

# KENTUCKY PUBLIC SERVICE COMMISSION

## Electric Distribution Utility Annual Reliability Report

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### 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	2022
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### SECTION 3: MAJOR EVENT DAYS (MED)

TMED	6.8217
FIRST DATE USED TO DETERMINE TMED	1/1/2017
LAST DATE USED TO DETERMINE TMED	12/31/2021
NUMBER OF MED IN REPORT YEAR	2

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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.

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### SECTION 4: SYSTEM RELIABILITY INFORMATION AND RESULTS

#### System-wide Information

TOTAL CUSTOMERS	<u>30936</u>	TOTAL CIRCUITS	<u>86</u>
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#### Excluding MED

5 YEAR AVERAGE	REPORTING YEAR
SAIDI <u>90.47</u>	SAIDI <u>98.1317701782176</u>
SAIFI <u>1.05</u>	SAIFI <u>1.04</u>

#### Including MED

5 YEAR AVERAGE	REPORTING YEAR
SAIDI <u>200.9</u>	SAIDI <u>142.306271683475</u>
SAIFI <u>1.29</u>	SAIFI <u>1.17</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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# 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. SUBSTATION NAME AND NUMBER HARDINSBURG1

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)  
Behind MCRECC's Hardinsburg Office

3. CIRCUIT NAME AND NUMBER  
Feeder 4

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)  
NW through Hardinsburg, then North Hwy 261

5. TOTAL CIRCUIT LENGTH (MILES)  
42.46

6. CUSTOMER COUNT FOR THIS CIRCUIT  
367

7. DATE OF LAST CIRCUIT TRIM (VM)  
2020

8.	Cause	Count	Percentage	Customer-Hours	Customer-Count	SAIDI	SAIFI
	Pre-Arranged	9	56.25	700.22	371	114.17	1.01
	Unknown	1	6.25	337.33	368	55	1
	Storms	3	18.75	114.1	39	18.71	0.11
	Trees in R/W	1	6.25	22.24	11	3.66	0.03
	Birds/Animals	1	6.25	2.38	3	0.39	0.01

9. CIRCUIT 5 YEAR AVERAGE (SAIDI) 42.4

10. REPORTING YEAR (SAIDI) 192.45

11. CIRCUIT 5 YEAR AVERAGE (SAIFI) 0.72

12. REPORTING YEAR (SAIFI) 2.16

13. CORRECTIVE ACTION PLAN

On 10/12/22, a feeder was off for approximately 2 hours to change two poles. This was communicated to the members before the outage. No backfeed was available for these two poles. No further 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 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)  
South to intersection of Hwy 60 and Hwy 313, then East Hwy 60 (including South Hobbs Reesor Rd and Osbourne Road)
5. TOTAL CIRCUIT LENGTH (MILES) Osbourne Road  
23.4
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
	Birds/Animals	5	33.33	732.44	584	85.66	1.14
	Storms	3	20	69.4	33	8.12	0.06
	Unknown	2	13.33	21.88	36	2.6	0.07
	KVA	1	6.67	15.2	12	1.79	0.02
	Pre-Arranged	4	26.67	6.98	7	0.81	0.01

9. CIRCUIT 5 YEAR AVERAGE (SAIDI) 30.02
10. REPORTING YEAR (SAIDI) 98.74
11. CIRCUIT 5 YEAR AVERAGE (SAIFI) 0.85
12. REPORTING YEAR (SAIFI) 1.31
13. CORRECTIVE ACTION PLAN

On 9/10/22, a high side fuse blew due to a squirrel creating a 1 hour outage.

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 3

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)  
East along Hwy 1238, north along Bunger Rd, and south along Hobbs-Reesor Rd.)

5. TOTAL CIRCUIT LENGTH (MILES)  
18.68

6. CUSTOMER COUNT FOR THIS CIRCUIT  
736

7. DATE OF LAST CIRCUIT TRIM (VM)  
2020

8. Cause	Count	Percentage	Customer-Hours	Customer-Count	SAIDI	SAIFI
Birds/Animals	4	15.38	1034.72	771	84.7	1.05
Pre-Arranged	13	50	158.84	792	12.98	1.08
Storms	2	7.69	50.12	10	4.09	0.01
Unknown	2	7.69	39.37	30	3.23	0.04
Public Cause	1	3.85	31.27	38	2.55	0.05

9. CIRCUIT 5 YEAR AVERAGE (SAIDI) 65.69

10. REPORTING YEAR (SAIDI) 108.71

11. CIRCUIT 5 YEAR AVERAGE (SAIFI) 0.65

12. REPORTING YEAR (SAIFI) 2.24

13. CORRECTIVE ACTION PLAN

On 9/10/22, a high side fuse blew due to a squirrel creating a 1 hour outage.

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 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)

South along Fort Ave, then East along Flaherty Road

5. TOTAL CIRCUIT LENGTH (MILES)

18.91

6. CUSTOMER COUNT FOR THIS CIRCUIT

382

7. DATE OF LAST CIRCUIT TRIM (VM)

2020

8.	Cause	Count	Percentage	Customer-Hours	Customer-Count	SAIDI	SAIFI
	Storms	3	21.43	116.2	65	18.35	0.17
	Unknown	4	28.57	67.84	58	10.68	0.15
	Birds/Animals	4	28.57	41.88	46	6.59	0.12
	KVA	1	7.14	2.25	2	0.36	0.01
	Power Supplier	1	7.14	1.8	2	0.28	0.01

9. CIRCUIT 5 YEAR AVERAGE (SAIDI) 6.82

10. REPORTING YEAR (SAIDI) 36.28

11. CIRCUIT 5 YEAR AVERAGE (SAIFI) 0.11

12. REPORTING YEAR (SAIFI) 0.46

13. CORRECTIVE ACTION PLAN

These storm counts are due to downline fuses. For these 3 counts there were 18, 34, and 13 members outaged per each incident.

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 #5

1. SUBSTATION NAME AND NUMBER CUSTER

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

Approx. 1/4 mi. south of Custer along Hwy 86 in Breckinridge County

3. CIRCUIT NAME AND NUMBER

Feeder 3

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

West Hwy 86 from substation (including Hwy 690 and Hwy 1401)

5. TOTAL CIRCUIT LENGTH (MILES)

68.57

6. CUSTOMER COUNT FOR THIS CIRCUIT

578

7. DATE OF LAST CIRCUIT TRIM (VM)

2018

8. Cause	Count	Percentage	Customer-Hours	Customer-Count	SAIDI	SAIFI
Trees out of R/W	2	7.41	2236.39	574	234.18	1
Storms	7	25.93	866.55	239	90.74	0.42
Public Cause	2	7.41	81.68	37	8.57	0.06
Pre-Arranged	6	22.22	20.72	14	2.16	0.02
KVA	3	11.11	17.31	3	1.8	0.01

9. CIRCUIT 5 YEAR AVERAGE (SAIDI) 104.79

10. REPORTING YEAR (SAIDI) 336.36

11. CIRCUIT 5 YEAR AVERAGE (SAIFI) 1.02

12. REPORTING YEAR (SAIFI) 1.54

13. CORRECTIVE ACTION PLAN

On 8/7/22, winds caused a tree out of ROW to fall onto a line outaging the entire feeder for approximately 4 hours.

The substation ROW was trimmed in 2018 and was sprayed in 2019. Relatively high reliability feeder. No further 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 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 3

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)  
SW through Cloverport to Hwy 144/Hwy 992 (including Tar Springs Road, and Hwy 105)

5. TOTAL CIRCUIT LENGTH (MILES)  
51.8

6. CUSTOMER COUNT FOR THIS CIRCUIT  
416

7. DATE OF LAST CIRCUIT TRIM (VM)  
2018

8.	Cause	Count	Percentage	Customer-Hours	Customer-Count	SAIDI	SAIFI
	Trees out of R/W	3	20	1066.06	158	153.76	0.38
	Unknown	1	6.67	103.21	50	14.89	0.12
	Storms	2	13.33	48.65	17	7.02	0.04
	KVA	4	26.67	14.23	4	2.06	0.01
	Pre-Arranged	2	13.33	4.23	3	0.61	0.01

9. CIRCUIT 5 YEAR AVERAGE (SAIDI) 62.03

10. REPORTING YEAR (SAIDI) 178.58

11. CIRCUIT 5 YEAR AVERAGE (SAIFI) 0.78

12. REPORTING YEAR (SAIFI) 0.56

13. CORRECTIVE ACTION PLAN

On 5/24/22, winds caused a tree out of ROW to fall onto a line outaging the entire feeder for approximately 2 hours.

On 7/26/22, winds caused a tree out of ROW to fall onto a line outaging the entire feeder for approximately 9 hours.

The substation ROW was trimmed in 2018 and was sprayed in 2019. Relatively high reliability feeder. No further 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 HARNED
- 2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)  
North onto Hwy 1616 in Harned approx. 0.1 mi., substation is on right behind greenhouse
- 3. CIRCUIT NAME AND NUMBER in Breckinridge County  
Feeder 2
- 4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)  
East on Hwy 60 to Hwy 86
- 5. TOTAL CIRCUIT LENGTH (MILES)  
21.8
- 6. CUSTOMER COUNT FOR THIS CIRCUIT  
752
- 7. DATE OF LAST CIRCUIT TRIM (VM)  
2019

8. Cause	Count	Percentage	Customer-Hours	Customer-Count	SAIDI	SAIFI
Public Cause	4	19.05	2754.36	840	220.64	1.12
Conductor	2	9.52	840.5	996	68.43	1.35
Line Hardware	2	9.52	253.02	165	20.54	0.22
Storms	5	23.81	167.54	99	13.47	0.13
Birds/Animals	1	4.76	65.98	37	5.26	0.05

- 9. CIRCUIT 5 YEAR AVERAGE (SAIDI) 90.06
- 10. REPORTING YEAR (SAIDI) 331.4
- 11. CIRCUIT 5 YEAR AVERAGE (SAIFI) 1.18
- 12. REPORTING YEAR (SAIFI) 2.91
- 13. CORRECTIVE ACTION PLAN

On 9/7/22, a car hit a pole outaging the entire circuit for approximately 5 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 #8

1. SUBSTATION NAME AND NUMBER BRANDENBURG
2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)  
In Brandenburg near the intersection of Hwy 313 (Bypass Rd) and Old Ekron Rd. in Meade County
3. CIRCUIT NAME AND NUMBER  
Feeder 2
4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)  
Shopping Center directly east of the substation and the Meade County Middle School
5. TOTAL CIRCUIT LENGTH (MILES)  
1.68
6. CUSTOMER COUNT FOR THIS CIRCUIT  
52
7. DATE OF LAST CIRCUIT TRIM (VM)  
2022

8.	Cause	Count	Percentage	Customer-Hours	Customer-Count	SAIDI	SAIFI
	Storms	1	33.33	28.36	7	33.36	0.14
	Birds/Animals	1	33.33	1.8	1	2.16	0.02
	Public Cause	1	33.33	1.23	1	1.45	0.02

9. CIRCUIT 5 YEAR AVERAGE (SAIDI) 1.53
10. REPORTING YEAR (SAIDI) 36.22
11. CIRCUIT 5 YEAR AVERAGE (SAIFI) 0.05
12. REPORTING YEAR (SAIFI) 0.17
13. CORRECTIVE ACTION PLAN

On 11/5/22, strong winds broke a jumper at the top of a pole outaging one transformer with 7 members for approximately 4 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 #9

1. SUBSTATION NAME AND NUMBER HARNED
2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)  
North onto Hwy 1616 in Harned approx. 0.1 mi., substation is on right behind greenhouse
3. CIRCUIT NAME AND NUMBER in Breckinridge County  
Feeder 1
4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)  
East on US 60, south along Hwy 259 to Westview
5. TOTAL CIRCUIT LENGTH (MILES)  
27.46
6. CUSTOMER COUNT FOR THIS CIRCUIT  
473
7. DATE OF LAST CIRCUIT TRIM (VM)  
2019
8.

Cause	Count	Percentage	Customer-Hours	Customer-Count	SAIDI	SAIFI
Public Cause	3	21.43	1371.62	755	172.53	1.58
Pre-Arranged	3	21.43	350.82	324	44.13	0.68
Unknown	4	28.57	16.39	14	2.08	0.03
Birds/Animals	3	21.43	8.43	8	1.07	0.02
Line Hardware	1	7.14	2.77	2	0.35	0
9. CIRCUIT 5 YEAR AVERAGE (SAIDI) 50.05
10. REPORTING YEAR (SAIDI) 221.99
11. CIRCUIT 5 YEAR AVERAGE (SAIFI) 0.6
12. REPORTING YEAR (SAIFI) 2.33
13. CORRECTIVE ACTION PLAN

On 10/11/22, a car hit a pole outaging the entire circuit for approximately 4 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 #10

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 1

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)  
North on Hwy 313 then west on Hwy 333

5. TOTAL CIRCUIT LENGTH (MILES)  
42.6

6. CUSTOMER COUNT FOR THIS CIRCUIT  
462

7. DATE OF LAST CIRCUIT TRIM (VM)  
2020

8.	Cause	Count	Percentage	Customer-Hours	Customer-Count	SAIDI	SAIFI
	Public Cause	2	11.76	988.79	171	127.86	0.37
	Storms	8	47.06	292.21	408	37.7	0.88
	Pre-Arranged	5	29.41	6.38	10	0.82	0.02
	Trees out of R/W	1	5.88	0.33	1	0.04	0

9. CIRCUIT 5 YEAR AVERAGE (SAIDI) 10.12

10. REPORTING YEAR (SAIDI) 167.23

11. CIRCUIT 5 YEAR AVERAGE (SAIFI) 0.24

12. REPORTING YEAR (SAIFI) 1.28

13. CORRECTIVE ACTION PLAN

On 12/23/22, a car hit a pole due to slick roads and extreme cold outaging the entire circuit for approximately 6 hours.

Relatively high reliably feeder and substation; therefore 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 0.0087 to SAIFI and 0.8829 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. Weather was kind again in 2022 but most causes continue to show improvement. Public Cause is still concerning, particularly with distracted drivers