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**Missouri Public
Service Commission**

Exhibit No.:

Issue:

**Large Customer
Adjustments**

Witness:

Daniel I. Beck

Sponsoring Party:

MoPSC Staff

Type of Exhibit:

Direct Testimony

Case No.:

GR-2001-629

MISSOURI PUBLIC SERVICE COMMISSION

UTILITY OPERATIONS DIVISION

DIRECT TESTIMONY

OF

DANIEL I. BECK

LACLEDE GAS COMPANY

CASE NO. GR-2001-629

Jefferson City, Missouri

October 2001

DIRECT TESTIMONY

OF

DANIEL I. BECK

LACLEDE GAS COMPANY

CASE NO. GR-2001-629

Q. Please state your name and business address.

A. My name is Daniel I. Beck and my business address is P. O. Box 360,
Jefferson City, Missouri 65102.

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

A. I am employed by the Missouri Public Service Commission (MOPSC or
Commission) as a Utility Regulatory Engineer in the Utility Operations Division.

Q. Would you please review your educational background and work experience?

A. I graduated with a Bachelor of Science Degree in Industrial Engineering from
the University of Missouri at Columbia in 1983. Upon graduation, I was employed by the Navy
Plant Representative Office in St. Louis, Missouri, as an Industrial Engineer. I began my
employment at the Commission in November 1987 in the Research and Planning Department of
the Utility Division (later renamed the Economic Analysis Department of the Policy and
Planning Division) where my duties consisted of weather normalization, load forecasting,
integrated resource planning, cost-of-service and rate design. In December 1997, I was
transferred to the Rate Design/Tariff Section of the Commission's Gas Department where my
duties included weather normalization, annualization, tariff review, cost-of-service and rate
design. Since June 2001, I have continued with the same duties in the Engineering Analysis
Section of the Energy Department, which was created by combining the Gas and Electric

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1 Departments. I am a Registered Professional Engineer in the State of Missouri. My registration
2 number is EN 026953.

3 Q. Have you previously testified before this Commission?

4 A. Yes, I have. Schedule 1 is a list of cases in which I have testified.

5 Q. What is the purpose of your direct testimony?

6 A. The purpose of my direct testimony is to sponsor adjustments to the large
7 customers revenues related to unauthorized usage, weather normalization, the effect of
8 interruptions, and typical usage. The large customers can more specifically be described as: the
9 Large Volume Service (LV), Interruptible Service (IN), and Large Volume Transportation and
10 Sales Service (LVTSS) Classes. I have provided these adjustments to Staff Witness John P.
11 Cassidy.

12 Q. What is unauthorized usage and what procedure did you follow to calculate
13 the adjustment?

14 A. Unauthorized usage is defined on Sheet No. 35 of Laclede's tariffs and is
15 generally defined as usage over a customer's predefined limit on days when Basic
16 Transportation customers are notified to limit their usage. During the test year, there were 30
17 days when such limitations were imposed. In contrast, no days of limitations were imposed
18 during the previous winter. Laclede estimated that the average number of days of usage
19 limitations over the last 9 years was 10 days per year. Therefore, Laclede estimated that the
20 actual unauthorized usage experienced during the test year should be reduced by two-thirds to
21 reflect normalized unauthorized usage $([30 \text{ days} - 10 \text{ days}] / 30 \text{ days} = 2/3)$. Although it is
22 difficult to predict the number of future days of limitations, since this can be influenced by the
23 gas supply decisions of the Company and the usage characteristics of all customers, not just the

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1 LVTSS Basic customers, Staff finds the Company's methodology to be reasonable and has
2 made the corresponding adjustment.

3 Q. Earlier, you stated that you also made adjustments related to weather
4 normalization, the effect of interruptions, and typical usage. Are these three reasons for
5 adjustments related to one another?

6 A. Yes. Although I made separate adjustments for each of these three topics, the
7 topics are related, since most of these adjustments were calculated using regression analysis.
8 Depending on the class, the regressions were either run on the total class usage or individual
9 customer usage.

10 Q. Could you give an example the regression analysis that you performed?

11 A. Yes. For the LVTSS class, all customers are billed at the end of the month.
12 Therefore, the regression analysis compared monthly usage to actual heating degree days
13 (HDD) for a calendar month. Once the relationship between usage and weather was
14 determined, monthly adjustments to reflect normal weather were determined. An adjustment
15 reflecting the sum of these monthly weather adjustments is shown in Staff's Accounting
16 Schedules.

17 In addition to weather, the regression analysis showed that December 2000 and
18 January 2001 usage was lower than expected. In my opinion, this low usage was the result of
19 Company imposed limitations of service for Basic Transportation, which is a subclass of the
20 LVTSS Class. The adjustment can be seen in Adjustment ? in Staff's Accounting Schedules.

21 Q. Did you do a similar regression analysis on the Interruptible Class?

22 A. Yes, however, since this class has a small number of customers that have
23 different meter-read dates and some are non-weather sensitive with erratic load patterns, I

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1 performed regression analysis on a customer-by-customer basis. I determined that seven of the
2 interruptible customers were weather sensitive. Of these, five had low usage in the January
3 2001 billing month, one had an apparent billing error which combined December 2000 and
4 January 2001 usage into one bill, and one showed non-typical usage for the months of August,
5 September, and October. In addition, one customer that was non-weather sensitive showed zero
6 usage for the billing month of December 2000. Staff has made adjustments to normalize the
7 effect of these anomalies.

8 Q. The remaining large customer class is the LV Class. Did you also perform
9 regression analysis on this class?

10 A. Yes, this class, like the Interruptible Class, has customers that are read on
11 different read dates. But since the LV Class has a relatively large number of customers, I
12 developed weighted monthly HDDs to account for the diversity in the reading dates. (This class
13 has at least one customer with a meter that is read on each of the twenty-one billing cycles.)
14 Staff has made the corresponding weather normalization adjustment for this class.

15 Q. What was the source of the data used in your regression analysis?

16 A. Staff witness Anne Ross supplied the usage data for the large customer
17 classes. Staff witness Dennis Patterson provided the daily HDD values.

18 Q. Does this conclude your direct testimony in this part of the case?

19 A. Yes, it does. However, I will also be filing direct testimony on cost-of-
20 service and rate design.

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the matter of Laclede Gas Company's)
Tariff to Revise Natural Gas Rate Schedules)

Case No. GR-2001-629

AFFIDAVIT OF DANIEL I. BECK

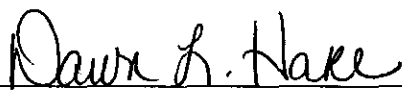
STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

Daniel I. Beck, is, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Direct Testimony in question and answer form, consisting of 4 pages to be presented in the above case; that the answers in the foregoing Direct 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.



DANIEL I. BECK

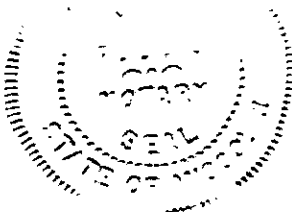
Subscribed and sworn to before me this 9th day of October 2001.



Notary Public

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

My Commission Expires: _____



LACLEDE GAS COMPANY
Case No. GR-2001-629

List of Cases in which prepared testimony was presented by:
DANIEL I. BECK

<u>Company Name</u>	<u>Case No.</u>
Union Electric Company	EO-87-175
The Empire District Electric Company	EO-91-74
Missouri Public Service	ER-93-37
St. Joseph Power & Light Company	ER-93-41
The Empire District Electric Company	ER-94-174
Union Electric Company	EM-96-149
Laclede Gas Company	GR-96-193
Missouri Gas Energy	GR-96-285
Kansas City Power & Light Company	ET-97-113
Associated Natural Gas Company	GR-97-272
Union Electric Company	GR-97-393
Missouri Gas Energy	GR-98-140
Missouri Gas Energy	GT-98-237
Ozark Natural Gas Company, Inc.	GA-98-227
Laclede Gas Company	GR-98-374
St. Joseph Power & Light Company	GR-99-246
Laclede Gas Company	GR-99-315
Utilicorp United Inc. & St. Joseph Light & Power Co.	EM-2000-292
Union Electric Company d/b/a AmerenUE	GR-2000-512
Missouri Gas Energy	GR-2001-292