Exhibit No.:	
Issues:	Weather Normal Variable
Witness:	Manisha Lakhanpal
Sponsoring Party:	MO PSC Staff
Type of Exhibit:	Rebuttal Testimony
Case No.:	GR-2010-0171
Date Filed:	June 24, 2010

MISSOURI PUBLIC SERVICE COMMISSION

UTILITY OPERATIONS DIVISION

REBUTTAL TESTIMONY

OF

MANISHA LAKHANPAL

LACLEDE GAS COMPANY

CASE NO. GR-2010-0171

Jefferson City, Missouri
June 2010

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Laclede Gas Company's Tariff to Increase Its Annual Revenues for Natural Gas Service	))))	Case No. GR-2010-0171

AFFIDAVIT OF MANISHA LAKHANPAL

STATE OF MISSOURI)
) **ss**
COUNTY OF COLE)

Manisha Lakhanpal, of lawful age, on her oath states: that she has participated in the preparation of the following Rebuttal Testimony in question and answer form, consisting of 4 pages of Rebuttal Testimony to be presented in the above case, that the answers in the following 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.

Manisha Lakhanpal

Manisha Lakhanpal

Subscribed and sworn to before me this 23rd day of June, 2010.

NOTARY PUBLIC NOTARY SEAL STATE OF MISSOURI

SUSAN L. SUNDERMEYER
My Commission Expires
September 21, 2010
Callaway County
Commission #06942086

Susan L. Sundermeyer

Notary Public

REBUTTAL TESTIMONY

OF

MANISHA LAKHANPAL

LACLEDE GAS COMPANY

CASE NO. GR-2010-0171

Q. Please state your name and business address.

A. My name is Manisha Lakhanpal and my business address is Missouri Public Service Commission, P. O. Box 360, Jefferson City, Missouri, 65102.

Q. Are you the same Manisha Lakhanpal who submitted a section on weather normal variables as part of the Staff's , May 10, 2010 Revenue Requirement Cost of Service Report?

A. Yes, I am.

Q. What is the purpose of your Rebuttal Testimony?

A. I will address the Direct Testimony of Laclede Gas Company (LGC or Company) witness Patricia A. Krieger regarding the weather data Ms. Krieger used in weather normalization of billing usage.

Q. Please explain the differences between the normal weather data used by Staff and LGC.

A. Both Staff and the Company use weather from the St. Louis, Lambert International Airport (STL) weather data station to estimate weather normal. Both Staff and the Company use data provided by National Oceanic and Atmospheric Administration (NOAA). The main difference between the positions of the parties is one of timing. Staff relied on the published official NOAA weather normals from January 1971 through

December 2000 as a benchmark to compare actual Heating Degree Day (HDD) from the test year. The Company used monthly averages from July 1979 through June 2009 as their weather normal benchmark. This recent 30–year average of weather data is also available through NOAA, but is not considered "official" weather normal data.

Q. What is an official weather normal?

A. An official weather normal is an average of appropriately adjusted observations of a weather element calculated over a prescribed period of time by government climatologists. NOAA applies this concept to temperature by calculating 30-year temperature normals as monthly averages for daily maximum, minimum and average temperature. NOAA's normal temperatures for each of the 12 calendar months for STL are calculated as the adjusted average temperatures of the NOAA monthly sequential, over thirty years. The end product is called NOAA thirty-year monthly temperature normals (published as Climatography of the United States No. 81 Monthly Station Normals of Temperature, Precipitation, and Heating and Cooling Degree Days, 1971-2000, 23 MISSOURI, NOAA, National Environmental Satellite, Data and Information Service, National Climatic Data Center, Asheville, NC).

Q. Why does NOAA make adjustments to historical temperature observations?

A. When monthly temperatures normals are calculated by NOAA special measures are taken to ensure that all years of monthly temperatures in the calculations are consistent. Without this adjustment, the historical monthly temperatures would be biased by the effects of exposure changes, e.g., changes in observation practices, instrument type, or instrument location and any inhomogeneities in the data due to missing temperature. To be

consistent, NOAA adjusts the historical monthly temperatures before they publish an official weather normal.

Q. When will NOAA update its current normals?

A. NOAA is expected to publish its official normals for January 1981 through December 2010 by next year.

Q. Have there been any exposure changes at STL in the past decade? If yes, then has NOAA adjusted for that change?

A. Yes, there has been a change in the elevation of the instrument used for measurement at the STL weather station. The change occurred on January 18, 2002, when the elevation was changed from 173.1 meters to 161.8 meters. Since this change is outside the current published official NOAA normal time period, it would be reflected as an adjustment when NOAA publishes its new set of official weather normals next year. According to NOAA, (Climatography Of The United States No. 81, Supplement No. 2, Annual Degree Days, to Selected Bases, 1971 – 2000) - "Instrument changes and relocations can cause numerous inhomogeneities in a weather station's records." Besides adjusting for exposure changes, NOAA uses a complex computational procedure to estimate normal weather variables.

Q. Has Ms. Krieger accounted for that change in her weather normal dataset?

A. It is unclear if she accounted for this change in the Company's weather normals.

Q. Please illustrate the differences between Staff and Company weather normals.

A. The differences are as follows:

Staff Normal HDD (using published NOAA normal time period of 1971-2000)	4751	**Company** Normal HDD (using 30-years from 1979-2009)	4551
Staff Actual HDD	4613	Company Actual HDD	4608
Adjustment - actual to normal	138	Adjustment - actual to normal	-57
Test year Warmer than normal by	3%	Test year Cooler than normal by	-1%

Q. Please explain the relevance of the results in the two datasets.

A. The weather normal adjustment factor based on the official published NOAA normals show that the test year was warmer than normal, which means Staff increased sales and revenues by about 3%. On the other hand, Company data shows that the test year was cooler than normal, and so they decreased sales and revenues by about 1%.

Q. Why does Staff prefer to use official weather normals?

A. Staff has consistently used official published NOAA normal, because the official normal is adjusted for exposure changes, missing data and is a result of a standard computational procedure followed by NOAA and the more recent 30-year weather data is not. Staff's approach does not benefit any one utility over another because it is standard data for all electric and gas cases. As can be seen in the illustration above, if Staff does not use a standard approach, then the normal can be selectively applied to the benefit of a particular group for a given test year.

Q. What is your recommendation to the Commission?

A. Staff recommends that the published official NOAA normal weather (1971-2000), be used as a benchmark over the weather normal data used by the Company.

Q. Does this conclude your rebuttal testimony?

A. Yes, it does.