



Meade County RECC

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5/14/14

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PUBLIC SERVICE
COMMISSION

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

To Whom it May Concern,

Attached is the revised annual reliability report for 2013 for Meade County RECC containing the PSC's new format and requirements. If you should have any questions or concerns, you may contact me at (270) 422-2162.

Sincerely,

David R. Poe, P.E.
Vice President of Operations & Engineering

KENTUCKY PUBLIC SERVICE COMMISSION

Electric Distribution Utility Annual Reliability Report

SECTION 1: CONTACT INFORMATION

UTILITY NAME	Meade County RECC
REPORT PREPARED BY	David Poe
E-MAIL ADDRESS OF PREPARER	DPoe@MCRECC.COM
PHONE NUMBER OF PREPARER	(270) 422-2162

SECTION 2: REPORTING YEAR

CALENDAR YEAR OF REPORT	2013
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SECTION 3: MAJOR EVENT DAYS (MED)

T_{MED}	9.48
FIRST DATE USED TO DETERMINE T_{MED}	1-Jan-10
LAST DATE USED TO DETERMINE T_{MED}	31-Dec-12
NUMBER OF MED IN REPORT YEAR	3

NOTE: Per IEEE 1366 T_{MED} should be calculated using the daily SAIDI values for the five prior years. If five years of data are not available, then utilities should use what is available until five years are accumulated.

SECTION 4: SYSTEM RELIABILITY INFORMATION AND RESULTS

System-wide Information

TOTAL CUSTOMERS	<u>29,263</u>	TOTAL CIRCUITS	<u>68</u>
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Excluding MED

	5 YEAR AVERAGE		REPORTING YEAR
SAIDI	<u>92.44</u>	SAIDI	<u>96.96</u>
SAIFI	<u>1.32425</u>	SAIFI	<u>1.411</u>

Including MED

	5 YEAR AVERAGE		REPORTING YEAR
SAIDI	<u>202.13559</u>	SAIDI	<u>146.011</u>
SAIFI	<u>2.36981</u>	SAIFI	<u>1.641</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 T_{MED}

KENTUCKY PUBLIC SERVICE COMMISSION

SECTION 5: CIRCUIT REPORTING

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

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #1:

1. Andyville Substation
2. One mile Northwest of Andyville on Hwy 228 in Meade County
3. Feeder 3 (St. Theresa's circuit)
4. West along Hwy 144 towards St. Theresa's Church
5. TOTAL CIRCUIT LENGTH: 60.2 miles
6. CUSTOMER COUNT FOR THIS CIRCUIT: 443 active meters
7. DATE OF LAST CIRCUIT TRIM: 2009

8

<u>Cause</u>	<u>Active Customers</u>	<u>Outage Count</u>	<u>Outage Customers</u>	<u>Outage Incidents</u>	<u>Outage Duration Minutes</u>	<u>SAIFI</u>	<u>SAIDI</u>
Power Supplier	443	1	436	436	2,180	0.9842	4.9210
Trees out of R/W	443	3	91	102	7,603	0.2303	17.1625
Storms	443	5	15	25	7,123	0.0564	16.0790
Unknown	443	4	18	18	961	0.0406	2.1693
Birds/Animals	443	2	18	18	1,317	0.0406	2.9729
Pre-Arranged	443	2	4	8	856	0.0181	1.9323

9. CIRCUIT 5 YEAR AVERAGE (SAIDI): 37.2324
10. REPORTING YEAR (SAIDI): 45.2370
11. CIRCUIT 5 YEAR AVERAGE (SAIFI): 0.8657
12. REPORTING YEAR (SAIFI): 1.3702
13. LIST OF CORRECTIVE ACTION, IF ANY, TAKEN OR TO BE TAKEN: None

KENTUCKY PUBLIC SERVICE COMMISSION

SECTION 5: CIRCUIT REPORTING

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

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #2:

1. Battletown Substation
2. Approximately 2 miles north of Battletown along Hwy 228 in Meade County
3. Feeder 3 (Cedar Flats circuit)
4. North of Battletown substation along Hwy 228
5. TOTAL CIRCUIT LENGTH: 36.7 miles
6. CUSTOMER COUNT FOR THIS CIRCUIT: 155 active meters
- 7.. DATE OF LAST CIRCUIT TRIM (VM): 2010

8

<u>Cause</u>	<u>Active Customers</u>	<u>Outage Count</u>	<u>Outage Customers</u>	<u>Outage Incidents</u>	<u>Outage Duration Minutes</u>	<u>SAIFI</u>	<u>SAIDI</u>
Power Supplier	155	2	152	300	8,056	1.9355	51.9742
Public Cause	155	1	150	150	30,150	0.9677	194.5161
Pre-Arranged	155	4	15	15	1,585	0.0968	10.2258
Trees out of R/W	155	2	12	12	1,416	0.0774	9.1355
Unknown	155	1	1	1	125	0.0065	0.8065
Birds/Animals	155	1	1	1	96	0.0065	0.6194
Storms	155	1	1	1	53	0.0065	0.3419

9. CIRCUIT 5 YEAR AVERAGE (SAIDI): 77.6512
10. REPORTING YEAR (SAIDI): 267.6194
11. CIRCUIT 5 YEAR AVERAGE (SAIFI): 0.7487
12. REPORTING YEAR (SAIFI): 3.0968
13. LIST OF CORRECTIVE ACTION, IF ANY, TAKEN OR TO BE TAKEN: None. Public cause exhibited high SAIDI due to car striking three-phase pole.

KENTUCKY PUBLIC SERVICE COMMISSION

SECTION 5: CIRCUIT REPORTING

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

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #3:

1. Brandenburg Substation
2. In Brandenburg along Old Ekron Road near the bypass in Meade County
3. Feeder 3 (Old Ekron Road circuit)
4. South from the substation along Old Ekron Road
5. TOTAL CIRCUIT LENGTH: 27.6 miles
6. CUSTOMER COUNT FOR THIS CIRCUIT: 459 active meters
- 7.. DATE OF LAST CIRCUIT TRIM: 2012

8

<u>Cause</u>	<u>Active Customers</u>	<u>Outage Count</u>	<u>Outage Customers</u>	<u>Outage Incidents</u>	<u>Outage Duration Minutes</u>	<u>SAIFI</u>	<u>SAIDI</u>
Storms	459	7	447	473	33,477	1.0305	72.9346
Birds/Animals	459	8	124	124	4,618	0.2702	10.0610
Line Hardware	459	1	41	41	2,788	0.0893	6.0741
Pre-Arranged	459	3	28	28	1,450	0.0610	3.1590
Unknown	459	2	27	27	1,051	0.0588	2.2898
Trees out of R/W	459	1	11	11	506	0.0240	1.1024
KVA	459	2	5	5	300	0.0109	0.6536
Conductor	459	2	4	4	212	0.0087	0.4619

9. CIRCUIT 5 YEAR AVERAGE (SAIDI): 17.2109
10. REPORTING YEAR (SAIDI): 96.7364
11. CIRCUIT 5 YEAR AVERAGE (SAIFI): 0.5987
12. REPORTING YEAR (SAIFI): 1.5534
13. LIST OF CORRECTIVE ACTION, IF ANY, TAKEN OR TO BE TAKEN: None

KENTUCKY PUBLIC SERVICE COMMISSION

SECTION 5: CIRCUIT REPORTING

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

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #4:

1. Custer Substation
2. Approximately 1/4 mile south of Custer in Breckinridge County
3. Feeder 2 (Dyer circuit)
4. South from the substation along Hwy 86 and then Hwy 401 to Hudson
5. TOTAL CIRCUIT LENGTH: 52.4 miles
6. CUSTOMER COUNT FOR THIS CIRCUIT: 390 active meters
- 7.. DATE OF LAST CIRCUIT TRIM: 2013

8

<u>Cause</u>	<u>Active Customers</u>	<u>Outage Count</u>	<u>Outage Customers</u>	<u>Outage Incidents</u>	<u>Outage Duration Minutes</u>	<u>SAIFI</u>	<u>SAIDI</u>
KVA	390	1	373	373	77,584	0.9564	198.9333
Unknown	390	7	29	56	4,703	0.1436	12.0590
Pre-Arranged	390	6	29	29	2,234	0.0744	5.7282
Storms	390	5	20	20	3,571	0.0513	9.1564
Birds/Animals	390	5	12	14	369	0.0359	0.9462
Trees out of R/W	390	1	8	8	1,592	0.0205	4.0821
Line Hardware	390	1	2	2	188	0.0051	0.4821
Conductor	390	1	1	1	62	0.0026	0.1590

9. CIRCUIT 5 YEAR AVERAGE (SAIDI): 21.9994
10. REPORTING YEAR (SAIDI): 231.5462
11. CIRCUIT 5 YEAR AVERAGE (SAIFI): 0.5085
12. REPORTING YEAR (SAIFI): 1.2897
13. LIST OF CORRECTIVE ACTION, IF ANY, TAKEN OR TO BE TAKEN: Transformer failed causing fault on one phase. New triple-single reclosure at the substation was not set correctly to open only one phase. Reprogrammed the reclosure control.

KENTUCKY PUBLIC SERVICE COMMISSION

SECTION 5: CIRCUIT REPORTING

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

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #5:

1. Custer Substation
2. Approximately 1/4 mile south of Custer in Breckinridge County
3. Feeder 3 (Hensley circuit)
4. North from substation along Hwy 86
5. TOTAL CIRCUIT LENGTH: 69.2 miles
6. CUSTOMER COUNT FOR THIS CIRCUIT: 546 active meters
- 7.. DATE OF LAST CIRCUIT TRIM: 2013

8

<u>Cause</u>	<u>Active Customers</u>	<u>Outage Count</u>	<u>Outage Customers</u>	<u>Outage Incidents</u>	<u>Outage Duration Minutes</u>	<u>SAIFI</u>	<u>SAIDI</u>
Storms	546	5	374	380	31,212	0.6960	57.1648
Unknown	546	6	168	217	13,671	0.3974	25.0385
Conductor	546	1	73	73	8,395	0.1337	15.3755
Pre-Arranged	546	7	62	68	3,320	0.1245	6.0806
Birds/Animals	546	5	32	32	2,018	0.0586	3.6960
KVA	546	1	4	4	832	0.0073	1.5238
Trees out of R/W	546	1	4	4	620	0.0073	1.1355
Cutouts/OCB	546	1	3	3	177	0.0055	0.3242
Public Cause	546	1	2	2	44	0.0037	0.0806

9. CIRCUIT 5 YEAR AVERAGE (SAIDI): 22.4201
10. REPORTING YEAR (SAIDI): 110.4194
11. CIRCUIT 5 YEAR AVERAGE (SAIFI): 0.7303
12. REPORTING YEAR (SAIFI): 1.4341
13. LIST OF CORRECTIVE ACTION, IF ANY, TAKEN OR TO BE TAKEN: None

KENTUCKY PUBLIC SERVICE COMMISSION

SECTION 5: CIRCUIT REPORTING

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

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #6:

1. Doe Valley substation
2. Approximately 3 miles east of Brandenburg along Hwy 1638 in Meade County
3. Feeder 1 (Rock Ridge circuit)
4. North of substation, primarily along Hwy 933 towards Brandenburg
5. TOTAL CIRCUIT LENGTH: 21.9 miles
6. CUSTOMER COUNT FOR THIS CIRCUIT: 445 active meters
- 7.. DATE OF LAST CIRCUIT TRIM: 2012

8

<u>Cause</u>	<u>Active Customers</u>	<u>Outage Count</u>	<u>Outage Customers</u>	<u>Outage Incidents</u>	<u>Outage Duration Minutes</u>	<u>SAIFI</u>	<u>SAIDI</u>
Birds/Animals	445	3	441	887	26,895	1.9933	60.4382
Public Cause	445	2	52	104	6,396	0.2337	14.3730
Unknown	445	2	38	38	1,875	0.0854	4.2135
Trees out of R/W	445	1	35	35	3,675	0.0787	8.2584
Pre-Arranged	445	3	21	21	1,040	0.0472	2.3371
Storms	445	2	11	11	313	0.0247	0.7034
KVA	445	1	2	2	236	0.0045	0.5303

9. CIRCUIT 5 YEAR AVERAGE (SAIDI): 43.2452
10. REPORTING YEAR (SAIDI): 90.8539
11. CIRCUIT 5 YEAR AVERAGE (SAIFI): 1.0675
12. REPORTING YEAR (SAIFI): 2.4674
13. LIST OF CORRECTIVE ACTION, IF ANY, TAKEN OR TO BE TAKEN: None. Squirrel shorted out reclosure, causing substantial damage. Covered reclosure terminals with animal guards.

KENTUCKY PUBLIC SERVICE COMMISSION

SECTION 5: CIRCUIT REPORTING

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

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT 7:

1. Doe Valley substation
2. Approximately 3 miles east of Brandenburg along Hwy 1638 in Meade County
3. Feeder 2 (Hwy 1638 and Gaines Road)
4. East from the substation along Hwy 1638 and south from the substation along Gaines Road
5. TOTAL CIRCUIT LENGTH: 25.7 miles
6. CUSTOMER COUNT FOR THIS CIRCUIT: 495 active meters
- 7.. DATE OF LAST CIRCUIT TRIM: 2012

8

<u>Cause</u>	<u>Active Customers</u>	<u>Outage Count</u>	<u>Outage Customers</u>	<u>Outage Incidents</u>	<u>Outage Duration Minutes</u>	<u>SAIFI</u>	<u>SAIDI</u>
Birds/Animals	495	7	493	1,012	29,881	2.0444	60.3657
Storms	495	5	78	110	13,044	0.2222	26.3515
Trees out of R/W	495	2	46	46	21,862	0.0929	44.1657
Unknown	495	1	23	23	1,564	0.0465	3.1596
Pre-Arranged	495	2	14	14	952	0.0283	1.9232
Public Cause	495	1	1	1	66	0.0020	0.1333

9. CIRCUIT 5 YEAR AVERAGE (SAIDI): 22.3913
10. REPORTING YEAR (SAIDI): 136.0990
11. CIRCUIT 5 YEAR AVERAGE (SAIFI): 0.8382
12. REPORTING YEAR (SAIFI): 2.4364
13. LIST OF CORRECTIVE ACTION, IF ANY, TAKEN OR TO BE TAKEN: Squirrel shorted out reclosure, causing substantial damage. Covered reclosure terminals with animal guards.

KENTUCKY PUBLIC SERVICE COMMISSION

SECTION 5: CIRCUIT REPORTING

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

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #8:

1. Doe Valley substation
2. Approximately 3 miles east of Brandenburg along Hwy 1638 in Meade County
3. Feeder 3 (Old Weldon circuit)
4. West from substation along Hwy 1638, into Doe Valley Resort, then cross-country west to Old Weldon
5. TOTAL CIRCUIT LENGTH: 20.5 miles
6. CUSTOMER COUNT FOR THIS CIRCUIT: 447 active meters
- 7.. DATE OF LAST CIRCUIT TRIM: 2012

8

<u>Cause</u>	<u>Active Customers</u>	<u>Outage Count</u>	<u>Outage Customers</u>	<u>Outage Incidents</u>	<u>Outage Duration Minutes</u>	<u>SAIFI</u>	<u>SAIDI</u>
Birds/Animals	447	5	447	893	26,416	1.9978	59.0962
Pre-Arranged	447	4	45	52	8,329	0.1163	18.6331
Storms	447	3	21	21	1,454	0.0470	3.2528
Line Hardware	447	1	21	21	2,079	0.0470	4.6510

9. CIRCUIT 5 YEAR AVERAGE (SAIDI): 15.5350
10. REPORTING YEAR (SAIDI): 85.6331
11. CIRCUIT 5 YEAR AVERAGE (SAIFI): 0.6837
12. REPORTING YEAR (SAIFI): 2.2081
13. LIST OF CORRECTIVE ACTION, IF ANY, TAKEN OR TO BE TAKEN: Squirrel shorted out reclosure, causing substantial damage. Covered reclosure terminals with animal guards.

KENTUCKY PUBLIC SERVICE COMMISSION

SECTION 5: CIRCUIT REPORTING

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

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #9:

1. Falls of Rough substation
2. Approximately 1 mile west of Hwy 79 along Hwy 110 in Grayson County
3. Feeder 2 (South 79 circuit)
4. South along Hwy 79 from Hwy 110 towards Short Creek
5. TOTAL CIRCUIT LENGTH: 31.4 miles
6. CUSTOMER COUNT FOR THIS CIRCUIT: 207 active meters
- 7.. DATE OF LAST CIRCUIT TRIM: 2010

8

<u>Cause</u>	<u>Active Customers</u>	<u>Outage Count</u>	<u>Outage Customers</u>	<u>Outage Incidents</u>	<u>Outage Duration Minutes</u>	<u>SAIFI</u>	<u>SAIDI</u>
Pre-Arranged	207	7	198	236	5,011	1.1401	24.2077
Unknown	207	6	22	34	1,790	0.1643	8.6473
KVA	207	1	9	9	468	0.0435	2.2609
Storms	207	1	9	9	918	0.0435	4.4348
Trees in R/W	207	1	3	3	705	0.0145	3.4058
Birds/Animals	207	1	1	1	24	0.0048	0.1159

9. CIRCUIT 5 YEAR AVERAGE (SAIDI): 32.4355
10. REPORTING YEAR (SAIDI): 43.0725
11. CIRCUIT 5 YEAR AVERAGE (SAIFI): 0.5180
12. REPORTING YEAR (SAIFI): 1.4106
13. LIST OF CORRECTIVE ACTION, IF ANY, TAKEN OR TO BE TAKEN: A huge amount of copper conductor is being changed out. Work is scheduled to continue into 2015.

KENTUCKY PUBLIC SERVICE COMMISSION

SECTION 5: CIRCUIT REPORTING

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

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #10:

1. Fordsville substation
2. Approximately 1 mile east of Fordsville along Hwy 54 in Ohio County
3. Feeder 2 (Hwy 261 North circuit)
4. North along Hwy 261 from Hwy 54 towards McQuady
5. TOTAL CIRCUIT LENGTH: 69.3 miles
6. CUSTOMER COUNT FOR THIS CIRCUIT: 349 active meters
- 7.. DATE OF LAST CIRCUIT TRIM: 2009

8

<u>Cause</u>	<u>Active Customers</u>	<u>Outage Count</u>	<u>Outage Customers</u>	<u>Outage Incidents</u>	<u>Outage Duration Minutes</u>	<u>SAIFI</u>	<u>SAIDI</u>
Storms	349	5	346	465	70,300	1.3324	201.4327
Birds/Animals	349	1	305	305	28,365	0.8739	81.2751
Pre-Arranged	349	2	44	44	3,940	0.1261	11.2894
Trees in R/W	349	1	4	4	380	0.0115	1.0888
Unknown	349	1	2	2	120	0.0057	0.3438

9. CIRCUIT 5 YEAR AVERAGE (SAIDI): 80.3338
10. REPORTING YEAR (SAIDI): 295.4298
11. CIRCUIT 5 YEAR AVERAGE (SAIFI): 1.1218
12. REPORTING YEAR (SAIFI): 2.3496
13. LIST OF CORRECTIVE ACTION, IF ANY, TAKEN OR TO BE TAKEN

KENTUCKY PUBLIC SERVICE COMMISSION

SECTION 5: CIRCUIT REPORTING

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

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #11:

1. Garrett substation
2. South edge of Garrett on Hwy 144 in Meade County
3. Feeder 1 (Ekron/Buck Grove Road circuit)
4. North and then west from station along Hwy 144 to Ekron and also east along Buck Grove Road
5. TOTAL CIRCUIT LENGTH: 30.5 miles
6. CUSTOMER COUNT FOR THIS CIRCUIT: 497 active meters
- 7.. DATE OF LAST CIRCUIT TRIM: 2010

8

<u>Cause</u>	<u>Active Customers</u>	<u>Outage Count</u>	<u>Outage Customers</u>	<u>Outage Incidents</u>	<u>Outage Duration Minutes</u>	<u>SAIFI</u>	<u>SAIDI</u>
Line Hardware	497	3	492	1,451	154,555	2.9195	310.9759
Storms	497	7	77	77	3,778	0.1549	7.6016
Pre-Arranged	497	1	30	30	1,950	0.0604	3.9235
Birds/Animals	497	3	32	32	1,331	0.0644	2.6781
Trees in R/W	497	2	10	10	455	0.0201	0.9155
Unknown	497	2	8	8	436	0.0161	0.8773
Cutouts/OCB	497	2	3	3	431	0.0060	0.8672
KVA	497	1	10	10	380	0.0201	0.7646
Public Cause	497	1	1	1	34	0.0020	0.0684

9. CIRCUIT 5 YEAR AVERAGE (SAIDI): 46.6928
10. REPORTING YEAR (SAIDI): 328.6720
11. CIRCUIT 5 YEAR AVERAGE (SAIFI): 1.1339
12. REPORTING YEAR (SAIFI): 3.2636
13. LIST OF CORRECTIVE ACTION, IF ANY, TAKEN OR TO BE TAKEN: None. Insulator failed in the substation.

KENTUCKY PUBLIC SERVICE COMMISSION

SECTION 5: CIRCUIT REPORTING

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

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #12:

1. Garrett substation
2. South edge of Garrett on Hwy 144 in Meade County
3. Feeder 2 (Johnstown circuit)
4. North from substation towards Brandenburg
5. TOTAL CIRCUIT LENGTH: 10.8 miles
6. CUSTOMER COUNT FOR THIS CIRCUIT: 159 active meters
- 7.. DATE OF LAST CIRCUIT TRIM: 2010

8

<u>Cause</u>	<u>Active Customers</u>	<u>Outage Count</u>	<u>Outage Customers</u>	<u>Outage Incidents</u>	<u>Outage Duration Minutes</u>	<u>SAIFI</u>	<u>SAIDI</u>
Line Hardware	159	2	156	311	32,471	1.9560	204.2201
Storms	159	2	61	61	3,705	0.3837	23.3019
Pre-Arranged	159	2	6	6	684	0.0377	4.3019

9. CIRCUIT 5 YEAR AVERAGE (SAIDI): 38.8237
10. REPORTING YEAR (SAIDI): 231.8239
11. CIRCUIT 5 YEAR AVERAGE (SAIFI): 0.5868
12. REPORTING YEAR (SAIFI): 2.3774
13. LIST OF CORRECTIVE ACTION, IF ANY, TAKEN OR TO BE TAKEN: None. Insulator failed in the substation.

KENTUCKY PUBLIC SERVICE COMMISSION

SECTION 5: CIRCUIT REPORTING

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

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #13:

1. Garrett substation
2. South edge of Garrett on Hwy 144 in Meade County
3. Feeder 3 (Hobbs/Reesor Road circuit)
4. East from substation along Hwy 1238 and then south along Hobbs/Reesor Road
5. TOTAL CIRCUIT LENGTH: 45.6 miles
6. CUSTOMER COUNT FOR THIS CIRCUIT: 862
- 7.. DATE OF LAST CIRCUIT TRIM: 45.6 miles

8

<u>Cause</u>	<u>Active Customers</u>	<u>Outage Count</u>	<u>Outage Customers</u>	<u>Outage Incidents</u>	<u>Outage Duration Minutes</u>	<u>SAIFI</u>	<u>SAIDI</u>
Line Hardware	862	3	849	1,677	179,454	1.9455	208.1833
Conductor	862	1	837	837	107,136	0.9710	124.2877
Storms	862	7	109	109	7,319	0.1265	8.4907
Unknown	862	7	112	134	6,457	0.1555	7.4907
Birds/Animals	862	14	49	111	5,593	0.1288	6.4884
Trees in R/W	862	2	26	26	1,506	0.0302	1.7471
Pre-Arranged	862	4	32	32	1,406	0.0371	1.6311
KVA	862	1	2	2	66	0.0023	0.0766
Broken Pole	862	1	1	1	46	0.0012	0.0534

9. CIRCUIT 5 YEAR AVERAGE (SAIDI): 112.4678
10. REPORTING YEAR (SAIDI): 358.4490
11. CIRCUIT 5 YEAR AVERAGE (SAIFI): 1.9994
12. REPORTING YEAR (SAIFI): 3.3979
13. LIST OF CORRECTIVE ACTION, IF ANY, TAKEN OR TO BE TAKEN: None. Insulator failed in the substation.

KENTUCKY PUBLIC SERVICE COMMISSION

SECTION 5: CIRCUIT REPORTING

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

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #14:

1. Hardinsburg 2 substation
2. West edge of Hardinsburg along Hwy 992 in Breckinridge County
3. Feeder 1 (Hwy 261 South)
4. East from substation cross country to Hwy 261 and then south to McQuady
5. TOTAL CIRCUIT LENGTH: 93.2 miles
6. CUSTOMER COUNT FOR THIS CIRCUIT: 652 active meters
- 7.. DATE OF LAST CIRCUIT TRIM: 2011

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<u>Cause</u>	<u>Active Customers</u>	<u>Outage Count</u>	<u>Outage Customers</u>	<u>Outage Incidents</u>	<u>Outage Duration Minutes</u>	<u>SAIFI</u>	<u>SAIDI</u>
Storms	652	4	70	156	38,305	0.2393	58.7500
Unknown	652	5	638	704	37,202	1.0798	57.0583
Power Supplier	652	1	639	639	21,087	0.9801	32.3420
Cutouts/OCB	652	1	22	22	2,156	0.0337	3.3068
Broken Pole	652	1	11	11	1,936	0.0169	2.9693
Pre-Arranged	652	2	20	20	1,078	0.0307	1.6534
Birds/Animals	652	2	25	25	1,039	0.0383	1.5936
Line Hardware	652	1	13	13	572	0.0199	0.8773
Trees in R/W	652	1	10	10	410	0.0153	0.6288
Trees out of R/W	652	2	3	3	214	0.0046	0.3282
KVA	652	1	1	1	134	0.0015	0.2055

9. CIRCUIT 5 YEAR AVERAGE (SAIDI): 43.5449
10. REPORTING YEAR (SAIDI): 159.7132
11. CIRCUIT 5 YEAR AVERAGE (SAIFI): 1.0808
12. REPORTING YEAR (SAIFI): 2.4601
13. LIST OF CORRECTIVE ACTION, IF ANY, TAKEN OR TO BE TAKEN: None

KENTUCKY PUBLIC SERVICE COMMISSION

SECTION 6: VEGETATION MANAGEMENT PLAN REVIEW

INCLUDE CURRENT VEGETATION MANAGEMENT PLAN

Additional page may be attached as needed.

With SAIDI values of 0.222 and 3.987 minutes (trees-in and trees-out of the ROW respectively), vegetation is not deemed a concerning contributing factor in 2013. The planned substation trimming schedules for 2013 were completed and no changes are anticipated in the vegetation management plan for 2014.

SECTION 7: UTILITY COMMENTS

Meade County RECC converted to a new Outage Management System (OMS) in 2010. Because of the noticeable manner and precision the outages are now tracked versus the prior method and due to the massive effort required to convert the old data into the new OMS, the Tmed, average, and standard deviation calculations and other comparisons are performed only for the years of 2010 through 2013.

The most prominent issues during 2013 were the failure of an insulator in the Garrett substation and an animal in the Doe Valley substation. In both cases the substation tripped out causing high SAIDI and SAIFI numbers. Further inspection did not uncover any other deficiencies in either substation.

The replacement of old copper conductor is ongoing. Outages due to conductor failure have greatly declined over the years of this endeavor. This initiative is scheduled to be complete near the end of 2015. This work has increased the number of 'Pre-arranged' outages substantially, especially in the Falls of Rough substation area where much of the work is occurring.