

MAR 29 2013





# COMMONWEALTH OF KENTUCKY BEFORE THE PUBLIC SERVICE COMMISSION

_	-		_
112	tha	Matter	at.
111	LHC	viallei	OL.

AN INVESTIGATION OF THE	)	
RELIABLITY MEASURES OF	)	ADMINISTRATIVE
KENTUCKY'S JURISDICTIONAL	)	CASE NO. 2006-00494
ELECTRIC DISTRIBUTION UTILITES	)	

## Electric Distribution Utility Annual Reliability Report for 2012

Reported by: Clark Energy Cooperative, Winchester, Kentucky

#### CERTIFICATE OF PREPARATION

STATE OF KENTUCKY)

COUNTY OF CLARK )

This letter is to certify that I, Scott Sidwell, Sr. V.P. of Engineering & Operations for Clark Energy Cooperative in Winchester, Kentucky, completed this report and do attest the information contained within this response is true, accurate to the best of my knowledge, information, and belief formed after a reasonable inquiry.

This 29th day of March, 2013

My Commission Expires //-/4-/3

### Electric Distribution Utility Annual Reliability Report

#### **SECTION 1. CONTACT INFORMATION**

UTILITY NAME	1.1	Clark Energy Cooperative
REPORT PREPARED BY	1.2	Scott Sidwell
E-MAIL ADDRESS OF PREPARER	1.3	ssidwell@clarkenergy.com
PHONE NUMBER OF PREPARER	1.4	859-901-9229

#### SECTION 2: REPORT YEAR

CALENDAR YEAR OF REPORT 2.1 2012

#### **SECTION 3: MAJOR EVENT DAYS**

TMED	3.1	11.01
FIRST DATE USED TO DETERMINE TMED	3.2	1/1/2007
LAST DATE USED TO DETERMINE TMED	3.3	12/31/2011
NUMBER OF MED IN REPORT YEAR	3.4	5

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

#### SECTION 4: SYSTEM RELIABILITY RESULTS

**Excluding MED** 

 SAIDI
 151

 SAIFI
 2.010

 CAIDI
 75

Including MED (Optional)

SAIFI
CAIDI

#### 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

#### Electric Distribution Utility Annual Reliability Report

### SECTION 5: OUTAGE CAUSE CATEGORIES Excluding MED

CAUSE CODE		SAIDI VALUE	CAUSE CODE		SAIFI VALUE
Trees with Ice/Snow	5.1.1	2.683	Lightning	5.2.1	0.017
Trees without Ice/Snow	5.1.2	1.333	Trees with Ice/Snow	5.2.2	0.011
Weather/Other	5.1.3	1.268	Tree Failure W/O Ice/Snow	5.2.3	0.007
Maintanance/Other	5.1.4	1.063	Weather/Other	5.2.4	0.007
Lightning	5.1.5	0.493	Unknown	5.2.5	0.005
Wind/Not Trees	5.1.6	0.253	Construction	5.2.6	0.003
Decay/Age of Mat.	5.1.7	0.213	Small animals/birds	5.2.7	0.003
Power Supply	5.1.8	0.151	Tree growth	5.2.8	0.003
Insulator	5.1.9	0.126	Decay/Age/Mat. Or Equip	5.2.9	0.002
Fused Cutout	5.1.10	0.124	Maintenance/other	5.2.10	0.002

#### SECTION 6: WORST PERFORMING CIRCUITS

		SAIDI	
CIRCUIT IDENTIFIER		VALUE	MAJOR OUTAGE CATEGORY
FRNBURG4	6.1.1	747.7	Maintenance
SIDEVIEW1	6.1.2	539.6	Maintenance
BLEVAL3	6.1.3	413.3	Maintenance
UNIONCITY2	6.1.4	330.7	Maintenance
MARIBA2	6.1.5	293.1	Weather
CAVERUN1	6.1.6	290.1	Maintenance
MARIBA3	6.1.7	241.9	Weather
SIDEVIEW2	6.1.8	239.0	Maintenance
MARIBA1	6.1.9	199.9	Maintenance
CLAYCTY4	6.1.10	197.8	Weather
		CAIEI	
CIDCLUTIDENTIFIED		SAIFI	NAME OF CATEGORY
CIRCUIT IDENTIFIER		VALUE	MAJOR OUTAGE CATEGORY
FRNBURG4	6.2.1	VALUE 6.6724	Maintenance
	6.2.2	VALUE 6.6724 5.2054	Maintenance Weather
FRNBURG4	<del></del>	VALUE 6.6724	Maintenance
FRNBURG4 UNIONCITY2	6.2.2	VALUE 6.6724 5.2054	Maintenance Weather
FRNBURG4 UNIONCITY2 MARIBA1	6.2.2 6.2.3	VALUE 6.6724 5.2054 4.6991	Maintenance Weather Maintenance
FRNBURG4 UNIONCITY2 MARIBA1 SIDEVIEW1	6.2.2 6.2.3 6.2.4	VALUE 6.6724 5.2054 4.6991 4.6427	Maintenance Weather Maintenance Maintenance
FRNBURG4 UNIONCITY2 MARIBA1 SIDEVIEW1 MARIBA2	6.2.2 6.2.3 6.2.4 6.2.5	VALUE 6.6724 5.2054 4.6991 4.6427 3.6372	Maintenance Weather Maintenance Maintenance Weather
FRNBURG4 UNIONCITY2 MARIBA1 SIDEVIEW1 MARIBA2 BLEVAL3	6.2.2 6.2.3 6.2.4 6.2.5 6.2.6	VALUE 6.6724 5.2054 4.6991 4.6427 3.6372 2.7981	Maintenance Weather Maintenance Maintenance Weather Maintenance
FRNBURG4 UNIONCITY2 MARIBA1 SIDEVIEW1 MARIBA2 BLEVAL3 HINKSTON3	6.2.2 6.2.3 6.2.4 6.2.5 6.2.6 6.2.7	VALUE 6.6724 5.2054 4.6991 4.6427 3.6372 2.7981 2.1946	Maintenance Weather Maintenance Maintenance Weather Maintenance Weather Weather

#### Electric Distribution Utility Annual Reliability Report

#### Additional pages may be attached as necessary SECTION 7: VEGETATION MANAGEMENT PLAN REVIEW

Clark Energy continues to expand our Right-of-Way program with a budget increase each year for the last four years. We are in the fourth year of our seven year program to clear all the substation circuits on our system using a systematic approach of circuit bidding with multiple contractors.

Our 2013 bid included clearing 400 miles of overhead lines in Clark, Montgomery and Menifee Counties.

Approximately 150 miles of overhead lines that were cleared in the last 2 years were bid out for herbicide spray in 2013.

One section of remotely located primary line running through the Daniel Boone National Forest around Cave Run Lake is slated to be trimmed in 2013 using a helicopter fitted with a large motorized trim saw designed to do side trimming. The lack of access to this area makes it a perfect fit for this procedure.

#### **SECTION 8. UTILITY COMMENTS**

Some of the things Clark Energy is working on to improve service in 2013 includes:

- 1. Identifying locations of porcelain fused cutouts that have begun to fail and begin a replacement program
- 2. Convening a reliability committee to discuss ways of improving reliability
- 3. Changing conductors in problem areas that are experiencing outages due to old or frayed conductor
- 4. Completing a substation and feeder circuits on one of our repetitive 10 worst circuits that was subjected to excessive exposure due to feeder length.
- 5. Reviewing our sectionalizing scheme to include the use of electronic sectionalizing cutouts barrels in two or three shot designs that should reduce nuisance trips related to weather while preserving the overall design of the electrical system.
- 6. Completion of our SCADA system. Currently only ½ of our substations have SCADA and this should help improve reliability.