

KENTUCKY PUBLIC SERVICE COMMISSION

Electric Distribution Utility Annual Reliability Report

SECTION 1: CONTACT INFORMATION

UTILITY NAME	Meade County RECC
REPORT PREPARED BY	Michael French
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SECTION 2: REPORTING YEAR

CALENDAR YEAR OF REPORT	2023
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SECTION 3: MAJOR EVENT DAYS (MED)

TMED	6.85058
ST DATE USED TO DETERMINE TMED	1/1/2018
ST DATE USED TO DETERMINE TMED	12/31/2022
NUMBER OF MED IN REPORT YEAR	9

NOTE: Per IEEE 1366 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 are accumulated.

SECTION 4: SYSTEM RELIABILITY INFORMATION AND RESULTS

System-wide Information

TOTAL CUSTOMERS	<u>31232</u>	TOTAL CIRCUITS	<u>86</u>
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5 YEAR AVERAGE

AIDI	<u>90.23</u>
AIFI	<u>0.96</u>

Excluding MED

REPORTING YEAR

SAIDI	<u>98.7050940114841</u>
SAIFI	<u>0.97</u>

5 YEAR AVERAGE

AIDI	<u>209.49</u>
AIFI	<u>1.24</u>

Including MED

REPORTING YEAR

SAIDI	<u>634.734297873975</u>
SAIFI	<u>1.92</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

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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 #1

1. SUBSTATION NAME AND NUMBER HARDINSBURG1

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

Behind MCRECC's Hardinsburg Office

3. CIRCUIT NAME AND NUMBER

Feeder 8

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

SE through Hardinsburg, then along Hooks Ln and Tules Creek Rd

5. TOTAL CIRCUIT LENGTH (MILES)

17.55

6. CUSTOMER COUNT FOR THIS CIRCUIT

572

7. DATE OF LAST CIRCUIT TRIM (VM)

2020

8. Cause	Count	Percentage	Customer-Hours	Customer-Count	SAIDI	SAIFI
Storms	1	3.85	334.65	23	35.35	0.04
Birds/Animals	4	15.38	52.93	42	5.59	0.07
Pre-Arranged	16	61.54	48.57	53	5.11	0.09
Line Hardware	1	3.85	41.18	63	4.34	0.11
Cutouts/OCB	1	3.85	22.96	10	2.41	0.02

9. CIRCUIT 5 YEAR AVERAGE (SAIDI) 13.95

10. REPORTING YEAR (SAIDI) 55.76

11. CIRCUIT 5 YEAR AVERAGE (SAIFI) 0.27

12. REPORTING YEAR (SAIFI) 0.36

13. CORRECTIVE ACTION PLAN

On 9/28/23, a storm blew a fuse causing 23 members to be without power for 14.5 hours while crews repaired damage.

Relatively high reliably feeder and substation; therefore no action is deemed necessary.

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. SUBSTATION NAME AND NUMBER HARDINSBURG1
2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)
Behind MCRECC's Hardinsburg Office
3. CIRCUIT NAME AND NUMBER
Feeder 6
4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)
SE through Hardinsburg, then along Fairgrounds Rd
5. TOTAL CIRCUIT LENGTH (MILES)
5.97
6. CUSTOMER COUNT FOR THIS CIRCUIT
269
7. DATE OF LAST CIRCUIT TRIM (VM)
2020

8. Cause	Count	Percentage	Customer-Hours	Customer-Count	SAIDI	SAIFI
Storms	2	25	627.81	313	140.03	1.16
Pre-Arranged	3	37.5	9.43	9	2.1	0.03

9. CIRCUIT 5 YEAR AVERAGE (SAIDI) 28.46
10. REPORTING YEAR (SAIDI) 142.13
11. CIRCUIT 5 YEAR AVERAGE (SAIFI) 0.8
12. REPORTING YEAR (SAIFI) 1.2
13. CORRECTIVE ACTION PLAN

On 9/28/23, a storm outaged the feeder for approximately 1.5 hours while crews repaired damage.

On 9/28/23, a storm blew a downline fuse causing 43 members to be outaged for approximately 4 hours while crews repaired damage.

Relatively high reliably feeder and substation; therefore no action is deemed necessary.

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. SUBSTATION NAME AND NUMBER GARRETT
- 2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)
On south end of Garrett along Hwy 144 in Meade County
- 3. CIRCUIT NAME AND NUMBER
Feeder 4
- 4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)
S Hwy 333, Hwy 60, Hobbs Reeser Rd, Osbourne Rd.
- 5. TOTAL CIRCUIT LENGTH (MILES)
23.69
- 6. CUSTOMER COUNT FOR THIS CIRCUIT
514
- 7. DATE OF LAST CIRCUIT TRIM (VM)
2020

8. Cause	Count	Percentage	Customer-Hours	Customer-Count	SAIDI	SAIFI
Storms	3	10	719.91	710	84.53	1.39
Major Storms	2	6.67	60.37	7	7.09	0.01
Unknown	4	13.33	48.1	61	5.63	0.12
Pre-Arranged	10	33.33	25.51	19	2.98	0.04
Trees in R/W	1	3.33	20.71	13	2.42	0.03

- 9. CIRCUIT 5 YEAR AVERAGE (SAIDI) 33.34
- 10. REPORTING YEAR (SAIDI) 104.4
- 11. CIRCUIT 5 YEAR AVERAGE (SAIFI) 0.44
- 12. REPORTING YEAR (SAIFI) 1.62
- 13. CORRECTIVE ACTION PLAN

On 4/30/23, a storm with high winds caused a recloser to lockout downline causing 199 members to be outaged for approximately 1 hour.

On 7/5/23, a storm caused a tree to fall onto a line outaging the entire feeder for approximately 1 hour.

Relatively high reliably feeder and substation; therefore no action is deemed necessary.

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. SUBSTATION NAME AND NUMBER CLOVERPORT

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)
 Hwy 60 to Cloverport, turn on U.S. 60 Business into Cloverport then turn on L.M. Basham Road.

3. CIRCUIT NAME AND NUMBER
 Feeder 4

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)
 West side of town

5. TOTAL CIRCUIT LENGTH (MILES)
 5.55

6. CUSTOMER COUNT FOR THIS CIRCUIT
 260

7. DATE OF LAST CIRCUIT TRIM (VM)
 2023

8. Cause	Count	Percentage	Customer-Hours	Customer-Count	SAIDI	SAIFI
Trees out of R/	1	7.14	136.94	38	31.72	0.15
Pre-Arranged	4	28.57	28.03	266	6.47	1.02
Storms	2	14.29	15.82	18	3.67	0.07
Trees in R/W	1	7.14	15.09	5	3.57	0.02
Birds/Animals	3	21.43	10.8	9	2.49	0.03

9. CIRCUIT 5 YEAR AVERAGE (SAIDI) 30.01

10. REPORTING YEAR (SAIDI) 47.69

11. CIRCUIT 5 YEAR AVERAGE (SAIFI) 0.35

12. REPORTING YEAR (SAIFI) 1.29

13. CORRECTIVE ACTION PLAN

On 7/8/23, a tree out of ROW fell onto a line blowing a downline fuse. This outaged 38 members for approximately 3.5 hours. Storms had been in the area earlier.

The substation ROW was trimmed in 2023. Relatively high reliably feeder. No further action is deemed necessary.

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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 #5

1. SUBSTATION NAME AND NUMBER CENTERVIEW

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

Approximately 500 ft. North of the intersection of Hwy 401 and Mook-Centerview Rd.

3. CIRCUIT NAME AND NUMBER

Feeder 4

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

NE Hwy 401

5. TOTAL CIRCUIT LENGTH (MILES)

32.15

6. CUSTOMER COUNT FOR THIS CIRCUIT

228

7. DATE OF LAST CIRCUIT TRIM (VM)

2022

8. Cause	Count	Percentage	Customer-Hours	Customer-Count	SAIDI	SAIFI
Storms	4	22.22	947.94	671	255.05	3.01
Birds/Animals	1	5.56	373.7	222	101	1
Pre-Arranged	6	33.33	28.47	21	7.46	0.09
Major Storms	1	5.56	5.94	2	1.61	0.01
Public Cause	2	11.11	5.91	2	1.55	0.01

9. CIRCUIT 5 YEAR AVERAGE (SAIDI) 61.37

10. REPORTING YEAR (SAIDI) 359.36

11. CIRCUIT 5 YEAR AVERAGE (SAIFI) 1.01

12. REPORTING YEAR (SAIFI) 4.04

13. CORRECTIVE ACTION PLAN

On 2/16/23, a lighting storm outaged the feeder 3 times for approximately 4 hours total.

Relatively high reliably feeder and substation; therefore no action is deemed necessary.

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. SUBSTATION NAME AND NUMBER FORTAVENUE

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)
Approximately 2 miles north of the intersection of Hwy 313 and Ky-1882 (Fort Ave)

3. CIRCUIT NAME AND NUMBER
Feeder 3

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)
S Fort Ave, Hwy 313

5. TOTAL CIRCUIT LENGTH (MILES)
18.91

6. CUSTOMER COUNT FOR THIS CIRCUIT
386

7. DATE OF LAST CIRCUIT TRIM (VM)
2020

8. Cause	Count	Percentage	Customer-Hours	Customer-Count	SAIDI	SAIFI
Storms	1	3.23	118.95	65	18.73	0.17
Pre-Arranged	14	45.16	97.14	61	15.14	0.16
Birds/Animals	4	12.9	60.1	79	9.37	0.21
Trees out of R/2	2	6.45	35.05	25	5.52	0.07
Unknown	1	3.23	9.54	13	1.48	0.03

9. CIRCUIT 5 YEAR AVERAGE (SAIDI) 14.08

10. REPORTING YEAR (SAIDI) 51.79

11. CIRCUIT 5 YEAR AVERAGE (SAIFI) 0.2

12. REPORTING YEAR (SAIFI) 0.65

13. CORRECTIVE ACTION PLAN

On 7/8/23, a storm caused a fuse to blow downline outaging 65 members for approximately 2 hours.

Relatively high reliably feeder and substation; therefore no action is deemed necessary.

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. SUBSTATION NAME AND NUMBER ANDYVILLE
- 2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)
Approximately 500 ft. N of the intersection of Hwy 144 and Hwy 228
- 3. CIRCUIT NAME AND NUMBER
Feeder 3
- 4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)
West Hwy 144, Hwy 259
- 5. TOTAL CIRCUIT LENGTH (MILES)
61.48
- 6. CUSTOMER COUNT FOR THIS CIRCUIT
461
- 7. DATE OF LAST CIRCUIT TRIM (VM)
2019

8. Cause	Count	Percentage	Customer-Hours	Customer-Count	SAIDI	SAIFI
Storms	4	10	1710.33	471	224.06	1.03
Trees out of R/3	3	7.5	586.85	182	76.55	0.4
Major Storms	1	2.5	125.36	2	16.6	0
Pre-Arranged	14	35	88.37	53	11.48	0.11
Line Hardware	3	7.5	66.17	90	8.61	0.2

- 9. CIRCUIT 5 YEAR AVERAGE (SAIDI) 60.61
- 10. REPORTING YEAR (SAIDI) 344.89
- 11. CIRCUIT 5 YEAR AVERAGE (SAIFI) 0.85
- 12. REPORTING YEAR (SAIFI) 1.85
- 13. CORRECTIVE ACTION PLAN

On 5/31/23, a storm with high winds caused 3 three phase poles to break outaging the entire feeder for approximately 4 hours.

On 1/30/23, 8/19/23, and 8/21/23, 3 trees out of ROW caused 3 different downline reclosers to lock out outaging a total of 182 members to be without power for approximately 9 hours. Large trees and rough terrain in this area.

The substation ROW was trimmed in 2019. Relatively high reliably feeder.

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. SUBSTATION NAME AND NUMBER FORDSVILLE
- 2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)
Approximately 1 mile east of Fordsville along Hwy 54 in Ohio County
- 3. CIRCUIT NAME AND NUMBER
Feeder 2
- 4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)
Hwy 261 N
- 5. TOTAL CIRCUIT LENGTH (MILES)
72.25
- 6. CUSTOMER COUNT FOR THIS CIRCUIT
386
- 7. DATE OF LAST CIRCUIT TRIM (VM)
2019

8. Cause	Count	Percentage	Customer-Hours	Customer-Count	SAIDI	SAIFI
Storms	6	10.34	3891.91	1227	611.3	3.21
Trees out of R/6	6	10.34	3056.8	876	478.87	2.29
Public Cause	4	6.9	1914.73	517	300.74	1.35
Line Hardware	1	1.72	313.41	117.07	49.75	0.31
Pre-Arranged	15	25.86	212.36	120	33.01	0.31

- 9. CIRCUIT 5 YEAR AVERAGE (SAIDI) 113.42
- 10. REPORTING YEAR (SAIDI) 1470.37
- 11. CIRCUIT 5 YEAR AVERAGE (SAIFI) 0.94
- 12. REPORTING YEAR (SAIFI) 7.56
- 13. CORRECTIVE ACTION PLAN

On 2/9/23, 2/27/23, and 6/25/23 multiple storms with high winds outaged the entire feeder for a total of approximately 18 hours.

On 1/3/23 and 3/25/23 two separate trees out of ROW caused the entire feeder to be outaged for approximately 7.5 hours. Large trees and rough terrain in this area.

The substation ROW was trimmed in 2019. Relatively high reliability feeder.

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. SUBSTATION NAME AND NUMBER FLAHERTY

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)
North edge of Flaherty on a hill to the west of Hwy 144.

3. CIRCUIT NAME AND NUMBER
Feeder 2

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)
W Hwy 1600 (Saint Martins Rd) , South Hwy 333

5. TOTAL CIRCUIT LENGTH (MILES)
54.46

6. CUSTOMER COUNT FOR THIS CIRCUIT
756

7. DATE OF LAST CIRCUIT TRIM (VM)
2020

8. Cause	Count	Percentage	Customer-Hours	Customer-Count	SAIDI	SAIFI
Line Hardware	3	6.25	502.68	253	41.04	0.34
Birds/Animals	5	10.42	146.29	86	11.77	0.12
Storms	2	4.17	112.18	41	9.16	0.06
Trees in R/W	2	4.17	98.86	78	7.96	0.1
Pre-Arranged	14	29.17	32.32	22	2.57	0.03

9. CIRCUIT 5 YEAR AVERAGE (SAIDI) 35.3

10. REPORTING YEAR (SAIDI) 75.38

11. CIRCUIT 5 YEAR AVERAGE (SAIFI) 0.32

12. REPORTING YEAR (SAIFI) 0.71

13. CORRECTIVE ACTION PLAN

On 3/1/23, B phase wire came off an insulator locking out a downline recloser. This outaged 181 members for approximately 2.5 hours.

On 4/3/23, C phase wire came off an insulator locking our a downline recloser. This outaged 71 members for approximately 1 hour.

Relatively high reliably feeder and substation; therefore no action is deemed necessary.

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. SUBSTATION NAME AND NUMBER FORTAVENUE

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)
Approximately 2 miles north of the intersection of Hwy 313 and Ky-1882 (Fort Ave)

3. CIRCUIT NAME AND NUMBER
Feeder 1

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)
N Hwy 1882, W Hwy 1816, N Hwy 2726

5. TOTAL CIRCUIT LENGTH (MILES)
4.88

6. CUSTOMER COUNT FOR THIS CIRCUIT
57

7. DATE OF LAST CIRCUIT TRIM (VM)
2020

8. Cause	Count	Percentage	Customer-Hours	Customer-Count	SAIDI	SAIFI
Major Storms	3	17.65	44.01	3	47.15	0.05
Pre-Arranged	3	17.65	3.98	3	4.26	0.05

9. CIRCUIT 5 YEAR AVERAGE (SAIDI) 2.9

10. REPORTING YEAR (SAIDI) 50.51

11. CIRCUIT 5 YEAR AVERAGE (SAIFI) 0.03

12. REPORTING YEAR (SAIFI) 0.11

13. CORRECTIVE ACTION PLAN

A FEMA declared wind storm occurred from 3/3/23 to 3/6/23. These outages would be part of the storm that did not meet our TMED level days.

No action is deemed necessary.

KENTUCKY PUBLIC SERVICE COMMISSION

SECTION 6: VEGETATION MANAGEMENT PLAN REVIEW

INCLUDE CURRENT VEGETATION MANAGEMENT PLAN

Additional page may be attached as needed

Vegetation's contribution to Meade County RECC's reliability numbers continue to remain low. Trees in ROW events only contributed 0.0076 to SAIFI and 0.6462 to SAIDI. At this time, there is no anticipated change to the existing ROW program.

SECTION 7: UTILITY COMMENTS

Due to several storms this year Meade County RECC's reliability numbers increased slightly. As seen in most circuits above, storms is the main reason for all circuits to be included in the report. Meade County RECC reliability numbers outside of storms remains low.