

Exhibit No.:
Issues: Normalization of Class
Sales and Normalization
of Net System Input
Witness: Lena M. Mantle
Sponsoring Party: MO PSC Staff
Type of Exhibit: Rebuttal Testimony
Case No.: ER-2001-672
Date Testimony Prepared: January 8, 2002

MISSOURI PUBLIC SERVICE COMMISSION

UTILITY OPERATIONS DIVISION

REBUTTAL TESTIMONY

OF

LENA M. MANTLE

**UTILICORP UNITED, INC.
D/B/A MISSOURI PUBLIC SERVICE**

CASE NO. ER-2001-672

**Jefferson City, Missouri
January 2002**

FILED²
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Missouri Public
Service Commission

1 **REBUTTAL TESTIMONY**

2 **OF**

3 **LENA M. MANTLE**

4 **UTILICORP UNITED INC.**

5 **d/b/a/ MISSOURI PUBLIC SERVICE COMPANY**

6 **CASE NO. ER-2001-672**

7 Q. Please state your name and business address.

8 A. My name is Lena M. Mantle and my business address is Missouri Public
9 Service Commission, P. O. Box 360, Jefferson City, Missouri 65102.

10 Q. Are you the same Lena M. Mantle who has filed prepared direct testimony in
11 this case?

12 A. Yes, I am.

13 Q. What is the purpose of your rebuttal testimony?

14 A. The purpose of my rebuttal testimony is to explain a correction that I have
15 made to annualize test year class usages to 365 days. I will also describe the reasons for
16 the differences between weather adjustments to class sales recommended by Missouri
17 Public Service, a division of UtiliCorp United, Inc (MPS) and Staff and describe why the
18 Commission should adopt the weather adjustments to sales recommended by Staff. In
19 addition, I will briefly describe why the Commission should adopt the normalized net
20 system loads that were used in Staff's estimate of fuel and purchased power expenses.

21 Q. What correction did you make to annual class usage?

22 A. In prehearing discussions with MPS, it was pointed out that in my direct
23 testimony, I estimated normalized annual class usage for each of the weather sensitive

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1 classes for the calendar year of 2000, which had 366 days because it was a leap year. I
2 have made a correction to the normalized annual class usage to reflect 365 days of usage.

3 Q. How was this correction made?

4 A. The amount of reduction for each weather-normalized class was calculated
5 by dividing the normalized, annual usage by 366. Then this "average day's usage" for
6 each class was subtracted from the calendar year 2000 normalized, annual usage for that
7 class to reflect 365 days of usage. This method was used instead of removing the usage
8 from a specific day of the year because there is no way to determine which day should be
9 removed.

10 Q. Did you make any other corrections to Staff's recommended normalization
11 adjustments to class usage?

12 A. No, I did not.

13 Q. To which Staff witness did you provide your correction?

14 A. I provided class adjustments totaling 10,810,449 kWh to Staff witness Janice
15 Pyatte, who calculated an adjustment to revenue due to this reduction in class usage. A
16 breakdown of the adjustment to the usage for each weather sensitive class can be found in
17 Ms. Pyatte's rebuttal testimony on Schedule 1.

18 In addition, I provided the sum of the class adjustments multiplied by the loss
19 factor to Staff witness David Elliott so that he could calculate a corresponding adjustment
20 to fuel and purchased power expenses.

21 Q. Did the Staff and MPS come to an agreement regarding weather adjustments
22 to class usage?

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1 A. No, we did not. While the methodology and model used to calculate weather
2 adjustments to class sales were the same for both parties, the results were different
3 because of differences in the inputs. MPS recommends a reduction in usage of
4 37,803,000 kWh with a corresponding reduction in revenues of \$2,878,283, and Staff
5 recommends a reduction in usage of 22,627,088 kWh with a corresponding reduction in
6 revenues of \$2,341,386.

7 Q. What were the differences in the inputs?

8 A. The model used by both Staff and MPS was developed using a two-day
9 weighted mean temperature, which is a measure of weather for a given day that takes into
10 account the impact of the weather of the previous day. This is consistent with the way
11 MPS's customers respond to weather, i.e., the usage on any given day is impacted by not
12 only the weather on that day, but also the weather on the previous day. Despite the fact
13 that the model was based on two-day weighted mean temperatures, MPS input actual
14 mean daily temperatures for the time period being adjusted. Mean daily temperature is
15 calculated as the sum of the daily maximum and minimum on that day divided by two.
16 Therefore the weather adjustment calculated by MPS was based on the difference
17 between normal usage, based on a two-day weighted mean temperature, and actual usage,
18 based on a mean daily temperature. By contrast, the weather adjustment I calculated was
19 based on the difference between normal and actual usages, both calculated using two-day
20 weighted mean temperatures. In other words, the actual weather that I used was fully
21 consistent with the model. The actual weather used by MPS was not.

22 Another input that was different was the billing data. Staff reviewed the billing
23 data that MPS used and made adjustments to the data to reflect billing corrections and/or

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1 recording errors that MPS made during the test year. These adjustments typically occur
2 because of one of two situations. One situation involved the correction of an erroneous
3 original bill in a month other than the month that the original, incorrect bill was recorded.
4 The second situation resulted when MPS's new billing system incorrectly recorded bills
5 based upon the month when the bill was calculated rather than the actual billing month
6 the usage occurred in. In both situations the monthly billing data that is required for
7 accurate weather normalization of class usage is distorted.

8 While MPS attempted to correct the data prior to its calculation of weather
9 adjustments to class sales, there were still adjustments that needed to be made to the data.
10 Staff witness Janice Pyatte adjusted the billing data to reflect what the billing data would
11 have been if the bill had been correctly billed and/or correctly recorded prior to my
12 calculation of the weather adjustment to sales. The information used to make these
13 adjustments was supplied to Staff by MPS. While Staff does not believe that it adjusted
14 for all of the billing problems that occurred in the test year, the billing problems
15 identified by Staff and the adjustments made to the billing data input into the weather
16 normalization analysis did make a measurable difference in the weather adjustments to
17 class sales. A summary of the billing adjustments can be found in the Direct Testimony
18 of Janice Pyatte on Schedule 2-2 in the column titled "Annualizations for Billing
19 Corrections."

20 Q. Were there any other differences in the inputs used by MPS and Staff?

21 A. Yes, there was one other difference. I used normal weather measures in the
22 calculation of weather adjustments to class sales that, unlike those used by MPS, were
23 consistent with weather measures I used to normalize net system loads. However, the use

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1 of these differing normal weather measures did not produce significant differences
2 between MPS and Staff's results.

3 Q. Do the differences in inputs that you have just described account for all of the
4 difference between MPS's and Staff's positions regarding weather adjustments?

5 A. No, they do not. In its analysis, MPS included weather adjustments to its
6 large power service classes (rates 730 and 735). Staff did not include weather
7 adjustments for these classes. The customers in this class are typically large industrial
8 customers whose weather sensitive usage, if there is any at all, is a very small portion of
9 their total usage. Moreover, any billing errors in the usage of these two classes would
10 dwarf the weather sensitive loads of these customers.

11 I did calculate a weather adjustment for these classes and it was not significantly
12 different from zero. Ms. Pyatte also reviewed the billing data provided by UCU for these
13 classes. After reviewing the billing data and taking into account the small weather
14 adjustment, Staff made the determination that it did not have enough confidence in the
15 billing data to be able to include weather adjustments for these two rate classes.
16 Therefore, weather adjustments for the large power classes are not included in Staff's
17 recommendation to the Commission regarding weather adjustments to class sales.

18 Q. Were there differences between the normalized net system loads used by the
19 Staff and MPS in the production cost model that estimates fuel and purchased power
20 expenses?

21 A. Yes, there are many differences.

22 Q. Briefly describe the differences in the net system loads used by MPS and
23 Staff.

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1 A. The net system loads used by MPS are projected net system loads for
2 calendar year 2001. These loads were estimated using the Hourly Electric Load Model
3 (HELM), which assumes that the weather sensitivity of the daily peak is the same as the
4 weather sensitivity of the daily energy. In addition, MPS did not reconcile its projected
5 net system loads to the usage that is the basis for its revenue calculation.

6 The net system loads used by Staff are normalized calendar year 2000 loads.
7 Staff's method of weather normalizing net system load does not assume that daily peaks
8 and energies have the same weather sensitivity. Daily peaks are weather normalized
9 separately from daily energy. The Staff's method of assigning normal weather measures
10 to the days of the test year also minimizes the weather adjustment on any given day,
11 allowing the Staff to use the actual daily load shapes in its normalization. Finally, Staff's
12 net system loads are reconciled to the customer usage from which normalized revenues
13 are calculated.

14 Q. What are your recommendations to the Commission?

15 A. I recommend that the Commission adopt (1) Staff's adjustment to normalize,
16 annual class usage to 365 days; (2) the weather adjustments to class sales as calculated by
17 Staff; and, (3) the net system loads input by the Staff in its production cost model used to
18 calculate fuel and purchased power expenses. Recommendations (2) and (3) remain as
19 they were in my direct testimony.

20 Q. Does this conclude your rebuttal testimony?

21 A. Yes, it does.

**BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI**

In The Matter Of The Tariff Filing Of)
Missouri Public Service (MPS) A Division)
Of UtiliCorp United Inc., To Implement A)
General Rate Increase For Retail Electric)
Service Provided To Customers In The)
Missouri Service Area Of MPS.)

Case No. ER-2001-672

AFFIDAVIT OF LENA M. MANTLE

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

Lena Mantle, of lawful age, on her oath states: that she has participated in the preparation of the foregoing rebuttal testimony in question and answer form, consisting of 6 pages of rebuttal testimony to be presented in the above case, that the answers in the foregoing rebuttal testimony were given by her; that she has knowledge of the matters set forth in such answers; and that such matters are true to the best of her knowledge and belief.



Lena M. Mantle
Lena M. Mantle

Subscribed and sworn to before me this 7th day of January, 2002.

My commission expires _____

DAWN L. HAKE
Notary Public - State of Missouri
County of Cole
My Commission Expires Jan 9, 2005

Dawn L. Hake
Notary Public