Exhibit No.:	
Issue:	**Weather Mitigation Clause Rate Design**
Witness:	**Paul H. Raab**
Type of Exhibit:	**Rebuttal Testimony**
Sponsoring Party:	**Laclede Gas Company**
Case No.:	**GR-2002-356**

LACLEDE GAS COMPANY

GR-2002-356

REBUTTAL TESTIMONY

OF

PAUL H. RAAB

August, 2002

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-2002-356

AFFIDAVIT OF PAUL H. RAAB

STATE OF Maryland)
) **ss**
COUNTY OF Montgomery)

Paul H. Raab, of lawful age, on his oath states: that he has participated in the preparation of the following written testimony in question and answer form, consisting of 35 pages of testimony to be presented in the above case, that the answers in the following written testimony were given by him; that he has knowledge of the matters set forth in such answers; and that such matters are true to the best of his knowledge and belief.

Paul H. Raab

Subscribed and sworn to before me this 1 day of Aug., 2002.

Notary Public

My commission expires LIONEL HANNIBLE BUTLER
Notary Public, State of Maryland
My Commission Expires May 14, 2005

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REBUTTAL TESTIMONY

OF

PAUL H. RAAB

CASE NO. GR-2002-356

LACLEDE GAS COMPANY

Q. PLEASE STATE YOUR NAME, OCCUPATION, AND BUSINESS ADDRESS.

A. My name is Paul H. Raab and my business address is 4900 Massachusetts Avenue, N.W., Suite 111, Washington, DC 20016. I am an independent economic consultant.

Q. ON WHOSE BEHALF ARE YOU APPEARING TODAY?

A. I am appearing on behalf of Laclede Gas Company ("Laclede" or "Company").

I. QUALIFICATIONS

Q. WHAT IS YOUR EDUCATIONAL BACKGROUND?

A. I have a B.A. in Economics from Rutgers University and an M.A. from the State University of New York at Binghamton with a concentration in econometrics. While attending Rutgers, I studied as a Henry Rutgers Scholar.

Q. PLEASE DESCRIBE YOUR BUSINESS EXPERIENCE.

A. I have been providing consulting services to the utility industry for twenty-five years, having assisted electric, natural gas, telephone, and water utilities; Commissions; and intervenor clients in a variety of areas. I am trained as a quantitative economist so that most of this assistance has been in the form of

mathematical and economic analysis and information systems development. My particular areas of focus are regulatory change management, planning issues, marginal cost and rate design analysis, and depreciation and life analysis. I began my career with the professional services firm that is now known as Ernst & Young, where I was employed for ten years. A detailed statement of my qualifications appears as Schedule PHR-1.

Q. HAVE YOU PREVIOUSLY PROVIDED EXPERT TESTIMONY?

A. Yes. I have provided expert testimony before the state regulatory authorities of the District of Columbia, Indiana, Kansas, Kentucky, Louisiana, Maryland, Michigan, Nevada, New Jersey, New Mexico, New York, Ohio, Oklahoma, Tennessee, Virginia, West Virginia, and Wisconsin, as well as the Michigan House Economic Development and Energy Committee, the Province of Saskatchewan, and the United States Tax Court. Schedule PHR-1 provides more detail on the subject matter of the testimony provided.

II. PURPOSE OF TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to respond to the direct testimonies filed by Staff witnesses James M. Russo and Daniel I. Beck. Specifically, I will address the concerns raised by Mr. Russo regarding the Company's proposed Weather Mitigation Clause ("WMC") and Mr. Beck's suggestions regarding various rate design solutions that could be used to mitigate the impact of weather on the recovery of fixed distribution costs.

III. ORGANIZATION AND SUMMARY OF TESTIMONY

Q. HOW IS YOUR TESTIMONY ORGANIZED?

A. My testimony is organized into two additional sections. Section IV addresses the specific arguments and concerns that have been raised by Mr. Russo in support of his position that the Company's proposed WMC should not be approved by the Commission and explains why those concerns do not warrant such a result. I also explain in Section IV how weather mitigation clauses, like the one proposed by Laclede in this case, have been successfully structured and approved by numerous utility commissions throughout the country--a development that in my view would be highly unlikely if the various public policy criticisms leveled by Mr. Russo were truly substantive. In particular, I will discuss the favorable results that have been achieved with the WMC that was proposed by Kansas Gas Service ("KGS") and subsequently approved by the Kansas Corporation Commission ("KCC") several years ago. I was intimately involved in the design of the WMC implemented by KGS. This WMC is still in place in Kansas and has been in place over the last two winter heating seasons. This is noteworthy because the winter heating season of 2000/2001 was colder than normal and the winter heating season of 2001/2002 was warmer than normal. Thus, I have had an opportunity to monitor and evaluate the performance of this particular WMC in both types of weather. Because of my involvement and practical experience with weather mitigation clauses, the Company has asked me to share my experience with the Commission.

Section V of my testimony addresses the potential rate design alternatives that were identified in the direct testimony of Staff witness Beck for reducing the

impact of weather on the recovery of fixed costs. It also addresses the rate design proposal that Laclede witness Michael Cline has developed in response to those alternatives and evaluates it from the standpoint of the Company's objectives, impacts on Laclede's customers, and Staff's concerns with respect to the proposed WMC. Based on my evaluation, I believe the Company's rate design alternative represents a workable and economically sound alternative to both the WMC proposed by the Company and the potential rate design solutions identified by Mr. Beck. In addition to accomplishing most, if not all, of the objectives of a WMC, the Company's rate design solution also does a better job than Laclede's existing rate design of reducing over- and under-recoveries of both gas costs and distribution costs. In other words, it produces a rate structure that more accurately reflects the manner in which the Company actually incurs its costs. Moreover, it does all this with virtually no impact on customers compared to the existing rate design, other than a significant decrease for the smallest commercial customers.

IV. THE WEATHER MITIGATION CLAUSE

Q. DO YOU AGREE WITH STAFF WITNESS RUSSO'S RECOMMENDATION THAT THE COMMISSION SHOULD NOT APPROVE THE COMPANY'S PROPOSED WMC?

A. No. As a general matter, I support the use of weather mitigation clauses by natural gas local distribution companies ("LDCs"). I think that they are practical and theoretically sound mechanisms that provide benefits to the Company and its customers alike. My experience, and the experience of many of the other

LDCs that I interviewed when the KGS clause was developed and put into effect, has been positive. For these reasons, as well as others that I will present in my testimony, I recommend that the Commission approve the WMC proposed by Laclede or, in the alternative, the Company's rate design proposal.

Q. HAVE OTHER GAS LDCS IMPLEMENTED WMC MECHANISMS?

A. Yes. In the summer of 1990, the AGA Rate Committee sponsored a survey of rate adjustment mechanisms that provide revenue stability in the event of abnormal weather conditions. The results of that survey were published by AGA in June 1991, and subsequently updated in September 1992 and December 1994. These studies provide the basis for the current discussion of WMC clauses. While somewhat dated at this point, the surveys appear to represent the most comprehensive evaluation of WMC clauses to date. In addition, these surveys appear to capture the features of such clauses that are in place today and represent a reasonable sample of those LDCs that have applied for a WMC clause, both successfully and unsuccessfully. To confirm this, two additional efforts were undertaken. First, an internet search of state regulatory authority web sites was conducted to determine if additional WMC clauses had been approved since 1994 and, if so, how different these clauses were from those originally approved and documented by the AGA. Second, follow-up conversations were held with representatives from United Cities Gas Company (which has recently had a WMC approved in its Kentucky service territory).

Q. WHAT ARE THE KEY FINDINGS OF THE AGA SURVEY?

A. There are three key findings of the AGA survey work: (1) there are two general types of WMC clauses, (2) there are four key differences in the operation of WMC clauses, and (3) many LDCs have applied for and implemented WMC clauses.

Q. PLEASE DESCRIBE THE TWO TYPES OF WEATHER NORMALIZATION CLAUSES.

A. In what AGA refers to as a type (1) WMC, revenue adjustments to compensate for abnormal weather are added or credited directly to the customer's monthly bill. A type (2) WMC, on the other hand, captures the revenue deviations in a deferred account and collects (or refunds) the difference over future sales.

Q. PLEASE DESCRIBE THE FOUR KEY DIFFERENCES IN THE OPERATION OF WMC CLAUSES.

A. The AGA report identifies four areas in which differences in the application of the WMC arise: the number of months over which the WMC will operate (all months, heating season only, or some combination); volumes covered (sales customers only, all weather-sensitive customers, all customers); threshold levels at which the WMC applies ($\pm$0.5%, $\pm$2.2%); and timing of the adjustment (one month delay, immediate application).

Q. HOW MANY LDCS HAVE IMPLEMENTED WMC CLAUSES?

A. When AGA conducted its first survey in 1991, 10 LDCs had operating WMC clauses and another 10 LDCs had applied. By the time of the last survey in December 1994, 34 WMC clauses were in operation. This information is summarized in Schedule PHR-2.

Q. DID YOUR INTERNET SEARCH REVEAL THAT ADDITIONAL WMC CLAUSES HAVE BEEN IMPLEMENTED SINCE THE TIME OF THE ORIGINAL AGA STUDY?

A. Yes. WMC clauses have been approved for at least Arkla (in Arkansas and Oklahoma); Baltimore Gas & Electric Company; Delta Natural Gas Company, Inc.; Oklahoma Natural Gas Company; Western Kentucky Gas Company; Mountain Fuel Supply Company; and Southern Connecticut Gas Company; although this is probably not an exhaustive list.

Q. PLEASE DESCRIBE THE KGS WMC THAT YOU DESIGNED.

A. The WMC that I designed for KGS incorporated the following general features:

1. A type 2 weather normalization clause. From the AGA survey described above, there are two types of weather normalization clauses that could be proposed in this case. A type 1 clause collects any deficiency or refunds any over-collection related to weather during the period over which the deficiency or over-collection is identified. A type 2 clause defers the over- and under-collections, and recovers them in some future period.

2. A WMC applicable to all months of the year. The AGA survey indicates a varying number of months during which the WMC can apply. In order to be consistent with the rate case weather normalization process, the KGS WMC operates for all twelve months of the year.

3. A clause applicable to weather-sensitive rate classes. This excluded transportation customers and industrial sales customers since these sales are not as weather sensitive.

4. The WMC factor remains constant for a 12-month period. The initial WMC factor was calculated for the period December 1, 2000 through February 28, 2001 and applied to bills beginning with cycle 1 in April 2001. The factor was then recalculated during subsequent years using the 12-month period March 1 through February 28.

5. The Company collects/refunds the revenue difference in a separate rider. This feature required the use of 48 separate UCDD factors to reflect the weather influence of 13 different weather stations on three different customer classes.

6. Weather normalization was done according to the Commission-approved methodology. In order to be consistent with KGS' prior rate order, sales are weather normalized according to the Staff approach approved by the Commission in the prior rate case.

In addition to these general features, the KGS WMC involved a filing requirement so that Kansas Commission Staff can verify that the correct amounts are being billed or refunded for the upcoming WMC Collection Year, which runs from April 1 to March 31. This filing is due by April 1 of each year and includes, by month and by class, the following data:

1. Number of affected bills.
2. Amount of WMC revenue/refund.
3. The WMC rider amount.
4. The WMC account balance.
5. The actual number of heating degree-days.

6. The normal number of heating degree-days.

7. The number and nature of customer inquiries about the WMC.

Q. IS LACLEDE'S PROPOSED WMC MECHANISM SIMILAR TO THE MECHANISM THAT KGS HAS SUCCESSFULLY EMPLOYED FOR THE LAST TWO YEARS?

A. Yes, the mechanism proposed by Laclede has many similarities to the KGS mechanism. Specifically, the Laclede proposal is a type 2 clause that defers over- and under-collections and recovers them in some future period, a clause applicable only to weather-sensitive rate classes, and a clause that relies on a Commission-approved weather-normalization technique. It differs in that it applies only to consumption in the winter heating season and the WMC adjustment may be made simultaneously with the Company's Purchased Gas Adjustment (PGA) clause filings during the year.

Q. IN YOUR OPINION, ARE THE DIFFERENCES BETWEEN THE LACLEDE WMC AND THE KGS WMC MATERIAL ENOUGH THAT THEY UNDERMINE ANY COMPARATIVE VALUE BETWEEN THE TWO?

A. No. These differences appear to be minor, and I expect that they would not affect the success of the Laclede WMC or the comparative value of the Kansas experience.

Q. WHEN THE KANSAS COMMISSION APPROVED THE KGS WMC APPLICATION IN 2000, DID THE KANSAS STAFF EXPRESS CONCERNS REGARDING THE WMC?

A. Yes, it did. The KCC Staff was concerned, among other things, that the WMC would cause customer confusion, lead to an increase in administrative costs, and send potentially misleading price signals. In addition, the KCC Staff was concerned that the necessary data to support implementation of a WMC were not available.

Q. WHY WAS THE KCC STAFF CONCERNED THAT THE WMC WOULD LEAD TO CUSTOMER CONFUSION?

A. KCC Staff was concerned that if the WMC were separately identified as a line item on the bill, it would lead to customer confusion as to why this charge appears on the bill. If the WMC were not identified on the bill, customers would be confused as to why the rate changed periodically.

Q. DID THE KGS WMC LEAD TO CUSTOMER CONFUSION IN THE TWO YEARS THAT IT HAS BEEN IMPLEMENTED?

A. Not at all. As with any rate change, KGS had an obligation to educate its customer service representatives, which it did with training, and an obligation to educate its customers, which it did with a bill notice and a bill insert. In the two years that the WMC has been in place in Kansas, there has been no increase in complaints and no increase in telephone inquiries related to the WMC. This is significant since, in Kansas, the WMC is separately identified on the bill.

Q. WERE YOU SURPRISED THAT THERE WAS NO CUSTOMER CONFUSION, PARTICULARLY DURING TIMES WHEN THE WMC AMOUNT CHANGED?

A. Not really. The WMC can be compared to a utility's PGA, which varies periodically with little understanding of why it does so by the consuming public, and this does not cause significant customer confusion.

Q. DID THE KGS WMC LEAD TO AN INCREASE IN ADMINISTRATIVE COSTS?

A. No. As a condition of implementing the WMC, KGS agreed to track its administrative costs and determine whether the program benefits support whatever cost increases (if any) are observed. After two years, KGS has seen no measurable increase in administrative costs as a result of implementing the WMC.

Q. WHY DID THE KANSAS STAFF BELIEVE THAT THE WMC COULD POTENTIALLY SEND MISLEADING PRICE SIGNALS?

A. The KCC Staff was concerned that the WMC would serve to lower the price during periods of colder weather, the time when a higher price signal may be called for to reduce demand.

Q. HOW DID YOU RESPOND TO STAFF'S CONCERN THAT THE WMC WILL SEND POTENTIALLY MISLEADING PRICE SIGNALS?

A. I do not believe this argument has merit. In an economic sense, the "proper" price signal during any time period or season is the marginal cost. If the Company's costs do not monotonically increase with consumption (since a gas utility's non-gas costs primarily consist of fixed costs, we know that they do not), then the marginal cost at high consumption levels will be less than the price charged at those consumption levels and an unnecessarily high price signal will be sent to consumers. A higher than economically efficient price signal leads to

a set of consumption and resource allocation distortions that can be just as serious as those produced by a lower than economically efficient price.

In other words, economic theory suggests that the WMC may provide a more theoretically correct price signal than the price signal sent under a traditional rate.

Q. DOES LACLEDE HAVE THE HISTORICAL DATA TO PROPERLY IMPLEMENT THE WMC?

A. Yes. Whether Laclede relies on its weather normalization technique or the one proposed by Staff in this proceeding, the WMC will be based on data that have previously been employed in the rate setting process.

Q. DESPITE THESE INITIAL CONCERNS, WAS THE KCC STAFF ULTIMATELY ABLE TO RECOMMEND APPROVAL OF THE KGS WMC?

A. Yes.

Q. HAS THE MISSOURI COMMISSION STAFF ALSO EXPRESSED CONCERNS REGARDING THE IMPLEMENTATION OF THE LACLEDE WMC?

A. Yes. The Missouri Commission Staff appears to be concerned that:

1. The WMC proposal is equivalent to retroactive ratemaking. (Direct Testimony of James M. Russo, page 5, lines 1-7)

2. The proposal provides Laclede with a rate of return guarantee. (Direct Testimony of James M. Russo, page 5, line 8 - page 6, line 6)

3. If the WMC were in effect and Laclede was able to lower some expenses, the result would be Laclede earning above its authorized rate of return. (Direct Testimony of James M. Russo, page 6, lines 9-10)

4. Savings would be minimal to the ratepayer when the weather was colder than normal. (Direct Testimony of James M. Russo, page 6, line 13 - page 7, line 5)

5. The WMC would not be implemented equally across all residential customers in Laclede's operating divisions and would most severely impact low-income consumers. (Direct Testimony of James M. Russo, page 6, line7 - page 9, line 7)

6. Neither the HDDs nor the method used by the Company to calculate the WMC adjustment is consistent with Staff's methodology. (Direct Testimony of James M. Russo, page 5, lines 1-7)

7. The adjustment inappropriately includes variable costs. (Direct Testimony of James M. Russo, page 11, lines 3-26; page 16, lines 13-17)

8. The UCDD factors used to implement the WMC are not appropriate. (Direct Testimony of James M. Russo, page 16, line 18 - page 17, line 10)

9. The WMC should be implemented as an optional service offering. (Direct Testimony of James M. Russo, page 19, lines 5-7)

Q. IS THE WMC PROPOSAL EQUIVALENT TO RETROACTIVE RATEMAKING?

A. No. Adjustment of the Company's rates to reflect under- or over-collections of fixed costs as a result of weather is equivalent to adjustment of the Company's Actual Cost Adjustment ("ACA") factor to reflect, on a prospective basis, under- or over-collections of gas costs as a result of imprecise forecasts of therm usage. The costs reflected in basic rates are no less real than the gas costs reflected in the Company's PGA, and no one could successfully argue that adjustments to

the ACA are retroactive ratemaking. In fact, I have been advised by counsel for the Company that Missouri courts have expressly rejected such an argument in connection with the operation of the PGA/ACA clause in Missouri. Given that the WMC operates in the same way, I can see no basis for such an argument.

Q. DOES THE WMC PROPOSAL PROVIDE LACLEDE WITH A RATE OF RETURN GUARANTEE?

A. No, it does not. The Company still bears a significant amount of risk, which can have major impacts on the Company's realized return. Staff Witness Russo clearly recognizes this on page 11 of his Direct Testimony where he states that, "Weather can have an impact on a Company's overall earnings when it is warmer or colder than normal, but there are other factors, such as consumers using less gas through conservation efforts and changes in the level of expenditures that contribute to the overall earnings of a Company." (Direct Testimony of James M. Russo, Page 11, lines 23-26).

This is also recognized by Staff Witness Daniel I. Beck, who states, "[t]he WMC adjusts a customer's bill based on that customer's current actual usage. If a customer's total winter usage is abnormal for reasons other than weather, the total winter bill will be different from year to year." (Direct Testimony of Daniel I. Beck, page 3, line 23 - page 4, line 2). Thus, there is explicit recognition by Staff that, even if the WMC were implemented, Laclede will still face significant risks. Moreover, even with a WMC, the Company will continue to absorb, as it has for decades, increases in its costs of providing utility service that occur between rate

cases. Given these considerations, it is simply incorrect to suggest that approval of a WMC would in any sense provide Laclede with a rate of return guarantee.

Q. IS IT THE CASE THAT IF THE WMC WERE IN EFFECT AND LACLEDE WAS ABLE TO LOWER SOME EXPENSES, THE RESULT WOULD BE LACLEDE EARNING ABOVE ITS AUTHORIZED RATE OF RETURN?

A. While such a result is possible, it is equally true that the same result could occur if the WMC was <u>not</u> in effect and Laclede was able to lower some expenses. This is a characteristic of all rate regulation and is not specific to the WMC proposal. In other words, this situation could arise whether or not the Commission approves the WMC, and it is no more or no less likely to arise if the Commission approves the WMC. Similarly, if expenses increase, Laclede is likely to earn less than its authorized rate of return regardless of whether the WMC is in effect. The primary difference is that under a WMC Laclede will not be charging customers millions of dollars more than the costs the Company actually incurs to serve them (or, conversely, millions of dollars less than the cost of serving them) simply because of the uncontrollable impact of weather. Indeed, from the standpoint of aligning the Company's earnings with its Commission-approved cost of providing utility service, the WMC is far superior to the existing rate structure in that it eliminates the nonsensical situation where customers pay millions of dollars more than what it actually costs to serve them in a colder than normal weather year on the theory that someday in the future another group of customers will pay millions of dollars less than what it costs to actually serve them in a warmer than normal weather year.

Q. WOULD THE SAVINGS BE MINIMAL TO THE RATEPAYER WHEN THE WEATHER WAS COLDER THAN NORMAL AS SUGGESTED BY MR. RUSSO?

A. I do not understand how Mr. Russo can make this claim, particularly in view of his assertions regarding the "significant" impact that the WMC would have on customers when weather is warmer than normal. Although Mr. Russo does not acknowledge this key point in his testimony, the fact remains that the rate adjustment elements of the Company's WMC are completely symmetrical. Thus, both positive and negative deviations from normal weather will have the same impact on the WMC factor. This means that in colder weather customers will benefit from a reduced bill in the same manner and to the same degree that they would receive a higher bill when weather is warmer than normal by an equal amount. Given this symmetry, I can see no logical basis for Mr. Russo's assertion that the WMC does not materially benefit customers when weather is colder than normal but somehow imposes a significant financial burden on them when weather is warmer than normal. The value of a dollar to the customer is the same under both circumstances and it serves no purpose to pretend otherwise.

Q. WILL THE WMC BE IMPLEMENTED EQUALLY ACROSS ALL RESIDENTIAL CUSTOMERS IN LACLEDE'S OPERATING DIVISIONS?

A. The WMC mechanism will be applied equally to all residential and general service customers. However, UCDD factors specific to Laclede's operating divisions will be applied to customers within those divisions. This is exactly how Kansas Gas Service has implemented its WMC.

Q. IS THIS FAIR?

A. Yes, it is. It is fair to the Company, it is fair to the high UCDD customer, and it is fair to the low UCDD customer.

Q. WHY IS IT FAIR TO THE COMPANY AND CUSTOMERS GENERALLY?

A. It is fair to the Company since it can now collect those costs that the Commission determined the Company was entitled to collect to fulfill its mandated public utility obligations, but that would otherwise remain uncollected solely due to the impact of weather. Moreover, it is equally fair to the Company's customers because it will ensure that the Company does not over-collect these costs solely due to the impact of weather. Both of these results are ensured because the same UCDD factors that the Commission used to develop test year weather-normalized therm sales are used in the WMC.

Q. WHY IS IT FAIR TO THE HIGH UCDD CUSTOMER?

A. It is fair to the high UCDD customer because, when weather is colder than normal, these customers will receive a higher refund consistent with their higher level of usage.

Q. WHY IS IT FAIR TO THE LOW UCDD CUSTOMER?

A. It is fair to the low UCDD customer because, when weather is warmer than normal, these customers will receive a smaller surcharge, consistent with their lower level of usage.

Q. WILL THE WMC MOST SEVERELY IMPACT LOW-INCOME CONSUMERS?

A. No, it will not. On the contrary, if Staff's analysis of the relationship between income and natural gas usage (as measured by the UCDD) is correct, then low-

income customers are more likely to benefit from the Company's WMC proposal than are high-income consumers.

Q. PLEASE EXPLAIN.

A. If low-income customers are also predominantly high usage customers then, during periods of colder than normal weather, these customers are paying more than it costs to serve them and more than their higher income counterparts. Thus, this type of rate design feature will provide greater benefits to low-income customers during the very times when their bills are likely to be highest because of the impact of colder than normal weather on both the usage and price components of the customers bill.

Q. ARE THE NORMAL WEATHER HDDS USED BY THE COMPANY TO CALCULATE THE WMC ADJUSTMENT CONSISTENT WITH STAFF'S NORMAL WEATHER HDDS?

A. No. However, a significant benefit of implementing the WMC is that this dispute simply goes away. If the WMC were granted, all of the parties should be indifferent to the normal weather HDDs so long as the HDDs used to determine normal weather therm sales for the WMC are the same as the HDDs used to determine normal weather therm sales for ratemaking purposes. In order to minimize any upward rate adjustment under the WMC, the Commission may wish to consider the warmest reasonable measure of "normal" weather, which, in this case, is the Company's. However, should the Commission approve the WMC, the Company would have no objection to using the Staff's method for

determining this component of the clause as suggested by Mr. Russo as long as such use is consistent for ratemaking purposes.

Q. DOES THE ADJUSTMENT INAPPROPRIATELY INCLUDE VARIABLE COSTS?

A. No. In theory, I agree that it would be ideal to structure the WMC so that it only applied to fixed costs. However, there is not likely to be complete agreement among the parties about the exact level of fixed costs associated with volumetric/margin rates and, since the vast majority of the Company's non-gas costs are fixed, the most reasonable option is to recognize that while the WMC may not be perfect, it is a far better alternative than the status quo in terms of permitting a more appropriate recovery of costs.

Q. COULD LACLEDE DESIGN ITS WMC TO ACCOUNT FOR ONLY FIXED COSTS?

A. Yes, it could. And, assuming that there was agreement on the level of those fixed costs, this would simply change the CGU (Charge for Gas Used) element of the WMC.

Q. ARE THE UCDD FACTORS USED TO IMPLEMENT THE WMC APPROPRIATE?

A. As discussed above, for purposes of the WMC, the Company could agree at this time to the use per customer per HDD estimates that Staff has supported in this case, as long as the same values are applied in the rate setting process.

Q. DO YOU BELIEVE THAT THE WMC SHOULD OR COULD BE IMPLEMENTED AS AN OPTIONAL SERVICE OFFERING?

A. No, for two reasons. First, I believe it is unfair to the Company to afford any customer the opportunity to "opt out" of paying his fair share of the cost of service. Second, unless customers are required to continue participating in the WMC, there is simply too much potential for customers to "opt in" when a rebate is coming and to "opt out" when a surcharge is coming. Voluntary participation in the WMC virtually guarantees that the Company will fail to earn its authorized return. That said, I will note that pursuant to the Stipulation and Agreement in its last rate case, the Company has been working with the Staff and Public Counsel to develop a fixed bill service option for its customers. Although I understand that the Company has not yet received feedback from Staff and Public Counsel on the latest revision to its proposal for such an option, the Company remains willing to discuss such an option with both parties. Implementation of such an option would not, however, represent a meaningful solution to the weather mitigation problem -- a fact that was also recognized in Kansas where KGS has implemented both a (mandatory) WMC and a (voluntary) fixed bill service option.

Q. DO YOU WISH TO COMMENT ON ANY OTHER ASSERTIONS MADE BY MR. RUSSO IN HIS DIRECT TESTIMONY?

A. Yes. At various places in his testimony, Mr. Russo makes a number of other assertions in support of his position that are either unfair, incorrect or irrelevant to whether a WMC should be approved by the Commission. For example, he notes at page 15 of his direct testimony that other utilities with WMCs have lower customer charges than Laclede. While this may be true, I fail to see what possible relevance this has since, by their very nature, both customer charges

and WMCs operate to reduce over- and under-recoveries of fixed costs due to weather. Mr. Russo also makes a number of assertions regarding Laclede's financial situation at page 13 of his direct testimony. Since Laclede witness James Fallert provides a far more informed picture of Laclede's financial situation in his rebuttal testimony, I will simply note that none of Mr. Russo's comments in this regard address, let alone detract from, the basic soundness of the WMC as an appropriate ratemaking mechanism. Finally at page 5 of his direct testimony Mr. Russo questions the Company's characterization of the WMC as a mechanism to recover its fixed costs since the Company did not seek to return money to its customers when weather was colder than normal during the 2000/2001 heating season. This is a particularly unfair criticism given my understanding that Company made numerous rate design proposals both prior to and after the winter heating season of 2000/2001, that if adopted, would have benefited customers during colder than normal weather by reducing over-recoveries of the Company's fixed costs. Regardless of how cold or warm winter heating seasons may turn out to be, the Company has consistently supported mechanisms designed to reduce over- and under-recoveries of its fixed costs. Since the WMC does just that in a workable and theoretically sound manner, it should be approved by the Commission.

V. RATE DESIGN SOLUTIONS TO THE WEATHER MITIGATION PROBLEM

Q. HAVE YOU REVIEWED THE RATE DESIGN TESTIMONY FILED BY STAFF WITNESS BECK IN THIS PROCEEDING?

A. Yes, I have. In his testimony, Mr. Beck identifies various scenarios under which all or a portion of the Company's fixed distribution costs could be collected on a fixed basis by increasing the Company's customer charges by various amounts. To the extent that such modifications were made to the Company's customer charges they would tend to reduce the impact of weather on the Company's recovery of fixed distribution costs.

Q. WHAT IS YOUR RESPONSE TO THESE POTENTIAL RATE SOLUTIONS?

A. The Company certainly appreciates Staff's efforts to consider alternative rate design solutions to the weather problem. However, it is clear from Mr. Beck's testimony that Staff is concerned over the significant customer impacts that would arise in the event there were any substantial increases in customer charges. As a result, Staff does not suggest these scenarios as any kind of immediate solution to the weather mitigation problem that could be implemented in this case.

Q. HAS THE COMPANY DEVELOPED AN ALTERNATIVE RATE DESIGN PROPOSAL THAT ADDRESSES THE WEATHER PROBLEM AND THAT CAN BE IMPLEMENTED IMMEDIATELY WITHOUT THE KIND OF CUSTOMER IMPACTS THAT WOULD ARISE THROUGH SUBSTANTIAL INCREASES IN THE CUSTOMER CHARGE?

A. Yes. In response to Mr. Russo's criticisms of the WMC and Mr. Beck's comments regarding potential rate design solutions, the Company has developed a "rate design proposal" that attempts to mitigate some of the over- and under-recoveries of its fixed costs due to weather deviations from normal. This solution

recognizes that the Company collects its non-gas costs using a declining block rate form and collects its gas costs through a flat PGA rate. When added together, the total, delivered price of natural gas is also in the form of a declining block rate, although one that is less steeply sloped than the non-gas rate alone.

The Company's rate design proposal is to keep the same total, delivered price of natural gas per block. It does so by collecting the Company's non-gas costs in the initial block of the declining block rate and implementing an inverted PGA rate to collect the gas commodity costs. Schedule PHR-3 provides an example of how this proposal could be implemented for the residential class.

Q. WILL THE RATE DESIGN PROPOSAL ADDRESS THE COMPANY'S FIXED COST RECOVERY CONCERNS?

A. Yes, it will, although not to the same extent as a WMC.

Q. WILL THE RATE DESIGN PROPOSAL ADDRESS THE STAFF'S CONCERNS WITH THE WMC?

A. In large measure, yes. Specifically, it will address the following Staff concerns:

1. Since the rate design proposal involves no adjustment to billed rates, it cannot be construed in any way to be retroactive ratemaking.
2. The proposal in no way provides Laclede with a rate of return guarantee.
3. The proposal in no way affects Laclede's ability to vary its expense levels in a manner that could affect its ability to earn above its authorized rate of return.
4. The proposal does not result in changes to customers' rates based on weather deviations from normal.

5. The proposal has little or no income redistribution effects, since all customers are paying the same rates they would have paid had the proposal not been implemented.

6. The rate design proposal can be implemented without regard to the level of variable costs in the Company's volumetric/margin rates.

7. The rate design proposal does not depend on the use of UCDD factors. Therefore, these factors cannot be a source of controversy.

Q. WHAT ADVANTAGES DOES THE RATE DESIGN SOLUTION ENJOY OVER THE WMC SOLUTION?

A. Its primary advantages are that it: (a) can be implemented immediately and meet the need for a method of fixed cost recovery that is not substantially impacted by weather, (b) does not result in a bill change for the Company's residential customers and hence avoids any customer impacts; (c) does a better job than both the existing rate structure and the WMC of reducing over- and under-recoveries of gas costs; and (d) satisfies many of the concerns expressed by other parties about the Company's WMC proposal.

Q. DOES THE RATE DESIGN SOLUTION SUFFER FROM ANY DISADVANTAGES RELATIVE TO THE WMC SOLUTION?

A. The only disadvantage is that it does not completely address the problem of what constitutes normal weather or completely prevent over- and under-recoveries of non-gas costs due to weather as the WMC would have. However, in light of its many other benefits, and the degree to which it addresses the concerns that

have been expressed regarding the Company's proposed WMC, the Company is willing to implement such a rate design solution as an alternative to the WMC.

Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?

A. Yes.

PAUL H. RAAB

Mr. Raab's consulting focus is on the regulated public utility industry. His experience includes mathematical and economic analyses and system development and his areas of expertise include regulatory change management, load forecasting, supply-side and demand-side planning, management audits, mergers and acquisitions, costing and rate design, and depreciation and life analysis.

PROFESSIONAL EXPERIENCE

Mr. Raab has directed or has had a key role in numerous engagements in the areas listed above. Representative clients are provided for each of these areas in the subsections below.

Regulatory Change Management. Mr. Raab has recently been assisting both electric and natural gas utilities as they prepare to operate in an environment that is significantly different from the one they operate in today. This work has involved the development of unbundled cost of service studies; the development of strategies that will allow companies to prosper in a restructured industry; retail access program development, implementation, and evaluation; and the development of innovative ratemaking approaches to accompany changes in the regulatory structure. Representative clients for whom he has performed such work include:

- Kansas Corporation Commission
- Atmos Energy Corporation
- Electric Cooperatives' Association
- Central Louisiana Electric Company
- Washington Gas
- Western Resources
- Kansas Gas Service
- Mid Continent Market Center.

Load Forecasting. Mr. Raab has broad experience in the review and development of forecasts for electric and natural gas utilities. This work has also included the development of elasticity of demand measures that have been used for attrition adjustments and revenue requirement reconciliations. Representative clients for whom he has performed such work include:

- Washington Gas Energy Services
- Central Louisiana Electric Company
- Washington Gas
- Saskatchewan Public Utilities Review Commission
- Union Gas Limited

- Nova Scotia Power Corporation
- Cajun Electric Power Cooperative
- Cincinnati Gas & Electric
- Commonwealth Edison Company
- Cleveland Electric Illuminating
- Public Service of Indiana
- Atlantic City Electric Company
- Detroit Edison Company
- Sierra Pacific Power
- Connecticut Natural Gas Corporation
- Appalachian Power Company
- Missouri Public Service Company
- Empire District Electric Company
- Public Service Company of Oklahoma
- Wisconsin Electric Power Company
- Northern States Power Company
- Iowa State Commerce Commission
- Missouri Public Service Commission.

Supply Side Planning. Mr. Raab has assisted clients to determine the most appropriate supply-side resources to meet future demands. This assistance has included the determination of optimal sizes and types of capacity to install, determination of production costs including and excluding the resource, and an assessment of system reliability changes as a result of different resource additions. Much of this work for the following clients has been done in conjunction with litigation:

- Washington Gas
- Soyland Electric Cooperative
- Houston Lighting and Power
- City of Farmington, New Mexico
- Big Rivers Electric Cooperative
- City of Redding, California
- Brown & Root
- Kentucky Joint Committee on Electric Power Planning Coordination
- Sierra Pacific Power.

Demand Side Planning. Demand Side Planning involves the forecasting of future demands; the design, development, implementation, and evaluation of demand side management programs; the determination of future supply side costs; and the integration of cost effective demand side management programs into an Integrated Least Cost Resource Plan. Mr. Raab has performed such work for the following clients:

- Washington Gas Light Company
- Piedmont Natural Gas Company

- Chesapeake Utilities
- Pennsylvania & Southern Gas
- Montana-Dakota Utilities.

Management Audits. Mr. Raab has been involved in a number of management audits. Consistent with his other experience, the focus of his efforts has been in the areas of load forecasting, demand- and supply-side planning, integrated resource planning, sales and marketing, and rates. Representative commission/utility clients are as follows:

- Public Utilities Commission of Ohio/East Ohio Gas
- Kentucky Public Service Commission/Louisville Gas & Electric
- New Hampshire Public Service Commission/Public Service Company of New Hampshire
- New Mexico Public Service Commission/Public Service of New Mexico
- New York Public Service Commission/New York State Electric & Gas
- Missouri Public Service Commission/Laclede Gas Company
- New Jersey Board of Public Utilities/Jersey Central Power & Light
- New Jersey Board of Public Utilities/New Jersey Natural Gas
- Pennsylvania Public Utilities Commission/ Pennsylvania Power & Light
- California Public Utilities Commission/San Diego Gas & Electric Company.

Mergers and Acquisitions. Mr. Raab has been involved in a number of merger and acquisition studies throughout his career. Many of these were conducted as confidential studies and cannot be listed. Those in which his involvement was publicly known are:

- ONEOK, Inc./Southwest Gas Corporation
- Western Resources
- Constellation.

Costing and Rate Design Analysis. Mr. Raab has prepared generic rate design studies for the National Governor's Conference, the Electricity Consumer's Resource Council, the Tennessee Valley Industrial Committee, the State Electricity Commission of Western Australia, and the State Electricity Commission of Victoria. These generic studies addressed advantages and disadvantages of alternative costing approaches in the electric utility industry; the strengths and weaknesses of commonly encountered costing methodologies; future tariff policies to promote equity, efficiency, and fairness criteria; and the advisability of changing tariff policies. Mr. Raab has performed specific costing and rate design studies for the following companies:

- Western Resources
- Kansas Gas Service Company
- Central Louisiana Electric Company

- Washington Gas Light Company
- Piedmont Natural Gas Company
- Chesapeake Utilities
- Pennsylvania & Southern Gas
- KPL Gas Service Company
- Allegheny Power Systems
- Northern States Power
- Interstate Power Company
- Iowa-Illinois Gas & Electric Company
- Arkansas Power and Light
- Iowa Power & Light
- Iowa Public Service Company
- Southern California Edison
- Pacific Gas & Electric
- New York State Electric & Gas
- Middle South Utilities
- Missouri Public Service Company
- Empire District Electric Company
- Sierra Pacific Power
- Commonwealth Edison Company
- South Carolina Electric & Gas
- State Electricity Commission of Western Australia
- State Electricity Commission of Victoria, Australia
- Public Service Company of New Mexico
- Tennessee Valley Authority.

Depreciation and Life Analysis. Mr. Raab has extensive experience in depreciation and life analysis studies for the electric, gas, rail, and telephone industries and has taught a course on depreciation at George Washington University, Washington, DC. Representative clients in this area include:

- Champaign Telephone Company
- Plains Generation & Transmission Cooperative
- CSX Corporation (Includes work for Seaboard Coast Line, Louisville & Nashville, Baltimore & Ohio, Chesapeake & Ohio, and Western Maryland Railroads)
- Lea County Electric Cooperative, Inc.
- North Carolina Electric Membership Cooperative
- Alberta Gas Trunk Lines (NOVA)
- Federal Communications Commission.

TESTIMONY

The following table summarizes Mr. Raab's testimony experience.

Jurisdiction	Docket Number	Subject
District of Columbia	834	Demand Side Planning
	905	Costing/Rate Design
	917	Costing/Rate Design
	921	Demand Side Planning
	922	Rate Design
	934	Rate Design
	989	Rate Design
Indiana	36818	Capacity Planning
Kansas	174,155-U	Retail Competition
	176,716-U	Costing/Rate Design
	98-KGSG-822-TAR	Rate Design
	99-KGSG-705-GIG	Restructuring
	01-KGSG-229-TAR	Rate Design
	02-WSRE-301-RTS	Cost of Service
Kentucky	9613	Capacity Planning
	97-083	Management Audit
Louisiana	U-21453	Restructuring/Market Power
Maryland	8251	Costing/Rate Design
	8259	Demand Side Planning
	8315	Costing/Rate Design
	8720	Demand Side Planning
	8920	Costing/Rate Design
Michigan	U-6949	Load Forecasting
Nevada	81-660	Load Forecasting
New Jersey	OAL# PUC 1876-82 BPU# 822-0116	Load Forecasting
New Mexico	2087	Capacity Planning

Jurisdiction	Docket Number	Subject
New York	27546	Costing/Rate Design
Ohio	81-1378-EL-AIR	Load Forecasting
Oklahoma	27068	Load Forecasting
Tennessee	PURPA Hearings	Costing/Rate Design
US Tax Court	4870 4875	Life Analysis Life Analysis
Virginia	PUE900013 PUE920041 PUE940030 PUE940031 PUE950131	Demand Side Planning Costing/Rate Design Costing/Rate Design Costing/Rate Design Capacity Planning
West Virginia	79-140-E-42T 90-046-E-PC	Capacity Planning Demand Side Planning
Wisconsin	05-EP-2	Capacity Planning

In addition, Mr. Raab has presented expert testimony before the Michigan House Economic Development and Energy Committee and the Province of Saskatchewan. He is a member of the Advisory Board of the Expert Evidence Report, published by The Bureau of National Affairs, Inc.

EDUCATION

Mr. Raab holds a B.A. (with high distinction) in Economics from Rutgers University and an M.A. from SUNY at Binghamton with a concentration in Econometrics. While attending Rutgers, he studied as a Henry Rutgers Scholar.

PUBLICATIONS AND PRESENTATIONS

Mr. Raab has published in a number of professional journals and spoken at a number of industry conferences. His publications/ presentations include:

- "Factors Influencing Cooperative Power Supply," National Rural Utilities Cooperative Finance Corporation Independent Borrower's Conference,

Boston, MA, July 3, 1997.

- "Current Status of LDC Unbundling," American Gas Association Unbundling Conference: Regulatory and Competitive Issues, Arlington, VA, June 19, 1997.

- "Balancing, Capacity Assignment, and Stranded Costs," American Gas Association Rate and Strategic Planning Committee Spring Meeting, Phoenix, AZ, March 26, 1997.

- "Gas Industry Restructuring and Changes: The Relationship of Economics and Marketing" (with Jed Smith), National Association of Business Economists, 38th Annual Meeting, Boston, MA September 10, 1996.

- "Improving Corporate Performance By Better Forecasting," 1996 Peak Day Demand and Supply Planning Seminar, San Francisco, CA, April 11, 1996.

- "Natural Gas Price Elasticity Estimation," AGA Forecasting Review, Vol. 6, No. 1, November 1995.

- "Assessing Price Competitiveness," Competitive Analysis & Benchmarking for Power Companies, Washington, DC, November 13, 1995.

- "Avoided Cost Concepts and Management Considerations," Workshop on Avoided Costs in a Post 636 Gas Industry: Is It Time to Unbundle Avoided Cost? Sponsored by the Gas Research Institute and Wisconsin Center for Demand-Side Research, Milwaukee, WI, June 29, 1994.

- "Estimating Implied Long- and Short-Run Price Elasticities of Natural Gas Consumption," Atlantic Economic Conference, Philadelphia, PA, October 10, 1993.

- "Program Evaluation and Marginal Cost," The Natural Gas Least Cost Planning Conference, Washington, DC, April 7, 1992.

- "The New Environmentalism & Least Cost Planning," Institute for Environmental Negotiation, University of Virginia, May 15, 1991.

- "Development of Conditional Demand Estimates of Gas Appliances," AGA Forecasting Review, Vol. 1, No. 1, October 1988.

- "The Feasibility Study: Forecasting and Sensitivities," Municipal Wastewater Treatment Facilities, The Energy Bureau, Inc., November 18, 1985.

- "The Development of a Gas Sales End-Use Forecasting Model," Third International Forecasting Symposium, The International Institute of Forecasting, July 1984.

- "New Forecasting Guidelines for REC's - A Seminar," (Chairman), Kansas City, Missouri, June 1984.

- "A Method and Application of Estimating Long Run Marginal Cost for an Electric Utility," Advances in Microeconomics, Volume II, 1983.

- "Forecasting Under Public Scrutiny," Forecasting Energy and Demand Requirements, University of Wisconsin - Extension, October 25, 1982.

- "Forecasting Public Utilities," The Journal of Business Forecasting, Vol. 1, No. 4, Summer, 1982.

- "Are Utilities Underforecasting," Electric Ratemaking, Vol. 1. No. 1, February, 1982.

- "A Polynomial Spline Function Technique for Defining and Forecasting Electric Utility Load Duration Curves," First International Forecasting Symposium, Montreal, Canada, May, 1981.

- "Time-of-Use Rates and Marginal Costs," ELCON Legal Seminar, March 20, I980.

- "The Ernst & Whinney Forecasting Model," Forecasting Energy & Demand Requirements, University of Wisconsin - Extension, October 8, I979.

- "Marginal Cost in Electric Utilities--A Multi-Technology Multi-Period Analysis" (with Frederick McCoy), ORSA/Tims Joint National Meeting, Los Angeles, California, November 13-15, 1978.

STATUS OF WEATHER NORMALIZATION CLAUSE FILINGS FROM AGA UPDATE ON WEATHER NORMALIZATION CLAUSES, DECEMBER 1994

COMPANY	STATUS	TYPE OF CLAUSE
Alabama Gas Corp.	Approved - 1990	1
Atlanta Gas Light Co.	Approved - 1989	1
Brooklyn Union	Approved - 1980	1
Chattanooga Gas Co.	Approved - 1991	1
City of Richmond, Department of Public Utilities	Approved - 1992	2
Columbia Gas of Kentucky, Inc.	Approved - 1994	1
Columbia Gas of Maryland, Inc.	Approved - 1993	1
Columbia Gas of Ohio, Inc.	Approved - 1994	1
Consolidated Edison Company of New York	Approved - 1989	1
Elizabethtown Gas Co.	Approved - 1991	2
Gaz Metropolitain, Inc.	Approved - 1980	2
Lone Star Gas Co.	Approved - 1991	1&2
Long Island Lighting Co.	Approved - 1992	1
National Fuel Gas Distribution Co.	Approved - 1988	1
New Jersey Natural Gas Co.	Approved - 1992	2
New York State Electric and Gas Corp.	Approved - 1992	1
Niagara Mohawk Power Corp.	Approved - 1994	1
North Carolina Natural Gas Corp.	Approved - 1991	1
Otange & Rockland Utilities, Inc.	Approved - 1993	1
Pacific Gas and Electric Co.	Approved - 1988	2
Piedmont Natural Gas Company - NC	Approved - 1991	1
Piedmont Natural Gas Company - SC	Approved - 1993	1
Piedmont Natural Gas Company -TN	Approved - 1992	1
Public Service Company of North Carolina	Approved - 1991	1
Rochester Gas & Electric Corp.	Approved - 1992	1
San Diego Gas & Electric Co.	Approved - 1985	2
South Carolina Electric & Gas Co.	Approved - 1991	1
South Jersey Gas Co.	Approved - 1992	2
Southern California Gas Co.	Approved - 1988	2
Southern Connecticut Gas Co.	Approved - 1993	1
Southern Union Gas Co.	Approved - 1991	1
Southwest Gas Corp.	Approved - 1990	2
United Cities Gas Co. - GA	Approved - 1990	1
United Cities Gas Co. - GA	Approved - 1991	1
BC Gas Inc.	Filed - 1993	2
East Ohio Gas Co.	Filed - 1993	2
EnergyNorth Natural Gas, Inc.	Under Consideration	n/a
Mountain Fuel Supply Co.	Under Consideration	n/a
Arkla, Inc. - AR	Dropped in Settlement	1
Arkla, Inc. - KS	Dropped in Settlement	1
Arkla, Inc. - LA	Dropped in Settlement	1
Arkla, Inc. - OK	Dropped in Settlement	1
Bay State Gas Co.	Denied	2
BC Gas Inc.	Dropped in Settlement	2
Berkshire Gas Co.	Dismissed	2
Colimbia Gas of Pennsylvania, Inc.	Dropped in Settlement	1
Commonweather Gas Services, Inc.	Denied	1
Indiana Gas Co., Inc.	Dropped in Settlement	1
Minnegasco	Dropped in Settlement	1
Montana-Dakota Utilities Co.	Dropped in Settlement	1
National Fuel Gas Distribution Co.	Dropped in Settlement	1
Providence Gas Co.	Denied	1 & 2
United Cities Gas Co. - KS	Denied	1
Washington Energy Co.	Denied	1
Wisconsin Gas Co.	Denied	1

RATE DESIGN PROPOSAL EXAMPLE

RESIDENTIAL GENERAL COMMODITY RATES
(per therm)

	Non-Gas (Winter)	Gas (CPGA)	Total
EXISTING			
Block 1	$ 0.17590	$ 0.44998	$ 0.62588
Block 2	$ 0.13970	$ 0.44998	$ 0.58968
PROPOSED (1)			
Block 1	$ 0.35589	$ 0.26999	$ 0.62588
Block 2	$ -	$ 0.58968	$ 0.58968

(1) Excludes impact of general rate increase