



A Touchstone Energy Cooperative

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COMMISSION

March 31, 2009

Reggie Chaney
Director of Engineering
Kentucky Public Service Commission
PO Box 615
Frankfort, KY 40602

RE: **Administrative Case No. 2006-00494**

Dear Mr. Chaney;

Enclosed is Blue Grass Energy's 2008 Annual Reliability Report as required by Administrative Case No. 2006-00494.

If you have any further questions, please feel free to contact me.

Sincerely,

A handwritten signature in cursive script that reads "Chris Brewer".

Chris Brewer, Vice President Engineering

Electric Distribution Utility Annual Reliability Report

SECTION 1: CONTACT INFORMATION

UTILITY NAME	1.1	<u>Blue Grass Energy</u>
REPORT PREPARED BY	1.2	<u>Chris Brewer</u>
E-MAIL ADDRESS OF PREPARER	1.3	<u>chrisb@bgenergy.com</u>
PHONE NUMBER OF PREPARER	1.4	<u>859-885-2114</u>

SECTION 2: REPORT YEAR

CALENDAR YEAR OF REPORT	2.1	<u>2008</u>
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SECTION 3: MAJOR EVENT DAYS

TMED	3.1	<u>12.09</u>
FIRST DATE USED TO DETERMINE TMED	3.2	<u>1/1/2003</u>
LAST DATE USED TO DETERMINE TMED	3.3	<u>12/31/2007</u>
NUMBER OF MED IN REPORT YEAR	3.4	<u>2</u>

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.

SECTION 4: SYSTEM RELIABILITY RESULTS

Excluding MED

SAIDI	4.1	<u>101</u>
SAIFI	4.2	<u>0.957</u>
CAIDI	4.3	<u>106</u>

Including MED (Optional)

SAIDI	4.4	<u> </u>
SAIFI	4.5	<u> </u>
CAIDI	4.6	<u> </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 April 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 TMED

Blue Grass Energy

	SAIDI					CAIDI	SAIFI
	All	MED	PS	Sched	Other	All	All
2000	139.4	37.0	2.3	1.5	98.5	89.2	1.56
2001	111.5	23.7	1.6	2.1	84.1	83.0	1.34
2002	156.7	33.0	16.4	0.9	106.4	105.6	1.48
2003	1133.2	1033.4	8.4	0.9	90.5	504.5	2.25
2004	310.9	162.0	43.8	0.4	104.7	158.8	1.96
2005	108.6	0.0	15.9	0.7	92.0	91.1	1.19
2006	124.4	0.0	0.6	2.5	121.2	113.5	1.10
2007	147.1	41.5	6.4	2.9	96.4	120.2	1.22
2008	169.4	67.3	11.8	1.1	89.2	141.3	1.20
2003-2007 avg.	364.8	247.4	15.0	1.5	101.0	197.6	1.5
2004-2008 avg.	172.1	54.1	15.7	1.5	100.7	125.0	1.3

Major Event Days

	2004	2005	2006	2007	2008
	5/27/2004	None	None	4/3/2007	2/6/2008
	12/22/2004			8/16/2007	6/10/2008
	12/23/2004				
	12/28/2004				
	12/29/2004				

Years over which data used

Year T_{MED} used for	T_{MED}
2000-2004	2005 10.61
2001-2005	2006 11.40
2002-2006	2007 12.69
2003-2007	2008 12.09
2004-2008	2009 10.74

Electric Distribution Utility Annual Reliability Report

SECTION 5: OUTAGE CAUSE CATEGORIES

Excluding MED

CAUSE CODE DESCRIPTION		SAIDI VALUE	CAUSE CODE DESCRIPTION		SAIFI VALUE
Lightning	5.1.1	37.8	Power Supplier	5.2.1	0.203
Major Storm	5.1.2	37.4	Trees	5.2.2	0.152
Trees	5.1.3	18.9	Lightning	5.2.3	0.140
Power Supplier	5.1.4	14.3	Equipment Fault	5.2.4	0.135
Equipment Fault	5.1.5	14.0	Major Storm	5.2.5	0.121
Ice/Snow-not trees	5.1.6	10.5	Unknown	5.2.6	0.087
Wind-not trees	5.1.7	9.7	Small Animal S.C.	5.2.7	0.086
Unknown	5.1.8	6.4	Wind-not trees	5.2.8	0.067
Small Animal S.C.	5.1.9	5.7	Public Accident	5.2.9	0.045
Deterioration	5.1.10	5.2	Ice/Snow-not trees	5.2.10	0.035

SECTION 6: WORST PERFORMING CIRCUITS

CIRCUIT IDENTIFIER		SAIDI VALUE	MAJOR OUTAGE CATEGORY
Headquarters 104	6.1.1	2,442	Ice/Snow-not trees
Four Oaks 144	6.1.2	1,897	Ice/Snow-not trees
South Jessamine 144	6.1.3	1,793	Public Accident
Cynthiana 164	6.1.4	926	Major Storm
Lees Lick 144	6.1.5	763	Deterioration
Bridgeport 134	6.1.6	347	Unknown
South Elkhorn 124	6.1.7	303	Power Supplier
Headquarters 134	6.1.8	284	Trees
Millersburg 114	6.1.9	280	Power Supplier
Oxford 104	6.1.10	265	Wind-not trees

CIRCUIT IDENTIFIER		SAIFI VALUE	MAJOR OUTAGE CATEGORY
Cynthiana 114	6.2.1	0.056	Small Animal S.C.
Lees Lick 114	6.2.2	0.041	Maintenance
Colemansville 104	6.2.3	0.038	Public Accident
South Elkhorn 124	6.2.4	0.033	Power Supplier
Bridgeport 134	6.2.5	0.031	Ice/Snow-not trees
West Berea 124	6.2.6	0.027	Wind-not trees
Millersburg 114	6.2.7	0.026	Power Supplier
Crooksville 124	6.2.8	0.025	Trees
Ninevah 134	6.2.9	0.023	Trees
Hickory Plains 134	6.2.10	0.019	Lightning



**DISTRIBUTION RIGHT-OF-WAY VEGETATION
MANAGEMENT 2008 PLAN REVIEW**

MARCH 2009

Blue Grass Energy Vegetation Management Plan

2008 Review of Plan Implementation

Blue Grass Energy developed a formal plan to manage the maintenance of vegetation on distribution rights-of-way (ROW) in 2007/2008. The plans goals were established to provide excellent member service, maintain current tree related reliability and look for opportunities to increase production and reduce program cost.

As stated in the previously submitted Vegetation Management Plan, the plan may be modified from time-to-time based on performance as measured by tree-related service reliability and evaluations of member satisfaction with service reliability. Specific reliability metrics may include Tree SAIFI, trends in customer minutes interrupted by tree-related causes and tree-caused primary interruptions per 100 line miles as internal benchmarks of program performance over time. A Tree-Caused Outage Report summarizes these reliability criteria and is regularly reviewed and monitored.

2008-2009 Vegetation Management Strategy

SCHEDULED MAINTENANCE AND CLEARANCE

Blue Grass Energy provides electric service to over 54,000 members through a network of over 4,500 miles of distribution line. Blue Grass Energy uses a cyclic approach to preventive electric distribution ROW. Different circuits or portions of circuits may be scheduled on different cycles based on site conditions, sensitivity of the line to interruptions caused by trees or criticality of the line. The maintenance cycle for tree removal, tree pruning or brush control may be the same or different for a given scheduling unit.

As illustrated in Table 1, Blue Grass Energy completed 29 distribution circuits in 2008 for a total of 741 miles of distribution line. This is 38 miles ahead of the original goal. In 2009, there are 17 distribution circuits for a total of 700.3 miles scheduled. The varying site conditions determine the cost and cause completed miles to vary by year.

Table 1. Blue Grass Energy R/W Miles Scheduled vs. Completed

Maintenance Year	2008	2009
Scheduled	704	700
Completed	741	TBD

RELIABILITY

In 2008, Blue Grass Energy developed and implemented an outage investigation process to better understand the cause of tree failures. The data was used to identify species failure rates and help plan future work to eliminate potential outages. The investigation of all tree related outages will continue into 2009 to collect data on major outage categories.

Historical Blue Grass Energy tree caused outages are illustrated in Table 2.

Table 2. Number of Tree-Caused Outages on the Blue Grass Energy System

2002	2003	2004	2005	2006	2007	2008
176	190	208	82	99	204	174

2008 VEGETATION MANAGEMENT PLAN REVIEW

Several major changes were accomplished in 2008 to improve the plan. The “Distribution Right-Of-Way Vegetation Management Plan” submitted December 2007 outlined in detail the processes that were built into the plan.

Listed below are some of the process improvements in 2008:

1. Implementation of a general 5-6 year maintenance cycle for the system. In areas where standard clearances cannot be consistently achieved (e.g., subdivisions), mid cycle assessments will be conducted and cycles adjusted based on those findings. Recommended cycle lengths are guidelines.
2. Certified Arborist Utility Specialist supervisory personnel have adequate utility vegetation management technical expertise.
3. Three contractors were used in 2008 in order to increase flexibility, promote competition, and match contractor strengths (e.g., herbicide applications) to individual maintenance activities.
4. Reduced the amount of reactive maintenance by pre-inspection of all member tree trimming requests (e.g., hot spotting or responding to member requests) being completed. The amount of reactive maintenance was down significantly.
5. The crew labor and equipment complements were adjusted throughout the year to maximize cost effectiveness.
6. Developed and implemented a formal work monitoring and completion process. Each circuit is individually audited by ROW supervisory personnel to ensure specifications for clearance and quality are achieved.
7. Formally inspected all completed maintenance and utilized records to evaluate crew and contractor performance.
8. Records were maintained of key aspects of the ROW vegetation management program to document program performance and provide information necessary for ongoing program management

2009 VEGETATION MANAGEMENT PLAN

In addition to continuing the Distribution Right-Of-Way Vegetation Management Plans outlined for 2009 we intend to incorporate the following key objectives in the upcoming year:

- Accomplish National Arbor Day Tree Line USA status
- Continue to increase production and quality with established workforces
- Improve Process Management for all Capital/ Construction processes

Appendix

ROW VEGETATION MAINTENANCE CLEARANCE CYCLE SCHEDULING STRATEGY

The following table summarizes the Blue Grass Energy ROW vegetation maintenance scheduling strategy. Individual circuits may be accelerated or deferred based on assessment of field conditions and operating performance.

Circuit Description	Primary Cycle Length (Years)	Mid-cycle Inspection/selective Tree Maintenance (Years)
Feeder Multi-phase	5-6	2 to 3
Feeder Laterals (single-phase)	5-6	