Exhibit No.:	
Issue:	Weather Normalization, HVAC
Witness:	Patricia A. Krieger
Type of Exhibit:	Surrebuttal Testimony
Sponsoring Party:	Laclede Gas Company
Case No.:	GR-99-315

LACLEDE GAS COMPANY

GR-99-315

SURREBUTTAL TESTIMONY

OF

PATRICIA A. KRIEGER

Surrebuttal Tesitmony of Patricia A. Krieger

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SURREBUTTAL TESTIMONY OF PATRICIA A. KRIEGER

Q. Please state your name and business address.

A. My name is Patricia A. Krieger, and my business address is 720 Olive St., St. Louis, Missouri 63101.

Q. Are you the same Patricia A. Krieger who submitted direct and rebuttal testimony in this case?

A. Yes, I am.

PURPOSE OF TESTIMONY

Q. What is the purpose of your surrebuttal testimony?

A. The purpose of my surrebuttal testimony is to respond to the rebuttal testimony of Staff witnesses, Steve Qi Hu (Dr. Hu), Dennis Patterson, Henry Warren, Ph.d., and James Gray in the matter of weather normalization. In addition, I will respond to the rebuttal testimony of Staff witness Arlene Westerfield regarding appliance service work (HVAC).

WEATHER NORMALIZATION

RESPONSE TO DR. HU'S REBUTTAL TESTIMONY

Q. On page 2, line 17 of Dr. Hu's rebuttal testimony, he states that the global warming effect on temperature in a 10-year period may be too small to detect, at about 3/10 of a Centigrade degree. Do you agree?

A. A change in temperature due to global warming of 3/10 degree Centigrade equates to over .5 degrees Fahrenheit. This amount is only .2 degrees Fahrenheit less than one of Dr. Hu's bias adjustments in this case and .2 degrees Fahrenheit more than

one of his adjustments in Case No. GR-98-374. If Dr. Hu can identify biases and calculate adjustments of this small magnitude and urge their consideration for ratemaking purposes, it would seem reasonable that a .5 degree change due to global warming should be able to be detected and considered as well in establishing rates.

Q. On page 3, line 1 of his rebuttal testimony, Dr. Hu suggests that natural variations in climate conditions may be greater than the warming projected due to anthropogenic effects (those effects induced by humans on climate). Please comment.

A. Natural climate variabilility may be greater than the anthropogenic effects. However, this does not mean that such effects do not exist. Scientists are attempting to separate the natural variations so that the global warming signal can become more evident. Lack of consistent, quality historical data is hampering this endeavor. Improvements in technology and measurement procedures are being put in place to provide more meaningful data in the future to allow scientists to quantify more exactly the impacts of anthropogenic effects. Nonetheless, until such time as sufficient data becomes available to identify precisely the impacts of global warming, it is reasonable to assume that the suspected impacts of warming trends are embedded in more recent data, and that future climate conditions will continue to reflect these existing impacts at an accelerating rate.

Q. On page 3, line 8 of Dr. Hu's rebuttal testimony, he states that it is unknown at this time what has been causing the mild temperatures in the central United States, and he goes on to state that we cannot say this condition is a trend or that it should be used in projections for future years. Please reply.

A. It is unlikely that natural climate variation is the sole cause underlying the mild winters experienced in recent years. As it is generally true that more recent events provide a better indication of the future, it is likewise reasonable to believe that more recent historical weather data is more indicative of future climate conditions. Acknowledgment of this assumption can be reflected by choosing a more recent period upon which to base normal weather conditions, such as the past ten years as proposed by the Company in this case. This approach recognizes an inherent warming bias, regardless of the source of such bias, be it global warming, urbanization, etc., and utilizes the more recent data, which is the most meaningful and has the greatest influence on future weather conditions. Please see the testimony of Company witnesses, Dr. Jay Turner, D.Sc. and Mr. Timothy Waldron for more discussion on trends and appropriate normals.

RESPONSE TO MR. PATTERSON'S REBUTTAL TESTIMONY

Q. Why does Staff disagree with the use of a 10-year normal?

A. Mr. Patterson states on page 2, line 2 of his rebuttal testimony that it is critical to the ratemaking process that "official" standards be used and that the "official" period adopted by NOAA is 30 years. However, Staff apparently does not feel it is critical to the ratemaking process that "official" standards (published data) be used for determining the 30-year normal. If NOAA official standards should be used to determine the proper period, then it follows that NOAA official temperature data, or at the very least data adjusted in the same manner and to the same end that NOAA would make adjustments, should be required for calculation of the 30-year normal. To my knowledge, Dr. Hu's adjustments to the NOAA data are neither "official" nor

sanctioned by NOAA. Similarly, on page 6 of his rebuttal testimony, Mr. Patterson criticizes my use of NOAA "official" temperature data instead of using Dr. Hu's adjusted data. Mr. Patterson cannot have it three ways; namely, (1) claim that Staff's position is "official" NOAA, (2) use a witness, Dr. Hu, who blatantly and significantly changes NOAA's official data, and (3) criticize Laclede for using official NOAA data.

Q. Does Staff disagree with the 10-year normal proposed by the Company for any other reason?

A. Yes. On page 2, line 4 of his rebuttal testimony, Mr. Patterson states that the Company's calculations failed to take into account significant observational changes that have occurred at Lambert, specifically in 1988 and 1996. The significant observational changes that Mr. Patterson refers to are changes quantified through Dr. Hu's double mass analyses, the quality of which has been questioned in my rebuttal testimony as well as that of the Company's consultant, witness Dr. Turner. The 1988 change observed by Dr. Hu has not to this date been acknowledged by NOAA either in its calculation of its 1990 published normals or in its official station history sheet for Lambert. The 1996 ASOS change observed through Dr. Hu's work is one which NOAA will not even consider until publication of its 2000 normals in approximately 2002. The official Lambert station history sheet does not indicate any 1996 location change. It is not known whether NOAA will make an adjustment to its 2000 sequential temperature data, much less the amount of such adjustment. Staff is proposing an adjustment not yet contemplated by NOAA, based on methods and procedures not utilized by NOAA, and using a data set that is not sufficient to be

reliable. Furthermore, neither Staff nor the Company has the expertise or the resources to attempt to make an adjustment comparable to NOAA. This is evident by the fact that Staff's calculated adjustment for the 1978/1979 station move is significantly different than the adjustment made by NOAA for the same event. NOAA' s adjustment was a monthly adjustment varying from .9 degrees to 1.2 degrees Fahrenheit. Dr. Hu's adjustment was calculated as .7 degrees Fahrenheit in this case, but Dr. Turner's correction to Dr. Hu's calculations would result in an adjustment of .2 degrees Fahrenheit applied to all months. In addition to the shortcomings in his application, Dr. Hu's analysis fails to account for obvious seasonal differences in adjusting for biases. Please refer to the surrebuttal testimony of Company witnesses, Dr. Turner and Mr. Waldron, for more discussion on the appropriateness of Dr. Hu's adjustments with regard to seasonality.

Q. Is the Company asking the Commission to decide if there is global warming?

A. No. The Company is asking the Commission to recognize for ratemaking purposes the need for a benchmark in weather normalization that would more equitably serve the ratepayer and the shareholder and be more in tune with actual current climate conditions. Essentially, the Company is asking the Commission to recognize a warming bias (be it due to global warming, urbanization, or some other source) that is already acknowledged by many in the scientific community.

Q. On page 2, line 22 of his rebuttal testimony, Mr. Patterson states that official recognition of global warming should come through NOAA when it adopts a shorter period than 30 years for its published normal. Do you agree?

A. No. Recognition by NOAA would not necessarily result in adoption of shorter periods for its published normals, because the 30-year normals currently published by NOAA are simply presented as benchmarks based on historical data. NOAA does not adjust for trends and does not imply that future climate conditions will conform to the past conditions embedded in these historical baselines. On the other hand, NOAA has already, in essence, recognized the need for using shorter timeframes for predictive purposes by its utilization of a ten-year period on which to base its Optimal Climate Normals. These values are made available by the Climate Prediction Center (a division of NOAA) to forecast long-term temperatures for the upcoming year and periods beyond one year. NOAA's concern regarding global warming issues is also apparent in its establishment of the United States Historical Climate Network (USHCN) in an attempt to study and quantify the impacts of global warming. USHCN includes approximately 1200 weather stations across the country, primarily in rural settings, which supposedly have consistent historical temperature data from which to analyze such impacts. NOAA would not be utilizing its resources to study the impacts of global warming if it did not believe global warming concerns were relevant.

Q. On page 3, line 3 of his rebuttal testimony, Mr. Patterson states that the past 15 years have not been statistically warmer than the previous period. Is his analysis valid?

A. Company witness, Dr. Turner, addresses the statistical validity of Mr. Patterson's analysis in his surrebuttal testimony. I can only add that a simple average of heating degree days for the past 15 years (1984-1998) is nearly 10% lower than the average of the earlier (1961-1983) period using NOAA official heating degree days, and

more than 6% lower even using Dr. Hu's adjusted data. It is reasonable to conclude from this simple analysis that warmer weather has occurred over the past 15 years.

Q. On page 3, line 18 of his rebuttal testimony, Mr. Patterson discusses the potential benefits that were enjoyed by the Company during periods of colder-than-normal weather prior to 1984 and suggests that such benefits perhaps offset the lost revenues experienced during the past 15 years of overall warmer-than-normal heating seasons. Mr. Patterson expresses concern that policy on weather normals should not change due to what "might be" short-run trends in weather. Please comment.

A. While Mr. Patterson considers 15 years of predominantly warmer-than-normal weather as something that "might be" a short-run trend, I doubt that the business community views 15 years of depressed earnings results due to warmer-than-normal weather short-run. One must look realistically at how long financial markets will allow the Company to attempt to recover from extended periods of one-sided weather conditions. Is it realistic to expect the financial community to consider the effect on earnings of colder-than-normal heating seasons experienced prior to 1984 when making decisions in the financial marketplace today? Of greater importance, is the very real concern that underperformance due to warmer-than-normal weather in recent years will never come close to offsetting in the future because of the one-sidedness of the factors causing the current trend, i.e., global warming and urbanization. All indications are that these factors will continue to persist for several years to come. Reasonable recognition of this concern is warranted in this ratemaking process. Certainly the expectation of equity for both the ratepayer and shareholder is something that should be realized in less than 30 years.

Q. Does Mr. Patterson have any other objections to using the most recent 10-year period to establish normals?

A. Mr. Patterson's rebuttal testimony discusses the following concerns:

1. Use of a 10-year normal would require annual readjustment of rates;
2. Risk of departure from such normal is not shared equitably by the ratepayer and shareholder; and
3. Staff would have no basis on which to file a complaint case in the event that actual weather results were colder than the established normal for an extended number of years.

With all due respect, Mr. Patterson's objections are for the most part contrived arguments that are without any true merit or substance. First of all, I do not agree that use of a 10-year normal would require annual readjustment of rates any more than use of a 30-year normal requires annual readjustment. As long as the value of the normal is representative of average results, there is no need for readjustment of rates. Mr. Patterson's second concern regarding equity in risk is one which should not be taken lightly. It should be noted, however, that the risk is currently not shared equitably -- in view of recent extended periods of warmer-than-normal weather, the risk is significantly greater for the shareholder. Finally, as for actual results being colder than normal for extended periods, the Company shares a similar risk that results will be warmer than normal, as pointed out by Mr. Patterson. The same condition exists when using a 30-year normal. Even if several years of colder-than-normal heating seasons were to occur, Staff could initiate a review if it felt the normal was no longer reliable. In addition, it is unlikely that the Company would not

file for rate increases for any significant period, given its history of filing every two years.

Q. On page 7, line 3 of his rebuttal testimony, Mr. Patterson states that Missouri is a test year state and implies that heating degree days are not used as predictors but rather as a means to adjust the test year for a departure from normal conditions. How is this relevant?

A. It is irrelevant that Missouri is a test year state. The number of normal heating degree days to use in adjusting the test year to normal conditions can, in fact, be the same number as used to predict future conditions. Just as a 10-year normal can be used to represent future conditions, it can also be used as the appropriate benchmark to represent normal conditions during the historical test year. I simply do not understand the distinction Mr. Patterson is attempting to make.

Q. On page 7, line 9 of his rebuttal testimony, Mr. Patterson comments that in addition to departures from normal in weather, departures from normal in other areas also occur. He states that "it may be expected that the various departures from the overall normal condition will tend to offset one another." Do you agree?

A. No. It is inconceivable that departures from normal conditions "may be expected" to offset one another. Consider the bias inherent in the following scenario:

- Departures from normal weather can either increase or reduce revenues;
- Departures in customer levels, i.e. increases in customers for Laclede, typically have the effect of increasing revenues; although, this effect is accompanied by higher depreciation expense related to the cost of constructing additional mains and services. The Company's service territory has seen minor levels of

customer growth in recent years, and there is no indication that this condition will change in the foreseeable future;

- Departures from expense levels almost always reduce earnings because we are living in an inflationary economy. While the rate of inflation may vary, there is a continuing erosion of earnings due to higher wage rates and increases in other costs of doing business. In short, there are no "other conditions" that would positively offset the under-earnings being experienced due to warmer-than-normal weather. Obviously, the potential for net losses is greater than the potential for net gains. Staff's unfounded concerns about not being able to file a complaint case in the event that normals are set too low and several years of colder-than-normal weather occurs should be additionally tempered by the fact, that in such cases, the benefits of increases in revenues will most likely be offset to some extent by the on-going inflationary increases in expense levels. On the other hand, periods of extended warmer-than-normal weather cause reductions in revenues that are coupled with the inherent bias of inflationary increases in expense levels. This condition over time takes its toll on the financial stability of the Company.

RESPONSE TO REBUTTAL TESTIMONY OF HENRY WARREN

Q. On page 2, line 20 of his rebuttal testimony, Dr. Warren states that the Company's method for determining baseload does not accurately measure water heating use in the test year or for that matter "normal" water heating use. Please comment.

A. The Company's method was designed to provide a reasonable estimate of seasonal effects on non-weather sensitive load. While the seasonal effects may vary

somewhat in extreme periods, this method provides an approximate amount of usage that does not vary with heating degree days.

Q. On page 2, line 27 of his rebuttal testimony, Dr. Warren states that the Company's calculation of average hot water use is above values found in end-use studies by the Gas Research Institute (GRI) and the U.S. Department of Energy (DOE). Do you agree?

A. GRI or DOE studies may or may not be indicative of usage patterns specifically in the Company's service territory. The estimate of total non-spaceheating load calculated by the Company in this case is actually lower than that calculated by Dr. Warren in this case for water heating use only. The Company's calculation of total baseload for the Laclede residential division is 323 therms annually. Dr. Warren's calculation of an annual amount for water heating alone is 332 therms (.01159 times 28,634 actual water heating degree days). It should be noted that Dr. Warren's regression calculation of water heating values indicates negative gas requirements for non-water heating base load, such as cooking and clothes drying. In other words, Dr. Warren's methodology suggests that Laclede has somehow lost all of its load, and more, associated with these commonly used applications for natural gas. Obviously, this is contrary to reality. This result is demonstrated by Dr. Warren's Schedules 2-1 and 2-2 in his direct testimony. The intercept on his graph is below zero, indicating negative non-water heating base load. Regardless of the merits of his overall results, his graph demonstrates a serious and obvious flaw in his analysis. Schedule 1 to my surrebuttal testimony illustrates the anticipated results of regression analysis and the result of Dr. Warren's analysis.

Q. Dr. Warren states on pages 3 and 4 of his rebuttal testimony that the Company's study supporting its baseload methodology is not based on end-use surveys and that the Company has not fulfilled its obligation in Case No. GR-92-165. He also recommends that the Gas Research Institute should perform a study to determine how much gas is used for water heating. Please comment.

A. The study supporting the Company's methodology is based on actual usage patterns of customer billings that could determine an appropriate relationship between summer and winter baseload. The study relies on the actual usage patterns of customers in the Company's service territory that do not use natural gas for spaceheating, but do use natural gas for other purposes, primarily water heating. This group of residential customers have historically had a consistent annual load level that has been relatively constant regardless of heating degree days, indicating that the seasonal trends in baseload are not significantly impacted by year-to-year weather variations. Dr. Warren contends that end-use surveys are the only way to determine accurate baseload, and that the Company has not fulfilled commitments made during Case No. GR-92-165. However, the Company did in fact take a serious look at Staff's proposed methods and discussed with Staff the inherent problems with each of these approaches. While end-use surveys can provide representative data on gas water heating saturation, water heating efficiency, household size, water heater temperature settings, and other demographics, surveys can not provide reliable data as to the inlet temperature of water. I doubt that data collected through end-use surveys is more reliable than the actual metered usage of customers who use natural gas for purposes other than spaceheating. Water heater usage would need to be

individually metered and water temperatures measured at the inlet to accurately determine the impact of weather on water heating usage. The Company fulfilled its commitment in Case No. GR-92-165 by working with Staff on this issue. It is my recollection that both Staff and the Company had certain reservations with respect to all of the methods proposed. The value derived from end-use studies is not cost-justified. Staff's water heating adjustment is approximately 9% of its total weather normalization adjustment in this case.

Q. On page 6, line 21 of his rebuttal testimony, Dr. Warren contends that the Company's use of weather data for gas supply planning is not symmetric with the weather data used for determining revenue requirement. Please comment.

A. Dr. Warren is mixing apples (weather normalization) with oranges (gas supply planning requirements to meet worst case weather conditions). Revenue requirement is based on normal conditions -- an average condition expected to occur in the future. Ten years of data provides a reasonable level of average results most likely to occur in the future. It is inconceivable to think that gas supply requirements for a firm, or captive, customer base should be determined on average conditions. The Company is obligated to provide gas supply under the most extreme weather conditions and, therefore, should utilize all historical data to determine the range of extreme weather patterns it should be prepared for, regardless of the likelihood of such occurrence. Under Dr. Warren's scenario, the Company would not be able to supply gas to residential customers any time the temperature for the heating season exceeded the maximum number of degree days experienced for the past ten years. The Company proposes a 10-year normal for revenue requirement to more closely approximate

what normal weather conditions will be, which shows a tendency toward more frequent, warmer seasons. That is not to say there will never be another extremely cold heating season, and the Company's gas supply planning should acknowledge that concern.

RESPONSE TO REBUTTAL TESTIMONY OF JAMES GRAY

Q. Is Staff's regression methodology for weather normalization superior to the ratio method employed by the Company, as stated by Mr. Gray in his rebuttal testimony?

A. No. My rebuttal testimony regarding weather normalization did not focus on the differences between the ratio method and Staff's regression analysis methodology due to the fact that only approximately 5% of the difference in the revenue requirement related to weather normalization between the Company's position and that of Staff is due to the variation in these two methodologies. About 86% of the variation is due to differences in the calculation of normal heating degree days (and the temperature data underlying those calculations), and approximately 9% is due to the desire on the part of Staff to weather normalize water heating usage.

At a weather normalization seminar sponsored by the Staff in 1992, Staff presented both the ratio method and the regression method as appropriate methods used for weather normalization. While regression analysis may be more appropriate for electric utilities due to the need for, and availability of, hourly data, the ratio method was presented as being an acceptable method for gas utilities that have available only monthly billing data as a source for calculating normalization adjustments. Until the Company's 1992 rate case, the Staff had consistently used the ratio method.

The Company has evaluated the regression methodology that Staff has sponsored in recent years, and the Company has certain reservations about adopting this methodology. Both methods assume a linear relationship between heating degree days and use per customer. Insignificant differences exist between the use of annual versus monthly versus billing cycle data. Although Staff begins with data at a much lower level (billing cycle), its regression analysis plots only 12 points (monthly data). In the final analysis, both methods produce a consistent value that is applicable to each and every degree day in the test year. The difference in this case between Staff's value per degree day and that of the Company is only .002 therms per degree day, or 1.4%, for Laclede Division residential heating. Staff's methodology results in a lower revenue requirement worth only about $500 per degree day variation for all districts and customer classes. Although, Staff's overall results appear reasonable, I have a few concerns with regard to the appropriateness of Staff's model. First, some of the intercepts in Staff's regression analyses have been "plugged" to equal zero. If not made to equal zero, the natural slope of the regression line would produce a negative intercept. Such a result would suggest that the Company has negative baseload volumes, a result which defies logic. Similar results appear in Dr. Warren's analysis of water heating regression. I suspect this phenomenon stems from incorrect assumptions regarding water heating degree days, the impacts of which are carried through to the final spaceheating analyses.

My second area of concern regards pricing. The Staff uses yet another statistical model to determine the appropriate assignments of the total therms to be adjusted to the various block structures. The Company uses the actual monthly use per customer

to determine how many of the adjusted therms fall into each block. As a result, if total therms are being added back to a month of the test year, adjustments to both Block 1 and Block 2 must be positive. Staff's methodology results in the need to "plug" adjustments to result in the correct direction that logic would dictate.

While the ratio method does not generate a "goodness of fit" r^2 statistic, the correlation between heating degree days and spaceheating usage has long been recognized throughout this industry. Staff's statistical methods produce a result within a certain range of error. Given that the results of the Company's methodology fall within 5% of the results produced by Staff's methodology, one can assume that the Company's method is just as statistically reliable as Staff's method in this case. While minor shortcomings may exist in both methodologies, the difference between the results of Staff's method and the Company's method is about .5% of the Company's actual test year sales. The methods employed by the Company are labeled as "crude" by Mr. Gray and do not meet his level of statistical sophistication. However, the ratio methodology is much simpler to apply and the results produced are certainly within the range of error in Staff's methodology.

Weather Normalization Summarization

Q. Please summarize your position on weather normalization.

A. The following guidelines should be applied in this case:

1. The Commission should continue to rely on NOAA data since it is collected and made available to the public by an expert, independent third party. No adjustments to the data should be made in this case, because there is no compelling evidence that the data should be adjusted and because the proposed

adjustments have not been calculated reliably using the same methods and standards as NOAA. Furthermore, there is no assurance that these adjustments are representative of the adjustments that might be made by NOAA at the end of the decade;

2. The Commission should recognize the need for a normal degree day benchmark that is more reliable in approximating actual weather conditions. This can be achieved by adopting a shorter normals period that will place more emphasis on recent climate conditions, thereby capturing any trends that may exist at Lambert;

3. The Commission should continue to rely on both the ratio and regression methodologies for calculating weather normalization adjustments for gas companies. However, due to some of the illogical results produced by Staff's model in this case, the Company's ratio method should be relied upon; and

4. The Commission should accept the Company's long standing method for calculating seasonal impacts on baseload volumes that do not vary with heating degree days. However, it is not necessary to normalize water heating usage for weather variations because year-to-year fluctuations in seasonal usage are minimal and not capable of being accurately calculated. The value of conducting end-use surveys is not cost-justified and would not produce the results desired.

APPLIANCE SERVICE WORK (HVAC)

RESPONSE TO REBUTTAL TESTIMONY OF ARLENE WESTERFIELD

Q. How did the Company calculate its adjustment in this case to ensure that the ratemaking treatment given HVAC costs and revenues would be consistent with the requirement of subsection 4 of Section 386.756 of the HVAC Services Act (RSMo. Supp. 1998)?

A. Consistent with the statute, my adjustment effectively excludes all of the revenues and all of the costs that would have been received or incurred by the Company had it not been engaged in HVAC service work during the test year. The net effect of all actual revenues and all expenses incurred (either actual or allocated) for performing HVAC work, such as materials, advertising, administrative and general expenses, and transportation costs (including related depreciation expense), were adjusted from the test year income statement. This adjustment ensures that the Company's rates have not been increased or decreased as a result of its participation in HVAC activities.

Q. Why did Staff not make an adjustment as required by the statute?

A. According to Staff, it made no attempt to make an adjustment because the Company's recordkeeping does not track the costs related to HVAC work separately. On page 2, line 18 of her rebuttal testimony, Ms. Westerfield states that: "Staff does not believe this adjustment is appropriate, due to lack of sufficient recordkeeping."

Q. Is the Company's recordkeeping inadequate for purposes of calculating an appropriate adjustment?

A. No. The Company specifically records the man-hours associated with such work. It is, therefore, possible to calculate labor costs based on an average payroll distribution rate. The actual costs for advertising and materials are determinable. Transportation costs and related depreciation expense are allocated based on actual man-hours. If the Company were to isolate the HVAC costs in a separate account for recordkeeping purposes, the methodology in charging the account would be nearly identical to the assigned allocations. The same allocations of certain indirect costs would need to be made in order to book these costs to the specified account. The methods used to allocate costs to HVAC work in this case produce the general amounts that would have been charged directly to an account set up specifically to record HVAC expenses during the test year. Workpapers determining all of these expense items were provided to Staff.

Q. Do you agree with Ms. Westerfield that the HVAC Services Act requires that Laclede account for these items separately?

A. No. I have been advised by legal counsel that Ms. Westerfield's interpretation of the HVAC Services Act is plainly incorrect.

Q. On page 3, line 11 of Ms. Westerfield's rebuttal testimony, she states that "the Staff believes that the standard of fully distributed cost should be used to determine the expenses associated with appliance service work." Do you agree?

A. No. I have been advised by legal counsel that Staff's interpretation is not consistent with the clear language of the HVAC Services Act and that even the fully distributed cost standard adopted by the Commission in its recent HVAC rule only applies to those circumstances where a separate affiliate uses the assets of a utility to engage in

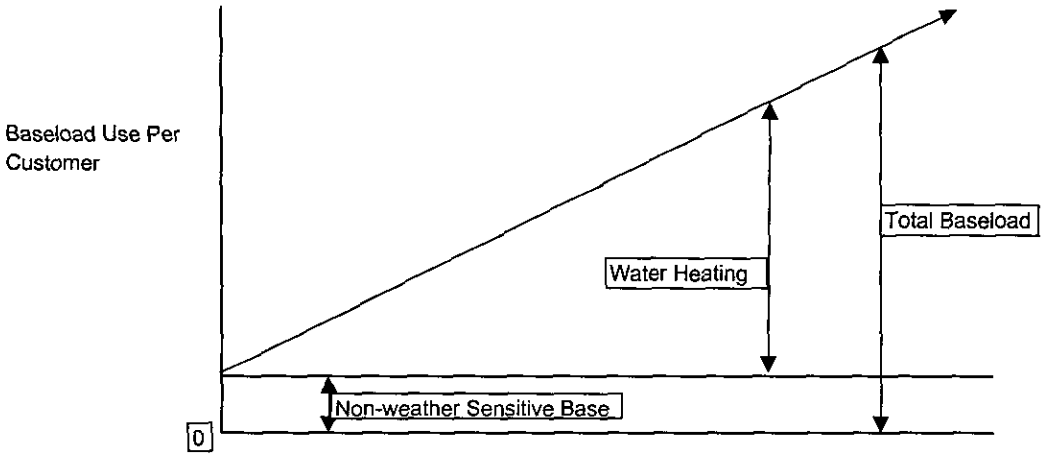
HVAC services. Since Laclede performs these activities "in house" rather than through a separate affiliate, the Commission's decision in the rulemaking docket has no bearing on the issue under consideration in this case.

Q. Does this conclude your surrebuttal testimony?

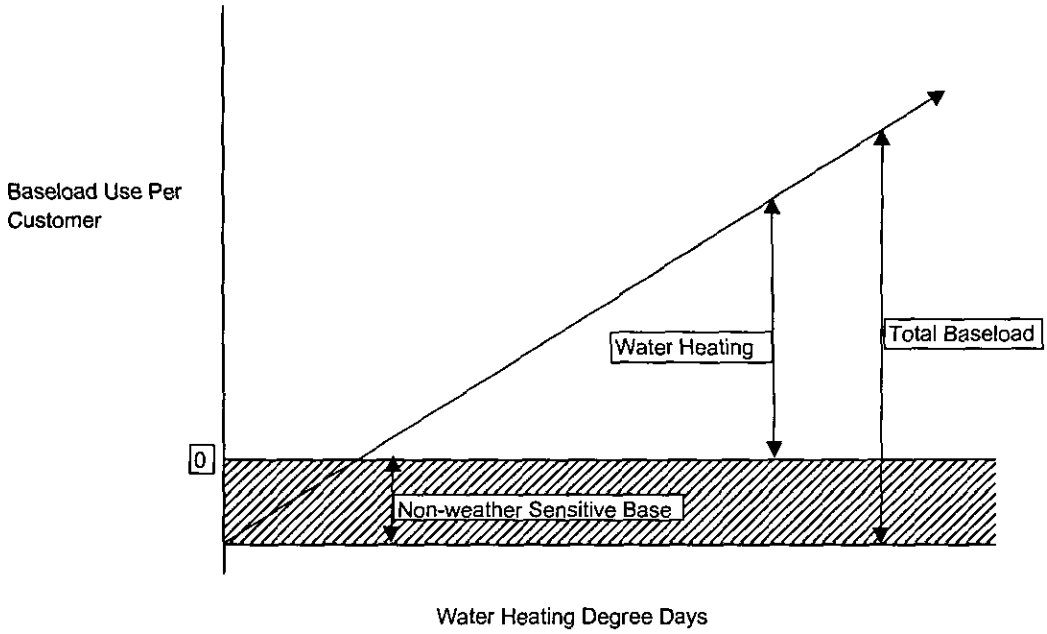
A. Yes, it does.

Illustration of Regression Analysis (Expected vs. Staff) on Baseload to Determine Water Heating Value
Visual Representation of Regression Plotting Only - Not Based on Any Underlying Data
GR-99-315

Expected Results:



Staff Results:



//////// - Indicates negative Non-weather Sensitive Base, which is not logical.

Schedule 1

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-99-315

AFFIDAVIT

STATE OF MISSOURI)
) SS.
CITY OF ST. LOUIS)

Patricia A. Krieger, of lawful age, being first duly sworn, deposes and states:

1. My name is Patricia A. Krieger. My business address is 720 Olive Street, St. Louis, Missouri 63101; and I am Manager of Accounting for Laclede Gas Company.

2. Attached hereto and made part hereof for all purposes is my surrebuttal testimony, consisting of pages 1 to 20, inclusive; and Schedule 1.

3. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded and the information contained in the attached schedule are true and correct to the best of my knowledge and belief.

Patricia A. Krieger

Subscribed and sworn to before me this 19th day of August, 1999.

Joyce L. Jansen

JOYCE L. JANSEN
Notary Public — Notary Seal
STATE OF MISSOURI
St. Louis County
My Commission Expires: July 2, 2001