

# LICKING VALLEY

RURAL ELECTRIC COOPERATIVE CORPORATION

P. O. Box 605 • 271 Main Street West Liberty, KY 41472-0605 (606) 743-3179



April 25, 2008

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PUBLIC SERVICE
COMMISSION

Director of Engineering Public Service commission 211 Sower Boulevard P.O. Box 615 Frankfort, KY 40602

RE: Administrative Case No. 2006-00494

Enclosed you will find Licking Valley Rural Electric Cooperative Corporation's reliability report as requested in the October 26, 2007 order.

If additional information is needed, please advise.

Sincerely,

Kerry K. Howard

CEO

**Enclosures** 

#### LICKING VALLEY RURAL ELECTRIC COOPERATIVE CORPORATION

#### Annual Reliability Report - 2007

The table below shows the reliability indices for Licking Valley RECC's system for the past five years. These indices reflect all outages including outages caused by major storms and substation outages.

YEAR	SAIFI	SAIDI - ( minutes)	CAIDI –( minutes)
2003	.099	184.68	186.54
2004	.099	418.86	423.09
2005	1.00	195.96	195.96
2006	.099	213.42	215.58
2007	1.00	251.76	251.76

IEEE Standard 1366 – Tmed (major event day) could not be used in the calculations for years 2003-2007 as data is not available for daily SAIDI values.

## LICKING VALLEY RURAL ELECTRIC COOPERATIVE CORPORATION

## ANNUAL RELIABILITY REPORT - 2007

# **Contributing Causes:**

	SAIFI	SAIDI	CAIDI
			(minutes)
Substation Outage	.1132	.5592	296.40
Storms	.1551	.1846	71.40
Prearranged Maintenance	.4099	.6368	93.24
Equipment Failure in Substation	.1221	.4145	203.70
Animals	.0199	.0225	67.86
Trees Cut on Line	.0770	.1198	93.36
Unknown	.4043	.6385	94.74
Equipment Failure (Overhead)	.2692	.4520	100.74
Vandalism	.0026	.0085	196.14
Right – of- Way	.3939	.7490	114.06
Vehicles Hitting Pole or Wire	.1285	.3808	177.78
Cross Arm Broke	.0120	.0229	114.48
Oil Well Equipment Failure	.0044	.0064	87.30

In response to the ten worst performing circuits, Licking Valley Rural Electric Cooperative Corporation Does not track outages by circuit.					

Licking Valley Rural Electric Cooperative Corporation Response Item 1

1. Licking Valley Rural Electric Cooperative Corporation Annual Reliability Report.

Licking Valley Rural Electric Cooperative Corporation has a distribution reliability improvement program. Our distribution reliability program is managed by outage reports, line inspection reports, maintenance reports and consumer requests. Areas of concern are reported to management, which then takes the appropriate action for response to the situation. It is our opinion that these reports, which are prepared by our cooperative employees, are principal indicators of our distribution reliability and the efficiency of this program. We have enclosed, for your convenience, copies of Licking Valley Rural Electric Cooperative Corporation's Current Work Plan, which we feel is a very aggressive four year work plan.

Licking Valley Rural Electric Cooperative Corporation Response Item 2

2. Licking Valley Rural Electric Cooperative Corporation Vegetation Management Plan.

Licking Valley Rural Electric Cooperative Corporation has an aggressive vegetation management program and has contracted W. A. Kendall to address our cooperatives right-of-way requirements. Our cooperative likes to maintain sixty-foot of right-of-way clearance on new and existing accounts, however some variety in right-of-way clearing is based on geography/terrain, easement widths, line voltages and property owner issues. W. A. Kendall works with five (5) three (3) men crews. One crew runs a bucket truck and a chipper and their main concern are consumer requests and hot spots. One crew concentrates primarily on new right-of-way clearing. Three crews work on substation and circuit right-of-way clearing. In addition to W.A. Kendall, the cooperative has a bush hog that is used for right-of-way clearing when not in use by construction or maintenance crews. The cooperative provides one right-of-way crew, and W. A. Kendall also provides a crew that concentrates on Herbicide Treatment, primarily for the months of May until August or September.

### II. IEEE 1366 Definition of terms

The following terms are defined according to the IEEE standard 1366-2003 and have been used in this report.

SAIFI = System Average Interruption Frequency Index calculated as

 $SAIFI = \underline{Total\ number\ of\ customer\ interruptions}$ .

Total number of customers served

SAIDI = System Average Interruption Duration Index given in minutes and hours per year calculated as

SAIDI = Sum of all customer interruption durations.

Total number of customers served

CAIDI = Customer Average Interruption Duration Index

CAIDI = <u>SAIDI</u> = <u>Sum of all customer interruption durations</u>
SAIFI Total number of customer interruptions

 $T_{MED}$  = Major event day identification threshold value calculated as

 $T_{MED} = e^{(\alpha + 2.5\beta)}$  where

 $\alpha$  = the average of the natural logarithms of each daily SAIDI value for the year

 $\beta$  = the standard deviation of the natural logarithms of the daily SAIDI values