COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

AN INVESTIGATION OF THE	)	
RELIABILITY MEASURES OF	)	ADMINISTRATIVE
KENTUCKY'S JURISDICTIONAL	)	CASE NO. 2011-00450
ELECTRIC DISTRIBUTION UTILITIES	)	

Salt River Electric

Responses to Information Request of
the Kentucky Public Service Commission
by Order dated January 11, 2012

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PUBLIC SERVICE
COMMISSION

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In the Matter of:

AN INVESTIGATION OF THE RELIABILITY MEASURES OF KENTUCKY'S JURISDICTIONAL ELECTRIC DISTRIBUTION UTILITIES	))))	ADMINISTRATIVE CASE NO. 2011-00450

CERTIFICATE OF PREPARATION

STATE OF KENTUCKY)
)
COUNTY OF NELSON)

Timothy J. Sharp, being duly sworn, states that he supervised the preparation of the responses in the Appendix to the order dated January 11, 2012, of the Kentucky Public Service Commission in the above-named administrative case, and that the matters and items set forth therein are true and accurate to the best of his knowledge, information and belief, formed after reasonable inquiry.

SALT RIVER ELECTRIC COOPERATIVE CORP.

Timothy J. Sharp PE
Vice President of Operations

Subscribed and sworn before me on this 31st day of January 2012.

Notary Public, KY State at Large

My commission expires: 12-16-2014

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KENTUCKY'S JURISDICTIONAL	)	CASE NO. 2011-00450
ELECTRIC DISTRIBUTION UTILITIES	)	

The Witness for the Cooperative responsible for responding to questions

concerning the following information is

Timothy J. Sharp PE
Vice President of Operations
SALT RIVER ELECTRIC COOPERATIVE CORPORATION

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1. The following questions relate to the data maintained by each utility.

    a. Identify the number of circuits currently maintained by the electric utility.

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    b. Does the utility calculate separate SAIDI, SAIFI and CAIDI indices for each circuit? If no, explain why not and explain the degree to which the utility tracks the following:

        i. SAIDI;
        ii. SAIFI; and
        iii. CAIDI

    Salt River Electric does calculate individual indices for each circuit as it is necessary to report to the PSC. SAIDI and SAIFI are system averages and Salt River Electric tracks and uses them for trending and analysis on the system. Salt River Electric does not heavily rely on these two indices for evaluation on a per-circuit basis. Using these indices on a per-circuit basis can provide skewed numbers due to the relatively low customer numbers per circuit. Any indications provided on a per-circuit basis must be analyzed by someone thoroughly familiar with the circuit and outages to arrive at a reasonable conclusion. Salt River Electric does use CAIDI on a per-circuit basis to determine the effective response time of crews. However, an in depth

knowledge of the circuit location and terrain are required to adequately complete this evaluation.

c. Identify any other reliability indicator or measure the utility uses to assess reliability. Explain the significance of each indicator or measure used. Does the utility maintain these indicators or measures for each circuit?

Salt River Electric does not use other statistical measures to evaluate reliability. However, the application of all data and information available is used on a continual basis to evaluate reliability in areas of the system. Salt River Electric is constantly striving to improve overall system reliability, and individual reliability to each customer. Experience has shown that this is best achieved by individuals who are intimately knowledgeable of the system and circuits using the data available to arrive at the recommendations for improving reliability.

2. The following questions refer to the manner in which each utility calculates and tracks the SAIDI, SAIFI and CAIDI indices.

a. Identify the manner in which the indices are calculated and tracked; i.e., manually (Excel spreadsheet), or an electronic or mechanized (outage reporting) system.

All data is recorded in an electronic outage system. Monthly the data is exported into an excel spreadsheet for manipulation into the desired format. The excel spreadsheet allows for individualization of the data to look at specific areas or problems that might need to be addressed.

b. If the response to Item 2.a. above is *electronic or mechanized,* provide a description of the system and explain whether it was developed internally or purchased from a third-party vendor. If purchased from a third-party vendor, provide the name of the vendor and an estimate of the original cost of the system.

The outage management system was purchased from Milsoft. The total system, including automated answering, voice recognition and text to voice, was approximately $85,000.

c. If the response in Item 2.a. above is *manually*, provide a description of the elements tracked. Discuss in detail any inquiry made into the internal development of an electronic or mechanized system or any consideration of the purchase of a system from a third-party vendor.

Any manual calculations are done in Excel and are only for the ease of internal manipulation of data. The flexibility of Excel allows for more customizable and specific analysis when needed.

3. Concerning SAIDI, SAIFI and CAIDI reporting: the Commission directed that the reporting be based on the criteria and definitions set forth in the IEEE Standard.

a. If the utility does not follow the IEEE Standard, explain why not. Explain what standard(s) the utility does follow in its calculation of SAIDI, SAIFI and CAIDI.

Salt River Electric follows the IEEE Standard.

b. Does the utility track and review SAIDI, SAIFI and CAIDI monthly, quarterly or annually?

Salt River Electric tracks and reviews all indices monthly.

c. Are SAIDI, SAIFI and CAIDI tracked on a rolling 12-month period or for a more discrete period of time; i.e., monthly, quarterly, or annually?

Salt River Electric tracks SAIDI on a rolling 12-month period.

SAIFI and CAIDI are tracked monthly as it pertains to the current year.

d. Currently, in each annual report submitted pursuant to the Final Order in Case No. 2006-00494, each utility provides

system-wide SAIDI, SAIFI and CAIDI calculated for a calendar year. Identify any other preferred 12-month reporting parameter; i.e., calendar year, fiscal year, or some other 12-month method.

No other method is preferred.

e. Does the utility review SAIDI, SAIFI and CAIDI by any discrete fashion such as by division, district, region or some other method?

Each index is reviewed on a system-wide basis. All data will be analyzed to determine trends for improvement.

4. The following questions relate to the requirement that each utility report the ten worst-performing circuits for each index in the annual report submitted pursuant to the Final Order in Case No. 2006-00494.

   a. If the utility does not track SAIDI, SAIFI and CAIDI for each circuit, explain how the ten worst-performing circuits are identified.

   Salt River Electric uses SAIDI, SAIFI and CAIDI for each circuit.

   b. Does the utility see benefit in expanding the report of the worst-performing circuits to the 15 or 20 worst-performing circuits for each index?

   Salt River Electric does not see the benefit of including additional circuits in the report. All circuits are analyzed to determine improvements needed for reliability.

   c. Identify any alternative to reporting the ten worst-performing circuits that the utility utilizes to determine system reliability.

   Salt River Electric uses the methodology of looking at the circuits that contributed the most to the SAIDI and SAIFI numbers as part of their analysis. In this method, it can be seen which circuit,

when improved, provides the greatest benefit to the system as a whole.

5. The following questions relate to the identification of the ten worst-performing circuits for each index.

   a. Provide an explanation of the actions taken by the utility once the ten worst-performing circuits for each index have been identified. Include the typical steps taken to correct the reliability issues relating to the ten worst-performing circuits for each index.

   All circuits are analyzed by someone who is intimately familiar with the circuit and the outages to determine the root cause of systematic problems. Any improvements recommended will be scheduled for implementation. These will vary in manner and time, as each situation will be unique.

   b. Provide a timeline of the typical steps taken to correct reliability issues relating to the ten worst-performing circuits for each index.

   Steps taken to improve reliability will vary in manner and time, as each situation will be unique.

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