



INTER COUNTY
ENERGY COOPERATIVE

A Touchstone Energy Cooperative 

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APR 13 2020

PUBLIC SERVICE
COMMISSION

April 8, 2020

Mr. Kent Chandler
Executive Director
Kentucky Public Service Commission
P. O. Box 615
Frankfort, KY 40602-0615

**Re: ADMINISTRATIVE CASE NO. 2006-00494
AN INVESTIGATION OF THE RELIABILITY MEASURES OF KENTUCKY'S
JURISDICTIONAL ELECTRIC DISTRIBUTION UTILITIES AND CERTAIN
RELIABILITY MAINTENANCE PRACTICES**

Dear Mr. Chandler:

Enclosed is Inter-County Energy Cooperative's Annual Report of Reliability pursuant to Public Service Commission Case No. 2006-00494 dated October 26, 2007.

If you have further questions or comments, please direct those to David Phelps, Vice President-Operations, 859-936-7818, davidp@intercountyenergy.net or to Jessie Turpin, System Engineer, 859-936-7857, jessie@intercountyenergy.net.

Sincerely,



Jerry W. Carter
President/CEO

This institution is an equal opportunity provider and employer.

Electric Distribution Utility Annual Reliability Report

SECTION 1: CONTACT INFORMATION

UTILITY NAME	1.1	<u>Inter-County Energy</u>
REPORT PREPARED BY	1.2	<u>Jessie Turpin</u>
E-MAIL ADDRESS OF PREPARER	1.3	<u>jessie@intercountyenergy.net</u>
PHONE NUMBER OF PREPARER	1.4	<u>859-236-4561 ext. 7857</u>

SECTION 2: REPORT YEAR

CALENDAR YEAR OF REPORT	2.1	<u>2019</u>
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SECTION 3: MAJOR EVENT DAYS

T_{MED}	3.1	<u>11.71249</u>
FIRST DATE USED TO DETERMINE T_{MED}	3.2	<u>Jan. 1, 2014</u>
LAST DATE USED TO DETERMINE T_{MED}	3.3	<u>Dec. 31, 2018</u>
NUMBER OF MED IN REPORT YEAR	3.4	<u>0</u>

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>26556</u>	TOTAL CIRCUITS	<u>43</u>
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Excluding MED

5 YEAR AVERAGE		REPORTING YEAR	
SAIDI	<u>104.09</u>	SAIDI	<u>98.15</u>
SAIFI	<u>1.09</u>	SAIFI	<u>0.99</u>

Including MED

5 YEAR AVERAGE		REPORTING YEAR	
SAIDI	<u>341.90</u>	SAIDI	<u>98.15</u>
SAIFI	<u>2.11</u>	SAIFI	<u>0.99</u>

Notes:

- 1) All duration indices (SAIDI, CAIDI) 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, CAIDI, and T_{MED}

2019

Circuit #1

1. Substation Name and Number	Lancaster (1)
2. Substation Location	Garrard-Buckeye Rd-Lancaster
3. Circuit Name and Number	Buckeye(2)
4. Circuit Location	Buckeye Rd, Sugar Creek Rd, Bethel Rd, Freedom Rd, Brodus Branch Rd, Long Branch Rd, Poor Ridge Pike
5. Total Circuit Length (Miles)	89.38
6. Customer Count	839
7. Date of Last Circuit Trim	2015
8. Outage Cause (% of Total Outage Numbers)	
	Animals 4.63%
	Lightning 27.16%
	High Wind 0.08%
	Equip. Failure 8.94%
	Deteriorated 3.44%
	Cars or Trucks 17.91%
	Insulation broke 0.00%
	Vegetation/Trees 1.45%
	Trees Cut Into Line 0.74%
	Equipment OL 0.00%
	Rain/ Ice 25.68%
	Cased by Others 9.98%
9. Circuit 5 Year Average (SAIDI)	0.902597565
10. Reporting Year (SAIDI)	2.930914827
11. Circuit 5 Year Average (SAIFI)	0.484490687
12. Reporting Year (SAIFI)	2.752365931
13. List of Corrective Action, If Any, Taken or To Be Taken	
	2018-2021 Work Plan Actions To Be Taken:
	-CFR 308 Buckeye Rd (Voltage Conversion 2021)

2019

Circuit #2

1. Substation Name and Number	Perryville (6)
2. Substation Location	Boyle-Harrodsburg-Perryville
3. Circuit Name and Number	Harrodsburg(1)
4. Circuit Location	US 68, Quirks Run, Bluegrass Pike

5. Total Circuit Length (Miles)	58.36
6. Customer Count	414
7. Date of Last Circuit Trim	2012
8. Outage Cause (% of Total Outage Numbers)	

Animals	2.22%
Lightning	0.00%
High Wind	0.00%
Equip. Failure	97.61%
Deteriorated	0.17%
Cars or Trucks	0.00%
Insulation broke	0.00%
Vegetation/Trees	0.00%
Trees Cut Into Line	0.00%
Equipment OL	0.00%
Rain/ Ice	0.00%
Cased by Others	0.00%

9. Circuit 5 Year Average (SAIDI)	0.67718017
10. Reporting Year (SAIDI)	3.193115942
11. Circuit 5 Year Average (SAIFI)	0.253574985
12. Reporting Year (SAIFI)	1.256038647

13. List of Corrective Action, If Any, Taken or To Be Taken

2018-2021 Work Plan Actions To Be Taken:

-None

2019

Circuit #3

1. Substation Name and Number	Lebanon (7)
2. Substation Location	Marion-S Harrison St-Lebanon
3. Circuit Name and Number	Lebanon(2)
4. Circuit Location	Old Calvary Pike, New Calvary Rd, KY 1157, Arbuckle Rd, Medlock Crk Rd, Three Pines Rd, Old Shale Rd, E Calvary Rd, Campbellsville Hwy, Old Hwy68, Miller Pk, Stewarts Crk Rd, McElroy Pk, Wards Branch Rd
5. Total Circuit Length (Miles)	145.93
6. Customer Count	1778
7. Date of Last Circuit Trim	2014
8. Outage Cause (% of Total Outage Numbers)	
	Animals 1.27%
	Lightning 8.01%
	High Wind 16.40%
	Equip. Failure 21.32%
	Deteriorated 0.07%
	Cars or Trucks 36.21%
	Insulation broke 0.02%
	Vegetation/Trees 1.76%
	Trees Cut Into Line 0.00%
	Equipment OL 0.00%
	Rain/ Ice 0.34%
	Cased by Others 14.60%
9. Circuit 5 Year Average (SAIDI)	0.848199125
10. Reporting Year (SAIDI)	3.769797525
11. Circuit 5 Year Average (SAIFI)	0.658407281
12. Reporting Year (SAIFI)	2.117547807
13. List of Corrective Action, If Any, Taken or To Be Taken	
	2018-2021 Work Plan Actions To Be Taken:
	-CFR 311 Siloam Rd (Voltage Conversion 2020)
	-CFR 312 Coutry Club Dr (Multiphase/Feeder 2021)
	-CFR 313 McElroy Pike (Multiphase 2021)

2019

Circuit #4

1. Substation Name and Number	Sulpher Ck.(9)
2. Substation Location	Nelson-Gap Knob Rd-New Hope
3. Circuit Name and Number	Howardstown(2)
4. Circuit Location	Stiles Rd, Scott Rd, Howardstown Rd, Walter Hall Rd
5. Total Circuit Length (Miles)	53.1
6. Customer Count	285
7. Date of Last Circuit Trim	2019
8. Outage Cause (% of Total Outage Numbers)	
	Animals 3.25%
	Lightning 0.15%
	High Wind 0.76%
	Equip. Failure 0.92%
	Deteriorated 0.00%
	Cars or Trucks 0.30%
	Insulation broke 0.00%
	Vegetation/Trees 43.03%
	Trees Cut Into Line 0.00%
	Equipment OL 0.00%
	Rain/ Ice 42.27%
	Cased by Others 9.32%
9. Circuit 5 Year Average (SAIDI)	1.581340849
10. Reporting Year (SAIDI)	5.278947368
11. Circuit 5 Year Average (SAIFI)	1.195509176
12. Reporting Year (SAIFI)	2.603508772
13. List of Corrective Action, If Any, Taken or To Be Taken	
2018-2021 Work Plan Actions To Be Taken:	
-CFR 332 Sulphur Ck (Multiphase 2021)	

2019

Circuit #5

1. Substation Name and Number	H.T. Adams (10)
2. Substation Location	Mercer-DryBranchRd-Harrodsburg
3. Circuit Name and Number	Harrodsburg (1)
4. Circuit Location	Dry Branch Rd, Kyle Ln, Sparrow Ln, Danville Rd, Beaumont Ave, Bud James Ln, Bellows Mill Rd, Mercer Ave, Boyle Ave, Adams Ln, Brightleaf Dr, Cold Springs Dr
5. Total Circuit Length (Miles)	39.98
6. Customer Count	602
7. Date of Last Circuit Trim	2012
8. Outage Cause (% of Total Outage Numbers)	
	Animals 4.34%
	Lightning 7.10%
	High Wind 0.00%
	Equip. Failure 0.52%
	Deteriorated 0.00%
	Cars or Trucks 0.00%
	Insulation broke 0.00%
	Vegetation/Trees 4.09%
	Trees Cut Into Line 0.00%
	Equipment OL 0.00%
	Rain/ Ice 2.15%
	Cased by Others 81.80%
9. Circuit 5 Year Average (SAIDI)	0.421653206
10. Reporting Year (SAIDI)	1.213316722
11. Circuit 5 Year Average (SAIFI)	0.21601306
12. Reporting Year (SAIFI)	1.171096346
13. List of Corrective Action, If Any, Taken or To Be Taken	
2018-2021 Work Plan Actions To Be Taken:	
-None	

2019

Circuit #6

1. Substation Name and Number	H.T. Adams (10)
2. Substation Location	Mercer-Dry Branch-Harrodsburg
3. Circuit Name and Number	Dixville(2)
4. Circuit Location	Rose Hill, Perryville Rd, Dixville
5. Total Circuit Length (Miles)	64.59
6. Customer Count	631
7. Date of Last Circuit Trim	2013
8. Outage Cause (% of Total Outage Numbers)	
Animals	0.89%
Lightning	0.79%
High Wind	0.83%
Equip. Failure	40.59%
Deteriorated	0.08%
Cars or Trucks	0.00%
Insulation broke	0.00%
Vegetation/Trees	26.06%
Trees Cut Into Line	0.00%
Equipment OL	0.00%
Rain/ Ice	25.32%
Cased by Others	5.44%
9. Circuit 5 Year Average (SAIDI)	1.314727854
10. Reporting Year (SAIDI)	4.029239303
11. Circuit 5 Year Average (SAIFI)	1.325222947
12. Reporting Year (SAIFI)	3.670364501
13. List of Corrective Action, If Any, Taken or To Be Taken	
2018-2021 Work Plan Actions To Be Taken:	
305 (2020) Oakland Ln - 1ph to 2ph Conversion	
306 (2020) Mackville Rd - 1ph to 2ph Conversion	

2019

Circuit #7

1. Substation Name and Number	Garrard (13)
2. Substation Location	Garrard-Enterprise Dr-Lancaster
3. Circuit Name and Number	Paintlick(1)
4. Circuit Location	Richmond Rd, Sunrise Dr, Richmond Rd Loop 1, Kirksville Rd, Perry Rogers Rd, Poor House Rd, Hurt Ln, Kelly Ridge Rd, Maupin Rd, Gooch Pike, Gaffney Rd, Walker Pike, Brock Rd, Old Railroad Grade Rd, Gillespie Pike, Broa
5. Total Circuit Length (Miles)	80.14
6. Customer Count	622
7. Date of Last Circuit Trim	2015
8. Outage Cause (% of Total Outage Numbers)	
	Animals 23.36%
	Lightning 48.95%
	High Wind 0.52%
	Equip. Failure 3.24%
	Deteriorated 0.67%
	Cars or Trucks 10.40%
	Insulation broke 0.00%
	Vegetation/Trees 1.03%
	Trees Cut Into Line 2.77%
	Equipment OL 0.00%
	Rain/ Ice 0.00%
	Cased by Others 9.06%
9. Circuit 5 Year Average (SAIDI)	0.610094412
10. Reporting Year (SAIDI)	1.526741693
11. Circuit 5 Year Average (SAIFI)	0.900430122
12. Reporting Year (SAIFI)	0.98392283
13. List of Corrective Action, If Any, Taken or To Be Taken	
2018-2021 Work Plan Actions To Be Taken:	
-None	

Electric Distribution Utility Annual Reliability Report

Additional pages may be attached as necessary
SECTION 6: VEGETATION MANAGEMENT PLAN REVIEW

Inter-County Energy revised cycle to include worst performing circuits in 2019 and completed the third year of its 6 year vegetation management plan. Inter-County Energy is closely monitoring the results of the cycle progress.

SECTION 7: UTILITY COMMENTS

Inter-County Energy is in the process of replacing porcelain cutouts with polymer cut outs and updating coordination/fusing for CSP transformers between the substation and first protective devices downline in order to reduce the number of customers effected by equipment failures of transformers, transformer lightning arrestors and porcelain cutouts.