN

TREE FAILURE WAS LARGEST CAUSE. CIRCUIT DUE TO BE CUT 2019

#### **SECTION 5: CIRCUIT REPORTING**

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

# (CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

## **CIRCUIT #1:**

1. SUBSTATION NAME AND NUMBER

RECTORVILLE

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

LEWIS, OWL HOLLOW RD, RECTORVILLE

3. CIRCUIT NAME AND NUMBER

**PLUMVILLE - OCR 134** 

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

PLUMVILLE, KY 9, PLUMVILLE

5. TOTAL CIRCUIT LENGTH (MILES)

76.2

6. CUSTOMER COUNT FOR THIS CIRCUIT

925

7.. DATE OF LAST CIRCUIT TRIM (VM)

2011

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

Equipment Failure	47.7	Tree Fallure	5.83	<b>Cust Caused</b>	54.4
Installation Fault	0	Tree w/ Ice	0	Motor Vehicle	2.32
Conductor Sag	0	In-house Tree	0	Public Cut Tree	0
Overload	0	Lightning	35.62	Public Other	6.86
Decay/Age Equip	0	Wind	25.3	Other	0
Corrosion/Abrasion	0	Small Animal	0.49	Cause Unknown	4.73
Tree Growth	N 166	Animal	0 044		

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

83.1

10. REPORTING YEAR (SAIDI)

183.5

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.63

12. REPORTING YEAR (SAIFI)

1.9

13. CORRECTIVE ACTION PLAN

CUSTOMER CAUSED WAS LARGEST OUTAGE. MEMBER HAD A BULLDOZER TAKE OUT ENTIRE CIRCUIT.

## **SECTION 5: CIRCUIT REPORTING**

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

# (CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

#### CIRCUIT #1:

1. SUBSTATION NAME AND NUMBER

**MURPHYSVILLE** 

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

MASON, MURPHYSVILLE RD, MURPHYSVILLE

3. CIRCUIT NAME AND NUMBER

STRODES RUN - OCR 144

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

MAYSLICK, PARKER LANE

5. TOTAL CIRCUIT LENGTH (MILES)

29.7

6. CUSTOMER COUNT FOR THIS CIRCUIT

108

7.. DATE OF LAST CIRCUIT TRIM (VM)

2016

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

Equipment Fallure	0	Tree Failure	0	Cust Caused	0.17
Installation Fault	0	Tree w/ Ice	0	<b>Motor Vehicle</b>	0
Conductor Sag	0	In-house Tree	0	<b>Public Cut Tree</b>	0
Overload	0	Lightning	0.65	Public Other	0
Decay/Age Equip	0	Wind	0	Other	0
Corrosion/Abrasion	0	Small Animal	2.11	Cause Unknown	0.164
Tree Growth	0	Animal	0 009		

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

3.045

10. REPORTING YEAR (SAIDI)

3.12

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.053

12. REPORTING YEAR (SAIFI)

0.048

13. CORRECTIVE ACTION PLAN

NOT A LOT OF OUTAGES ON THIS CIRCUIT. ANIMAL WAS LEADING CAUSE.

## **SECTION 5: CIRCUIT REPORTING**

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

#### (CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

#### CIRCUIT #1:

1. SUBSTATION NAME AND NUMBER

**FLEMINGSBURG** 

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

FLEMING, ENERGY RD, FLEMINGSBURG

3. CIRCUIT NAME AND NUMBER

**TILTON - OCR 104** 

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

**TILTON, KY 11, TILTON** 

5. TOTAL CIRCUIT LENGTH (MILES)

81.3

6. CUSTOMER COUNT FOR THIS CIRCUIT

616

7.. DATE OF LAST CIRCUIT TRIM (VM)

2015

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

<b>Equipment Failure</b>	7.72	Tree Failure	0.028	Cust Caused	0.155
Installation Fault	0	Tree w/ Ice	0	Motor Vehicle	3.6
Conductor Sag	0	In-house Tree	0	Public Cut Tree	0
Overload	0	Lightning	25.96	Public Other	0
Decay/Age Equip	0	Wind	0	Other	0
Corrosion/Abrasion	0	Small Animal	1.48	Cause Unknown	0.469
Tree Growth	0	Animal	0		

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

30.4

10. REPORTING YEAR (SAIDI)

39.5

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.22

12. REPORTING YEAR (SAIFI)

0.18

13. CORRECTIVE ACTION PLAN

LIGHTING WAS LARGEST CAUSE. WILL INVESTIGATE LIGHTNING PROTECTION.

## **SECTION 5: CIRCUIT REPORTING**

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

# (CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

#### **CIRCUIT #1:**

1. SUBSTATION NAME AND NUMBER

**FLEMINGSBURG** 

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

FLEMING, ENERGY RD, FLEMINGSBURG

3. CIRCUIT NAME AND NUMBER

**UNDERBUILD - OCR 144** 

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

**WALLINGFOR, KY 59, WALLINGFORD** 

5. TOTAL CIRCUIT LENGTH (MILES)

67.6

6. CUSTOMER COUNT FOR THIS CIRCUIT

731

7.. DATE OF LAST CIRCUIT TRIM (VM)

2014

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

Equipment Failure	3.07	Tree Failure	0	<b>Cust Caused</b>	0.071
Installation Fault	0	Tree w/ Ice	0	<b>Motor Vehicle</b>	11.5
Conductor Sag	0	In-house Tree	0	Public Cut Tree	0
Overload	0	Lightning	0.87	Public Other	0
Decay/Age Equip	0	Wind	0	Other	0
Corrosion/Abrasion	0	Small Animal	0.33	Cause Unknown	1.72
Tree Growth	0.27	Animal	N 22		

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

8.55

10. REPORTING YEAR (SAIDI)

18.11

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.104

12. REPORTING YEAR (SAIFI)

0.45

13. CORRECTIVE ACTION PLAN

MOTOR VEHICLE WAS LARGEST CAUSE. WILL INVESTIGATE.

## **SECTION 5: CIRCUIT REPORTING**

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

## (CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

#### **CIRCUIT #1:**

1. SUBSTATION NAME AND NUMBER

CHARTERS

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

LEWIS, AA HWY, CHARTERS

3. CIRCUIT NAME AND NUMBER

**VANCEBURG - OCR134** 

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

**VANCEBURG, KY 9/KY 8, VANCEBURG** 

5. TOTAL CIRCUIT LENGTH (MILES)

169.2

6. CUSTOMER COUNT FOR THIS CIRCUIT

1364

7.. DATE OF LAST CIRCUIT TRIM (VM)

2017

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

<b>Equipment Failure</b>	25.95	Tree Failure	6.75	Cust Caused	0.705
Installation Fault	0	Tree w/ lce	0	Motor Vehicle	0.021
Conductor Sag	0	In-house Tree	7.48	Public Cut Tree	0
Overload	0	Lightning	0.912	Public Other	0
Decay/Age Equip	83.3	Wind	0	Other	0
Corrosion/Abrasion	0	Small Animal	1.04	Cause Unknown	2.06
Tree Growth	0.06	Animal	0		

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

137.1

10. REPORTING YEAR (SAIDI)

129.3

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.913

12. REPORTING YEAR (SAIFI)

1.1

13. CORRECTIVE ACTION PLAN

CIRCUIT HAD A COUPLE LARGE OUTAGES WITH INSULATORS. WILL INVESTIGATE.

# **SECTION 6: VEGETATION MANAGEMENT PLAN REVIEW**

# **INCLUDE CURRENT VEGETATION MANAGEMENT PLAN**

Additional page may be attached as needed.

2018 - CHARTERS (HERRON HILL), SHARKEY SUB, OAK RIDGE SUB, HILDA (INTERCHANGE, PINE HILLS, BLUE STONE)	
Trimming Cycle - 6 years Spaying Cycle - 3 years	
SECTION 7: UTILITY COMMENTS	