KCP&L-213

Exhibit No.:
Issue: Reliability
Witness: Gregory C. Brossier
Sponsoring Party: MoPSC Staff
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MISSOURI PUBLIC SERVICE COMMISSION

UTILITY OPERATIONS DIVISION

REBUTTAL TESTIMONY

OF

GREGORY C. BROSSIER

KANSAS CITY POWER & LIGHT COMPANY

FILE NO. ER-2010-0355

Jefferson City, Missouri
December 2010

** **Denotes Highly Confidential Information** **

Staff Exhibit No. KCP&L-213
Date 1/18/11 Reporter LMB
File No. ER-2010-0355

NP

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of the Application of Kansas City Power & Light Company for Approval to Make Certain Changes in its Charges for Electric Service to Continue the Implementation of Its Regulatory Plan	)))))	File No. ER-2010-0355

AFFIDAVIT OF GREGORY C. BROSSIER

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

Gregory C. Brossier, of lawful age, on his oath states: that he has participated in the preparation of the following Rebuttal Testimony in question and answer form, consisting of 5 pages of Rebuttal Testimony to be presented in the above case, that the answers in the following Rebuttal Testimony were given by him; that he has knowledge of the matters set forth in such answers; and that such matters are true to the best of his knowledge and belief.

Gregory C. Brossier

Subscribed and sworn to before me this 8th day of December, 2010.

SUSAN L. SUNDERMEYER
Notary Public - Notary Seal
State of Missouri
Commissioned for Callaway County
My Commission Expires: October 03, 2014
Commission Number: 10942086

Notary Public

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REBUTTAL TESTIMONY

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KANSAS CITY POWER & LIGHT COMPANY

FILE NO. ER-2010-0355

Q. Please state your name and business address.

A. Gregory C. Brossier, P.O. Box 360, Jefferson City, Missouri 65102.

Q. By whom are you employed and in what capacity?

A. I am a Utility Engineering Specialist I in the Energy Department with the Missouri Public Service Commission ("Commission" or "PSC").

Q. Describe your educational and professional background.

A. I graduated from the Missouri University of Science & Technology in 2008 with a Bachelor of Science Degree in Engineering Management. Upon graduation I worked as a Wastewater Engineer for the Department of Natural Resources for 14 months. I have been employed by the Commission since April 2010 as a Utility Engineering Specialist.

EXECUTIVE SUMMARY

Q. Please summarize your Rebuttal Testimony.

A. The purpose of my Testimony is to recommend that the Commission reject Kansas City Power & Light Company's ("KCPL" or "Company") request for a higher return on equity (ROE) due to the Company's reliability achievements as identified on page 10, lines 1 through 14, of KCPL witness Mr. Curtis D. Blanc's Direct Testimony and on page 5, lines 11 through 14 of KCPL witness Dr. Samuel Hadaway's Direct Testimony.

KCPL's REQUEST FOR MONETARY RECOGNITION FOR RELIABILTY

Q. What specifically has the Company said it is requesting and why?

A. The Company has indicated that it is requesting:

> . . . a return on equity commensurate with the top of Dr. Hadaway's range to reflect the Company's reliability and customer satisfaction achievements. KCP&L's T&D systems continued to perform at Tier 1 reliability levels in 2009, as measured by System Average Interruption Duration Index ("SAIDI") in the annual Edison Electric Institute Reliability Survey. (Blanc, Direct, p. 10, lines 1-5)

Q. What is SAIDI?

A. SAIDI is the System Average Interruption Duration Index. It measures, in minutes, the average length of time a customer is without power over the course of a year. This is done by taking the total duration of all customer interruptions divided by the total number of customers served. This is one of the most common indices used to measure reliability and is used widely throughout the electric power industry

Q. Are any other indices used or recorded by the Company?

A. Yes. There are three other indices used. Customer Average Interruption Duration Index or CAIDI, System Average Interruption Frequency Index or SAIFI, and Momentary Average Interruption Frequency Index or MAIFI. All of these indices, including SAIDI, are broken down into weather adjusted and non-weather adjusted figures. The weather adjusted figures remove large outliers from the data that were caused by weather conditions that are considered extreme or outside of typical weather patterns.

Q. What do these indices indicate regarding the reliability of KCPL's transmission and distribution system?

A. The SAIDI, CAIDI, SAIFI, and MAIFI numbers show an expected randomness and no significant reliability trends showing an increase or decrease in reliability over the period of January 2006 to September 2010.

Q. Are you including any graphical representations of the Company's reliability indices?

A. Yes. The graphs for SAIDI are included in the attached Schedule GCB-1.

Q. Could you please explain the graphs shown in this schedule?

A. There are four graphs which breakdown the SAIDI data that was provided by the Company for January 2006 through September 2010. The four graphs are: Monthly, Quarterly, Summer Months (May through October), and Winter Months (January through April, November and December). All of the graphs include data points, the data points average, an upper and lower bound, and a moving average. The data points come from the data provided by the Company as agreed to by the Stipulation and Agreement in EO-2005-0329, the data points' average is just the sum of the data points divided by the total number of data points for that graph and the upper and lower bounds are three standard deviations above and below the average respectively. The Monthly graph shows a 12-month moving average, and the Quarterly graph shows a 4-quarter moving average, i.e., both of these moving averages use a years worth of data. The Summer and Winter Months graphs use a 6-period moving average to track that season.

Q. What do the moving averages in these graphs indicate?

A. The moving average is a simple method used to show trends in data. When there are numerous consecutive data points, usually seven or more, in a large enough sample, either gradually increasing or gradually decreasing, it can be assumed that something is

causing the trend, not randomness. By viewing these moving average trend lines it can be seen that there is no trend in reliability in an upward or downward direction.

Q. What would an upward or downward trend indicate?

A. An upward or downward trend would indicate that something outside of normal variability is occurring.

Q. Would an upward or downward trend be negative or positive?

A. An upward trend, i.e., the average number of minutes the customers were without power is increasing would indicate that there may be something the Company would need to address to improve its reliability. A downward trend, i.e., the average number of minutes the customers were without power is decreasing, would indicate that the Company may be doing something or executing a plan to improve reliability and it is working. No definite statement of regarding the change in reliability should be made without looking at the other indices and the changes in the utility's vegetation management and infrastructure replacement practices.

Q. Why is the Staff opposed to the Company's request for the high end of its recommended range on ROE for the reasons the Company states?

A. Staff witness Lisa A. Kremer's Rebuttal Testimony addresses the customer satisfaction issue, but Staff is also opposed to the Company's request due to the fact that the KCPL shows no significant trend either upward or downward in its reliability statistics over the past five years. The Company's overall System Average Interruption Duration Index (SAIDI) numbers show no evidence of trending in either direction. Instead, the numbers vary from year to year which is to be expected when dealing with indices that are affected by so many factors (e.g., weather, system loads, geography). When broken down into summer

months (May – October) and winter months (November – April) the inconsistency remains, which further supports that lack of a trend. For these reasons Staff believes that the Company is operating its system at a consistent level of reliability. However it should be noted that the average SAIDI is approximately two times higher in summer months than in winter months throughout the past five years which indicates that the average time that a customer is without service is greater in the summer months than it is in the winter months.

Q. Please summarize your Rebuttal Testimony.

A. The Company's request for an increased rate of return based in part upon Mr. Blanc's statements that "KCP&L's T&D systems continued to perform at Tier 1 reliability levels in 2009...," should be rejected by the Commission for the following reasons:

1) KCPL's reliability has had no significant trends upward or downward over the past five years, and

2) Reliable service is something that is expected from KCPL, and does not justify a higher rate of return.

Q. Does this conclude your Rebuttal Testimony?

A. Yes.

Schedule GCB-1

Is Deemed

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In Its Entirety