

**INTER COUNTY**  
ENERGY COOPERATIVE

A Touchstone Energy Cooperative 

RECEIVED

MAR 28 2016

Public Service  
Commission

March 23, 2016

Mr. Kyle Willard  
Director of Engineering  
Kentucky Public Service Commission  
P. O. Box 615  
Frankfort, KY 40602-0615

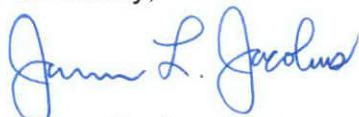
**Re: ADMINISTRATIVE CASE NO. 2006-00494  
AN INVESTIGATION OF THE RELIABILITY MEASURES OF KENTUCKY'S  
JURISDICTIONAL ELECTRIC DISTRIBUTION UTILITIES AND CERTAIN  
RELIABILITY MAINTENANCE PRACTICES**

Dear Mr. Willard:

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

MAR 28 2016

Public Service  
Commission

**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>David Phelps</u>
E-MAIL ADDRESS OF PREPARER	1.3	<u>davidp@intercountyenergy.net</u>
PHONE NUMBER OF PREPARER	1.4	<u>859-236-4561 ext. 7818</u>

SECTION 2: REPORT YEAR

CALENDAR YEAR OF REPORT	2.1	<u>2015</u>
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SECTION 3: MAJOR EVENT DAYS

	$T_{MED}$	3.1	<u>8.49417</u>
FIRST DATE USED TO DETERMINE	$T_{MED}$	3.2	<u>Jan. 1, 2010</u>
LAST DATE USED TO DETERMINE	$T_{MED}$	3.3	<u>Dec. 31, 2014</u>
NUMBER OF MED IN REPORT YEAR		3.4	<u>7</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>26333</u>	TOTAL CIRCUITS	<u>42</u>
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Excluding MED

5 YEAR AVERAGE		REPORTING YEAR	
SAIDI	<u>93.71</u>	SAIDI	<u>96.87</u>
SAIFI	<u>1.07</u>	SAIFI	<u>1.02</u>

Including MED

5 YEAR AVERAGE		REPORTING YEAR	
SAIDI	<u>215.72</u>	SAIDI	<u>235.12</u>
SAIFI	<u>1.59</u>	SAIFI	<u>1.56</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  $T_{MED}$

2015

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)	5.58
6. Customer Count	79
7. Date of Last Circuit Trim	Jun-10
8. Outage Cause (% of Total Outage Numbers)	
	Animals 0.00%
	Lightning 89.90%
	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 10.10%
9. Circuit 5 Year Average (SAIDI)	0.015822785
10. Reporting Year (SAIDI)	0.305063291
11. Circuit 5 Year Average (SAIFI)	0.012658228
12. Reporting Year (SAIFI)	0.025316456
13. List of Corrective Action, If Any, Taken or To Be Taken	0.139240506
2014-2017 Work Plan Actions To Be Taken:	None

2015

**Circuit #2**

1. Substation Name and Number	Ballard (2)
2. Substation Location	Lincoln-Fisher Ford Rd-Lancaster
3. Circuit Name and Number	Wells Landing (2)
4. Circuit Location	Wells Landing Rd, Old Bridge, Taylor Rd, Old Lexington Rd
5. Total Circuit Length (Miles)	23.6
6. Customer Count	458
7. Date of Last Circuit Trim	Feb-10
8. Outage Cause (% of Total Outage Numbers)	
	Animals 1.52%
	Lightning 0.67%
	High Wind 82.89%
	Equip. Failure 0.88%
	Deteriorated 0.00%
	Cars or Trucks 6.17%
	Insulation broke 0.00%
	Vegetation/Trees 5.87%
	Trees Cut Into Line 0.00%
	Equipment OL 0.00%
	Rain/ Ice 1.68%
	Cased by Others 0.33%
9. Circuit 5 Year Average (SAIDI)	1.215965697
10. Reporting Year (SAIDI)	3.376710335
11. Circuit 5 Year Average (SAIFI)	0.702678069
12. Reporting Year (SAIFI)	1.456331878
13. List of Corrective Action, If Any, Taken or To Be Taken	
2014-2017 Work Plan Actions To Be Taken:	None

2015

Circuit #3

1. Substation Name and Number	Highland (3)
2. Substation Location	Lincoln-KY Hwy 1247- Waynesburg
3. Circuit Name and Number	Waynesburg (2)
4. Circuit Location	KY HWY 1247, Red Oak Ln, Rocky Hollow Rd, US HWY 27S, KY HWY 501, Greenbriar Rd
5. Total Circuit Length (Miles)	35.49
6. Customer Count	451
7. Date of Last Circuit Trim	Dec-09
8. Outage Cause (% of Total Outage Numbers)	
Animals	0.14%
Lightning	0.92%
High Wind	34.83%
Equip. Failure	13.30%
Deteriorated	0.00%
Cars or Trucks	0.00%
Insulation broke	0.00%
Vegetation/Trees	41.78%
Trees Cut Into Line	0.04%
Equipment OL	0.00%
Rain/ Ice	5.57%
Cased by Others	3.41%
9. Circuit 5 Year Average (SAIDI)	1.378822159
10. Reporting Year (SAIDI)	2.48939394
11. Circuit 5 Year Average (SAIFI)	0.949221094
12. Reporting Year (SAIFI)	2.095343681
13. List of Corrective Action, If Any, Taken or To Be Taken	
2014-2017 Work Plan Actions To Be Taken:	None

2015

Circuit #4

1. Substation Name and Number	Highland (3)
2. Substation Location	Lincoln-GreasyRdgRd-Stanford
3. Circuit Name and Number	GrnRvr/HorseRdg (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)	136.3
6. Customer Count	1042
7. Date of Last Circuit Trim	Dec-10
8. Outage Cause (% of Total Outage Numbers)	
	Animals 3.70%
	Lightning 0.97%
	High Wind 33.62%
	Equip. Failure 9.47%
	Deteriorated 0.00%
	Cars or Trucks 0.00%
	Insulation broke 7.11%
	Vegetation/Trees 36.40%
	Trees Cut into Line 0.00%
	Equipment OL 0.10%
	Rain/ Ice 0.00%
	Cased by Others 8.62%
9. Circuit 5 Year Average (SAIDI)	1.138984565
10. Reporting Year (SAIDI)	2.100447857
11. Circuit 5 Year Average (SAIFI)	1.048053069
12. Reporting Year (SAIFI)	0.878119002
13. List of Corrective Action, If Any, Taken or To Be Taken	
2014-2017 Work Plan Actions To Be Taken:	317 (2017), 319 (2017)
Hwy 698-Convert 1ph to 3ph, 1/0AAAC	
Peck Hollow Rd-Replace 1ph#4ACSR with 1ph-1/0AAAC	

2015

Circuit #5

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)	138.9
6. Customer Count	972
7. Date of Last Circuit Trim	Dec-13
8. Outage Cause (% of Total Outage Numbers)	
	Animals 0.15%
	Lightning 30.80%
	High Wind 2.65%
	Equip. Failure 1.70%
	Deteriorated 0.04%
	Cars or Trucks 0.18%
	Insulation broke 0.00%
	Vegetation/Trees 17.75%
	Trees Cut Into Line 2.97%
	Equipment OL 0.00%
	Rain/ Ice 0.00%
	Cased by Others 43.75%
9. Circuit 5 Year Average (SAIDI)	1.667856763
10. Reporting Year (SAIDI)	3.298679698
11. Circuit 5 Year Average (SAIFI)	0.930566838
12. Reporting Year (SAIFI)	2.791152263
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	

2015

Circuit #6

1. Substation Name and Number	Peyton Store (5)
2. Substation Location	Casey-Hwy 78-Hustonville
3. Circuit Name and Number	Hustonville (3)
4. Circuit Location	Hwy 78, Long Hollow Rd, Hwy 906, Upper Brush Creek, US 127, Chef Ridge, Shucks Creek, Woodrum Ridge, Short Town Rd, Patsy Riffe Ridge Rd
5. Total Circuit Length (Miles)	133.6
6. Customer Count	950
7. Date of Last Circuit Trim	Sep-14
8. Outage Cause (% of Total Outage Numbers)	
	Animals 0.07%
	Lightning 4.81%
	High Wind 7.85%
	Equip. Failure 2.08%
	Deteriorated 0.00%
	Cars or Trucks 0.08%
	Insulation broke 0.00%
	Vegetation/Trees 6.81%
	Trees Cut Into Line 0.00%
	Equipment OL 0.06%
	Rain/ Ice 0.02%
	Cased by Others 78.22%
9. Circuit 5 Year Average (SAIDI)	2.697643362
10. Reporting Year (SAIDI)	4.592578947
11. Circuit 5 Year Average (SAIFI)	0.827159593
12. Reporting Year (SAIFI)	3.32
13. List of Corrective Action, If Any, Taken or To Be Taken	
2014-2017 Work Plan Actions To Be Taken:	341 (2016), 342 (2017), 343 (2016)
Black Pike-Convert 1ph to 3ph, 1/0AAAC	
Upper Brush Creek Rd- Voltage Conversion	
Hwy78/MazeyValley-Convert to 3ph, 1/0AAAC	



2015

Circuit #7

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)	63.84
6. Customer Count	346
7. Date of Last Circuit Trim	Mar-12
8. Outage Cause (% of Total Outage Numbers)	
	Animals 2.28%
	Lightning 25.57%
	High Wind 5.59%
	Equip. Failure 1.13%
	Deteriorated 7.08%
	Cars or Trucks 0.00%
	Insulation broke 0.00%
	Vegetation/Trees 2.85%
	Trees Cut Into Line 30.39%
	Equipment OL 0.00%
	Rain/ Ice 1.56%
	Cased by Others 23.56%
9. Circuit 5 Year Average (SAIDI)	0.47133081
10. Reporting Year (SAIDI)	1.566040462
11. Circuit 5 Year Average (SAIFI)	0.252990116
12. Reporting Year (SAIFI)	1.74566474
13. List of Corrective Action, If Any, Taken or To Be Taken	
2014-2017 Work Plan Actions To Be Taken:	None

2015

Circuit #6

1. Substation Name and Number	Lebanon (7)
2. Substation Location	Marion-S Harrison St-Lebanon
3. Circuit Name and Number	Danville (1)
4. Circuit Location	US 68 W, Sulphur Spring Rd, Barbers Mill Rd, Shortline Pike, Popes Creek Rd, Hunley Ln, Mays Chapel Rd, Poplar Corner Rd, Tatum Ln, Gravel Switch Rd, Jones Creek Rd
5. Total Circuit Length (Miles)	149.11
6. Customer Count	1081
7. Date of Last Circuit Trim	Mar-14
8. Outage Cause (% of Total Outage Numbers)	
Animals	0.14%
Lightning	1.10%
High Wind	1.09%
Equip. Failure	42.42%
Deteriorated	0.00%
Cars or Trucks	0.02%
Insulation broke	0.00%
Vegetation/Trees	4.79%
Trees Cut Into Line	0.10%
Equipment OL	0.01%
Rain/ Ice	46.92%
Cased by Others	3.40%
9. Circuit 5 Year Average (SAIDI)	1.796150511
10. Reporting Year (SAIDI)	3.975161887
11. Circuit 5 Year Average (SAIFI)	1.125345877
12. Reporting Year (SAIFI)	1.435707678
13. List of Corrective Action, If Any, Taken or To Be Taken	
2014-2017 Work Plan Actions To Be Taken:	None

2015

Circuit #9

1. Substation Name and Number	Loretto (8)
2. Substation Location	Marion-Loretto Rd-Loretto
3. Circuit Name and Number	Makers Mark (1)
4. Circuit Location	St Francis Hwy, Burkes Springs Rd, Holy Cross Rd, Nerinx Rd, George Edelen Rd, Springtown Rd, Manton Rd, Raley Rd, Beantown Rd, Sam Browning Rd
5. Total Circuit Length (Miles)	
6. Customer Count	
7. Date of Last Circuit Trim	Dec-12
8. Outage Cause (% of Total Outage Numbers)	
	Animals 0.00%
	Lightning 64.40%
	High Wind 0.00%
	Equip. Failure 0.92%
	Deteriorated 0.00%
	Cars or Trucks 0.00%
	Insulation broke 0.00%
	Vegetation/Trees 0.00%
	Trees Cut Into Line 1.44%
	Equipment OL 0.00%
	Rain/ Ice 0.00%
	Cased by Others 33.23%
9. Circuit 5 Year Average (SAIDI)	0.562569576
10. Reporting Year (SAIDI)	4.660416667
11. Circuit 5 Year Average (SAIFI)	0.392445969
12. Reporting Year (SAIFI)	3.38362069
13. List of Corrective Action, If Any, Taken or To Be Taken	
2014-2017 Work Plan Actions To Be Taken:	None

2015

Circuit #10

1. Substation Name and Number	H.T. Adams (10)
2. Substation Location	Mercer-Dry Branch Rd-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)	38.79
6. Customer Count	563
7. Date of Last Circuit Trim	May-10
8. Outage Cause (% of Total Outage Numbers)	
	Animals 2.77%
	Lightning 13.46%
	High Wind 0.46%
	Equip. Failure 4.58%
	Deteriorated 5.80%
	Cars or Trucks 57.42%
	Insulation broke 0.00%
	Vegetation/Trees 9.39%
	Trees Cut Into Line 0.00%
	Equipment OL 0.00%
	Rain/ Ice 0.00%
	Cased by Others 6.12%
9. Circuit 5 Year Average (SAIDI)	0.387548798
10. Reporting Year (SAIDI)	0.936352872
11. Circuit 5 Year Average (SAIFI)	0.53968351
12. Reporting Year (SAIFI)	0.371225577
13. List of Corrective Action, If Any, Taken or To Be Taken	
2014-2017 Work Plan Actions To Be Taken:	316 (2017)
Dry Branch Rd-Replace 1ph-#4ACSR with 1ph-1/0AAAC	

2015

Circuit #11

1. Substation Name and Number	Gooch(11)
2. Substation Location	Lincoln-Rice Ln-Stanford
3. Circuit Name and Number	Preachersville (1)
4. Circuit Location	Preachersville Rd, Rice Ln, Swope Rd, Fall Lick Rd, Drakes Creek Rd, Swamper Rd, Harmons Lick Rd, Hwy 3249, Dripping Springs Rd, Hamilton Valley Rd, Cartersville Rd, White Lick Rd, Wallacetown Rd, Calico Rd
5. Total Circuit Length (Miles)	122.93
6. Customer Count	1059
7. Date of Last Circuit Trim	Apr-13
8. Outage Cause (% of Total Outage Numbers)	
	Animals 0.50%
	Lightning 4.72%
	High Wind 87.05%
	Equip. Failure 4.29%
	Deteriorated 0.02%
	Cars or Trucks 0.00%
	Insulation broke 0.00%
	Vegetation/Trees 1.47%
	Trees Cut Into Line 0.39%
	Equipment OL 0.00%
	Rain/ Ice 0.02%
	Cased by Others 1.53%
9. Circuit 5 Year Average (SAIDI)	0.670029671
10. Reporting Year (SAIDI)	4.392713251
11. Circuit 5 Year Average (SAIFI)	0.442282509
12. Reporting Year (SAIFI)	1.372049103
13. List of Corrective Action, If Any, Taken or To Be Taken	
2014-2017 Work Plan Actions To Be Taken:	305 (3017), 209 (216)
Cartersville Rd-Convert 1ph to 3ph, 1/0AAAC	
White Lick Rd-Convert 1ph to 3ph, 1/0AAAC	

2015

Circuit #12

1. Substation Name and Number	Marion Industrial(12)
2. Substation Location	Marion-Industrial Dr-Lebanon
3. Circuit Name and Number	Ky Hwy 208 (1)
4. Circuit Location	New Calvery Rd, Lovers Ln, Millers Pike, Campbellsville Hwy, McElroy Pike, Wards Branch Rd
5. Total Circuit Length (Miles)	10.55
6. Customer Count	100
7. Date of Last Circuit Trim	Feb-11
8. Outage Cause (% of Total Outage Numbers)	
	Animals 13.17%
	Lightning 71.25%
	High Wind 0.45%
	Equip. Failure 3.83%
	Deteriorated 0.00%
	Cars or Trucks 2.55%
	Insulation broke 0.00%
	Vegetation/Trees 0.65%
	Trees Cut Into Line 0.00%
	Equipment OL 0.00%
	Rain/ Ice 0.00%
	Cased by Others 8.10%
9. Circuit 5 Year Average (SAIDI)	0.84936038
10. Reporting Year (SAIDI)	6.227
11. Circuit 5 Year Average (SAIFI)	0.971189281
12. Reporting Year (SAIFI)	4.89
13. List of Corrective Action, If Any, Taken or To Be Taken	
2014-2017 Work Plan Actions To Be Taken:	332 (2017)
Miller Pike-Replace 1ph-#4ACSR with 1ph-1/0AAAC	

2015

Circuit #13

1. Substation Name and Number	Marion Industrial(12)
2. Substation Location	Marion-Industrial Dr-Lebanon
3. Circuit Name and Number	TBMK (2)
4. Circuit Location	Industrial Dr
5. Total Circuit Length (Miles)	0.67
6. Customer Count	2
7. Date of Last Circuit Trim	Not Applicable
8. Outage Cause (% of Total Outage Numbers)	
Animals	50.00%
Lightning	0.00%
High Wind	0.00%
Equip. Failure	50.00%
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	0.00%
9. Circuit 5 Year Average (SAIDI)	0.1666
10. Reporting Year (SAIDI)	1.5
11. Circuit 5 Year Average (SAIFI)	0.1666
12. Reporting Year (SAIFI)	1.5
13. List of Corrective Action, If Any, Taken or To Be Taken	
2014-2017 Work Plan Actions To Be Taken:	None

2015

Circuit #14

1. Substation Name and Number	Garrard (13)
2. Substation Location	Garrard-Enterprise Dr-Lancaster
3. Circuit Name and Number	Gilberts Creek (2)
4. Circuit Location	Richmond Rd, Eastland Acres, Fall Lick Rd, Crab Orchard Rd, Stingy Creek Rd, Perkins Ln
5. Total Circuit Length (Miles)	33.42
6. Customer Count	357
7. Date of Last Circuit Trim	Mar-11
8. Outage Cause (% of Total Outage Numbers)	
Animals	5.43%
Lightning	39.68%
High Wind	11.97%
Equip. Failure	0.59%
Deteriorated	8.27%
Cars or Trucks	0.00%
Insulation broke	1.49%
Vegetation/Trees	21.38%
Trees Cut Into Line	0.00%
Equipment OL	0.00%
Rain/ Ice	3.11%
Cased by Others	8.08%
9. Circuit 5 Year Average (SAIDI)	0.375515214
10. Reporting Year (SAIDI)	0.960364146
11. Circuit 5 Year Average (SAIFI)	0.296723644
12. Reporting Year (SAIFI)	0.658263305
13. List of Corrective Action, If Any, Taken or To Be Taken	



# 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 first 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

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