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**MISSOURI PUBLIC SERVICE COMMISSION**

**REGULATORY REVIEW DIVISION**

**SURREBUTTAL TESTIMONY**

**OF**

**SHAWN E. LANGE**

**KCP&L GREATER MISSOURI OPERATIONS COMPANY**

**CASE NO. ER-2012-0175**

*Jefferson City, Missouri  
October 2012*

Staff Exhibit No. 299  
Date 10/17/12 Reporter MM  
File No. ER-2012-0175

Staff Exhibit - 299



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**SURREBUTTAL TESTIMONY**

**OF**

**SHAWN E. LANGE**

**KCP&L GREATER MISSOURI OPERATIONS COMPANY**

**CASE NO. ER-2012-0175**

Q. Please state your name and business address.

A. My name is Shawn E. Lange and my business address is Missouri Public Service Commission, P.O. Box 360, Jefferson City, MO 65102.

Q. Are you the same Shawn E. Lange who contributed to Staff's Cost of Service Report filed in this case?

A. Yes, I am.

Q. What is the purpose of your surrebuttal testimony?

A. The purpose of my surrebuttal testimony is to respond to KCP&L Greater Missouri Operations Company ("GMO") witness Dr. George McCollister.

Dr. McCollister asserts the Large Power Service ("LPS") customer class is weather sensitive and therefore should be weather normalized in this case. Staff's position is that while the usage of the LPS class increases in the summer months, it is more sensitive to seasonal changes in weather and to business cycles than it is to daily fluctuations in weather, and hence not appropriate for weather normalization.

Q. Dr. McCollister stated:

First, for all the classes that are weather normalized, the weather response function is estimated for the class as a whole and applied to the actual sales of the entire class. It is never applied to individual customers in the methods used by either KCP&L or the Staff, as Mr. Lange inferred.<sup>1</sup>

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<sup>1</sup> Dr. McCollister Rebuttal page 2, lines 6-9.

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Shawn E. Lange

1 Do you agree?

2 A. Yes. For the classes that are weather normalized in this case, by either GMO  
3 or Staff, the adjustment is calculated and applied at the class level and not at the level of  
4 individual customers.

5 Q. Why does Staff assert that the LPS class billing data should not be weather  
6 normalized?

7 A. There are several reasons why Staff did not weather normalize the LPS class.  
8 First, this class includes the LPS customers that Staff individually annualizes in its case  
9 instead of applying a growth factor to them. Please see Staff witness Dr. Seoung Joun Won's  
10 portion of the Staff Cost of Service Report for more information regarding the annualization  
11 of the LPS class. Second, Staff asserts that the increase in the LPS class load in the summer  
12 months is influenced more by the time of the year (season) than by the day-to-day fluctuations  
13 that occur in the other customer classes. Third, while Staff agrees that some customers in the  
14 LPS class are weather-sensitive; those customers represent a small percentage of the whole  
15 class.

16 Q. Why does Staff not apply a growth factor to the LPS class?

17 A. Typically, growth is applied to the weather normalized usage per customer.  
18 First, the class usage is weather normalized, and then it is divided by the number of customers  
19 in that class to get an average usage per customer. Growth in class usage is calculated by  
20 applying an increased number of customers to the average customer weather normal usage. A  
21 more detailed description of how growth is calculated can be found in the Staff witness Ms.  
22 Karen Lyons portion of the Staff Cost of Service Report.

1           With that in mind, the LPS class contains the largest energy users and the lowest  
2 number of customers. Because this small group of customers demands larger amounts of  
3 electricity and performs a variety of functions, —e.g. hotels, office buildings, manufacturing,  
4 hospitals, etc.— the class is very heterogeneous in how and when its members demand  
5 electricity. As a result, there is no usage that represents the typical LPS customer because  
6 there is not a typical LPS customer. However, there may be, and usually are, seasonal  
7 sensitivities that correspond to the industry of which each customer is a part.

8           Q.     Does Staff adjust usage in order to reflect this seasonal sensitivity of the LPS  
9 Class?

10          A.     No.

11          Q.     Why not?

12          A.     Seasonal fluctuations need to remain in the usage because they are “normal,”  
13 i.e., they occur every year.

14          Q.     Why does Staff assert that this class shows a seasonal response rather than a  
15 weather-sensitive response?

16          A.     Seasonal sensitivity occurs when a company or industry experiences a change  
17 in the amount of electricity used because of a repeating yearly cycle. Examples of seasonal  
18 sensitivity include a July drop in automobile production as factories retool for new models or  
19 a reduction in a customer’s electric usage at a facility because their electric motors run more  
20 efficiently in the winter when it is cooler.

21          Q.     If seasonal sensitivity is present in the LPS class, is it present in any of the  
22 other classes?

1           A.     While it may be present in the other classes, the amount of any impact that one  
2 customer may have on the class as a whole is typically much smaller. Also, because these  
3 other classes typically have larger amounts of customers, the class level's hourly load data is  
4 typically a result of sampling. Customers that are not normal are typically included in the  
5 sample. Implicit in the sampling is the assumption that the customers in each strata respond  
6 similarly. When these classes are weather normalized, the assumption of customers  
7 responding similarly is carried forward in the weather normalization process.

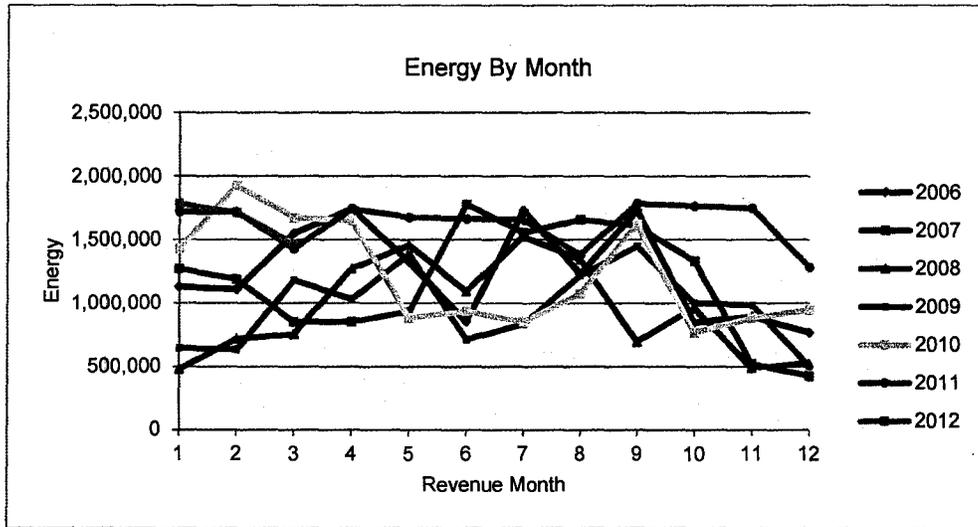
8           Q.     How is the LPS class sampled?

9           A.     Typically the LPS class is 100% sampled or close to 100% sampled, i.e. all  
10 customers are included in the sample. So the same assumption that customers respond  
11 similarly is not present for the LPS class.

12          Q.     Why does being at or near 100% sampled have an impact on the LPS class?

13          A.     Because of the number of and size of the customers in this class, customers  
14 like those in Figures 1 through 4 below, will affect the class load shape and will affect the  
15 weather adjustment of the class. Figures 1 through 4 are examples of GMO LPS customers  
16 that tend to react to something other than weather, such as business cycles or economic  
17 cycles. If these customers were weather sensitive, there would be a general increasing trend  
18 to a peak monthly usage in July, August, or January and a decrease thereafter. While month  
19 to month and year to year there may be slight differences due to temperatures in those time  
20 periods, the overall the trend due to weather would be consistent.

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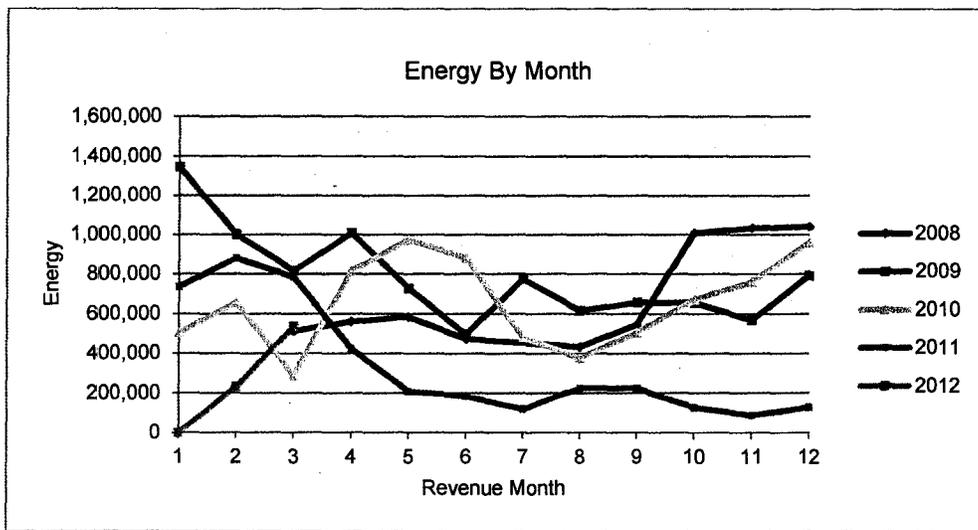


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*Figure 1: The figure above shows an example of a customer that, on a revenue month basis, their energy usage tends to react to something other than weather.*

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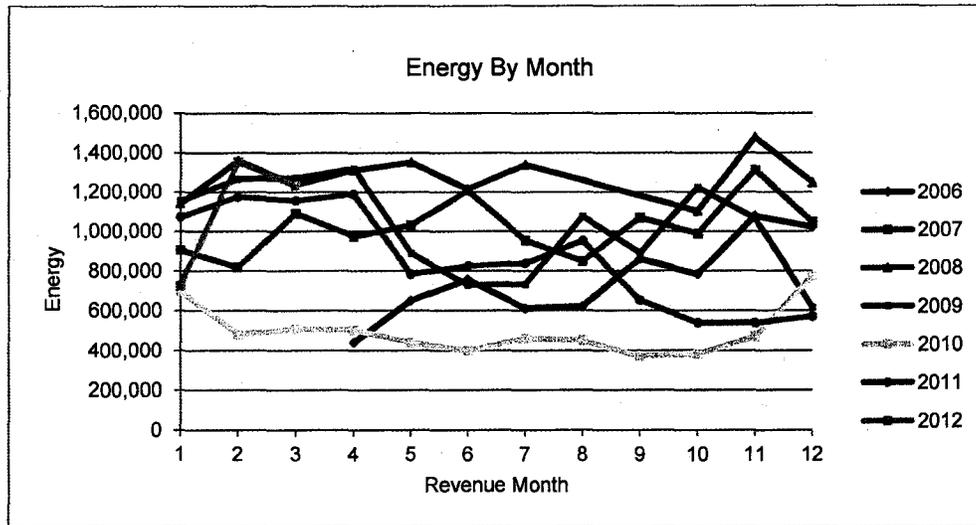


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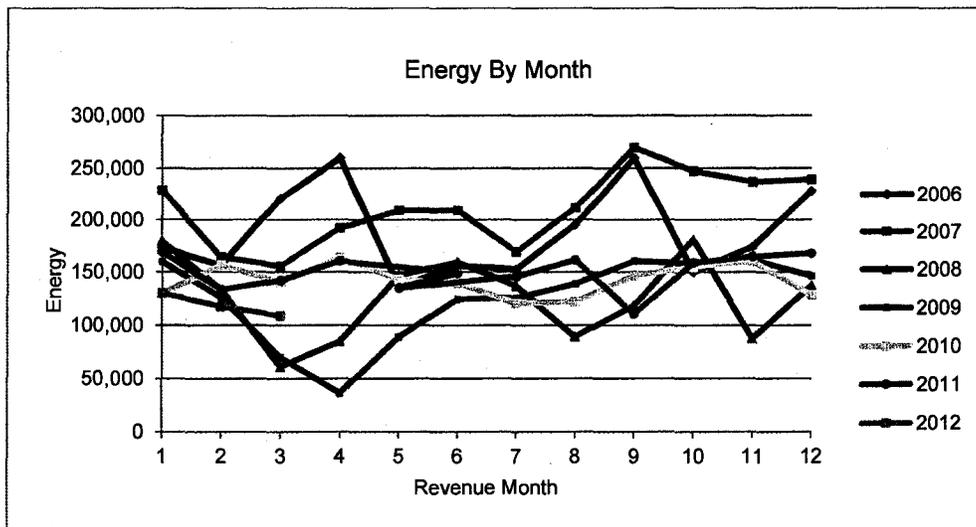
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*Figure 2: The figure above shows an example of a customer that, on a revenue month basis, their energy usage tends to react to something other than weather.*

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2 *Figure 3: The figure above shows an example of a customer that, on a revenue month basis,*  
3 *their energy usage tends to react to something other than weather.*



4  
5 *Figure 4: The figure above shows an example of a customer that, on a revenue month basis,*  
6 *their energy usage tends to react to something other than weather.*

7 Q. Does Staff weather normalize the LPS class at the class level for any of the  
8 other electric utilities this Commission rate regulates?

9 A. No, it does not.

10 Q. Has the Commission ruled on this issue before?

Surrebuttal Testimony of  
Shawn E. Lange

1 A. Yes, in its Report and Order in Case No. ER-2006-0314, the Commission

2 stated:

3 The Commission finds that the competent and substantial evidence  
4 supports Staff's position, and finds this issue in favor of Staff. The LP  
5 class consists of a fairly small number of large businesses engaged in  
6 wildly different enterprises; hotels, office buildings, manufacturing, and  
7 hospitals are examples. These businesses' electricity needs vary more due  
8 to the type of commerce they are in than due to day-to-day temperature  
9 changes...<sup>2</sup>

10  
11 Q. What is your recommendation?

12 A. I recommend the Commission adopt the actual LPS usage with annualization  
13 adjustments as proposed by Staff witness Dr. Seoung Joun Won.

14 Q. Does this conclude your surrebuttal testimony?

15 A. Yes, it does.

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<sup>2</sup> ER-2006-0314 Report and Order page 73.