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PUBLIC SERVICE
COMMISSION

March 28, 2018

Ms. Gwen R. Pinson
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 Ms. Pinson:

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,

A handwritten signature in cursive script, appearing to read "Jerry W. Carter".

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>2017</u>
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SECTION 3: MAJOR EVENT DAYS

		<u>T_{MED} 9.7441</u>
FIRST DATE USED TO DETERMINE T _{MED}	3.2	<u>Jan. 1, 2012</u>
LAST DATE USED TO DETERMINE T _{MED}	3.3	<u>Dec. 31, 2016</u>
NUMBER OF MED IN REPORT YEAR	3.4	<u>2</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>26047</u>	TOTAL CIRCUITS <u>43</u>
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Excluding MED

5 YEAR AVERAGE		REPORTING YEAR	
SAIDI	<u>94.61</u>	SAIDI	<u>101.78</u>
SAIFI	<u>1.07</u>	SAIFI	<u>1.02</u>

Including MED

5 YEAR AVERAGE		REPORTING YEAR	
SAIDI	<u>246.42</u>	SAIDI	<u>175.92</u>
SAIFI	<u>1.70</u>	SAIFI	<u>2.00</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}

2017

Circuit #1

1. Substation Name and Number	Lancaster (1)
2. Substation Location	Garrard-Buckeye Rd-Lancaster
3. Circuit Name and Number	Old Hwy 52 (3)
4. Circuit Location	Conns Ln, Curtis Ln, Deer Haven Ln, Hale Ln
5. Total Circuit Length (Miles)	4.01
6. Customer Count	7
7. Date of Last Circuit Trim	May-10
8. Outage Cause (% of Total Outage Numbers)	
Animals	0.00%
Lightning	0.00%
High Wind	0.00%
Equip. Failure	0.00%
Deteriorated	0.00%
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	100.00%
9. Circuit 5 Year Average (SAIDI)	0.008730159
10. Reporting Year (SAIDI)	0.55877193
11. Circuit 5 Year Average (SAIFI)	0.011904762
12. Reporting Year (SAIFI)	0.368421053
13. List of Corrective Action, If Any, Taken or To Be Taken	
2018-2021 Work Plan Actions To Be Taken:	None

2017

Circuit #2

1. Substation Name and Number	Highland (3)
2. Substation Location	Lincoln-GreasyRdgRd-Stanford
3. Circuit Name and Number	Green River (3)
4. Circuit Location	Greasy Ridge Rd, Good Paster Rd, KyHwy 698, Martins Trail Spice Ridge, Peck Hollow, Hwy 198, Mt Salem Rd, Short Pike, Indian Creek, Angel Ridge Rd

5. Total Circuit Length (Miles)	133.64
6. Customer Count	1013
7. Date of Last Circuit Trim	Apr-17
8. Outage Cause (% of Total Outage Numbers)	

Animals	0.59%
Lightning	77.44%
High Wind	5.28%
Equip. Failure	0.80%
Deteriorated	0.25%
Cars or Trucks	0.07%
Insulation broke	0.00%
Vegetation/Trees	0.41%
Trees Cut Into Line	5.93%
Equipment OL	0.44%
Rain/ Ice	0.46%
Cased by Others	8.32%

9. Circuit 5 Year Average (SAIDI)	1.623999558
10. Reporting Year (SAIDI)	3.001201053
11. Circuit 5 Year Average (SAIFI)	1.224655462
12. Reporting Year (SAIFI)	1.744323791

13. List of Corrective Action, If Any, Taken or To Be Taken	
2018-2021 Work Plan Actions To Be Taken:	None

2017

Circuit #3

1. Substation Name and Number	Perryville (6)
2. Substation Location	Boyle-Harrodsburg-Perryville
3. Circuit Name and Number	Gravel Switch (3)
4. Circuit Location	Perryville Rd, Short Line Rd, US 68 West, Aliceton Rd, WardsBranch Rd Riley-Gravel Switch Rd, Fork Land Rd, Scrubgrass Rd, Logan Rd, Craitown Road, Long Run Rd
5. Total Circuit Length (Miles)	133.09
6. Customer Count	834
7. Date of Last Circuit Trim	Mar-12
8. Outage Cause (% of Total Outage Numbers)	
Animals	1.94%
Lightning	3.13%
High Wind	28.31%
Equip. Failure	0.25%
Deteriorated	0.02%
Cars or Trucks	3.97%
Insulation broke	0.18%
Vegetation/Trees	38.17%
Trees Cut Into Line	15.50%
Equipment OL	0.00%
Rain/ Ice	0.19%
Cased by Others	8.34%
9. Circuit 5 Year Average (SAIDI)	0.712595648
10. Reporting Year (SAIDI)	5.599440448
11. Circuit 5 Year Average (SAIFI)	0.307993007
12. Reporting Year (SAIFI)	3.057553957
13. List of Corrective Action, If Any, Taken or To Be Taken	
2018-2021 Work Plan Actions To Be Taken:	
326 (2020) Forkland Rd - Voltage Conversion 7.2kV to 14.4kV	

2017

Circuit #4

1. Substation Name and Number	Sulpher Ck.(9)
2. Substation Location	Nelson-Gap Knob Rd-New Hope
3. Circuit Name and Number	Raywick (1)
4. Circuit Location	Highview Pike, Salt Lick Rd, Levelwood Rd, Howardstown Rd, Scotts Ridge Rd, FrankLee Rd, St Joe Rd, Raywick-StFrancis Rd
5. Total Circuit Length (Miles)	174.98
6. Customer Count	1150
7. Date of Last Circuit Trim	2009
8. Outage Cause (% of Total Outage Numbers)	
	Animals 0.29%
	Lightning 53.14%
	High Wind 0.10%
	Equip. Failure 9.86%
	Deteriorated 0.16%
	Cars or Trucks 21.37%
	Insulation broke 0.00%
	Vegetation/Trees 1.93%
	Trees Cut Into Line 0.00%
	Equipment OL 0.00%
	Rain/ Ice 0.08%
	Cased by Others 13.07%
9. Circuit 5 Year Average (SAIDI)	1.388916857
10. Reporting Year (SAIDI)	5.39015942
11. Circuit 5 Year Average (SAIFI)	1.003541865
12. Reporting Year (SAIFI)	2.993913043
13. List of Corrective Action, If Any, Taken or To Be Taken	
	2018-2021 Work Plan Actions To Be Taken:
	330 (2018) Clear Creek - Voltage Conversion
	331 (2021) Raywick-StFrancis - 1ph to 3ph Conversion
	333 (2019) Raywick Rd - Voltage Conversion

2017

Circuit #5

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)	53.6
6. Customer Count	284
7. Date of Last Circuit Trim	May-14
8. Outage Cause (% of Total Outage Numbers)	
Animals	0.11%
Lightning	2.38%
High Wind	46.71%
Equip. Failure	29.41%
Deteriorated	0.06%
Cars or Trucks	0.00%
Insulation broke	0.00%
Vegetation/Trees	20.76%
Trees Cut Into Line	0.00%
Equipment OL	0.00%
Rain/ Ice	0.00%
Cased by Others	0.58%
9. Circuit 5 Year Average (SAIDI)	1.484364646
10. Reporting Year (SAIDI)	3.559800469
11. Circuit 5 Year Average (SAIFI)	1.004192121
12. Reporting Year (SAIFI)	2.982394366
13. List of Corrective Action, If Any, Taken or To Be Taken	
2018-2021 Work Plan Actions To Be Taken:	
332 (2020) Howardstown Rd - 1ph to 3ph Conversion	

2017

Circuit #6

1. Substation Name and Number	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)	64.51
6. Customer Count	619
7. Date of Last Circuit Trim	Apr-11
8. Outage Cause (% of Total Outage Numbers)	
Animals	0.29%
Lightning	6.03%
High Wind	21.32%
Equip. Failure	2.81%
Deteriorated	0.00%
Cars or Trucks	0.00%
Insulation broke	0.00%
Vegetation/Trees	0.92%
Trees Cut Into Line	0.87%
Equipment OL	0.00%
Rain/ Ice	0.13%
Cased by Others	67.63%
9. Circuit 5 Year Average (SAIDI)	0.850504674
10. Reporting Year (SAIDI)	2.181690899
11. Circuit 5 Year Average (SAIFI)	0.693904229
12. Reporting Year (SAIFI)	2.363489499
13. List of Corrective Action, If Any, Taken or To Be Taken	
2018-2021 Work Plan Actions To Be Taken:	
305 (2019) Oakland Ln - 1ph to 2ph Conversion	
306 (2019) Mackville Rd - 1ph to 2ph Conversion	

2017

Circuit #7

1. Substation Name and Number	Gooch(11)
2. Substation Location	Lincoln-Rice Ln-Stanford
3. Circuit Name and Number	Danville(3)
4. Circuit Location	Carmans Ln, Crawford Ln, US 150
5. Total Circuit Length (Miles)	12.83
6. Customer Count	265
7. Date of Last Circuit Trim	Sep-16
8. Outage Cause (% of Total Outage Numbers)	
Animals	4.99%
Lightning	0.00%
High Wind	46.84%
Equip. Failure	0.15%
Deteriorated	0.00%
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	48.02%
9. Circuit 5 Year Average (SAIDI)	0.921983368
10. Reporting Year (SAIDI)	2.509119497
11. Circuit 5 Year Average (SAIFI)	0.680871113
12. Reporting Year (SAIFI)	3.226415094
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 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