

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	2021
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SECTION 3: MAJOR EVENT DAYS (MED)

TMED	7.78981
FIRST DATE USED TO DETERMINE TMED	1/1/2016
LAST DATE USED TO DETERMINE TMED	12/31/2020
NUMBER OF MED IN REPORT YEAR	2

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		TOTAL CIRCUITS	
	<u>30594</u>		<u>86</u>
Excluding MED			
5 YEAR AVERAGE		REPORTING YEAR	
SAIDI	<u>97.71</u>	SAIDI	<u>82.01</u>
SAIFI	<u>1.27</u>	SAIFI	<u>0.89</u>
Including MED			
5 YEAR AVERAGE		REPORTING YEAR	
SAIDI	<u>206.9</u>	SAIDI	<u>192.37</u>
SAIFI	<u>1.51</u>	SAIFI	<u>1.45</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 CLOVERPORT

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

Hwy 60 to Cloverport, turn on U.S. 60 Buisness into Cloverport then turn on L.M. Basham Road.

3. CIRCUIT NAME AND NUMBER

Feeder 5

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

North out of substation covering east part of town.

5. TOTAL CIRCUIT LENGTH (MILES)

4.36

6. CUSTOMER COUNT FOR THIS CIRCUIT

279

7. DATE OF LAST CIRCUIT TRIM (VM)

2018

8.	Cause	Count	Percentage	Customer-Hours	Customer-Count	SAIDI	SAIFI
	Trees out of R/W	1	16.67	270.97	278	57.86	0.99
	Storms	1	16.67	26.61	11	5.54	0.04
	Trees in R/W	2	33.33	23.9	30	5.03	0.11
	Birds/Animals	1	16.67	7.12	11	1.5	0.04
	Unknown	1	16.67	3.57	5	0.77	0.02

9. CIRCUIT 5 YEAR AVERAGE (SAIDI) 30.8

10. REPORTING YEAR (SAIDI) 71.44

11. CIRCUIT 5 YEAR AVERAGE (SAIFI) 0.3

12. REPORTING YEAR (SAIFI) 1.2

13. CORRECTIVE ACTION PLAN

On 5/9/21, strong winds caused a tree out of ROW to fall onto the line outaging the entire feeder for approximately 1 hour.

The substation ROW was trimmed in 2018 and was sprayed in 2019. Relatively high reliably feeder. No further action is deemed necessary.

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CIRCUIT #2

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 3

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

Southeast from sub along Hwy 144, Hwy 313, and Hwy 1600.

5. TOTAL CIRCUIT LENGTH (MILES)

22.65

6. CUSTOMER COUNT FOR THIS CIRCUIT

408

7. DATE OF LAST CIRCUIT TRIM (VM)

2020

8.	Cause	Count	Percentage	Customer-Hours	Customer-Count	SAIDI	SAIFI
	Public Cause	1	5.88	820.01	406	120.89	1
	Cutouts/OCB	1	5.88	737.39	406	108.18	0.99
	Trees out of R/W	1	5.88	125.71	65	18.4	0.16
	Birds/Animals	3	17.65	117.12	46	17.14	0.11
	Storms	5	29.41	76.12	55	11.19	0.13

9. CIRCUIT 5 YEAR AVERAGE (SAIDI) 85.02

10. REPORTING YEAR (SAIDI) 276.29

11. CIRCUIT 5 YEAR AVERAGE (SAIFI) 1.09

12. REPORTING YEAR (SAIFI) 2.41

13. CORRECTIVE ACTION PLAN

On 10/9/21, a tractor hit a guy wire breaking a three phase pole outaging the entire circuit for approximately 2 hours.

On 1/25/21, a downline recloser malfunctioned outaging the entire circuit for 1 hour. The malfunctioned recloser was changed out.

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

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

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #3

1. SUBSTATION NAME AND NUMBER FORDSVILLE

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

East along Hwy 54 from Fordsville, left onto Fordsville-Askins Rd., sub is on right.

3. CIRCUIT NAME AND NUMBER

Feeder 2

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

North along Hwy 261 towards Hardinsburg.

5. TOTAL CIRCUIT LENGTH (MILES)

70.4

6. CUSTOMER COUNT FOR THIS CIRCUIT

379

7. DATE OF LAST CIRCUIT TRIM (VM)

2019

8.	Cause	Count	Percentage	Customer-Hours	Customer-Count	SAIDI	SAIFI
	Birds/Animals	3	27.27	1531.9	376	250.45	1.02
	Unknown	1	9.09	108.95	86	17.67	0.23
	Trees out of R/W	2	18.18	66.77	33	10.71	0.09
	Storms	2	18.18	27.58	7	4.39	0.02
	KVA	1	9.09	1.35	1	0.21	0

9. CIRCUIT 5 YEAR AVERAGE (SAIDI) 106.54

10. REPORTING YEAR (SAIDI) 275.1

11. CIRCUIT 5 YEAR AVERAGE (SAIFI) 1.46

12. REPORTING YEAR (SAIFI) 1.33

13. CORRECTIVE ACTION PLAN

On 6/25/21, a beaver chewed through a tree out of ROW that fell onto a three phase line outaging the entire circuit for approximately 4 hours.

No further action is deemed necessary.

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

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #4

1. SUBSTATION NAME AND NUMBER CLUSTER
2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)
Hwy 86 just East of Custer.
3. CIRCUIT NAME AND NUMBER
Feeder 2
4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)
North following Hwy 690.
5. TOTAL CIRCUIT LENGTH (MILES)
56.65
6. CUSTOMER COUNT FOR THIS CIRCUIT
421
7. DATE OF LAST CIRCUIT TRIM (VM)
2018
8.

Cause	Count	Percentage	Customer-Hours	Customer-Count	SAIDI	SAIFI
Unknown	4	25	720.91	430	103.73	1.03
Birds/Animals	2	12.5	71.52	46	10.27	0.11
Trees out of R/W	2	12.5	13.81	7	1.99	0.02
Storms	1	6.25	10.28	1	1.48	0
Public Cause	1	6.25	10.26	9	1.46	0.02
9. CIRCUIT 5 YEAR AVERAGE (SAIDI) 28.5
10. REPORTING YEAR (SAIDI) 119.53
11. CIRCUIT 5 YEAR AVERAGE (SAIFI) 0.74
12. REPORTING YEAR (SAIFI) 1.2
13. CORRECTIVE ACTION PLAN

On 13/13/21, a high side fuse blew creating a 1 1/2 hour outage. No cause was found after a thorough investigation.

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

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CIRCUIT #5

1. SUBSTATION NAME AND NUMBER ANDYVILLE
2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)
Just North of the intersection of Hwy 144 and Hwy 228.
3. CIRCUIT NAME AND NUMBER
Feeder 2
4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)
East along Hwy 144 towards Payneville.
5. TOTAL CIRCUIT LENGTH (MILES)
49.33
6. CUSTOMER COUNT FOR THIS CIRCUIT
528
7. DATE OF LAST CIRCUIT TRIM (VM)
2019
8.

Cause	Count	Percentage	Customer-Hours	Customer-Count	SAIDI	SAIFI
Public Cause	1	7.14	661.57	223	74.61	0.42
Pre-Arranged	6	42.86	152.62	571	17.21	1.07
Trees out of R/W	2	14.29	15.72	12	1.78	0.02
KVA	1	7.14	11.74	6	1.33	0.01
Birds/Animals	2	14.29	8.86	11	1.01	0.02
9. CIRCUIT 5 YEAR AVERAGE (SAIDI) 34.44
10. REPORTING YEAR (SAIDI) 97.43
11. CIRCUIT 5 YEAR AVERAGE (SAIFI) 0.66
12. REPORTING YEAR (SAIFI) 1.57
13. CORRECTIVE ACTION PLAN

On 7/9/21, a car ran off the road and broke a 3 phase pole. Crews opened a switch downline partially outaging the feeder for approximately 3 hours.

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

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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 0.0145 to SAIFI and 1.5917 to SAIDI. Fortunately, Townsend has not fell behind due to shortage in manpower as all other industry has faced. At this time, there is no anticipated change to the existing ROW program.

SECTION 7: UTILITY COMMENTS

Meade County RECC's reliability numbers continue to decrease from previous years. Excluding the December tornado, weather was kind again in 2021 but most causes continue to show improvement. Public Cause is still concerning, particularly with distracted drivers