


  
**INTER COUNTY**  
ENERGY COOPERATIVE

A Touchstone Energy Cooperative 

RECEIVED

April 17, 2017

APR 20 2017

Public Service  
Commission

Ms. Talina R. Mathews  
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. Mathews:

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](mailto:davidp@intercountyenergy.net) or to Jessie Turpin, System Engineer, 859-936-7857, [jessie@intercountyenergy.net](mailto:jessie@intercountyenergy.net).

Sincerely,



James L. Jacobus  
President/CEO

# Electric Distribution Utility Annual Reliability Report

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## 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><a href="mailto:jessie@intercountyenergy.net">jessie@intercountyenergy.net</a></u>
PHONE NUMBER OF PREPARER	1.4	<u>859-236-4561 ext. 7857</u>

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## SECTION 2: REPORT YEAR

CALENDAR YEAR OF REPORT	2.1	<u>2016</u>
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## SECTION 3: MAJOR EVENT DAYS

$T_{MED}$	3.1	<u>9.1896</u>
FIRST DATE USED TO DETERMINE $T_{MED}$	3.2	<u>Jan. 1, 2011</u>
LAST DATE USED TO DETERMINE $T_{MED}$	3.3	<u>Dec. 31, 2015</u>
NUMBER OF MED IN REPORT YEAR	3.4	<u>5</u>

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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.

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## SECTION 4: SYSTEM RELIABILITY INFORMATION AND RESULTS

### System-wide Information

TOTAL CUSTOMERS	<u>26392</u>	TOTAL CIRCUITS	<u>42</u>
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### Excluding MED

5 YEAR AVERAGE		REPORTING YEAR	
SAIDI	<u>94.68</u>	SAIDI	<u>88.48</u>
SAIFI	<u>1.06</u>	SAIFI	<u>1.11</u>

### Including MED

5 YEAR AVERAGE		REPORTING YEAR	
SAIDI	<u>233.95</u>	SAIDI	<u>170.78</u>
SAIFI	<u>1.61</u>	SAIFI	<u>1.98</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  $T_{MED}$

2016

Circuit #1

1. Substation Name and Number	Lancaster (1)
2. Substation Location	Garrard-Buckeye Rd-Lancaster
3. Circuit Name and Number	Conns Ln (4)
4. Circuit Location	Conns Ln, Miller Ave, Eastland Acres, Richmond Road Loop 1
5. Total Circuit Length (Miles)	5.59
6. Customer Count	79
7. Date of Last Circuit Trim	Jan-17
8. Outage Cause (% of Total Outage Numbers)	
	Animals 0.00%
	Lightning 57.52%
	High Wind 0.00%
	Equip. Failure 3.27%
	Deteriorated 0.00%
	Cars or Trucks 0.00%
	Insulation broke 0.00%
	Vegetation/Trees 0.00%
	Trees Cut Into Line 0.00%
	Equipment OL 12.35%
	Rain/ Ice 0.00%
	Cased by Others 26.87%
9. Circuit 5 Year Average (SAIDI)	0.112236287
10. Reporting Year (SAIDI)	0.792194093
11. Circuit 5 Year Average (SAIFI)	0.054852321
12. Reporting Year (SAIFI)	0.582278481
13. List of Corrective Action, If Any, Taken or To Be Taken	
2014-2017 Work Plan Actions To Be Taken:	None

2016

Circuit #2

1. Substation Name and Number	Shelby City(4)
2. Substation Location	Boyle-E Knob Lick Rd-Junction City
3. Circuit Name and Number	Stanford(1)
4. Circuit Location	KY HWY 300, Wilderness Trail, US HWY 150 W, HWY 1237, Chrisman Ln, Tom Hackley Rd, KY HWY 590, Engleman Ln
5. Total Circuit Length (Miles)	67.72
6. Customer Count	637
7. Date of Last Circuit Trim	May-13
8. Outage Cause (% of Total Outage Numbers)	
	Animals 0.38%
	Lightning 16.10%
	High Wind 30.65%
	Equip. Failure 12.05%
	Deteriorated 0.17%
	Cars or Trucks 0.36%
	Insulation broke 5.70%
	Vegetation/Trees 31.02%
	Trees Cut Into Line 0.12%
	Equipment OL 0.00%
	Rain/ Ice 0.00%
	Cased by Others 3.47%
9. Circuit 5 Year Average (SAIDI)	1.16560042
10. Reporting Year (SAIDI)	5.137624281
11. Circuit 5 Year Average (SAIFI)	0.868828833
12. Reporting Year (SAIFI)	2.215070644
13. List of Corrective Action, If Any, Taken or To Be Taken	
2014-2017 Work Plan Actions To Be Taken:	None

2016

Circuit #3

1. Substation Name and Number	Shelby City(4)
2. Substation Location	Boyle-E Knob Lick Rd-Junction City
3. Circuit Name and Number	Hustonville(2)
4. Circuit Location	Old US 127 North Loop, Moores Ln, KY HWY 1194, Peyton Well Rd
5. Total Circuit Length (Miles)	27.76
6. Customer Count	176
7. Date of Last Circuit Trim	Nov-13
8. Outage Cause (% of Total Outage Numbers)	
	Animals 20.21%
	Lightning 42.69%
	High Wind 14.81%
	Equip. Failure 0.00%
	Deteriorated 0.00%
	Cars or Trucks 1.48%
	Insulation broke 0.00%
	Vegetation/Trees 14.81%
	Trees Cut Into Line 0.00%
	Equipment OL 0.00%
	Rain/ Ice 0.00%
	Cased by Others 6.00%
9. Circuit 5 Year Average (SAIDI)	0.582553683
10. Reporting Year (SAIDI)	1.625568182
11. Circuit 5 Year Average (SAIFI)	0.590741385
12. Reporting Year (SAIFI)	1.363636364
13. List of Corrective Action, If Any, Taken or To Be Taken	
2014-2017 Work Plan Actions To Be Taken:	None

2016

Circuit #4

1. Substation Name and Number	Peyton Store (5)	
2. Substation Location	Casey-Hwy 78-Houstonville	
3. Circuit Name and Number	Jacktown (1)	
4. Circuit Location	Hwy 78, Hwy 49, Martins Creek, Hwy 1547, Peyton Ridge Rd, Griffith Rdg Rd, Caney Fork Rd, Snake Rdg Rd, Reynolds Crk, Wilson Rdg Rd, Lower Brush Crk	
5. Total Circuit Length (Miles)		139.51
6. Customer Count		957
7. Date of Last Circuit Trim		Oct-13
8. Outage Cause (% of Total Outage Numbers)		
	Animals	0.16%
	Lightning	1.83%
	High Wind	57.59%
	Equip. Failure	0.59%
	Deteriorated	0.00%
	Cars or Trucks	0.39%
	Insulation broke	0.00%
	Vegetation/Trees	35.30%
	Trees Cut Into Line	0.19%
	Equipment OL	0.00%
	Rain/ Ice	1.42%
	Cased by Others	2.52%
9. Circuit 5 Year Average (SAIDI)		2.177651909
10. Reporting Year (SAIDI)		4.065238593
11. Circuit 5 Year Average (SAIFI)		1.376186278
12. Reporting Year (SAIFI)		2.059561129
13. List of Corrective Action, If Any, Taken or To Be Taken		
2014-2017 Work Plan Actions To Be Taken:	337 (2016)	
Hwy 1547-Convert 1ph to 3ph, 1/0AAAC		

2016

Circuit #5

1. Substation Name and Number	Perryville (6)	
2. Substation Location	Boyle-Harrodsburg-Perryville	
3. Circuit Name and Number	Battlefield (4)	
4. Circuit Location	Battlefield	Road, Whites Rd, Cocanougher Rd, Fallis Run Rd, Deep Creek Rd, Windy Way Ln, Derringer Rd, New Dixville Rd, Russell Branch Rd
5. Total Circuit Length (Miles)	64.52	
6. Customer Count	354	
7. Date of Last Circuit Trim	Mar-12	
8. Outage Cause (% of Total Outage Numbers)		
	Animals	0.46%
	Lightning	92.69%
	High Wind	0.00%
	Equip. Failure	0.14%
	Deteriorated	0.00%
	Cars or Trucks	0.00%
	Insulation broke	0.00%
	Vegetation/Trees	0.05%
	Trees Cut Into Line	0.00%
	Equipment OL	0.00%
	Rain/ Ice	0.00%
	Cased by Others	6.66%
9. Circuit 5 Year Average (SAIDI)	0.696941019	
10. Reporting Year (SAIDI)	4.58173258	
11. Circuit 5 Year Average (SAIFI)	0.564662746	
12. Reporting Year (SAIFI)	1.347457627	
13. List of Corrective Action, If Any, Taken or To Be Taken		
2014-2017 Work Plan Actions To Be Taken:	None	

2016

Circuit #6

1. Substation Name and Number	Lebanon (7)
2. Substation Location	Marion-S Harrison St-Lebanon
3. Circuit Name and Number	Calvary(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)	141.63
6. Customer Count	1659
7. Date of Last Circuit Trim	Jun-11
8. Outage Cause (% of Total Outage Numbers)	
	Animals 1.59%
	Lightning 27.13%
	High Wind 9.17%
	Equip. Failure 12.54%
	Deteriorated 1.69%
	Cars or Trucks 4.42%
	Insulation broke 0.00%
	Vegetation/Trees 36.76%
	Trees Cut Into Line 0.00%
	Equipment OL 0.00%
	Rain/ Ice 0.00%
	Cased by Others 6.70%
9. Circuit 5 Year Average (SAIDI)	0.69099875
10. Reporting Year (SAIDI)	1.417791842
11. Circuit 5 Year Average (SAIFI)	0.420461426
12. Reporting Year (SAIFI)	1.133212779
13. List of Corrective Action, If Any, Taken or To Be Taken	
2014-2017 Work Plan Actions To Be Taken:	None



2016

Circuit #7

1. Substation Name and Number	Sulpher Ck.(9)
2. Substation Location	Nelson-Gap Knob Rd-New Hope
3. Circuit Name and Number	New Hope(3)
4. Circuit Location	Gap Knob Rd, Sulpher Lick Rd, Coon Hollow Rd, Walter Hall Rd, Strintown Rd, New Hope Rd
5. Total Circuit Length (Miles)	29.44
6. Customer Count	213
7. Date of Last Circuit Trim	May-14
8. Outage Cause (% of Total Outage Numbers)	
Animals	0.00%
Lightning	0.00%
High Wind	0.53%
Equip. Failure	76.77%
Deteriorated	0.00%
Cars or Trucks	0.00%
Insulation broke	0.00%
Vegetation/Trees	2.40%
Trees Cut Into Line	0.00%
Equipment OL	0.00%
Rain/ Ice	0.00%
Cased by Others	20.30%
9. Circuit 5 Year Average (SAIDI)	0.645775859
10. Reporting Year (SAIDI)	3.475978091
11. Circuit 5 Year Average (SAIFI)	0.502530312
12. Reporting Year (SAIFI)	2.713615023
13. List of Corrective Action, If Any, Taken or To Be Taken	
2014-2017 Work Plan Actions To Be Taken:	None

2016

Circuit #8

1. Substation Name and Number	Gooch(11)
2. Substation Location	Lincoln-Rice Ln-Stanford
3. Circuit Name and Number	CrabOrchard(2)
4. Circuit Location	John Sims Hwy, Old US HWY 150, Boone Rd, William Whitley Rd, KY HWY 39 S, Turkeytown Rd, Saylor Rd, Copper Creek Rd, Edwards Rd, KY HWY 643, Pine Grove Rd, Mike Genton Rd, Bishop Rd,
5. Total Circuit Length (Miles)	92.57
6. Customer Count	725
7. Date of Last Circuit Trim	May-12
8. Outage Cause (% of Total Outage Numbers)	
	Animals 0.05%
	Lightning 24.80%
	High Wind 18.50%
	Equip. Failure 24.20%
	Deteriorated 0.00%
	Cars or Trucks 1.27%
	Insulation broke 0.00%
	Vegetation/Trees 30.11%
	Trees Cut Into Line 0.00%
	Equipment OL 0.00%
	Rain/ Ice 0.00%
	Cased by Others 1.07%
9. Circuit 5 Year Average (SAIDI)	1.82378415
10. Reporting Year (SAIDI)	5.881126437
11. Circuit 5 Year Average (SAIFI)	2.027842218
12. Reporting Year (SAIFI)	3.326896552
13. List of Corrective Action, If Any, Taken or To Be Taken	
2014-2017 Work Plan Actions To Be Taken:	None

2016

Circuit #9

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)	78.98
6. Customer Count	615
7. Date of Last Circuit Trim	Dec-11
8. Outage Cause (% of Total Outage Numbers)	
	Animals 2.35%
	Lightning 28.99%
	High Wind 17.75%
	Equip. Failure 26.51%
	Deteriorated 0.24%
	Cars or Trucks 1.08%
	Insulation broke 0.00%
	Vegetation/Trees 18.91%
	Trees Cut Into Line 0.00%
	Equipment OL 0.00%
	Rain/ Ice 0.00%
	Cased by Others 4.15%
9. Circuit 5 Year Average (SAIDI)	0.77265545
10. Reporting Year (SAIDI)	1.00799458
11. Circuit 5 Year Average (SAIFI)	0.85406969
12. Reporting Year (SAIFI)	2.765853659
13. List of Corrective Action, If Any, Taken or To Be Taken	
2014-2017 Work Plan Actions To Be Taken:	None

# Electric Distribution Utility Annual Reliability Report

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

Inter-County Energy completed the second year of its 5 year vegetation management plan. Inter-County Energy is closely monitoring the results of the cycle progress.

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SECTION 7: UTILITY COMMENTS