

Exhibit No.:
Issues: Weather
Normalization
Witness: Shawn E. Lange
Sponsoring Party: MO PSC Staff
Type of Exhibit: Rebuttal Testimony
Case No.: ER-2006-0315
Date Testimony Prepared: July 28, 2006

MISSOURI PUBLIC SERVICE COMMISSION

UTILITY OPERATIONS DIVISION

REBUTTAL TESTIMONY

OF

SHAWN E. LANGE

EMPIRE DISTRICT ELECTRIC COMPANY

CASE NO. ER-2006-0315

**Jefferson City, Missouri
July 2006**

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

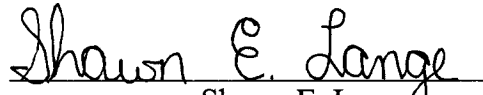
In the matter of The Empire District Electric)
Company of Joplin, Missouri for authority to file)
tariffs increasing rates for electric service provided)
to customers in the Missouri service area of the)
Company.)

Case No. ER-2006-0315

AFFIDAVIT OF SHAWN E. LANGE

STATE OF MISSOURI)
)
COUNTY OF COLE) ss.

Shawn E. Lange, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Rebuttal Testimony in question and answer form, consisting of 3 pages to be presented in the above case; that the answers in the foregoing Rebuttal Testimony were given by him; that he has knowledge of the matters set forth in such answers; and that such matters are true and correct to the best of his knowledge and belief.


Shawn E. Lange

Subscribed and sworn to before me this 27th day of July 2006.


Notary Public



My commission expires _____

DAWN L. HAKE
My Commission Expires
March 16, 2009
Cole County
Commission #05407643

1 | load data that is used to determine the weather response of the classes and the second deals
2 | with monthly billing data.

3 | Q. What differed in regard to the daily load data used?

4 | A. Staff used two years of daily load data to determine the weather response of
5 | the classes whereas Empire used only one year.

6 | Q. Why is it better to use two years of daily class load data?

7 | A. The model calculates a weather response function for each class using
8 | regression analysis on daily class loads. Using two years of daily class load data provides
9 | more data points for determining the weather response. Using more data results in a more
10 | accurate representation of what is occurring in each class. This is especially critical when
11 | determining the weather response for weekend days. With only one year of data, the model
12 | only has 13 Saturday data points in which to calculate the weather response across a three
13 | month season. With two years of data, there are 26 Saturday data points across the same three
14 | month season.

15 | While the statistical results using just thirteen data points may be excellent, what it is
16 | saying is that the regression equation is a good fit to the data; not that it accurately models the
17 | response. Using twenty-six data points gives the regression models a greater likelihood of
18 | both fitting a good regression equation and modeling the correct response.

19 | Q. What differed in regard to the actual billing month class usage data?

20 | A. Empire did not “clean up” the actual billing data used as an input in
21 | determining the weather adjustment. The billing data used, contained bad bills (i.e. bad
22 | original bills and cancels) and good bills, which included rebills. For this test year, December
23 | 2005 actual billing month class usage data contained an abnormally large amount of bad

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1 original bills. Staff corrected the bad billing data by moving the cancel that went with the bad
2 original bill from the months of January and February 2006 into December 2005. The rebills
3 that were associated with the moved cancels, were also moved from January and February
4 2006 into December 2005. It appears that Empire did not adjust for this.

5 Q. Are these the only differences in the weather normalization of the sales data?

6 A. No, they are not. There were other minor differences. However, more
7 important than these minor differences, Staff believes that is important in any type of
8 modeling to have the best input data because a model is only as good as the data input into it.

9 Q. Does this conclude your rebuttal testimony?

10 A. Yes, it does.