




Rural Electric Cooperative Corporation

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**PUBLIC SERVICE
COMMISSION**

July 25, 2014

**MR JEFF DEROUEN
EXECUTIVE DIRECTOR
PUBLIC SERVICE COMMISSION
PO BOX 615
FRANKFORT KY 40602**

RE: PSC CASE NO. 2011-00450

Dear Mr. Derouen:

Please find enclosed Nolin RECC's 2013 Reliability Report and Vegetation Management Program as requested in the above referenced case. These documents have also been submitted electronically.

If you have any questions, please let me know.

Sincerely,

Michael L. Miller

**Michael L. Miller
President & CEO**

afc

Enclosures

JUL 28 2014

PUBLIC SERVICE COMMISSION

Kentucky Public Service Commission
Electric Distribution Utility Annual Reliability Report

SECTION 1: CONTACT INFORMATION

UTILITY NAME: Nolin RECC
GDS Associates, Inc. D/B/A Hi-Line
REPORT PREPARED BY: Engineering
E-MAIL ADDRESS OF PREPARER: braxton_underwood@gdsassociates.com
PHONE NUMBER OF PREPARER: 770-425-8100

SECTION 2: REPORTING YEAR

CALENDAR YEAR OF REPORT: 2013

SECTION 3: MAJOR EVENT DAYS (MED)

TMED: 13 02
FIRST DATE USED TO DETERMINE TMED: 1/1/2008
LAST DATE USED TO DETERMINE TMED: 12/31/2012
NUMBER OF MED IN REPORT YEAR: 1

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

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SECTION 4: SYSTEM RELIABILITY INFORMATION AND RESULTS

System-wide Information	
TOTAL CUSTOMERS <u>34,061</u>	TOTAL CIRCUITS <u>86</u>
Excluding MED	
5-YEAR AVERAGE (2008-2012)	REPORTING YEAR
SAIDI: <u>65 05</u>	SAIDI: <u>42 82</u>
SAIFI: <u>0 71</u>	SAIFI: <u>0 84</u>
Including MED	
5-YEAR AVERAGE (2008-2012)	REPORTING YEAR
SAIDI: <u>1931 91</u>	SAIDI: <u>83 35</u>
SAIFI: <u>1 32</u>	SAIFI: <u>0 91</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 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 TMED

KENTUCKY PUBLIC SERVICE COMMISSION

SECTION 6: VEGETATION MANAGEMENT PLAN REVIEW
INCLUDE CURRENT VEGETATION MANAGEMENT PLAN

See attached "Vegetation Management Program 2-18-11 Nolin.docx".

SECTION 7: UTILITY COMMENTS

SECTION 5: CIRCUIT REPORTING
(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)
(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #1:	COLESBURG -1		
1. SUBSTATION NAME AND NUMBER:	COLESBURG 1		
2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN):	HARDIN - BRADSTOWN RD. - COLESBURG		
3. CIRCUIT NAME AND NUMBER:	COLESBURG -1		
4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA):	NEW HAVEN, KY - YOUNGERS CREEK RD./ DEVERS RD.		
5. TOTAL CIRCUIT LENGTH (MILES):	40.84		
6. CUSTOMER COUNT FOR THIS CIRCUIT:	396		
7. DATE OF LAST CIRCUIT TRIM (VM):	1/23/2013		
8. LIST OF OUTAGE(S):	OUTAGE MINUTES (% OF TOTAL OUTAGE MINUTES):		
CONTRACTOR	5.17	PUBLIC ACCIDENTS, OTHER	23.31
EQUIPMENT / MATERIAL			
FAILURE	17.67	SMALL ANIMALS OR BIRDS	7.99
LIGHTNING	4.98	TREES	15.04
NO CAUSE CODE	7.24	WIND, HIGH WIND	18.61
9. CIRCUIT 5 YEAR AVERAGE (SAIDI):	95.30		
10. REPORTING YEAR (SAIDI):	101.84		
11. CIRCUIT 5 YEAR AVERAGE (SAIFI):	1.11		
12. REPORTING YEAR (SAIFI):	1.07		

13. LIST OF CORRECTIVE ACTION, IF ANY, TAKEN OR TO BE TAKEN

Review sectionalizing on feeder.

SECTION 5: CIRCUIT REPORTING
(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)
(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #2:	CDLESBURG -2		
1. SUBSTATION NAME AND NUMBER:	CDLESBURG 1		
2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN):	HARDIN - BRADSTOWN RD. - CDLESBURG		
3. CIRCUIT NAME AND NUMBER:	CDLESBURG-2		
4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA):	CDLESBURG, KY - BRADSTOWN RD./ MOUNTAIN VIEW ESTATES RD.		
5. TOTAL CIRCUIT LENGTH (MILES):	12.60		
6. CUSTOMER COUNT FOR THIS CIRCUIT:	185		
7. DATE OF LAST CIRCUIT TRIM (VM):	1/23/2013		
8. LIST OF DUTAGE(S):	DUTAGE MINUTES (% OF TOTAL DUTAGE MINUTES):		
CONDUCTOR SAG	31.71	LIGHTNING	28.24
FARM EQUIP.	23.15	PUBLIC ACCIDENTS, OTHER	16.90
9. CIRCUIT 5 YEAR AVERAGE (SAIDI):	114.21		
10. REPORTING YEAR (SAIDI):	50.13		
11. CIRCUIT 5 YEAR AVERAGE (SAIFI):	0.52		
12. REPORTING YEAR (SAIFI):	0.96		
13. LIST OF CORRECTIVE ACTION, IF ANY, TAKEN OR TO BE TAKEN	Inspect for missing guy markers to reduce public contact.		

SECTION 5: CIRCUIT REPORTING
(CIRCUITS WITH SAIOI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)
(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MEO)

CIRCUIT #3:	<u>ETOWN 1-4</u>
1. SUBSTATION NAME AND NUMBER:	<u>ETOWN 2</u>
2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN):	<u>HAROLD - WOOLAND OR. - E-TOWN</u>
3. CIRCUIT NAME AND NUMBER:	<u>ETOWN 1-4</u>
4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA):	<u>ELIZABETHTOWN, KY - E. NALLS RO.</u>
5. TOTAL CIRCUIT LENGTH (MILES):	<u>2.37</u>
6. CUSTOMER COUNT FOR THIS CIRCUIT:	<u>113</u>
7. DATE OF LAST CIRCUIT TRIM (VM):	<u>1/15/2014</u>
8. LIST OF OUTAGE(S):	OUTAGE MINUTES (% OF TOTAL OUTAGE MINUTES):
OTHER UTILITY TRANSMISSION	
LINE	100
9. CIRCUIT 5 YEAR AVERAGE (SAIOI):	<u>4.46</u>
10. REPORTING YEAR (SAIOI):	<u>25.80</u>
11. CIRCUIT 5 YEAR AVERAGE (SAIFI):	<u>0.02</u>
12. REPORTING YEAR (SAIFI):	<u>1.00</u>
13. LIST OF CORRECTIVE ACTION, IF ANY, TAKEN OR TO BE TAKEN	None. Outage was on EKPC Substation/Transmission line.

SECTION 5: CIRCUIT REPORTING
(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)
(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #4:	<u>ETOWN 1-5</u>		
1. SUBSTATION NAME AND NUMBER:	<u>ETOWN 2</u>		
2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN):	<u>HARDIN - WOODLAND DR. - E-TOWN</u>		
3. CIRCUIT NAME AND NUMBER:	<u>ETOWN 1-5</u>		
4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA):	<u>ETOWN, KY - BYPASS/ BANKVIEW RD./ DIXIE RD./ FREEMAN LAKE PARK RD.</u>		
5. TOTAL CIRCUIT LENGTH (MILES):	<u>8.53</u>		
6. CUSTOMER COUNT FOR THIS CIRCUIT:	<u>454</u>		
7. DATE OF LAST CIRCUIT TRIM (VM):	<u>12/30/2013</u>		
8. LIST OF OUTAGE(S):	OUTAGE MINUTES (% OF TOTAL OUTAGE MINUTES):		
EQUIPMENT / MATERIAL		OTHER UTILITY TRANSMISSION	
FAILURE	5.52	LINE	8.48
LIGHTNING	56.80	SMALL ANIMALS OR BIRDS	29.19
9. CIRCUIT 5 YEAR AVERAGE (SAIDI):	<u>45.66</u>		
10. REPORTING YEAR (SAIDI):	<u>37.17</u>		
11. CIRCUIT 5 YEAR AVERAGE (SAIFI):	<u>0.69</u>		
12. REPORTING YEAR (SAIFI):	<u>1.16</u>		
13. LIST OF CORRECTIVE ACTION, IF ANY, TAKEN OR TO BE TAKEN	Main outage was on EKPC Substation/Transmission line. Review overvoltage protection.		

SECTION 5: CIRCUIT REPORTING
(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)
(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #5:	<u>ETOWN 2-2</u>		
1. SUBSTATION NAME AND NUMBER:	<u>ETOWN 20</u>		
2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN):	<u>HARDIN - WOODLAND DR. - E-TOWN</u>		
3. CIRCUIT NAME AND NUMBER:	<u>ETOWN 2-2</u>		
4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA):	<u>ETOWN, KY - JOHNSTOWN RD./ CARDINAL DR./ RING RD.</u>		
5. TOTAL CIRCUIT LENGTH (MILES):	<u>25.39</u>		
6. CUSTOMER COUNT FOR THIS CIRCUIT:	<u>405</u>		
7. DATE OF LAST CIRCUIT TRIM (VM):	<u>5/13/2013</u>		
8. LIST OF OUTAGE(S):	OUTAGE MINUTES (% OF TOTAL OUTAGE MINUTES):		
EQUIPMENT / MATERIAL		OTHER UTILITY TRANSMISSION	
FAILURE	45.05	LINE	16.48
LIGHTNING	38.46		
9. CIRCUIT 5 YEAR AVERAGE (SAIDI):	<u>161.40</u>		
10. REPORTING YEAR (SAIDI):	<u>52.99</u>		
11. CIRCUIT 5 YEAR AVERAGE (SAIFI):	<u>1.91</u>		
12. REPORTING YEAR (SAIFI):	<u>2.00</u>		
13. LIST OF CORRECTIVE ACTION, IF ANY, TAKEN OR TO BE TAKEN	None. Main outage was on EKPC Substation/Transmission line.		

SECTION 5: CIRCUIT REPORTING
(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)
(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #6:	ETOWN 2-3		
1. SUBSTATION NAME AND NUMBER:	ETOWN 20		
2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN):	HARDIN - WOODLAND DR. - E-TOWN		
3. CIRCUIT NAME AND NUMBER:	ETOWN 2-3		
4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA):	ETOWN, KY - DEERFIELD HILLS RD./ RINEYVILLE RD.		
5. TOTAL CIRCUIT LENGTH (MILES):	3.78		
6. CUSTOMER COUNT FOR THIS CIRCUIT:	290		
7. DATE OF LAST CIRCUIT TRIM (VM):	7/25/2012		
8. LIST OF OUTAGE(S):	OUTAGE MINUTES (% OF TOTAL OUTAGE MINUTES):		
EQUIPMENT/MATERIAL		OTHER UTILITY TRANSMISSION	
FAILURE	9.87	LINE	3.76
LIGHTNING	80.69	SMALL ANIMALS OR BIRDS	5.69
9. CIRCUIT 5 YEAR AVERAGE (SAIDI):	5.18		
10. REPORTING YEAR (SAIDI):	149.82		
11. CIRCUIT 5 YEAR AVERAGE (SAIFI):	0.05		
12. REPORTING YEAR (SAIFI):	2.19		
13. LIST OF CORRECTIVE ACTION, IF ANY, TAKEN OR TO BE TAKEN	<div style="border: 1px solid black; padding: 5px;"> <p align="center">Main outage was on EKPC Substation/Transmission line. Review overvoltage protection.</p> </div>		

SECTION 5: CIRCUIT REPORTING
(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)
(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #7:	<u>ETOWN 2-4</u>		
1. SUBSTATION NAME AND NUMBER:	<u>ETOWN 20</u>		
2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN):	<u>HARDIN - WOODLAND DR. - E-TOWN</u>		
3. CIRCUIT NAME AND NUMBER:	<u>ETOWN 2-4</u>		
	<u>ETOWN, KY - RING RD./ PEACH ORCHARD</u>		
4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA):	<u>RD.</u>		
5. TOTAL CIRCUIT LENGTH (MILES):	<u>11.96</u>		
6. CUSTOMER COUNT FOR THIS CIRCUIT:	<u>729</u>		
7. DATE OF LAST CIRCUIT TRIM (VM):	<u>1/15/2014</u>		
8. LIST OF OUTAGE(S):	OUTAGE MINUTES (% OF TOTAL OUTAGE MINUTES):		
EQUIPMENT / MATERIAL FAILURE	44.10 TREES	49.80	
OTHER UTILITY TRANSMISSION LINE	6.11		
9. CIRCUIT 5 YEAR AVERAGE (SAIDI):	<u>22.58</u>		
10. REPORTING YEAR (SAIDI):	<u>82.40</u>		
11. CIRCUIT 5 YEAR AVERAGE (SAIFI):	<u>0.28</u>		
12. REPORTING YEAR (SAIFI):	<u>2.50</u>		
13. LIST OF CORRECTIVE ACTION, IF ANY, TAKEN OR TO BE TAKEN	<div style="border: 1px solid black; padding: 5px;"> Main outage was on EKPC Substation/Transmission line. ROW was trimmed in 2014, which should help remedy tree caused outages. </div>		

SECTION 5: CIRCUIT REPORTING
(CIRCUITS WITH SAIDI AND/DR SAIFI EXCEEDING 5 YEAR AVERAGE)
(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #8:	<u>FDRT KNDX-5</u>		
1. SUBSTATION NAME AND NUMBER:	<u>FDRT KNDX 14</u>		
2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN):	<u>HARDIN - HWY 313 - RADCLIFF</u>		
3. CIRCUIT NAME AND NUMBER:	<u>FDRT KNDX-5</u>		
4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA):	<u>ETDWN, KY - BATTLE TRAINING RD.</u>		
5. TOTAL CIRCUIT LENGTH (MILES):	<u>11.96</u>		
6. CUSTOMER COUNT FOR THIS CIRCUIT:	<u>245</u>		
7. DATE OF LAST CIRCUIT TRIM (VM):	<u>8/8/2011</u>		
8. LIST OF OUTAGE(S):	OUTAGE MINUTES (% OF TOTAL OUTAGE MINUTES):		
DAMAGED MATERIAL OR EQUIP	7.15	LIGHTNING	20.32
EQUIPMENT / MATERIAL			
FAILURE	36.76	SMALL ANIMALS OR BIRDS	3.34
FARM EQUIP.	7.22	TREES	23.06
FIRE	2.14		
9. CIRCUIT 5 YEAR AVERAGE (SAIDI):	<u>42.96</u>		
10. REPORTING YEAR (SAIDI):	<u>80.52</u>		
11. CIRCUIT 5 YEAR AVERAGE (SAIFI):	<u>0.41</u>		
12. REPORTING YEAR (SAIFI):	<u>1.13</u>		
13. LIST OF CORRECTIVE ACTION, IF ANY, TAKEN OR TO BE TAKEN	Review sectionalizing on feeder.		

SECTION 5: CIRCUIT REPORTING
(CIRCUITS WITH SAIDI AND/DR SAIFI EXCEEDING 5 YEAR AVERAGE)
(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #9:	GLENDAL-2		
1. SUBSTATION NAME AND NUMBER:	GLENDAL 3		
2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN):	HARDIN - HWY 31W - GLENDAL		
3. CIRCUIT NAME AND NUMBER:	GLENDAL-2		
4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA):	GLENDAL, KY - SPORTSMAN LAKE RD./ DVERALL PHILLIPS RD.		
5. TOTAL CIRCUIT LENGTH (MILES):	<u>39.38</u>		
6. CUSTOMER COUNT FOR THIS CIRCUIT:	<u>845</u>		
7. DATE OF LAST CIRCUIT TRIM (VM):	<u>7/5/2011</u>		
8. LIST OF OUTAGE(S):	OUTAGE MINUTES (% OF TOTAL OUTAGE MINUTES):		
EQUIPMENT / MATERIAL			
FAILURE	25.40	PUBLIC ACCIDENTS, OTHER	10.10
LIGHTNING	38.63	UNKNOWN CAUSE	6.38
AND CAUSE CODE	19.50		
9. CIRCUIT 5 YEAR AVERAGE (SAIDI):	<u>83.78</u>		
10. REPORTING YEAR (SAIDI):	<u>114.95</u>		
11. CIRCUIT 5 YEAR AVERAGE (SAIFI):	<u>1.19</u>		
12. REPORTING YEAR (SAIFI):	<u>1.02</u>		
13. LIST OF CORRECTIVE ACTION, IF ANY, TAKEN OR TO BE TAKEN	Review overvoltage protection and sectionalizing on feeder.		

SECTION 5: CIRCUIT REPORTING
(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)
(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #11: HODGENVILLE-1

1. SUBSTATION NAME AND NUMBER: HODGENVILLE 4
2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN): LARUE - HWY 31E - HODGENVILLE
3. CIRCUIT NAME AND NUMBER: HODGENVILLE-1
HODGENVILLE, KY - LEAFDALE RD./ SALEM
4. CIRCUIT LOCATION (TDWN-ROAD-GENERAL AREA): CHURCH RD.
5. TOTAL CIRCUIT LENGTH (MILES): 58.33
6. CUSTOMER COUNT FOR THIS CIRCUIT: 640
7. DATE OF LAST CIRCUIT TRIM (VM): 2014 (in-progress)
8. LIST OF OUTAGE(S): OUTAGE MINUTES (% OF TOTAL OUTAGE MINUTES):

CABLE TV	0.00	SMALL ANIMALS OR BIRDS	11.99
EQUIPMENT/MATERIAL			
FAILURE	36.65	TREES	2.24
LIGHTNING	24.13	TREES AND ICE	4.14
MAJOR STORM	3.90	WIND, HIGH WIND	5.38
PUBLIC ACCIDENTS, OTHER	11.57		

9. CIRCUIT 5 YEAR AVERAGE (SAIDI): 154.03
10. REPORTING YEAR (SAIDI): 120.90
11. CIRCUIT 5 YEAR AVERAGE (SAIFI): 1.24
12. REPORTING YEAR (SAIFI): 2.13

13. LIST OF CORRECTIVE ACTION,
IF ANY, TAKEN OR TO BE TAKEN

Main outage was on EKPC Substation/Transmission line.

SECTION 5: CIRCUIT REPORTING
(CIRCUITS WITH SAIOI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)
(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MEO)

CIRCUIT #12: HOOGENVILLE-2

1. SUBSTATION NAME AND NUMBER: HOOGENVILLE 4
 2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN): LARUE - HWY 31E - HOOGENVILLE
 3. CIRCUIT NAME AND NUMBER: HOOGENVILLE-2
 WHITE CITY, KY - CAMPBELLSVILLE RO./ MT.
 4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA): TABOR RO.
 5. TOTAL CIRCUIT LENGTH (MILES): 58.10
 6. CUSTOMER COUNT FOR THIS CIRCUIT: 554
 7. DATE OF LAST CIRCUIT TRIM (VM): 1/13/2014
 8. LIST OF OUTAGE(S): OUTAGE MINUTES (% OF TOTAL OUTAGE MINUTES):

DAMAGED MATERIAL OR EQUIP	23.64	MEMBER CAUSED	4.00
EQUIPMENT / MATERIAL			
FAILURE	33.45	SMALL ANIMALS OR BIRDS	17.45
MAJOR STORM	9.94	UNKNOWN CAUSE	11.52

9. CIRCUIT 5 YEAR AVERAGE (SAIDI): 79.32
 10. REPORTING YEAR (SAIDI): 108.56
 11. CIRCUIT 5 YEAR AVERAGE (SAIFI): 0.64
 12. REPORTING YEAR (SAIFI): 2.15

13. LIST OF CORRECTIVE ACTION,
 IF ANY, TAKEN OR TO BE TAKEN

Main outage was on EKPC Substation/Transmission line. Review animal guard use.
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SECTION 5: CIRCUIT REPORTING
(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)
(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #13: HODGENVILLE-3

1. SUBSTATION NAME AND NUMBER: HODGENVILLE 4
2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN): LARUE - HWY 31E - HODGENVILLE
3. CIRCUIT NAME AND NUMBER: HODGENVILLE-3
TANNER, KY - LANDMARK DR./ S. LINCOLN
4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA): BLVD./ TANNER RD.
5. TOTAL CIRCUIT LENGTH (MILES): 36.93
6. CUSTOMER COUNT FOR THIS CIRCUIT: 407
7. DATE OF LAST CIRCUIT TRIM (VM): 5/22/2013
8. LIST OF OUTAGE(S): OUTAGE MINUTES (% OF TOTAL OUTAGE MINUTES):

EQUIPMENT / MATERIAL			
FAILURE	14.63	SMALL ANIMALS OR BIRDS	6.06
MAINTENANCE	23.76	UNKNOWN CAUSE	26.27
MAJOR STORM	5.71	WIND, HIGH WIND	12.40
MEMBER CAUSED	11.15		

9. CIRCUIT 5 YEAR AVERAGE (SAIDI): 85.32
10. REPORTING YEAR (SAIDI): 114.79
11. CIRCUIT 5 YEAR AVERAGE (SAIFI): 0.66
12. REPORTING YEAR (SAIFI): 2.14

13. LIST OF CORRECTIVE ACTION,
IF ANY, TAKEN OR TO BE TAKEN

Main outage was on EKPC Substation/Transmission line.

SECTION 5: CIRCUIT REPORTING
(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)
(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #14: HODGENVILLE-4

1. SUBSTATION NAME AND NUMBER:	HODGENVILLE 4		
2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN):	LARUE - HWY 31E - HODGENVILLE		
3. CIRCUIT NAME AND NUMBER:	HODGENVILLE-4		
4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA):	TONIEVILLE, KY - OLD ETOWN RD./ CARTER BROTHERS RD.		
5. TOTAL CIRCUIT LENGTH (MILES):	25.81		
6. CUSTOMER COUNT FOR THIS CIRCUIT:	333		
7. DATE OF LAST CIRCUIT TRIM (VM):	1/10/2013		
8. LIST OF OUTAGE(S):	OUTAGE MINUTES (% OF TOTAL OUTAGE MINUTES):		
EQUIPMENT / MATERIAL			
FAILURE	21.07	MAJOR STORM	12.17
FARM EQUIP.	15.28	SMALL ANIMALS OR BIRDS	27.00
LIGHTNING	11.42	UNKNOWN CAUSE	13.06
9. CIRCUIT 5 YEAR AVERAGE (SAIDI):	97.01		
10. REPORTING YEAR (SAIDI):	103.05		
11. CIRCUIT 5 YEAR AVERAGE (SAIFI):	1.18		
12. REPORTING YEAR (SAIFI):	2.03		

13. LIST OF CORRECTIVE ACTION, IF ANY, TAKEN OR TO BE TAKEN

Main outage was on EKPC Substation/Transmission line. Inspect for missing guy markers to reduce public contact.

SECTION 5: CIRCUIT REPORTING
(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)
(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #15: HODGENVILLE-5

1. SUBSTATION NAME AND NUMBER: HODGENVILLE 4
2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN): LARUE - HWY 31E - HODGENVILLE
3. CIRCUIT NAME AND NUMBER: HODGENVILLE-5
HODGENVILLE, KY - CARTER BROTHERS RD./
DAN DUNN RD.
4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA):
5. TOTAL CIRCUIT LENGTH (MILES): 60.78
6. CUSTOMER COUNT FOR THIS CIRCUIT: 434
7. DATE OF LAST CIRCUIT TRIM (VM): 2014 (in-progress)
8. LIST OF OUTAGE(S): OUTAGE MINUTES (% OF TOTAL OUTAGE MINUTES):

EQUIPMENT/MATERIAL			
FAILURE	27.70	MAJOR STORM	4.45
FIRE	4.51	SMALL ANIMALS OR BIRDS	11.62
ICE	4.18	TREES	16.13
LIGHTNING	19.28	UNKNOWN CAUSE	12.11

9. CIRCUIT 5 YEAR AVERAGE (SAIDI): 60.07
10. REPORTING YEAR (SAIDI): 128.84
11. CIRCUIT 5 YEAR AVERAGE (SAIFI): 0.54
12. REPORTING YEAR (SAIFI): 2.27

13. LIST OF CORRECTIVE ACTION,
IF ANY, TAKEN OR TO BE TAKEN

Main outage was on EKPC Substation/Transmission line. Review overvoltage protection and sectionalizing.

SECTION 5: CIRCUIT REPORTING
(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)
(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #16: LOGSDON-5

1. SUBSTATION NAME AND NUMBER: LOGSDON 18
2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN): HARDIN - CAROLYN CT - RADCLIFF
3. CIRCUIT NAME AND NUMBER: LOGSDON-5
RADCLIFF, KY - W. VINE ST./ S. LOGSDON
4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA): PKWY
5. TOTAL CIRCUIT LENGTH (MILES): 6.30
6. CUSTOMER COUNT FOR THIS CIRCUIT: 518
7. DATE OF LAST CIRCUIT TRIM (VM): 1/11/2013
8. LIST OF OUTAGE(S): OUTAGE MINUTES (% OF TOTAL OUTAGE MINUTES):
- | | | | |
|----------------------|-------|------------------------|-------|
| EQUIPMENT / MATERIAL | | | |
| FAILURE | 50.89 | SMALL ANIMALS OR BIRDS | 14.39 |
| LIGHTNING | 10.68 | UNKNOWN CAUSE | 9.64 |
| MEMBER CAUSED | 14.39 | | |
9. CIRCUIT 5 YEAR AVERAGE (SAIDI): 8.59
10. REPORTING YEAR (SAIDI): 12.79
11. CIRCUIT 5 YEAR AVERAGE (SAIFI): 0.18
12. REPORTING YEAR (SAIFI): 0.31

13. LIST OF CORRECTIVE ACTION,
IF ANY, TAKEN OR TO BE TAKEN

Review sectionalizing on feeder.

SECTION 5: CIRCUIT REPORTING
(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)
(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #18: MAGNOLIA-2

1. SUBSTATION NAME AND NUMBER: MAGNOLIA 5
2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN): LARUE - NEW JACKSON HWY - MAGNOLIA
3. CIRCUIT NAME AND NUMBER: MAGNOLIA-2
SHERMAN, KY - MT. SHERMAN RD./
JACKSON RD.
4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA):
5. TOTAL CIRCUIT LENGTH (MILES): 25
6. CUSTOMER COUNT FOR THIS CIRCUIT: 178
7. DATE OF LAST CIRCUIT TRIM (VM): 6/24/2011
8. LIST OF OUTAGE(S): OUTAGE MINUTES (% OF TOTAL OUTAGE MINUTES):
- | | | | |
|--------------------|-------|---------------|-------|
| EQUIPMENT/MATERIAL | | | |
| FAILURE | 44.47 | MEMBER CAUSED | 5.38 |
| ICE | 15.82 | Trees | 25.85 |
| MAJOR STORM | 8.48 | | |
9. CIRCUIT 5 YEAR AVERAGE (SAIDI): 55.84
10. REPORTING YEAR (SAIDI): 242.15
11. CIRCUIT 5 YEAR AVERAGE (SAIFI): 1.00
12. REPORTING YEAR (SAIFI): 2.86

13. LIST OF CORRECTIVE ACTION,
IF ANY, TAKEN OR TO BE TAKEN

Main outage was on EKPC Substation/Transmission line. Review sectionalizing on feeder.

SECTION 5: CIRCUIT REPORTING
(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)
(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #19: MAGNOLIA-3

1. SUBSTATION NAME AND NUMBER: MAGNOLIA 5
2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN): LARUE - NEW JACKSON HWY - MAGNOLIA
3. CIRCUIT NAME AND NUMBER: MAGNOLIA-3
MAGNDLIA, KY - UPTON TALLEY RD./
MAXINE RD.
4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA):
5. TOTAL CIRCUIT LENGTH (MILES): 55.9
6. CUSTOMER COUNT FOR THIS CIRCUIT: 403
7. DATE OF LAST CIRCUIT TRIM (VM): 2/19/2013
8. LIST OF OUTAGE(S): OUTAGE MINUTES (% OF TOTAL OUTAGE MINUTES):

EQUIPMENT/MATERIAL			
FAILURE	18.55	NO CAUSE CODE	1.06
FARM EQUIP.	3.18	SMALL ANIMALS OR BIRDS	3.87
LIGHTNING	40.96	TREES	20.24
MAJOR STORM	4.35	UNKNOWN CAUSE	7.79

9. CIRCUIT 5 YEAR AVERAGE (SAIDI): 68.20
10. REPORTING YEAR (SAIDI): 183.18
11. CIRCUIT 5 YEAR AVERAGE (SAIFI): 0.97
12. REPORTING YEAR (SAIFI): 2.20

13. LIST OF CORRECTIVE ACTION,
IF ANY, TAKEN OR TO BE TAKEN

Main outage was on EKPC Substation/Transmission line. Review overvoltage protection and sectionalizing.

SECTION 5: CIRCUIT REPORTING
(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)
(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #20: MAGNOLIA-4

1. SUBSTATION NAME AND NUMBER: MAGNOLIA 5
 2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN): LARUE - NEW JACKSON HWY - MAGNOLIA
 3. CIRCUIT NAME AND NUMBER: MAGNOLIA-4
TANNER, KY - NEW JACKSON HWY/
 4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA): HAWKINS RD./ AIRLINE RD.
 5. TOTAL CIRCUIT LENGTH (MILES): 76.88
 6. CUSTOMER COUNT FOR THIS CIRCUIT: 488
 7. DATE OF LAST CIRCUIT TRIM (VM): 5/2/2011
 8. LIST OF OUTAGE(S): OUTAGE MINUTES (% OF TOTAL OUTAGE MINUTES):

EQUIPMENT / MATERIAL			
FAILURE	24.43	PUBLIC ACCIDENTS, OTHER	0.01
LIGHTNING	11.28	SMALL ANIMALS OR BIRDS	9.95
MAJOR STORM	36.43	TREES	11.17
NO CAUSE CODE	6.74		

9. CIRCUIT 5 YEAR AVERAGE (SAIDI): 45.64
 10. REPORTING YEAR (SAIDI): 59.59
 11. CIRCUIT 5 YEAR AVERAGE (SAIFI): 0.63
 12. REPORTING YEAR (SAIFI): 1.15

13. LIST OF CORRECTIVE ACTION,
 IF ANY, TAKEN OR TO BE TAKEN

Main outage was on EKPC Substation/Transmission line. Review animal guards and sectionalizing on feeder.

SECTION 5: CIRCUIT REPORTING
(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)
(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #21: SMITHERSVILLE 1-3

1. SUBSTATION NAME AND NUMBER: SMITHERSVILLE 13
2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN): HARDIN -W.A. JENKINS RD. - E-TOWN
3. CIRCUIT NAME AND NUMBER: SMITHERSVILLE 1-3
RINEYVILLE, KY - HWY 447/ DECKARD
4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA): SCHOOL RD.
5. TOTAL CIRCUIT LENGTH (MILES): 27.00
6. CUSTOMER COUNT FOR THIS CIRCUIT: 831
7. DATE OF LAST CIRCUIT TRIM (VM): 2014 (In-progress)
8. LIST OF OUTAGE(S): OUTAGE MINUTES (% OF TOTAL OUTAGE MINUTES):

CONTRACTOR	4.75	NO CAUSE CODE	4.26
EQUIPMENT / MATERIAL			
FAILURE	12.48	PUBLIC ACCIDENTS, OTHER	3.18
FIRE	3.03	SMALL ANIMALS OR BIRDS	5.28
LIGHTNING	28.86	TREES	8.22
MAJOR STORM	29.94		

9. CIRCUIT 5 YEAR AVERAGE (SAIDI): 14.31
10. REPORTING YEAR (SAIDI): 1.57
11. CIRCUIT 5 YEAR AVERAGE (SAIFI): 0.44
12. REPORTING YEAR (SAIFI): 0.49

13. LIST OF CORRECTIVE ACTION,
IF ANY, TAKEN OR TO BE TAKEN

Review animal guards and sectionalizing on feeder.
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SECTION 5: CIRCUIT REPORTING
(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)
(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #22: SMITHERSVILLE 1-4

1. SUBSTATION NAME AND NUMBER: SMITHERSVILLE 13
2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN): HARDIN -W.A. JENKINS RD. - E-TOWN
3. CIRCUIT NAME AND NUMBER: SMITHERSVILLE 1-4
RINEYVILLE, KY - WILSON RD./ BOONE RD./
HUTCHERON RD.
4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA):
5. TOTAL CIRCUIT LENGTH (MILES): 17.56
6. CUSTOMER COUNT FOR THIS CIRCUIT: 843
7. DATE OF LAST CIRCUIT TRIM (VM): 7/17/2012
8. LIST OF OUTAGE(S): OUTAGE MINUTES (% OF TOTAL OUTAGE MINUTES):

EQUIPMENT / MATERIAL			
FAILURE	17.64	PUBLIC ACTIVITIES, OTHER	29.62
LIGHTNING	16.14	UNKNOWN CAUSE	4.49
NO CAUSE CODE	18.30	WIND, HIGH WIND	13.81

9. CIRCUIT 5 YEAR AVERAGE (SAIDI): 83.44
10. REPORTING YEAR (SAIDI): 61.62
11. CIRCUIT 5 YEAR AVERAGE (SAIFI): 0.82
12. REPORTING YEAR (SAIFI): 1.15

13. LIST OF CORRECTIVE ACTION,
IF ANY, TAKEN OR TO BE TAKEN

Primary outage causes were for new road construction via a planned outage and a failed insulator.

SECTION 5: CIRCUIT REPORTING
(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)
(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #23: SMITHERSVILLE 2-2

1. SUBSTATION NAME AND NUMBER:	<u>SMITHERSVILLE 17</u>
2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN):	<u>HARDIN -W.A. JENKINS RD. - E-TOWN</u>
3. CIRCUIT NAME AND NUMBER:	<u>SMITHERSVILLE 2-2</u>
4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA):	<u>RINEYVILLE, KY - W.A. JENKINS RD./ DIXIE HWY</u>
5. TOTAL CIRCUIT LENGTH (MILES):	<u>0.49</u>
6. CUSTOMER COUNT FOR THIS CIRCUIT:	<u>18</u>
7. DATE OF LAST CIRCUIT TRIM (VM):	<u>6/23/2014</u>
8. LIST OF OUTAGE(S):	OUTAGE MINUTES (% OF TOTAL OUTAGE MINUTES):
EQUIPMENT / MATERIAL FAILURE	100
9. CIRCUIT 5 YEAR AVERAGE (SAIDI):	<u>2.43</u>
10. REPORTING YEAR (SAIDI):	<u>43.03</u>
11. CIRCUIT 5 YEAR AVERAGE (SAIFI):	<u>0.04</u>
12. REPORTING YEAR (SAIFI):	<u>1.06</u>

13. LIST OF CORRECTIVE ACTION, IF ANY, TAKEN OR TO BE TAKEN

Main outage was on EKPC Substation/Transmission line.

SECTION 5: CIRCUIT REPORTING
(CIRCUITS WITH SAIOI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)
(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MEO)

CIRCUIT #24: SMITHERSVILLE 2-3

1. SUBSTATION NAME AND NUMBER: SMITHERSVILLE 17
2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN): HAROLD - W.A. JENKINS RO. - E-TOWN
3. CIRCUIT NAME AND NUMBER: SMITHERSVILLE 2-3
RINEYVILLE, KY - W.A. JENKINS RO./ OIXIE
4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA): HWY/ TERESA RO.
5. TOTAL CIRCUIT LENGTH (MILES): 11.68
6. CUSTOMER COUNT FOR THIS CIRCUIT: 635
7. DATE OF LAST CIRCUIT TRIM (VM): 6/23/2014
8. LIST OF OUTAGE(S): OUTAGE MINUTES (% OF TOTAL OUTAGE MINUTES):
- | | | | |
|-------------------------|-------|-----------------|-------|
| EQUIPMENT / MATERIAL | | | |
| FAILURE | 28.51 | TREES | 29.71 |
| NO CAUSE CODE | 10.88 | WIND, HIGH WIND | 5.31 |
| PUBLIC ACCIDENTS, OTHER | 25.60 | | |
9. CIRCUIT 5 YEAR AVERAGE (SAIOI): 7.40
10. REPORTING YEAR (SAIOI): 23.09
11. CIRCUIT 5 YEAR AVERAGE (SAIFI): 0.12
12. REPORTING YEAR (SAIFI): 0.94

13. LIST OF CORRECTIVE ACTION,
IF ANY, TAKEN OR TO BE TAKEN

Review sectionalizing on feeder. The tree trimming performed in 2014 should help mitigate tree caused outages.

SECTION 5: CIRCUIT REPORTING
(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)
(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #25: STEPHENSBURG-2

1. SUBSTATION NAME AND NUMBER:	<u>STEPHENSBURG 6</u>		
2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN):	<u>HARDIN-LEITCHFIELD RD-STEPHENSBURG</u>		
3. CIRCUIT NAME AND NUMBER:	<u>STEPHENSBURG-2</u>		
	<u>WHITE HILLS, KY - SONORA HARDIN SPRINGS</u>		
4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA):	<u>RD.</u>		
5. TOTAL CIRCUIT LENGTH (MILES):	<u>42.16</u>		
6. CUSTOMER COUNT FOR THIS CIRCUIT:	<u>254</u>		
7. DATE OF LAST CIRCUIT TRIM (VM):	<u>2014 (in-progress)</u>		
8. LIST OF OUTAGE(S):	OUTAGE MINUTES (% OF TOTAL OUTAGE MINUTES):		
CONDUCTOR SAG	7.46	MEMBER CAUSED	4.59
EQUIPMENT/MATERIAL			
FAILURE	9.76	NO CAUSE CODE	12.06
		OTHER UTILITY TRANSMISSION	
FIRE	3.27	LINE	3.56
ICE	12.17	SMALL ANIMALS OR BIRDS	6.08
LIGHTNING	12.51	UNKNOWN CAUSE	6.89
MAJOR STORM	21.64		
9. CIRCUIT 5 YEAR AVERAGE (SAIDI):	<u>76.15</u>		
10. REPORTING YEAR (SAIDI):	<u>274.80</u>		
11. CIRCUIT 5 YEAR AVERAGE (SAIFI):	<u>1.13</u>		
12. REPORTING YEAR (SAIFI):	<u>2.16</u>		

13. LIST OF CORRECTIVE ACTION,
IF ANY, TAKEN OR TO BE TAKEN

Main outage was on EKPC Substation/Transmission line.

SECTION 5: CIRCUIT REPORTING
(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)
(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #29: THARP-2-2

1. SUBSTATION NAME AND NUMBER: THARP 22
2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN): HARDIN - ST. JDHN RD. - ETOWN
3. CIRCUIT NAME AND NUMBER: THARP-2-2
ELIZABETHTOWN, KY - SAINT JOHN RD./
KING ARTHUR RD.
4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA):
5. TOTAL CIRCUIT LENGTH (MILES): 27.00
6. CUSTOMER COUNT FOR THIS CIRCUIT: 538
7. DATE OF LAST CIRCUIT TRIM (VM): 7/25/2012
8. LIST OF OUTAGE(S): OUTAGE MINUTES (% OF TOTAL OUTAGE MINUTES):

EQUIPMENT / MATERIAL	OTHER UTILITY TRANSMISSION	
FAILURE	51.36	LINE 5.86
LIGHTNING	24.80	PUBLIC ACCIDENTS, OTHER 17.98

9. CIRCUIT 5 YEAR AVERAGE (SAIDI): 66.96
10. REPORTING YEAR (SAIDI): 105.79
11. CIRCUIT 5 YEAR AVERAGE (SAIFI): 0.81
12. REPORTING YEAR (SAIFI): 2.01

13. LIST OF CORRECTIVE ACTIDN,
IF ANY, TAKEN OR TO BE TAKEN

Main outage was on EKPC Substation/Transmission line.

SECTION 5: CIRCUIT REPORTING
(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)
(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #30: THARP-2-3

1. SUBSTATION NAME AND NUMBER:	<u>THARP 22</u>
2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN):	<u>HARDIN - ST. JOHN RD. - ETOWN</u>
3. CIRCUIT NAME AND NUMBER:	<u>THARP-2-3</u>
4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA):	<u>ELIZABETHTOWN, KY - SAINT JOHN RD./ RING RD./ WEST PARK RD.</u>
5. TOTAL CIRCUIT LENGTH (MILES):	<u>0.91</u>
6. CUSTOMER COUNT FOR THIS CIRCUIT:	<u>1</u>
7. DATE OF LAST CIRCUIT TRIM (VM):	<u>9/13/2012</u>
8. LIST OF OUTAGE(S):	OUTAGE MINUTES (% OF TOTAL OUTAGE MINUTES):
OTHER UTILITY TRANSMISSION	
LINE	100
9. CIRCUIT 5 YEAR AVERAGE (SAIDI):	<u>6.60</u>
10. REPORTING YEAR (SAIDI):	<u>25.80</u>
11. CIRCUIT 5 YEAR AVERAGE (SAIFI):	<u>0.20</u>
12. REPORTING YEAR (SAIFI):	<u>1.00</u>

13. LIST OF CORRECTIVE ACTION,
IF ANY, TAKEN OR TO BE TAKEN

Main outage was on EKPC Substation/Transmission line.

SECTION 5: CIRCUIT REPORTING
(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)
(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #31: THARP-2-4

1. SUBSTATION NAME AND NUMBER:	<u>THARP 22</u>
2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN):	<u>HARDIN - ST. JDHN RD. - ETOWN</u>
3. CIRCUIT NAME AND NUMBER:	<u>THARP-2-4</u>
	<u>ELIZABETHDOWN, KY - SAINT JOHN RD./</u>
	<u>WILMOTH RD./ LANGLEY TRACE/</u>
4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA):	<u>CHARLEMAGNE BLVD.</u>
5. TOTAL CIRCUIT LENGTH (MILES):	<u>1.53</u>
6. CUSTOMER COUNT FOR THIS CIRCUIT:	<u>11B</u>
7. DATE OF LAST CIRCUIT TRIM (VM):	<u>7/25/2012</u>
8. LIST OF OUTAGE(S):	OUTAGE MINUTES (% OF TOTAL OUTAGE MINUTES):
OTHER UTILITY TRANSMISSION	
LINE	100
9. CIRCUIT 5 YEAR AVERAGE (SAIDI):	<u>51.59</u>
10. REPORTING YEAR (SAIDI):	<u>25.80</u>
11. CIRCUIT 5 YEAR AVERAGE (SAIFI):	<u>0.66</u>
12. REPORTING YEAR (SAIFI):	<u>1.00</u>

13. LIST OF CORRECTIVE ACTION,
IF ANY, TAKEN OR TO BE TAKEN

Main outage was on EKPC Substation/Transmission line.

SECTION 5: CIRCUIT REPORTING
(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)
(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #32: THARP-3

- | | | | |
|---|---|-------------------------|-------|
| 1. SUBSTATION NAME AND NUMBER: | <u>THARP 12</u> | | |
| 2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN): | <u>HARDIN - ST. JOHN RD. - ETOWN</u> | | |
| 3. CIRCUIT NAME AND NUMBER: | <u>THARP-3</u> | | |
| 4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA): | <u>ELIZABETHTOWN, KY - SAINT JOHN RD./</u>
<u>RING RD.</u> | | |
| 5. TOTAL CIRCUIT LENGTH (MILES): | <u>1.13</u> | | |
| 6. CUSTOMER COUNT FOR THIS CIRCUIT: | <u>10</u> | | |
| 7. DATE OF LAST CIRCUIT TRIM (VM): | <u>9/13/2012</u> | | |
| 8. LIST OF OUTAGE(S): | OUTAGE MINUTES (% OF TOTAL OUTAGE MINUTES): | | |
| OTHER UTILITY TRANSMISSION | | | |
| LINE | 60.91 | PUBLIC ACCIDENTS, OTHER | 39.09 |
| 9. CIRCUIT 5 YEAR AVERAGE (SAIDI): | <u>25.03</u> | | |
| 10. REPORTING YEAR (SAIDI): | <u>29.82</u> | | |
| 11. CIRCUIT 5 YEAR AVERAGE (SAIFI): | <u>0.22</u> | | |
| 12. REPORTING YEAR (SAIFI): | <u>1.10</u> | | |

13. LIST OF CORRECTIVE ACTION,
IF ANY, TAKEN OR TO BE TAKEN

Main outage was on EKPC Substation/Transmlssion line.

SECTION 5: CIRCUIT REPORTING
(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)
(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #33: THARP-4

1. SUBSTATION NAME AND NUMBER: THARP 12
2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN): HARDIN - ST. JOHN RD. - ETOWN
3. CIRCUIT NAME AND NUMBER: THARP-4
ELIZABETHTOWN, KY - SAINT JOHN RD./
THOMAS RD.
4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA):
5. TOTAL CIRCUIT LENGTH (MILES): 31.33
6. CUSTOMER COUNT FOR THIS CIRCUIT: 525
7. DATE OF LAST CIRCUIT TRIM (VM): 8/20/2012
8. LIST OF OUTAGE(S): OUTAGE MINUTES (% OF TOTAL DUTAGE MINUTES):

LIGHTNING	70.31	PUBLIC ACCIDENTS, OTHER	9.83
OTHER UTILITY TRANSMISSION			
LINE	9.39	UNKNOWN CAUSE	10.48

9. CIRCUIT 5 YEAR AVERAGE (SAIDI): 50.88
10. REPORTING YEAR (SAIDI): 28.08
11. CIRCUIT 5 YEAR AVERAGE (SAIFI): 0.73
12. REPORTING YEAR (SAIFI): 1.04

13. LIST OF CORRECTIVE ACTION,
IF ANY, TAKEN OR TO BE TAKEN

Main outage was on EKPC Substation/Transmission line. Review overvoltage protection.

SECTION 5: CIRCUIT REPORTING
(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)
(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #34: THARP-5

1. SUBSTATION NAME AND NUMBER:	<u>THARP 12</u>
2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN):	<u>HARDIN - ST. JOHN RD. - ETOWN</u>
3. CIRCUIT NAME AND NUMBER:	<u>THARP-5</u>
	<u>ELIZABETHTOWN, KY - SAINT JOHN RD./</u>
4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA):	<u>RING RD./ WEST PARK RD.</u>
5. TOTAL CIRCUIT LENGTH (MILES):	<u>0.71</u>
6. CUSTOMER COUNT FOR THIS CIRCUIT:	<u>9</u>
7. DATE OF LAST CIRCUIT TRIM (VM):	<u>9/13/2012</u>
8. LIST OF OUTAGE(S):	OUTAGE MINUTES (% OF TOTAL OUTAGE MINUTES):
OTHER UTILITY TRANSMISSION	
LINE	100
9. CIRCUIT 5 YEAR AVERAGE (SAIDI):	<u>24.60</u>
10. REPORTING YEAR (SAIDI):	<u>25.80</u>
11. CIRCUIT 5 YEAR AVERAGE (SAIFI):	<u>0.20</u>
12. REPORTING YEAR (SAIFI):	<u>1.00</u>

**13. LIST OF CORRECTIVE ACTION,
IF ANY, TAKEN OR TO BE TAKEN**

Main outage was on EKPC Substation/Transmission line.

SECTION 5: CIRCUIT REPORTING
(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)
(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #35: TUNNEL HILL 1-1

1. SUBSTATION NAME AND NUMBER: TUNNEL HILL 11
2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN): HARDIN - TUNNEL HILL RD. - E-TOWN
3. CIRCUIT NAME AND NUMBER: TUNNEL HILL 1-1
4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA): ETOWN, KY - DOLPHIN RD./ COMMERCE DR.
5. TOTAL CIRCUIT LENGTH (MILES): 3.24
6. CUSTOMER COUNT FOR THIS CIRCUIT: 441
7. DATE OF LAST CIRCUIT TRIM (VM): 3/1/2013
8. LIST OF OUTAGE(S): OUTAGE MINUTES (% OF TOTAL OUTAGE MINUTES):

EQUIPMENT/MATERIAL FAILURE	56.86	MAJOR STORM	22.88
FIRE	5.56	WIND, HIGH WIND	14.71

9. CIRCUIT 5 YEAR AVERAGE (SAIDI): 0.74
10. REPORTING YEAR (SAIDI): 160.04
11. CIRCUIT 5 YEAR AVERAGE (SAIFI): 0.09
12. REPORTING YEAR (SAIFI): 0.74

13. LIST OF CORRECTIVE ACTION,
IF ANY, TAKEN OR TO BE TAKEN

Underground primary fault caused a long outage restoration time. Review step restoration procedures.

SECTION 5: CIRCUIT REPORTING
(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)
(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #36: TUNNEL HILL 2-3

1. SUBSTATION NAME AND NUMBER: TUNNEL HILL 19
2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN): HARDIN - TUNNEL HILL RD. - E-TOWN
3. CIRCUIT NAME AND NUMBER: TUNNEL HILL 2-3
ETOWN, KY - TUNNEL HILL CHURCH RD./
SAINT JOHN RD.
4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA):
5. TOTAL CIRCUIT LENGTH (MILES): 60.84
6. CUSTOMER COUNT FOR THIS CIRCUIT: 1047
7. DATE OF LAST CIRCUIT TRIM (VM): 2/12/2013
8. LIST OF OUTAGE(S): OUTAGE MINUTES (% OF TOTAL OUTAGE MINUTES):

EQUIPMENT / MATERIAL			
FAILURE	13.68	SMALL ANIMALS OR BIRDS	2.04
LIGHTNING	8.09	SWITCHING OUTAGE	5.00
NO CAUSE CODE	30.15	TREES	28.09
PUBLIC ACCIDENTS, OTHER	12.95		

9. CIRCUIT 5 YEAR AVERAGE (SAIDI): 12.76
10. REPORTING YEAR (SAIDI): 13.44
11. CIRCUIT 5 YEAR AVERAGE (SAIFI): 0.14
12. REPORTING YEAR (SAIFI): 0.10

13. LIST OF CORRECTIVE ACTION,
IF ANY, TAKEN OR TO BE TAKEN

Significantly below system average outage time. No actions recommended.

SECTION 5: CIRCUIT REPORTING
(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)
(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #37: RINEYVILLE-4

1. SUBSTATION NAME AND NUMBER: RINEYVILLE 21
2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN): HARDIN - BERRYTOWN RD. - RINEYVILLE
3. CIRCUIT NAME AND NUMBER: RINEYVILLE-4
RINEYVILLE, KY - BERRYTOWN RD./ BLUE
4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA): BALL RD.
5. TOTAL CIRCUIT LENGTH (MILES): 48.23
6. CUSTOMER COUNT FOR THIS CIRCUIT: 379
7. DATE OF LAST CIRCUIT TRIM (VM): 2014 (in-progress)
8. LIST OF OUTAGE(S): OUTAGE MINUTES (% OF TOTAL OUTAGE MINUTES):

EQUIPMENT / MATERIAL			
FAILURE	39.49	MAJOR STORM	19.61
LIGHTNING	27.49	SMALL ANIMALS OR BIRDS	13.40

9. CIRCUIT 5 YEAR AVERAGE (SAIDI): 44.17
10. REPORTING YEAR (SAIDI): 95.04
11. CIRCUIT 5 YEAR AVERAGE (SAIFI): 0.65
12. REPORTING YEAR (SAIFI): 0.63

13. LIST OF CORRECTIVE ACTION,
IF ANY, TAKEN OR TO BE TAKEN

Main outage was on EKPC Substation/Transmission line. Review sectionalizing on feeder.

SECTION 5: CIRCUIT REPORTING
(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)
(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #38: VERTREES-1

- | | | | |
|---|---|-------|-------|
| 1. SUBSTATION NAME AND NUMBER: | <u>VERTREES 8</u> | | |
| 2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN): | <u>HARDIN - SALT RIVER RD. - VERTREES</u> | | |
| 3. CIRCUIT NAME AND NUMBER: | <u>VERTREES-1</u> | | |
| 4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA): | <u>VERTREES, KY - HARDINBURG RD./</u>
<u>CONSTANTINE RD.</u> | | |
| 5. TOTAL CIRCUIT LENGTH (MILES): | <u>44.85</u> | | |
| 6. CUSTOMER COUNT FOR THIS CIRCUIT: | <u>332</u> | | |
| 7. DATE OF LAST CIRCUIT TRIM (VM): | <u>4/11/2012</u> | | |
| 8. LIST OF OUTAGE(S): | OUTAGE MINUTES (% OF TOTAL OUTAGE MINUTES): | | |
| EQUIPMENT / MATERIAL | | | |
| FAILURE | 54.05 | TREES | 26.59 |
| OTHER UTILITY TRANSMISSION | | | |
| LINE | 19.36 | | |
| 9. CIRCUIT 5 YEAR AVERAGE (SAIDI): | <u>51.28</u> | | |
| 10. REPORTING YEAR (SAIDI): | <u>40.70</u> | | |
| 11. CIRCUIT 5 YEAR AVERAGE (SAIFI): | <u>0.48</u> | | |
| 12. REPORTING YEAR (SAIFI): | <u>1.01</u> | | |

13. LIST OF CORRECTIVE ACTION,
IF ANY, TAKEN OR TO BE TAKEN

Main outage was on EKPC Substation/Transmission line.

SECTION 5: CIRCUIT REPORTING
(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)
(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #39: VERTREES-2

1. SUBSTATION NAME AND NUMBER: VERTREES 8
2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN): HARDIN - SALT RIVER RD. - VERTREES
3. CIRCUIT NAME AND NUMBER: VERTREES-2
VERTREES, KY - SALT RIVER RD./ SAINT JOHN
4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA): RD.
5. TOTAL CIRCUIT LENGTH (MILES): 59.73
6. CUSTOMER COUNT FOR THIS CIRCUIT: 447
7. DATE OF LAST CIRCUIT TRIM (VM): 4/11/2012
8. LIST OF OUTAGE(S): OUTAGE MINUTES (% OF TOTAL OUTAGE MINUTES):

EQUIPMENT / MATERIAL		OTHER UTILITY TRANSMISSION	
FAILURE	8.53	LINE	2.16
LIGHTNING	17.13	TREES	29.81
MAJOR STORM	3.70	UNKNOWN CAUSE	2.41
MEMBER CAUSED	3.93	WIND, HIGH WIND	15.52
NO CAUSE CODE	16.81		

9. CIRCUIT 5 YEAR AVERAGE (SAIDI): 75.44
10. REPORTING YEAR (SAIDI): 87.50
11. CIRCUIT 5 YEAR AVERAGE (SAIFI): 1.00
12. REPORTING YEAR (SAIFI): 1.33

13. LIST OF CORRECTIVE ACTION,
IF ANY, TAKEN OR TO BE TAKEN

Main outage was on EKPC Substation/Transmission line. Review overvoltage protection, sectionalizing, and ROW.

SECTION 5: CIRCUIT REPORTING
(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)
(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #40: VERTREES-4

1. SUBSTATION NAME AND NUMBER: VERTREES 8
2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN): HARDIN - SALT RIVER RD. - VERTREES
3. CIRCUIT NAME AND NUMBER: VERTREES-4
VERTREES, KY - HARDINSBURG RD./ LONG GROVE RD.
4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA):
5. TOTAL CIRCUIT LENGTH (MILES): 41.23
6. CUSTOMER COUNT FOR THIS CIRCUIT: 486
7. DATE OF LAST CIRCUIT TRIM (VM): 4/11/2012
8. LIST OF OUTAGE(S): OUTAGE MINUTES (% OF TOTAL OUTAGE MINUTES):

EQUIPMENT / MATERIAL FAILURE	24.38	NO CAUSE CODE	20.22
		OTHER UTILITY TRANSMISSION	
FIRE	10.09	LINE	2.96
LIGHTNING	9.87	TREES	5.84
MAJOR STORM MEMBER CAUSED	13.81	UNKNOWN CAUSE	4.65
	8.19		

9. CIRCUIT 5 YEAR AVERAGE (SAIDI): 31.22
10. REPORTING YEAR (SAIDI): 85.07
11. CIRCUIT 5 YEAR AVERAGE (SAIFI): 0.41
12. REPORTING YEAR (SAIFI): 1.38

13. LIST OF CORRECTIVE ACTION, IF ANY, TAKEN OR TO BE TAKEN

Main outage was on EKPC Substation/Transmission line. Review sectionalizing on feeder.
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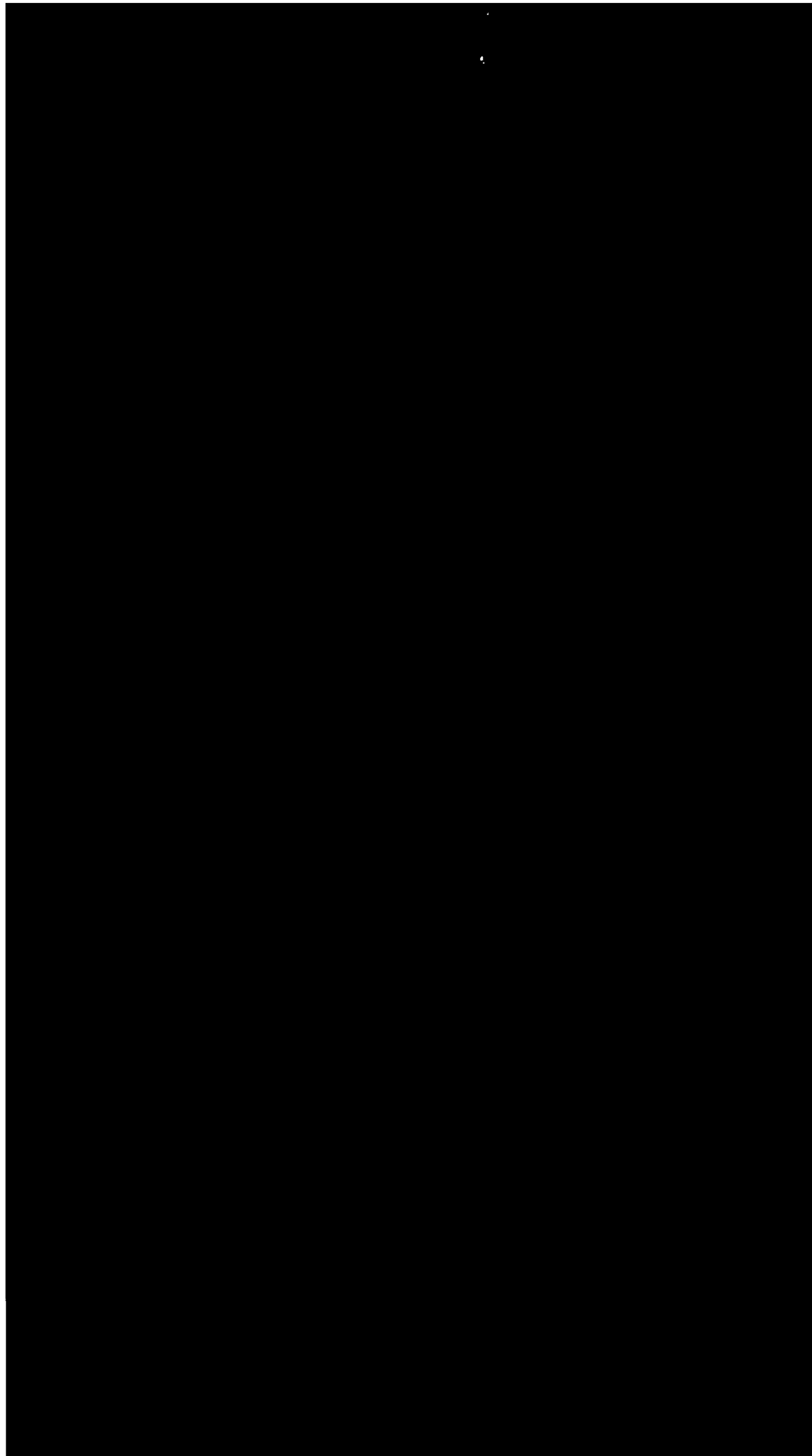
SECTION 5: CIRCUIT REPORTING
(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)
(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #41: WILLIAMS-1

1. SUBSTATION NAME AND NUMBER: WILLIAMS 16
2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN): HARDIN - BARDSTOWN RD. - E-TOWN
3. CIRCUIT NAME AND NUMBER: WILLIAMS-1
4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA): ELIZABETHTOWN, KY - BARDSTOWN RD./ LINCOLN RD.
5. TOTAL CIRCUIT LENGTH (MILES): 75.47
6. CUSTOMER COUNT FOR THIS CIRCUIT: 805
7. DATE OF LAST CIRCUIT TRIM (VM): 12/23/2013
8. LIST OF OUTAGE(S): OUTAGE MINUTES (% OF TOTAL OUTAGE MINUTES):
- | | | | |
|----------------------|-------|------------------------|-------|
| EQUIPMENT / MATERIAL | | | |
| FAILURE | 8.58 | NO CAUSE CODE | 2.65 |
| LIGHTNING | 28.82 | SMALL ANIMALS OR BIRDS | 7.52 |
| MEMBER CAUSED | 0.88 | TREES | 51.55 |
9. CIRCUIT 5 YEAR AVERAGE (SAIDI): 61.21
10. REPORTING YEAR (SAIDI): 26.35
11. CIRCUIT 5 YEAR AVERAGE (SAIFI): 0.88
12. REPORTING YEAR (SAIFI): 1.04

13. LIST OF CORRECTIVE ACTION, IF ANY, TAKEN OR TO BE TAKEN

Review sectionalizing on feeder. Review ROW.
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Vegetation Management Program

Definitions of Terms Used in Standard

This section includes newly defined or revised terms used in this standard. New or revised definitions, listed below, become approved when the standard is placed in operation. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.

Fire Risk: The likelihood that a fire will ignite or spread in a particular geographic area.

Flashover: An electrical discharge through air around or over the surface of insulation, between objects of different potential, caused by placing a voltage across the air space that results in the ionization of the air space.

IEEE: Institute of Electrical and Electronics Engineers, Inc.

Vegetation Inspection: The systematic examination of a distribution corridor to document vegetation conditions.

Operating Voltage: The voltage level by which an electrical system is designated and to which certain operating characteristics of the system are related; also, the effective (root-mean-square) potential difference between any two conductors or between a conductor and the ground. The actual voltage of the circuit may vary somewhat above or below this value.

Rated Electrical Operating Conditions: The specified or reasonably anticipated conditions under which the electrical system or an individual electrical circuit is intended/ designed to operate.

Right-of-Way (ROW): A corridor of land on which electric lines may be located. The distribution owner may own the land in fee, own an easement, or have certain franchise, prescription, or license rights to construct and maintain lines.

Sustained Outage: The de-energized condition of a distribution line resulting from a fault or disturbance following an unsuccessful automatic reclosing sequence and/or unsuccessful manual reclosing procedure.

Distribution Line: A system of structures, wires, insulators and associated hardware that carry electric energy from one point to another in an electric power system. Lines are operated at relatively high voltages varying from 120 V up to 7.2 kV, and are capable of transmitting quantities of electricity over long distances.

Vegetation: All plant material, growing or not, living or dead.

Introduction

Purpose:

To improve the reliability of the electric distribution systems by preventing outages from vegetation located on distribution rights-of-way (ROW) and minimizing outages from vegetation located adjacent to ROW, maintaining clearances between distribution lines and vegetation on and along distribution ROW.

This standard is developed for all distribution lines operated at 7.2 kV and to any lower voltage lines designated by the Nolin Rural Electric Cooperative Corporation (RECC) as critical to the reliability of the electric system in the region.

Requirements:

- 1) Nolin RECC will periodically review, and keep current, the formal distribution vegetation management program. The review will include the evaluation of objectives, practices, approved procedures, work specifications, and evaluation of SAIDI, SAIFI, CAIDI, and CAIFI. The outage management system (OMS) will collect information from the automated meter reading (AMR) system, supervisory control and data acquisition (SCADA) and input from the on-duty dispatcher for evaluation.
- 2) The plan defines a schedule for ROW vegetation inspections. This schedule will be flexible enough to adjust for changing conditions. The inspection schedule is based on the anticipated growth of vegetation and any other environmental or operational factors that could impact the relationship of vegetation to the Nolin RECC's distribution lines.
- 3) Encourage public outreach to educate the public, in general, about the use and acceptance of vegetation management on rights-of-way.
- 4) Nolin RECC will, during initial installation, identify clearances between vegetation and any overhead, ungrounded supply conductors, taking into consideration the line voltage, the effects of ambient temperature on conductor sag under maximum design loading, the configuration and insulated value of the line, and the effects of wind velocities on conductor sway. Specifically, Nolin RECC will establish clearances to be achieved at the time of vegetation management work to maintain a set of clearances identified to prevent flashover between vegetation and overhead-ungrounded supply conductors. Nolin RECC shall determine appropriate clearance distances to be achieved at the time of distribution vegetation management work based upon: operating voltage, appropriate vegetation management techniques, fire risk, reasonably anticipated tree and conductor movement, species types and growth rates, species failure characteristics, local climate and rainfall patterns, line terrain and elevation, location of the vegetation within the span, and worker approach distance requirements.

- 5) Nolin RECC will determine specific radial clearances to be maintained between vegetation and conductors under all rated electrical operating conditions. These minimum clearance distances are necessary to prevent flashover between vegetation and conductors and may vary due to such factors as has been stated. Nolin RECC shall develop mitigation measures to achieve sufficient clearances for the protection of the distribution facilities when it identifies locations on the ROW where it is restricted from attaining the clearances specified in this Requirement.
- 6) All personnel directly involved in the design and implementation of the Vegetation Management Program shall hold appropriate qualifications and training, as defined by Nolin RECC, to perform their duties.
- 7) Nolin RECC shall establish a process for the communication of vegetation conditions that present an imminent threat of an outage to a distribution line. This is so action may be taken (temporary reduction in line's consumers, switching line out of service, etc.) until the threat is relieved.
- 8) Nolin RECC shall create and implement an annual plan for vegetation management work to ensure the reliability of the system. The plan shall describe the methods used, such as manual clearing, mechanical clearing, herbicide treatment, or other actions. The plan should be flexible enough to adjust to changing conditions, taking into consideration the anticipated growth of vegetation and other environmental factors that may have an impact on the reliability of the distribution systems. Adjustments to the plan shall be documented as they occur. The plan should take into consideration the time required to obtain permissions or permits from landowners or regulatory authorities. Each procedure for documenting and tracking the planned vegetation management work and ensuring that the vegetation management work was completed according to work specifications.

Compliance to the Requirements

1. The overall 'Vegetation Management Plan' will be evaluated annually to establish the progress of the plans' past year improvement against prior years. The comparison will include outage data of specific feeders, overall system outages, record keeping process of outage tickets, time response to outage lengths, comparison of funds to lines lengths and type of work done, and AMR's blink reports. Each year the progress of the plan will be evaluated; deviations, deficiencies or improvements will be made for the following year, and work procedures will be considered.
2. The inspection and right of clearing schedule will be 3 years in dense housing areas (approximately 14 consumers per mile), fast growing tree (locust, sycamore etc.) areas and in areas where trimming maybe limited (historic sites, national forest, and sensitive environmental areas). Other areas will be on the normal 5-year cycle.
3. An article describing the need for right of way maintenance, safety issues associated with live electric lines and trees, and proper tree selection for planting near electric lines will be mailed to all consumer's service address.
4. During System inspection, employees working on existing facilities will make calls to the dispatcher about tree trimming or removal of trouble areas that may not comply with the RUS standard that is set forth in M1.30G "Right of way clearing guide" and standards set by the National Electrical Safety Code in Section 23. If no imminent danger exists, the dispatcher will generate a Work Order Ticket for the correction of the problem.
5. Staking sheets will have notes associated for tree trimming or removal with dimensions from the centerline of the line construction. The notes will remain with the staking sheets throughout the construction phase and final inspection of the jobs. The dimensions will comply with the RUS standard that is set forth in M1.30G "Right of way clearing guide" and standards set in the National Electrical Safety Code in Section 23.
6. Employees will have annual training on the RUS standards and National Electrical Safety Code relating to line construction and safety issues.
7. The dispatcher will be available 24 hours a day to take calls, make work order tickets, and dispatch employees for imminent danger of hazards to the public.
8. An overall system map will be color coded for work to be done each year. The map will be a base for planning and an estimate for budget numbers. The cost of various methods right of way control will be used as the land and environment dictate. Each year, during the planning period, an evaluation of outages and outages data will be used to set an estimated budget number. During the Budget planning, a dollar figure will be set aside for the various methods of right of way control. The areas, as budget permits, will be designated as to method and length of lines to be done.