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Issues: Revenue Adjustments, Cost of Service Study, Service Charges, and Rate Design
Witness: F. Jay Cummings
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Sponsoring Party: Missouri Gas Energy
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MISSOURI PUBLIC SERVICE COMMISSION

MISSOURI GAS ENERGY

CASE NO. GR-2004-0209

REBUTTAL TESTIMONY OF

F. JAY CUMMINGS

ON BEHALF OF MISSOURI GAS ENERGY

Jefferson City, Missouri

May 2004

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MAY 24, 2004

1. INTRODUCTION AND SUMMARY

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is F. Jay Cummings. My business address is 11044 Research Boulevard, Suite A-325, Austin, Texas 78759.

Q. ARE YOU THE SAME F. JAY CUMMINGS WHO FILED DIRECT TESTIMONY IN THIS PROCEEDING ON NOVEMBER 4, 2003 AND UPATED DIRECT TESTIMONY ON JANUARY 30, 2004?

A. Yes. Please note that my business address has changed since I filed my direct testimony.

Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

A. The first sections of my rebuttal testimony address revenue adjustments. In an overview section (Section 2), I discuss those adjustments on which I understand that settlement was reached as a result of discussions during the prehearing conference earlier this month. In Sections 3 through 5, I identify those adjustments that remain outstanding and address the positions of the parties on these issues.

In Section 6, I address the positions taken by other parties on my proposal to change various service charges. In the next section of my testimony, I address Staff's and Office of Public Counsel's ("OPC's") cost of service study results and class revenue allocation recommendations as contained in their direct testimonies. In Section 7, I address rate design.

2. OVERVIEW OF REVENUE ADJUSTMENTS

Q. WHAT REVENUE ADJUSTMENTS WERE SETTLED AS A RESULT OF DISCUSSIONS DURING THE PREHEARING CONFERENCE EARLIER THIS MONTH?

A. The Staff and the Company are the only two parties who presented comprehensive adjustments to test year revenue. OPC did present a revenue adjustment pertaining to capacity release/off system sales. Staff and I agree on adjustments needed to arrive at per book margin. This agreement includes Staff's concurrence that $55,915 in gross receipts taxes must be removed from Other Revenue as reflected in Accounting Schedule 9 included in its April 15, 2004 filing.[1]

A number of agreements have been reached on adjustments to test year margin. The flex rate adjustment has been settled by adding $36,237 to test year revenue. I concur with Staff's proposed rate switching adjustment of ($283,793). Staff and

[1] Staff concurred with the need to make this adjustment in its response to Company Data Request No. 0091.

I both have proposed the same Economic Development Rider adjustment. The Staff, OPC, and Company agree that the apartment/rental unit reclassification proposal should not be implemented. As a result, the Company's margin for the test year ended June 30, 2003 should be increased by $467,795 because the revenue shift associated with the reclassification will not occur. Since Staff did not incorporate the revenue shift in the Accounting Schedules accompanying its April 15, 2004 filing, no change is required in those Schedules for this item. In the event that my understanding of these agreements on revenue adjustments is not correct, I reserve the right to file supplemental testimony on the positions taken by the parties on these issues.

Q. WHAT REVENUE ADJUSTMENTS REMAIN UNRESOLVED?

A. The unresolved adjustments pertain to weather normalization, customer growth annualization, load attrition, capacity release/off-system sales, and late payment fees. I address each of these adjustments in Section 3 through Section 5 of my testimony, with the exception of capacity release/off-system sales and late payment fees. Company witnesses Noack and Hayes address the Staff and OPC adjustments for capacity release/off-system sales. Company witness Noack addresses the Staff's recommended change in the late payment fee and associated revenue consequence. I discuss the recommendations of the parties pertaining to miscellaneous service charge changes and the associated revenue consequences in Section 6.

3. WEATHER NORMALIZATION ADJUSTMENT

Q. PLEASE EXPLAIN THE DIFFERENCES BETWEEN YOU AND THE STAFF REGARDING THE WEATHER NORMALIZATION ADJUSTMENT.

A. Virtually of all the difference between us relates to Staff's use of a 30-year period ending in 2000 to define normal weather while I use a 20-year period ending at the end of the test year (June 30, 2003) to define normal weather. I explain why my choice for the selected weather normalization period is superior to that used by Staff later in this section of my testimony. I first discuss our calculation methods. This discussion shows that the significant difference between our adjustments results from the choice of the period to define normal weather

3.1 Weather Normalization Adjustment Calculation Methods

Q. PLEASE EXPLAIN THE SIMILARITIES AND DIFFERENCES BETWEEN YOUR APPROACH AND THE STAFF APPROACH IN CALCULATING THE ADJUSTMENT TO REVENUE TO REFLECT NORMAL WEATHER.

A. For the sales customer classes, i.e. Residential, Small General Service, and Large General Service, both the Staff and I use linear regression analyses for each class and geographic region to develop the adjustment. For Large Volume Service, I conduct individual customer regression analyses based on multiple years of usage

while the Staff develops regression analyses at the region level. The manner in which our regressions are developed and applied differ somewhat, but the results for the test year ended June 30, 2003 are quite similar as shown in the first two columns of the following table:

	1971-00 Period Defined as Normal		
	Staff Method	My Method	My Method With 1984-2003 Normal
Residential	$ (202,869)	$ (189,546)	$ (729,815)
Small General Service	$ (256,326)	$ (252,198)	$ (459,202)
Large General Service	$ (9,992)	$ (23,921)	$ (44,578)
Large Volume Service	$ (6,532)	$ 6,354	$ (18,169)
	$ (476,719)	$ (459,311)	$(1,251,764)

The third column of the table shows the weather adjustment based on a 20-year normal, as I propose. The 20-year adjustment calculations have been revised from those presented in my Direct Testimony as a result of correction of a spreadsheet cell reference identified by Staff during the prehearing conference earlier this month.[2] Clearly, the methodology differences are minor compared to the impact of the choice of the period to define normal weather.

[2] After correcting the cell reference and revising the adjustment, I provided all supporting calculations and work papers in electronic form to the Staff and OPC during the week of the prehearing conference earlier this month. Rebuttal Schedule FJC-1 provides a summary of the revised weather adjustment, both volumes and dollars, by month, customer class and region.

3.2 Time Period to Define Normal Weather

Q. WHAT TIME PERIOD DID STAFF USE TO DEFINE NORMAL WEATHER?

A. Staff uses the 30-year period 1971-2000 to define normal weather.

Q. WHY DID STAFF USE THIS PERIOD?

A. The Staff did not explain why it used this period in its direct testimony. In response to the Company's request for an explanation for Staff's choice of this period (Company Data Request No. 0085), Staff indicated that:

> The Staff continues to comply with the Commission's decision in the Report and Order from the MGE rate case, Case No. GR-96-285 (attached). In that Report and Order, the Commission upheld the use of the National Oceanic and Atmospheric Administration (NOAA) normals period of three calendar decades, which were the three decades 1961-1990 at that time.

In response to the Company's question concerning what other time periods Staff considered and rejected, Staff indicated that "no alternatives were considered" (Response to Company Data Request No. 0086). When asked for references to regulatory decisions that Staff considered in making its choice, Staff responded by saying that it "complies with decisions of the Missouri Public Service Commission. Staff witness Patterson does not possess a resource containing such decisions from other States" (Response to Company Data Request No. 0089). At least with respect to the choice of a normal weather period, the Staff apparently believes that once a Commission decision has been reached, more recent facts, circumstances, and analyses need not be considered to assess whether the support

for the prior decision remains valid. Such a belief has no basis in sound regulatory policy.

Q. WHAT PERIOD DID YOU USE TO DEFINE NORMAL WEATHER?

A. I use a 20-year period ending with the last month of test year period.

Q. WAS THE 20-YEAR PERIOD THE ONLY TIME PERIOD THAT YOU CONSIDERED TO DEFINE NORMAL WEATHER?

A. No.

Q. WHAT OTHER TIME PERIORS DID YOU CONSIDER?

A. I examined the most recent 10 years, 15 years, 20 years, and 20 years excluding the warmest and coldest years in the in the 20-year period. I also examined the period 1971-2000.

Q. WHY DID YOU SELECT THESE PERIODS FOR REVIEW?

A. Each of these periods has been used by regulatory commissions to normalize electric and gas revenues in rate proceedings. For example, a 10-year period has been used by the Arizona Corporation Commission,[3] the Rhode Island Public Utilities Commission,[4] Vermont Public Service Board,[5] and the Wyoming Public

[3] The Arizona Corporation Commission has used 10-year normalization periods in natural gas rate cases, such as Citizens Utilities Company, 1994 WL 399187 (Ariz. C.C.). The Commission has also used 10-year normalization periods in electric cases, such as Arizona Public Service Company [91 PUR 4th 337 (1988)] and Tucson Electric Power Company [149 PUR 4th 251(1994)].

[4] Valley Gas Company, 1992 WL 324576 (R.I.P.U.C.).

Service Commission,[6] and the Railroad Commission of Texas.[7] The Rhode Island Commission has also used a 15-year period to normalize revenues.[8]

A 20-year period has been used by the Massachusetts Department of Public Utilities[9] and the Minnesota Public Utilities Commission.[10] The Wisconsin Public Service Commission established the use of a 20-year period to normalize gas utility revenues in a generic proceeding.[11] The Washington Utilities and Transportation Commission uses a 20-year period, but excludes the warmest year and coldest year in the period, to define normal weather.[12] The Missouri Public Service Commission used a three-decade period to normalize the Company's revenues in Case No. GR-96-285, the only MGE rate case in which the Commission decided the weather normalization period issue.

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5 Vermont Gas Systems, Inc., 1992 WL 436328 (Vt. P.S.B.)

6 Questar Gas Company, 2000 Wyo. PUC LEXIS 315.

7 Southern Union Gas Company, Railroad Commission of Texas Gas Utilities Docket No. 8878 Consolidated (1997).

8 Providence Gas Company, 146 PUR 4th 570 (1993).

9 Boston Gas Company, 174 PUR 4th 200 (1996).

10 Northern States Power Company, 1993 Minn. PUC LEXIS 142. The Company noted that a 20-year period is used in all states in which it operates.

11 Re Rate Case Weather Normalization, 147 PUR 4th 209 (1993).

12 The Commission indicated that it was continuing its past practice to use this definitional period in Washington Natural Gas Company, 1993 Wash. UTC LEXIS 87.

Q. WHAT WERE THE RESULTS OF YOUR REVIEW OF THE VARIOUS TIME PERIODS TO DEFINE NORMAL WEATHER?

A. Rebuttal Schedule FJC-2 shows the heating degree days associated with the use of the various time periods to define normal weather for the Kansas City and St. Joseph regions. The 10-year and 15-year periods are close to one another, while the 20-year period after excluding the warmest and coldest years falls below (i.e., has fewer heating degree days, or is warmer than) either of these measures. My 20-year measure is somewhat higher than any of these three measures. By contrast, Staff's 1971-2000 "normal" is well above (i.e., has more heating degree days, or is colder than) any of the other measures. Comparing the 10-year, 15-year, and 20-year measures suggests that weather experienced in more recent years is warmer than in the past. I discuss this point further after reviewing Joplin experience.

Rebuttal Schedule FJC-3 shows a somewhat similar pattern for the Joplin region, although the 10-year average is somewhat higher than the 15-year and 20-year averages. In part, the higher 10-year average results from the very cold 2000-01 winter by Joplin standards. The Staff's 1971-2000 is clearly the outlier among the remaining measures of normality.

Since the 1971-2000 measure of normality was an outlier in each region, I broke this period down as shown in the table below:

	Kansas City/ St. Joseph	Joplin
1971-2000 HDDs	5,273	4,585
Average HDDs in:		
1971 – 1985 Period	5,510	4,659
1986 – 2000 Period	5,110	4,490

The table demonstrates that during the first half of the 30-year period in each region, and especially in the substantially larger Kansas City area, the weather was substantially colder on average during the first half of the period than during the second half of the period. In short, the 30-year measure of normality is unduly influenced by cold weather during the 1970s and early 1980s that has not consistently repeated itself in the last 15 to 20 years. This measure is simply not representative of conditions that would be expected on average based on weather experienced in the last two decades.

Q. WHY DID YOU SELECT THE 20-YEAR PERIOD?

A. This period of time is long enough so that it would not be unduly influenced by one or two occurrences of extremely warm or extremely cold weather, as arguably may be the case for the 10-year average in Joplin. The 20-year period also avoids the influence of extreme weather that occurred many years ago but has not repeated itself in recent years. Such influences make the use of Staff's 1971-2000 period problematic, as previously discussed.

The 20-year period tends to be the coldest (other than the unrepresentative 1971-2000 period) of the alternative measures of normality employed by various regulatory commissions. By using the coldest period, the Company's weather normalized revenues are higher and its resulted revenue deficiency lower than would be the case if any of these alternatively-accepted measures were used. The 20-year period is, thus, conservative, but yet reasonably representative of ongoing conditions that can be expected to occur on average after rates are set in this proceeding.

Q. IS STAFF'S 30-YEAR PERIOD ENDING IN 2000 A REASONABLE PERIOD TO USE TO DEFINE NORMAL WEATHER IN THIS CASE?

A. No. The 1971-2000 period is unduly influenced, especially in Kansas City, by the relatively cold period in the late 1970s to mid-1980s, weather that has not repeated itself with regularity in recent times. In Kansas City, average HDDs in the eight year period of 1978 through 1985 were met or surpassed in only two of the following 18 years.[13] In Joplin, the average for the same period was met or surpassed in 4 of the following 18 years. Clearly, the use of the 1971-2000 measure to define normality is not representative of typical weather experience since the mid-1980s.

[13] Even the 20-year measure that I use to normalize revenue is impacted to some degree by this cold period because the last two years of this eight-year period is included in my normalization period. The inclusion of these years at least partially explains why the 20-year measure is colder than either the 15-year measure or the 20-year measure excluding the coldest and the warmest year.

Q. IF THE COMMISION DOES NOT WISH TO BASE ITS NORMALIZATION DECISION ON A PERIOD OF LESS THAN THIRTY YEARS IN THIS CASE, DO YOU HAVE A RECOMMENDATION?

A. Yes. If the Commission wishes to examine weather experience over 30-years, I recommend that the Commission start with HDD data for the 30-year period ended June 30,. 2003. I propose that the Commission define normal HDDs for a given day to be the average of the HDDs for that day over the 30-year period after removing the coldest and warmest observation from the period. In effect, the Commission would be developing a 28-year average of HDDs. This average would be based on 30 years of weather experience, but it would eliminate the extreme warm year and the extreme cold year in calculating average HDDs. Such an average would remove at least some of the influence of the extremely period in the late 1970s and early 1980s that has not repeated itself with regularity in more recent experience.

Q. HAVE YOU DEVELOPED THE WEATHER NORMALIZATION ADJUSTMENT ASSOCIATED WITH THIS ALTERNATIVE DEFINITION OF NORMAL WEATHER?

A. Yes. Rebuttal Schedule FJC-4 provides the volume and dollar adjustment by month, customer class, and region if the Commission were to implement this alternative definition of normal weather.

Q. DO YOU CONSIDER THIS ALTERNATIVE TO BE PREFERABLE TO YOUR 20-YEAR NORMALIZATION RECOMMENDATION?

A. No. However, this alternative is certainly more reasonable than is the use of the 1971-2000 period to define normal weather.

4. CUSTOMER GROWTH ANNUALIZATION

Q. PLEASE COMPARE STAFF'S AND YOUR GROWTH ANNUALIZATION ADJUSTMENT FOR THE TEST YEAR ENDED JUNE 30, 2003.

A. My residential class adjustment is $164,484, while Staff's is $219,223. My general service adjustment is $112,613, while Staff's adjustment is $204,697 (after correction for the treatment of rate switching as agreed to by Staff at the prehearing conference and confirmed in response to Company Data Request No. 0090). I will not delve into the reasons that cause differences in these June 2003 results because I understand that Staff intends to update its growth annualization through December 2003.

Q. WHY DID STAFF NOT PROVIDE ITS ADJUSTMENT UPDATED THROUGH DECEMBER 2003 AS PART OF ITS DIRECT TESTIMONY?

A. As explained by Staff witness Harrison on page 11, line 14 through page 12, line 30, Staff was concerned about the declining customer counts reflected in the billing data for the months of July 2003 through December 2003, as compared,

for example, to the same months in the preceding year. Without an explanation of the cause of the change, Staff was unwilling to provide an updated growth adjustment.

Q. WHAT STEPS DID THE COMPANY TAKE TO RESEARCH THE CUSTOMER COUNT ISSUES RAISED BY STAFF WITNESS HARRISON?

A. I first gathered customer information for each customer class and region for the past nine calendar years. I examined historical customer counts, focusing on rolling 12-month averages of residential regular bill counts in each of the Company's three geographic regions. I noted that after the gas cost spike in the winter of 2000-01, the Company experienced a sharp decline in average bill counts in the spring and summer of 2001. While the Kansas City and Joplin regions experienced a return to some growth by early 2002, the growth rates beginning in early 2002 were much lower than the relatively steady and significant growth that the Company had experienced from the mid-1990s until mid-2001. While gas costs fell somewhat from late 2001 through October 2002, these costs once again began to climb, although not with sharp spikes that occurred in the winter of 2000-01. I expected that these rising gas costs could again be a contributing factor to customer count changes; however, the magnitude of the customer count changes shown in the billing data after June 2003 appeared too large to be entirely gas-cost driven. As a result, I concluded that there must be an additional explanation for the customer changes in the post-June 2003 period.

To examine the possible source of any data issue, I initiated a detailed town code-by-town code comparison of billing system information prior to June 2003 with that same information in the post June 2003 period. As a result of this extensive examination, I discovered that three relatively small towns in the Kansas City region were not picked up in the billing data downloads updated for the months of July 2003 through December 2003. The Company's information technology specialists subsequently confirmed my finding. The problem resulted from employee turnover between the time when the June 2003 test year data were downloaded from the billing system and the time when the updated data were assembled and inadequate documentation of computer coding maintained by the prior employee. The information technology specialist immediately revised the required computer coding to download the missing data and verified the consistency of the updated data with the initial test year data and the completeness of the entire set of billing data downloaded.

As soon as I received the updated billing download information, I incorporated the additional Kansas City region billing data into my base data and recalculated each of the revenue adjustments that had previously been updated through December 2003. Each of the Company's rate classes was impacted, although the more significant impacts occurred in the Residential and Small General Service classes as compared to the Large General Service and Large Volume Service classes. All revenue-related adjustments as summarized in Schedule H-2 updated through December 2003 were recalculated and all work papers that required

changes were developed. These work papers also contained the revised billing determinants for each of the customer classes. These schedules and work papers, both in paper and electronic form, were provided to the Staff and OPC on May 3, 2004, the first day of the prehearing conference.[14]

Since the initial oversight involves not accounting for some customers, the change, as expected, greatly affected my updated customer growth annualization adjustment. This change increased the growth adjustment and associated test year margin by $1,007,583, or from ($634,069) included in the Company's January 30, 2004 filing to $373,514. Very small changes occurred in the weather normalization adjustment (an increase of $16,481) and the load attrition adjustment (a decrease of $4,862). Of course, associated billing determinant changes will also affect the rates that will be designed for each class in this case.

Q. DO THE RESULTS WITH THE UPDATED DATA APPEAR CONSISTENT WITH YOUR EXPECTATIONS?

A. Yes. I will use the residential class as an example. As shown on pages 1 and 2 of Rebuttal Schedule FJC-5, the Company generally experienced steady and quite significant growth in the Kansas City and Joplin regions from the beginning of 1996 through May 2001. The gas cost spike of the winter of 2000-01 took its toll with declining 12-month average customer counts in both regions through early

[14] The billing download problem explained above affects only the update period, or the months of July 2003 through December 2003. Thus, all billing data and associated revenue adjustments for the test year ended June 30, 2003 are correct as explained in my Direct Testimony and supported by my revenue work papers.

2002. Since that time, modest growth has returned to both regions, but at a substantially slower pace than the last part of the 1990s. This more modest growth continues in the period beginning in July 2003 with the revised billing information. Presumably, the significant moderation in the growth since the late 1990s is largely gas cost driven, with gas costs today remaining substantially above those costs in the 1990s.

Page 3 of Rebuttal Schedule FJC-5 shows the experience in the St. Joseph region. Historically up until the impact of the winter 2000-01 gas cost spike, this region showed both periods of some growth and some customer losses. The longest period of sustained growth, albeit very modest growth, was the two year period ending in April 2001. Since that time, the Company has experienced a continually declining residential base in St. Joseph. While high gas costs might be part of the explanation in this region, economic conditions in the St. Joseph region certainly could be a major contributor to the trend.

Q. DO YOU EXPECT STAFF TO PROVIDE A CUSTOMER GROWTH ADJUSTMENT USING THE UPDATED INFORMATION?

A. Yes. I understand that Staff will provide the adjustment, presumably as part of its rebuttal testimony.

5. LOAD ATTRITION ADJUSTMENT

Q. DID ANY PARTY ADDRESS THE LOAD ATTRITION ADJUSTMENT THAT YOU EXPLAINED AND QUANTIFIED IN DIRECT TESTIMONY?

A. No.

6. MISCELLANEOUS SERVICE CHARGES

Q. PLEASE EXPLAIN THE POSITIONS OF THE PARTIES ON YOUR PROPOSED CHANGES IN MISCELLANEOUS SERVICE CHARGES.

A. I explained proposed changes to connect, standard reconnect, reconnect at the curb and at the main, and transfer fees in my Direct Testimony (page 19, line 11 - page 20, line 6). Staff witness Imhoff supports the changes with the exception of the proposed increases in charges for reconnects at the curb and reconnects at the main (Direct Testimony of Thomas M. Imhoff, page 7, lines 5-7). OPC witness Meisenheimer opposes all of my proposed changes in service charges (Direct Testimony of Barbara A. Meisenheimer, page 6, lines 8-11).

Q. HOW DO YOU TREAT THE INCREASED REVENUE THAT WILL FLOW FROM THE PROPOSED INCREASED SERVICE CHARGES?

A. I develop an adjustment to revenue based on test year service incidence that serves to offset the amount of revenue that must be collected through base monthly rates. The dollar amount of the adjustment is $1,395,364 for the test year

ended June 20, 2003 and $1,352,215 for the period updated with new incidence data through December 31, 2003. Staff calculates a revenue consequence of $1,259,855 for the test year ended June 30, 2003. I agree with Staff's calculation. Staff did not propose a revenue adjustment in its Accounting Schedules to reflect this revenue increment, but Staff witness Imhoff explains that this revenue increment will be considered in Staff's rate design. I have no problem with this approach since it will accomplish the same objective as my revenue adjustment, i.e. to offset the amount to be recovered through base rates.

Q. WHY DID STAFF NOT ACCEPT THE PROPOSED CHANGES TO THE RECONNECT AT THE CURB AND AT THE MAIN CHARGE?

A. On page 8, lines 5-8 of his Direct Testimony, Staff witness Imhoff indicates that the Company has not produced sufficient documentation to support the changes. These reconnects are outsourced at a fixed price. I recommended that the proposed charges be set at this price so that they match the Company's cost. The incidence of these types of reconnects is not large, so MGE is willing to drop the proposed changes in these two types of reconnections for the purpose of this proceeding. In effect, then, Staff and the Company agree on the proposed miscellaneous service charges. I would note that the revenue consequence updated with incidence through December 31, 2003 becomes $1,263,972.[15]

[15] The calculation of the revenue consequences of the service charge changes as accepted by Staff is provided on page 1 of Rebuttal Schedule FJC-6. Page 2 of Rebuttal Schedule FJC-6 shows that updating this adjustment through December 31, 2003 requires recognition of per book differences of ($141,013) due to changes in the incidence of various services provided, increased amounts of late payment fees, and additional service charge credits.

Q. WHY DOES OPC WITNESS MEISENHEIMER OPPOSE THE PROPOSED CHANGES IN SERVICE CHARGES?

A. On page 6, lines 10-11 of her Direct Testimony, OPC witness Meisenheimer simply states that "[t]he Residential class already recovers more than its cost of service. There is no need to change the status quo with respect to residential rates."

Q. DO YOU AGREE?

A. In addition to ignoring that these charges are assessed on customer classes other than the residential class, the OPC recommendation ignores cost causation principles and ignores the fact that this is a rate design matter (i.e., the allocation of revenue responsibility within rate classes) and not a class cost-of-service matter (i.e., the allocation of revenue responsibility among rate classes). If a designated number of dollars are to be collected from a customer class, those dollars must be collected through a combination of base monthly charges, i.e. customer charges and volumetric rates, and service charges. If service charges are set at levels below the cost to provide these services, customers causing the services to be provided are being subsidized by other customers within the class through higher than necessary base rates. This is the case with the current level of service charges. In fact, Staff witness Imhoff clearly articulates the principle ignored by OPC witness Meisenheimer when he states that "it is important that these miscellaneous charges reflect MGE's cost of performing these various services. The individual causing the Company to incur these expenses should be

responsible for the associated costs" (Direct Testimony of Thomas M. Imhoff, page 7, lines 1-3). The level of dollars to be collected from various customer classes as indicated by a class cost of service study is not at issue. The issue is whether cost causers should pay for specific, identifiable services so that other customers are not inequitably picking up a share of those costs.

7. CLASS COST OF SERVICE STUDY AND CLASS REVENUE ALLOCATION

7.1 Class Cost of Service Study Results

Q. WHAT PARTIES PRESENTED CLASS COST OF SERVICE STUDIES AND CLASS REVENUE ALLOCATION RECOMMENDATIONS?

A. In addition to my study, the Staff and OPC presented class cost of service studies and class revenue allocation recommendations.

Q. PLEASE SUMMARIZE THE RESULTS OF THE THREE COST OF SERVICE STUDIES.

A. The simplest way to summarize the studies is to compare the portion of the total revenue requirement that should be recovered from each customer class according to each study. These portions, or class revenue responsibilities, are shown below:

	Residential	Small General Service	Large General Service	Large Volume Service
My Study	73.80%	18.44%	1.04%	6.72%
Staff	72.03%	18.87%	1.03%	8.07%
OPC	62.95%	21.79%	1.43%	13.83%

My study and the Staff study produce reasonably similar class revenue responsibilities for the Small General Service and Large General Service classes, but the Staff study results in a somewhat smaller Residential revenue responsibility and a somewhat larger Large Volume Service revenue responsibility than my study. The OPC study, on the other hand, results in a dramatically lower Residential revenue responsibility than indicated in either the Staff study or my study. This lower Residential responsibility is accompanied by a dramatically higher Large Volume Service revenue responsibility in the OPC study compared to either the Staff or my results and somewhat higher Small General Service and Large General Service responsibilities.

Q. DO YOU PLAN TO ATTEMPT IDENTIFY ALL OF THE CAUSES THAT EXPLAIN THE DIFFERENCES IN THE STUDY RESULTS?

A. No. There are a large number of differences in, for example, allocation assumptions and methods, base data, allocation factors among the parties. I will

only provide several key examples to illustrate some of the important causes. As a starting point, there is a significant difference among the parties in the total cost of service, or revenue requirement, that is being allocated in the studies. The Company's total cost of service is $186.2 million for the test year ended June 30, 2003, while the total cost of service allocated by Staff and OPC is $142.3 million and $146.2 million, respectively. These base data differences can lead to significantly different results for specific customer classes depending on the sources of the cost of service differences.

Q. OTHER THAN THE STARTING POINT DIFFERENCES IN THE TOTAL COST OF SERVICE, WHAT OTHER DIFFERENCES WILL YOU DISCUSS?

A. I will discuss differences among the three studies in the allocation of mains and in the treatment of the automated meter reading investment.

Q. PLEASE EXPLAIN THE DIFFERENCES IN THE ALLOCATION OF MAINS AND WHY THOSE DIFFFERENCES ARE IMPORTANT.

A. The three studies use different methods to allocate mains. These methodological differences are an important cause for the differences in the overall results because the Company's mains investment represents about 39% of its total plant in service and the allocation of a number of accounts are directly or indirectly affected by the allocation of mains. As explained on page 24, lines 1-6 of my Direct Testimony, it is logical to conclude that some portion of the Company's

investment in mains is customer-related. In simple terms, my mains study, as explained on page 24, line 8 – page 25, line 7 of my Direct Testimony, results in 34.7% of the mains investment being classified as customer-related and the remaining 65.3% as demand-related. Staff's study effectively attributes 28.3% of the mains investment as "customer-related."[16] OPC's RSUM mains allocation is based entirely on demand-related data and, thus, results in no portion of the mains investment being driven by the number of customers served. Given the significance of the Company's investment in mains and the fact that the allocation of a number of other accounts are affected by the mains allocation, it is not at all surprising that the Staff and Company studies produce results that are much closer to one another than to the OPC study results. Furthermore, by not attributing any of the mains investment as customer-driven, the OPC study shifts costs away from the Residential class toward other classes compared to either my study or the Staff study. This result can be most easily seen with data directly available in my study – the Residential class accounts for about 89% of the customers but only 61% of the peak volumes.

[16] Staff uses the term "stand-alone" to describe this percentage, but Staff has explained that the concept is similar to customer-related costs. For example, in Case No. GR-98-140, Staff witness Beck indicated that "Staff's 'underlying cost' mains allocator determined the percentage of the cost of mains that could be considered to be stand-alone (which are similar to customer related costs) versus integrated system costs (which are similar to capacity related costs) to be 28% and 72%, respectively." (Rebuttal Testimony of Daniel I. Beck, page 5, lines 18-20).

Q. DO YOU BELIEVE THAT THE OPC MAINS METHOD IS REASONABLE?

A. No. As explained on page 24, lines 1-6 of my Direct Testimony, a gas distribution company must expand its system of mains to reach new customers, regardless of the amount of gas that they use. The sizing of the mains depends on volumes that these customers are expected to use during peak periods. Thus, from a logical perspective, the investment in mains involves both customer-related and demand-related components. That investment is not driven exclusively by customer demands, as OPC's method assumes.

Q. PLEASE EXPLAIN DIFFERENCES IN THE TREATMENT OF AUTOMATED METER READING EQUIPMENT IN THE COST OF SERVICE STUDIES.

A. As a point of reference, the Company's total investment in automated meter reading equipment is $34.2 million, and the revenue requirement associated with the investment (return, depreciation, and property taxes) would range from roughly $5 million to $6 million, depending which party's rate of return the Commission accepts in this proceeding.

I have treated automated meter reading investment to be a customer-related cost, just as I have treated the investment in, for example, meters and services. This treatment is sensible since the level of investment varies directly with the number of customer meters on which the equipment is installed. While Staff treats meters

and services as customer-related, Staff does not treat automated meter reading equipment in the same manner. Rather, Staff leaves automated meter reading equipment as part of general plant and allocates total general plant based on distribution plant. OPC follows a similar path in leaving the automated meter reading as part of general plant and allocating total general plant on the basis of net non-general plant.

The Staff and OPC allocations of the automated meter reading investment result in a portion of this investment being treated as a demand-related cost when, in fact, the size of the investment is driven solely by the number of customers served. The results of this difference can be illustrated by considering the Residential class. My study results in 89% of the automated meter reading investment being allocated to the Residential class. By contrast, Staff's and OPC's general plant allocators result in 71% and 63%, respectively, of the investment allocated to the Residential class. Both Staff and OPC understate the Residential class responsibility for the automated meter reading investment.

7.2 Class Revenue Allocations

Q. PLEASE SUMMARIZE THE CLASS REVENUE ALLOCATIONS OF THE PARTIES.

A. I explained my class revenue allocation recommendation based on the Company's revenue requirement in my Direct Testimony (page 26, lines 6-23). I presume

that Staff recommends that any revenue increase be spread based on the percentage of current revenue derived from each customer class because Staff witness Beck indicates that "I cannot recommend that revenues be shifted between classes at this time" (Direct Testimony of Daniel I. Beck, page 5, lines 13-14). OPC witness Meisenheimer provides a detailed revenue allocation formula that, for any given revenue increase, moves each class toward OPC's cost of service study results while not implementing a revenue reduction for any class (Direct Testimony of Barbara A. Meisenheimer, page 2, line 12 – page 5, line 22). The most straightforward comparison of the differences in the recommendations is provided by considering the class revenue changes proposed by the parties if the Company's $44,875,635 revenue deficiency for the test year ended June 30, 2003 were implemented. These results are shown below:

	Residential	Small General Service	Large General Service	Large Volume Service
Company	$ 34,843,180	$ 8,550,228	$ -	$ 1,482,228
Staff	$ 31,322,882	$ 9,227,697	$ 893,993	$ 3,431,062
OPC	$ 24,921,035	$10,372,618	$ 371,375	$ 9,210,607

As is the case with the cost of service study results, OPC's recommendations differ dramatically from the Staff and Company recommendations. Similarly, Staff and my recommendations are closer to one another, with the differences largely in the assignments to the Residential and Large Volume Service classes.

Q. DO YOU HAVE ANY OBSERVATIONS PERTAINING TO CLASS REVENUE ALLOCATION?

A. Yes. I continue to believe that my recommendations are sound and should be implemented. However, with the wide range of results and recommendations, the Commission must use reasonable judgment in assigning revenue changes to customer classes. It would not be unreasonable to conclude, consistent with Staff witness Beck's recommendation, that the revenue increase should be allocated to customer classes based on current revenue percentages.

8. RATE DESIGN

Q. PLEASE PROVIDE AN OVERVIEW OF THE RATE DESIGN RECOMMENDATIONS OF THE PARTIES.

A. For purposes of this discussion, I distinguish class revenue allocation from rate design by defining rate design to involve establishing the structure and level of rate elements for each of the Company's customer classes. The Staff and OPC sponsored rate design testimony. Neither party provided comprehensive rate design recommendations through their direct testimonies. As a result, my response in this testimony is necessarily limited. I presume that these parties will provide reactions to my specific rate design recommendations in their rebuttal testimonies. In addition to the rate design for monthly service, Staff and OPC provide recommendations for changes in the Experimental Low Income Rate

program in their testimonies. Company witness Noack addresses these recommendations in his rebuttal testimony.

Q. WERE ANY AGREEMENTS REACHED REGARDING RATE DESIGN DURING THE PREHEARING CONFERENCE EARLIER THIS MONTH?

A. Yes. The Company agreed not to seek the proposed change in the seasons from a winter of five months and summer of seven months to six months for each season for the Large Volume Service and Large General Service classes. I also agreed to develop a proposed change in the level of the multi-meter discount for affected Large Volume Service customers in response to a concern raised during the prehearing conference. I explain that recommendation at the end of this section of my testimony.

Q. WHAT ARE STAFF'S RATE DESIGN RECOMMENDATIONS?

A. On page 6, lines 20-21 of his Direct Testimony, Staff witness Beck states that "I do not propose to change the current rate design at this time." He did go on to state that he would reconsider rate design as various issues are clarified.

Q. WHAT ARE OPC'S RATE DESIGN RECOMMENDATIONS?

A. On page 6, line 11 of her Direct Testimony, OPC Meisenheimer recommended "no change in the status quo with respect to Residential rates." And, on page 11, lines 2-9 of his Direct Testimony, OPC witness Busch recommends no change in

the Residential customer charge and indicates that he has no recommendation at this time on the customer charges for other customer classes.

Q. WHAT CONCLUSIONS DO YOU DRAW FROM THE STAFF AND OPC RECOMMENDATIONS?

A. The only specific proposals appear to be no increase in the customer charge, for at least the Residential customer class.

Q. DO YOU HAVE ANY REACTIONS TO THESE RECOMMENDATIONS?

A. Yes. The limited recommendations stem, to at least some degree, from each party's cost of service study. This proceeding, as well as previous proceedings, clearly demonstrates that cost of service results vary substantially among analysts.

Because the cost of service study results are not consistent among the parties (as is commonly the case in rate proceedings such as this), the Commission must necessarily rely on judgment in determining appropriate rate designs. That judgment should consider the realities facing the Company. These realities include that fact that Residential and Small General Service use per customer is continually falling even in the non-heat sensitive months (Direct Testimony of F. Jay Cummings, Schedules FJC-1 and FJC-2). Furthermore, the Company's revenue stream resulting from the current rate design is extremely volatile due to its heavy reliance on volumetric rates.

For the Residential class, these realties are further reflected in the fact the Company has not been able to achieve the usage per Residential customer assumed in designing rates in any of the past 5 fiscal years (Direct Testimony of F. Jay Cummings, page 18, line 14 – page 19, line 5). More generally, the Company has been unable to achieve its authorized rate of return in any of the past eight fiscal years (Direct Testimony of Michael R. Noack, Schedule G-4). The current rate design (and that of its predecessor) simply has not provided the Company with a reasonable opportunity to earn the rates of return that have been authorized by the Commission.

Q. HOW SHOULD THE COMMISSION ADDRESS THESE REALITIES?

A. These realities should be addressed on two fronts. First, the Commission must consider past results in deciding on an appropriate rate design for each customer class on a going-forward basis. Second, reasonable billing determinants must be used in establishing rate levels within the rate design for each class. In arriving at reasonable billing determinants, the choice of the time period in constructing the weather normalization adjustment is extremely important. As explained earlier in this testimony, the use of the 30-period ending in 2000 is not representative of recent weather conditions and will result in an overstatement of billing determinants, thereby producing unrealistically low volumetric rates. Establishing reasonable billing determinants also requires recognition of the fact that use per customer will fall between the end of the test year and the time that new rates will become effective. My attrition adjustment captures this effect, and

unless this reality is built into the billing determinants used to establish rate levels in this case, the Company will have no reasonable chance to actually achieve its authorized rate of return.

Q. YOU DISCUSSED HOW REALITIES MUST BE CONSIDERED IN DETERMININING APPROPRIATE BILLING DETERMINANTS. HOW ARE THESE REALITIES IMPORTANT IN ESTABLISHING AN APPROPRIATE RATE DESIGN ON A GOING-FORWARD BASIS?

A. Rate design is critical if the Company is to have a reasonable opportunity to reach the revenue levels that the Commission uses to set rates in this proceeding. For example, a simple customer charge-volumetric rate design that is structured with a sizable portion of the revenue stream collected through volumetric rates leaves the Company susceptible to the continuing adverse affects of load attrition and to significant swings in revenue due to weather variations. Addressing these realities completely would require collection of the revenue stream entirely through a fixed monthly charge. For example, a Residential fixed charge (with no volumetric charge) of roughly $18 per month at current revenue levels to $25 per month with the Company's revenue deficiency for the test year ended June 30, 2003 would be required, compared to the current Residential customer charge of $10.05 and volumetric rate of $0.11423 per Ccf. With this fixed charge Residential rate design, the cost of service portion of Residential customer bills would no longer be subject to swings caused by weather variations, and the Company's revenue stream would be significantly stabilized against weather and

load variations. While I do not recommend that such a rate design be implemented in this case, its quantification has illustrative value.

Q. WHAT RATE DESIGN CHANGES WOULD REPRESENT IMPROVEMENTS OVER THE CURRENT DESIGN?

A. My proposed weather-mitigation rate design for the Residential and Small General Service classes, structured along the same lines as that recently approved for Laclede Gas Company, represents a significant improvement over the current design for these customer classes (Direct Testimony of F. Jay Cummings, page 27, line 1 – page 36, line 2). By increasing the customer charge, some of the impact of continuing load attrition will be tempered. Through the weather-mitigation volumetric structure, a sizable portion of the weather risk to the Company and the customer is removed.

I have also proposed to increase both the Large General Service and Large Volume Service customer charges. While weather variations result in some usage swings in these classes, many of these larger customers use of gas also varies with, for example, changing demands for the products they produce. By collecting a greater portion of the revenue stream from the customer charge, the Company's revenue stream from these classes is stabilized to some degree.

Q. IF THE COMMISSION CHOOSES NOT TO IMPLEMENT THE PROPOSED WEATHER-MITIGATION RATE DESIGN FOR THE RESIDENTIAL AND SMALL GENERAL SERVICE CLASSES, DO YOU HAVE ANY OTHER RECOMMENDATIONS?

A. Yes. I recommend that the Commission increase the level of customer charges for each class as recommended in my Direct Testimony and implement a Weather Normalization Clause ("WNC") on an experimental basis. While the Staff and OPC class cost of service studies suggest that the proposed levels of customer charges exceed customer-related costs, my study provides support for charges well above the proposed levels.[17] Even if the proposed customer charge levels were not considered cost-based, the Commission could reasonably implement them. The reasonableness conclusion would be based on an effort to reduce the impact of load attrition on the Company, thereby extending the time before the Company would find it necessary to file a new rate case.[18] Deferring a rate case has value to both the Company and its customers. The fact of the matter remains that the Commission has evidence in the record to support the proposed customer charges on the basis of cost considerations.

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[17] I believe that the Staff and OPC calculated customer charges are understated. For example, neither Staff nor OPC consider the automated meter reading investment to be customer-related. Furthermore, no portion of the mains investment is included in the customer charge in either the Staff or OPC calculation. As explained earlier in my testimony, it is logical to conclude that some portion of the mains investment is customer-related, and all customer-related costs should be included in the calculated customer charge. OPC simply does not consider any portion of the mains investment to be customer-related. Staff considers a portion to be customer-related but does not include these customer-related costs in its customer charge calculations.

[18] If the Commission increases customer charges but does not implement a WNC, which I do not recommend, higher customer charges have the added customer benefit of reducing bill swings associated with weather variations as compared to a rate design with lower customer charges.

Q. PLEASE EXPLAIN HOW THE WEATHER NORMALIZATION CLAUSE WOULD OPERATE.

A. In simple terms, the WNC adjusts the cost service portion of customer bills to match the way in which the weather normalization adjustment adjusts revenue in this rate case. The WNC, thus, ensures that weather variations will not cause the Company to collect more or less revenues than the Commission intended the Company to collect when it sets rates in this proceeding.

In mechanical terms, the rate case weather normalization adjustment is based on regression-based HDD factors, i.e. Ccf per HDD per bill, used to normalize revenues in this case for the Residential, Small General Service, and Large General Service classes in each geographic region. The volume adjustment to normalize weather in a given period is computed by multiplying these factors by the number of customer bills in the period and by the difference between normal HDDs and actual HDDs in the period.

A structure of a proposed WNC tariff sheet is included as Rebuttal Schedule FJC-7 to show how the calculation of the WNC adjustment mirrors the rate case weather normalization adjustment method. For simplicity, I propose that the WNC not apply to the Large General Service and Large Volume Service classes because adjustments for these classes are typically not large and because the WNC is an alternative to the proposed weather-mitigation rate design that is structured only for the Residential and Small General Service classes. The HDD

factors ultimately included in the tariff and the normal HDDs used in the WNC calculation are dependent on the Commission's resolution of the weather normalization adjustment in this case. For purposes of the draft tariff, I have included my HDD factors for the test year ended June 30, 2003 weather normalization adjustment, although Staff's factors are very similar to those that I developed.

Q. PLEASE EXPLAIN HOW THE CUSTOMER AND THE COMPANY BENEFIT FROM THE WEATHER NORMALIZATION CLAUSE.

A. I should first note that the WNC only adjusts the cost of service portion of a customer's bill. As a result, weather influences on customer bills are mitigated but not eliminated. For example, during an extremely cold period, the cost of service portion of customer's bill will be reduced to the level associated with normal weather. But, because the customer's usage is higher than normal, the gas cost portion of the customer's bill will be higher than normal.

Customer benefits are best described by considering the WNC as providing a type of insurance policy to the customer. The customer pays a "premium" during periods of warmer than normal weather. During these periods when customer bills are unusually low, the WNC adjusts cost of service volumes to the level associated with normal weather. While the "premium" raises customer bills in these periods, customer total bills remain lower than they would normally be because of the lower than normal gas cost portion of the bill. Thus, the customer

pays the "premium" when he or she is most able to afford it. The customer receives a "pay out" from the WNC insurance in colder than normal periods. During such periods, the WNC reduces these high bills by reducing the cost of service portion of the bill to the level that would have occurred with normal weather. Since customers have a greater difficulty in paying their bills when they are unusually high, the WNC helps to make gas service somewhat more affordable.

The Company benefits from a WNC through significantly reducing the variability of its revenue stream and improving its opportunity to reach the revenue levels that the Commission will use to set rates in this case.

Q. WHY DO YOU PROPOSE THAT, AS AN ALTERNATIVE TO YOUR WEATHER-MITIGATION RATE DESIGN, THE WNC BE IMPLEMENTED ON AN EXPERIMENTAL BASIS?

A. As a layman, I understand that concerns have been expressed in the past in regard to the lawfulness of the WNC in Missouri. As a layman, however, I believe the Commission has the authority to approve the implementation of the WNC as a "test case" or experiment. In this way the Commission could ascertain whether the benefits perceived in the WNC apparently expected by the numerous other jurisdictions that have approved WNCs are present in Missouri also.

Both the Company and the customer should benefit from the WNC. The Company, through its prior ownership of properties in Texas, has had substantial experience in implementing this type of WNC. It has the capability to bill the WNC and the experience to handle customer education and inquiries concerning the WNC. As an alternative to my proposed weather-mitigation rate design, which I continue to recommend, implementation of my proposed customer charges and an experimental WNC will help to address realities facing the Company in reaching the revenue levels that the Commission expects it to be able to achieve as a result of its rate design decisions in this case. Both my original rate design recommendation and this alternative recommendation represent significant steps in providing the Company with an improved opportunity to overcome past results.

Q. IN DESCRIBING THE RATE DESIGN AGREEMENTS REACHED DURING THE PREHEARING CONFERENCE, YOU INDICATED THAT YOU WOULD PROPOSE A CHANGE IN THE CURRENT LARGE VOLUME SERVICE MULTI-METER CUSTOMER CHARGE PROVISION. PLEASE EXPLAIN THE CURRENT PROVISION AND HOW IT WOULD BE CHANGED.

A. Sheet. No. 40 of the Company's tariff requires that for any Large Volume Service customer who, as of June 30, 2000, has multi-meters at a single address or location, the full Large Volume Service customer charge shall be assessed on each of the first two meters and, if applicable, 50 percent of the customer charge

shall be assessed on each additional meter. During the test year ended June 30, 2003, there were approximately 38 meters eligible for the discount. During the prehearing conference, Jackson County, the University of Missouri-Kansas City and Central Missouri State University indicated that it supported the Large Volume Service customer charge that I propose, but that it saw a need to modify the multi-meter discount level because of rate impacts.

I have evaluated this issue and recommend that my proposed Large Volume Service customer charge be implemented but that the level of the customer charge applied to applicable meters in excess of two at a single address or location be held at the current level. With the proposed increase in the Large Volume Service customer charge, the discount would be increased from its current 50 percent level to 66.67 percent. The charge for each of the first two meters would become $614 and each additional meter would be charged at the current rate of $204.65. For the test year ended June 30, 2003, $46,878 would have been collected from Large Volume Service customer charges under my original rate design will now be shifted to collection through volumetric rates (See Rebuttal Schedule FJC-8). The following table show the annual customer charge impact on the referenced customers as originally proposed and as revised:

	Annual Customer Charges		
Number of Meters	Current	Originally Proposed	As Revised
5	$17,191	$25,788	$22,103
13	$36,837	$55,260	$41,750

I believe that this change effectively addresses the rate impact concern raised during the prehearing conference while having no material impact on other customers.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

Revised Weather Normalization Adjustment for Test Year Ended June 30, 2003
Residential and General Service Schedules

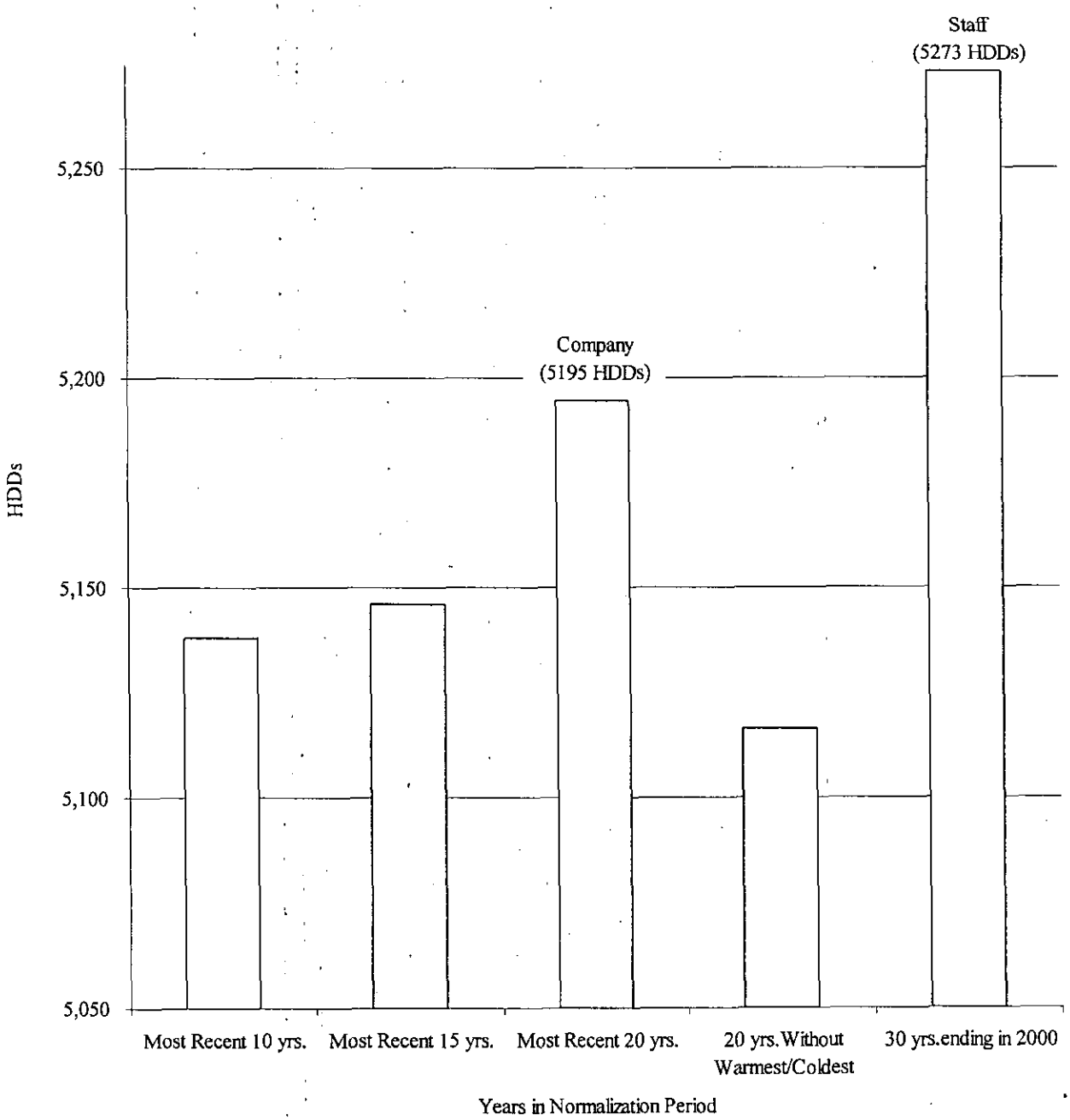
	Residential		Small General Service			Large General Service	
Kansas City	Volumes	Dollars	First Step	Second Step	Dollars	Volumes	Dollars
July	206,412	23,578	37,261	13,999	4,284	7,033	452
August	15,540	1,775	4,213	1,478	476	769	49
September	429,042	49,010	49,040	18,921	5,677	9,359	602
October	1,898,573	216,874	274,633	102,342	31,515	52,165	3,355
November	(8,116,323)	(927,128)	(1,662,252)	(766,706)	(319,192)	(294,994)	(32,827)
December	(1,339,965)	(153,064)	(177,374)	(113,752)	(38,034)	(35,604)	(3,962)
January	8,980,224	1,025,811	1,570,865	1,251,115	367,152	333,204	37,079
February	(3,723,348)	(425,318)	(699,124)	(596,355)	(168,323)	(155,980)	(17,357)
March	(7,024,208)	(802,375)	(1,242,119)	(972,627)	(288,243)	(258,722)	(28,791)
April	3,162,051	361,201	679,002	342,643	84,745	142,561	9,168
May	2,490,900	284,536	543,711	201,172	62,284	80,880	5,201
June	(448,043)	(51,180)	(95,028)	(31,843)	(10,633)	(12,394)	(797)
Joplin							
July	31,554	3,604	7,690	3,176	906	1,584	102
August	2,255	258	529	234	64	116	7
September	34,321	3,920	7,715	3,820	957	1,171	75
October	304,995	34,840	72,996	35,285	8,992	14,295	919
November	(794,808)	(90,791)	(226,173)	(101,114)	(43,031)	(37,714)	(4,197)
December	(841,171)	(96,087)	(231,418)	(129,919)	(47,321)	(38,819)	(4,320)
January	361,431	41,286	94,731	63,974	20,714	20,509	2,282
February	(1,091,694)	(124,704)	(282,176)	(198,915)	(62,739)	(45,519)	(5,065)
March	(1,107,054)	(126,459)	(299,828)	(189,909)	(63,995)	(47,115)	(5,243)
April	265,915	30,375	79,708	35,842	9,615	11,800	759
May	318,175	36,345	90,349	39,787	10,834	13,421	863
June	(119,572)	(13,659)	(28,153)	(15,063)	(3,579)	(6,558)	(422)
St. Joseph							
July	12,439	1,421	2,600	1,030	303	641	41
August	1,447	165	305	119	35	58	4
September	46,741	5,339	9,923	3,653	1,135	1,538	99
October	103,039	11,770	22,845	8,674	2,634	6,027	388
November	(621,456)	(70,989)	(143,989)	(73,603)	(28,544)	(30,713)	(3,418)
December	(37,061)	(4,233)	(8,026)	(5,402)	(1,753)	(4,169)	(464)
January	617,446	70,531	125,330	100,949	29,434	32,658	3,634
February	(276,662)	(31,603)	(53,415)	(48,503)	(13,226)	(13,487)	(1,501)
March	(512,825)	(58,580)	(103,968)	(87,931)	(24,938)	(21,258)	(2,366)
April	232,352	26,542	59,829	29,673	7,428	10,101	650
May	184,452	21,070	47,598	15,988	5,329	7,712	496
June	(34,109)	(3,896)	(1,432)	(524)	(164)	(1,178)	(76)
Total							
July	250,405	28,604	47,551	18,205	5,494	9,259	595
August	19,242	2,198	5,047	1,831	575	944	61
September	510,104	58,269	66,678	26,394	7,769	12,068	776
October	2,306,607	263,484	370,474	146,301	43,142	72,487	4,662
November	(9,532,587)	(1,088,907)	(2,032,415)	(941,423)	(390,767)	(363,421)	(40,441)
December	(2,218,197)	(253,385)	(416,818)	(249,073)	(87,108)	(78,591)	(8,746)
January	9,959,100	1,137,628	1,790,926	1,416,038	417,300	386,371	42,995
February	(5,091,704)	(581,625)	(1,034,715)	(843,773)	(244,288)	(214,986)	(23,924)
March	(8,644,087)	(987,414)	(1,645,915)	(1,250,467)	(377,177)	(327,095)	(36,399)
April	3,660,318	418,118	818,540	408,158	101,787	164,462	10,577
May	2,993,528	341,951	681,658	256,946	78,446	102,012	6,560
June	(601,724)	(68,735)	(124,614)	(47,430)	(14,376)	(20,130)	(1,295)
		$(729,815)	(1,473,603)	(1,058,293)	$(459,202)	$(256,620)	$(44,578)

Revised Weather Normalization Adjustment for Test Year Ended June 30, 2003
Large Volume Service Schedule

	Volume Adjustment			Dollars		
	Total	First	Second	Total	First Block	Second
Kansas City						
July	1,311	650	661	31	18	12
August	22,555	11,078	11,478	527	313	214
September	366,137	174,196	191,941	8,502	4,923	3,580
October	(1,359,831)	(587,963)	(771,867)	(31,011)	(16,616)	(14,395)
November	(136,481)	(53,826)	(82,655)	(5,302)	(2,403)	(2,899)
December	1,209,658	447,480	762,178	46,710	19,980	26,730
January	(187,678)	(64,033)	(123,645)	(7,195)	(2,859)	(4,336)
February	(1,015,787)	(371,029)	(644,758)	(39,178)	(16,566)	(22,612)
March	253,695	110,895	142,800	9,959	4,951	5,008
April	307,579	143,778	163,801	7,142	4,063	3,079
May	40,117	19,297	20,821	934	545	388
June	(70,939)	(34,527)	(36,411)	(1,655)	(976)	(679)
Joplin						
July	114	109	4	3	3	0
August	25	314	11	9	9	0
September	8,353	7,375	978	792	774	18
October	(3,033)	(54,730)	(8,303)	(1,702)	(1,547)	(155)
November	(31,381)	(24,080)	(7,300)	(1,331)	(1,075)	(256)
December	11,272	7,872	3,400	471	351	119
January	(58,809)	(36,347)	(22,462)	(2,411)	(1,623)	(788)
February	(89,094)	(60,390)	(28,704)	(3,703)	(2,696)	(1,007)
March	16,671	14,556	2,115	724	650	74
April	16,816	15,647	1,170	464	442	22
May	858	813	45	24	23	1
June	(6,004)	(5,764)	(240)	(167)	(163)	(4)
St. Joseph						
July	81	67	14	2	2	0
August	1,358	1,110	248	36	31	5
September	27,628	23,540	4,088	741	665	76
October	(96,541)	(73,245)	(23,297)	(2,504)	(2,070)	(434)
November	(9,625)	(6,533)	(3,092)	(400)	(292)	(108)
December	85,306	50,159	35,147	3,472	2,240	1,233
January	(13,044)	(7,172)	(5,872)	(526)	(320)	(206)
February	(70,603)	(42,500)	(28,103)	(2,883)	(1,898)	(986)
March	17,634	12,610	5,024	739	563	176
April	21,419	17,100	4,319	564	483	81
May	2,578	2,085	493	68	59	9
June	(4,344)	(3,551)	(793)	(115)	(100)	(15)
Total						
July	1,505	826	679	36	23	13
August	24,238	12,502	11,737	572	353	219
September	422,119	225,111	197,008	10,036	6,362	3,674
October	(1,519,405)	(715,938)	(803,467)	(35,217)	(20,232)	(14,985)
November	(177,487)	(84,440)	(93,047)	(7,033)	(3,770)	(3,263)
December	1,306,236	505,511	800,725	50,652	22,571	28,081
January	(259,532)	(107,552)	(151,980)	(10,132)	(4,802)	(5,330)
February	(1,175,484)	(473,919)	(701,565)	(45,764)	(21,160)	(24,604)
March	288,000	138,061	149,939	11,423	6,164	5,258
April	345,815	176,525	169,290	8,170	4,989	3,181
May	43,553	22,195	21,359	1,026	627	398
June	(81,287)	(43,842)	(37,445)	(1,937)	(1,239)	(698)
	(781,729)	(344,960)	(436,768)	$(18,169)	$ (10,115)	$ (8,055)

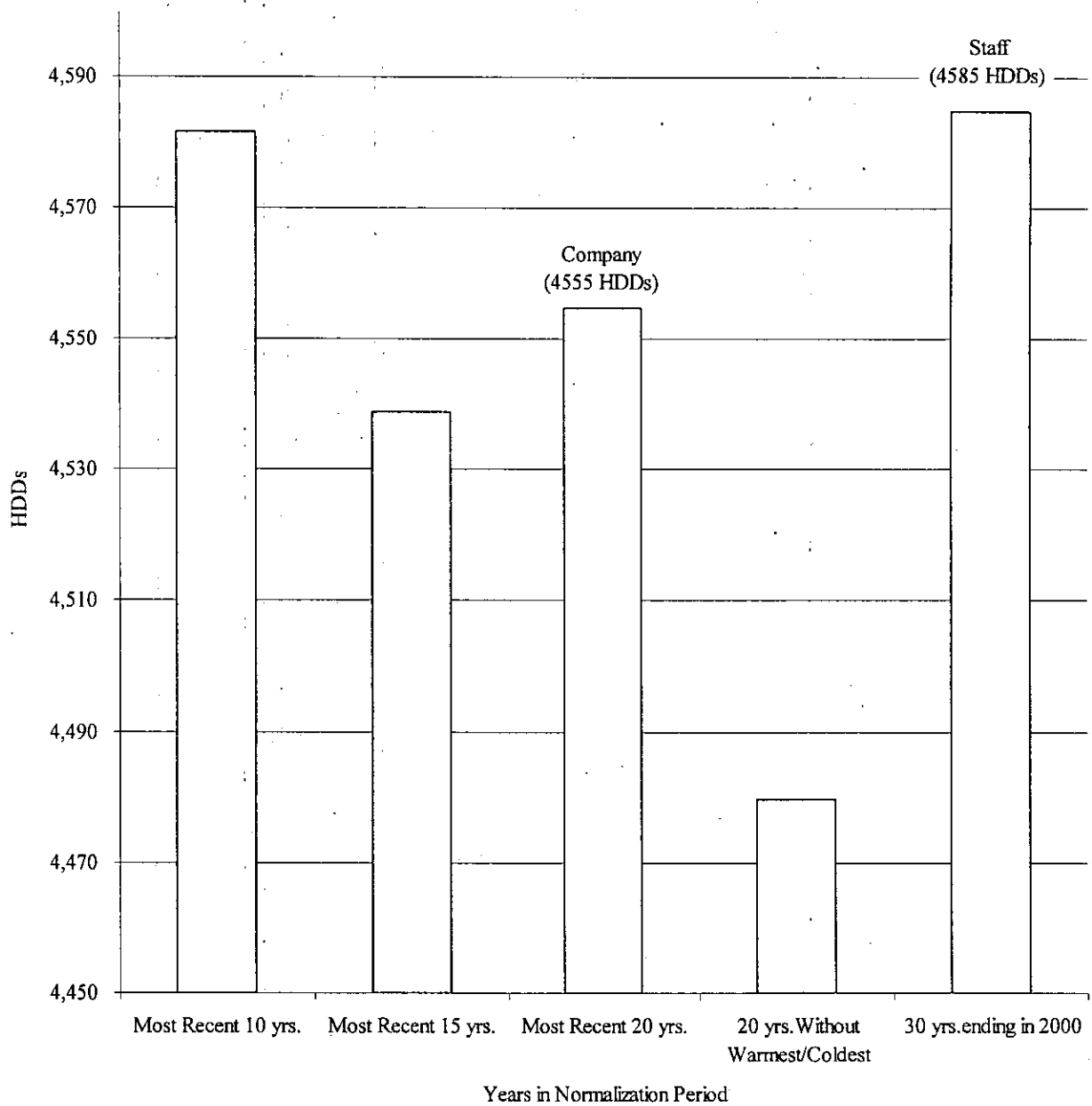
Rebuttal Schedule FJC-2

Alternative Periods Used By Regulatory Commissions to Define Normal Weather:
Heating Degree Days (HDDs) in the Kansas City and St. Joseph Regions
For Years Ending in June



Rebuttal Schedule FJC-3

Alternative Periods Used By Regulatory Commissions to Define Normal Weather:
Heating Degree Days (HDDs) in the Joplin Region
For Years Ending in June



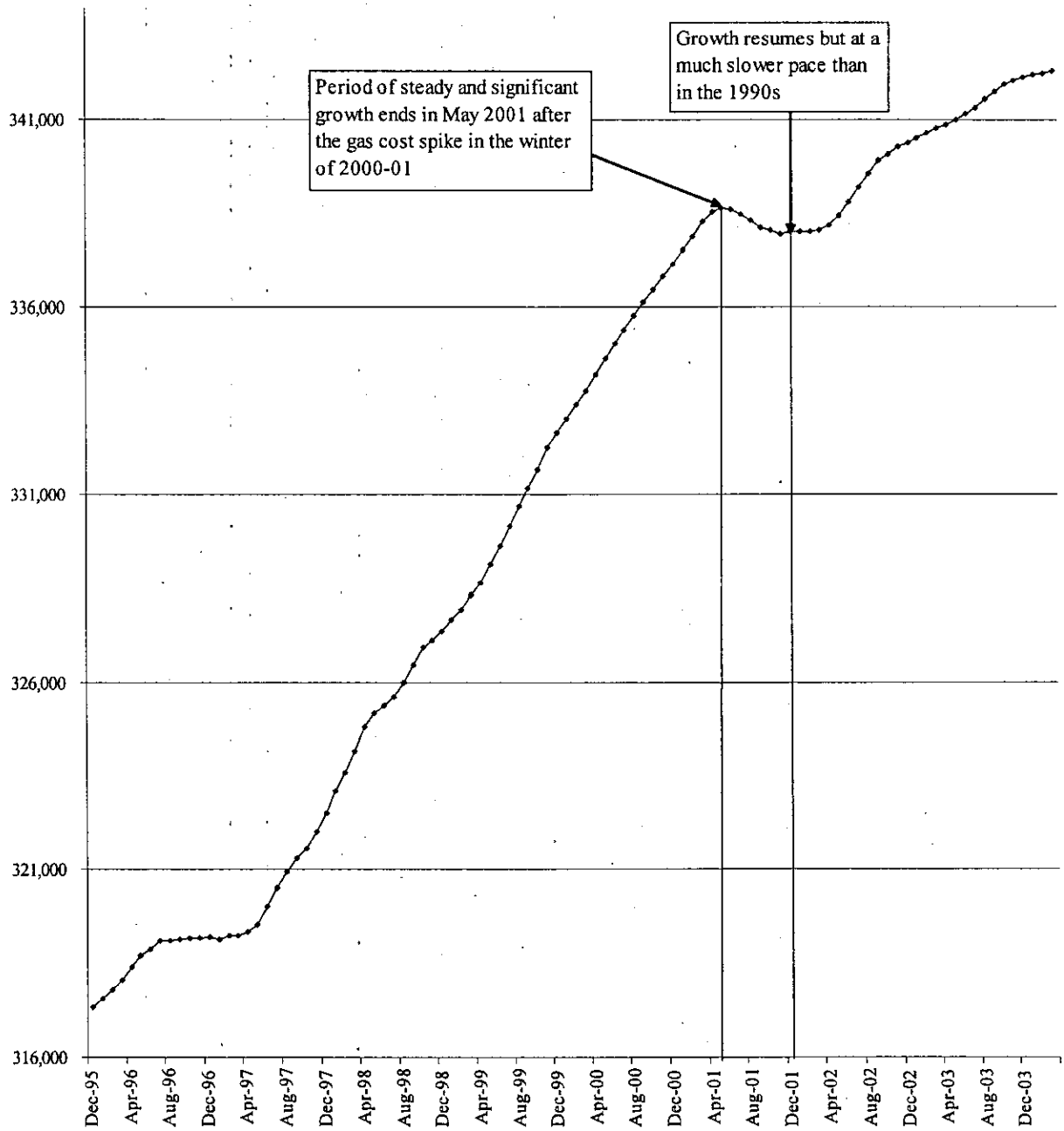
Alternative Weather Normalization Adjustment for the Test Year Ended June 20, 2003
Residential and General Service Schedules

	Residential		Small General Service			Large General Service	
Kansas City	Volumes	Dollars	First Step	Second	Dollars	Volumes	Dollars
July	118,753	13,565	21,396	8,039	2,460	4,039	260
August	2,155	246	611	214	69	112	7
September	273,157	31,203	33,756	13,024	3,908	6,442	414
October	1,468,571	167,755	188,643	70,298	21,648	35,832	2,304
November	(8,887,231)	(1,015,188)	(1,823,113)	(840,902)	(50,081)	(323,541)	(36,004)
December	(1,497,236)	(171,029)	(215,021)	(137,895)	(46,106)	(43,160)	(4,803)
January	8,957,818	1,023,251	1,587,946	1,264,720	371,145	336,827	37,482
February	(1,363,243)	(155,723)	(281,714)	(240,303)	(67,826)	(62,853)	(6,994)
March	(6,258,719)	(714,934)	(1,103,901)	(864,397)	(256,169)	(229,932)	(25,587)
April	3,249,709	371,214	693,433	349,925	86,546	145,591	9,363
May	1,971,997	225,261	425,144	157,302	48,701	63,162	4,062
June	(979,763)	(111,918)	(203,414)	(68,161)	(22,761)	(28,506)	(1,833)
Joplin							
July	16,379	1,871	3,992	1,649	470	791	51
August	150	17	35	16	4	8	0
September	28,714	3,280	6,455	3,196	801	925	59
October	239,061	27,308	57,216	27,658	7,048	1,465	737
November	(939,450)	(107,313)	(267,332)	(119,515)	(50,862)	(4,432)	(4,944)
December	(898,244)	(102,606)	(247,119)	(138,734)	(50,532)	(41,025)	(4,565)
January	315,713	36,064	82,748	55,882	18,094	18,929	2,106
February	(722,488)	(82,530)	(186,746)	(131,643)	(41,521)	(29,785)	(3,314)
March	(999,429)	(114,165)	(270,680)	(171,447)	(57,774)	(43,763)	(4,870)
April	300,732	34,353	90,145	40,535	10,873	13,201	849
May	299,405	34,201	85,019	37,440	10,195	12,732	819
June	(177,086)	(20,229)	(41,695)	(22,308)	(5,300)	(8,721)	(561)
St. Joseph							
July	7,531	860	1,574	624	183	392	25
August	222	25	47	18	5	9	1
September	33,123	3,784	7,032	2,589	805	1,022	66
October	66,082	7,549	14,651	5,563	1,689	4,501	289
November	(686,150)	(78,379)	(158,979)	(81,266)	(31,515)	(33,617)	(3,741)
December	(44,412)	(5,073)	(9,618)	(6,473)	(2,100)	(4,739)	(527)
January	633,135	72,323	128,515	103,514	30,181	32,844	3,655
February	(93,351)	(10,663)	(18,023)	(16,366)	(4,463)	(5,387)	(599)
March	(460,411)	(52,593)	(94,715)	(80,105)	(22,718)	(18,962)	(2,110)
April	233,485	26,671	59,917	29,717	7,439	10,412	670
May	145,593	16,631	37,503	12,597	4,199	6,125	394
June	(75,299)	(8,601)	(6,372)	(2,333)	(728)	(2,716)	(175)
Total							
July	142,663	16,296	6,962	10,311	3,114	5,221	336
August	2,527	289	693	248	79	128	8
September	334,994	38,266	47,243	18,809	5,513	8,389	540
October	1,773,714	202,611	260,510	103,518	30,385	51,797	3,331
November	(10,512,830)	(1,200,881)	(2,249,424)	(1,041,683)	(32,458)	(401,589)	(44,689)
December	(2,439,891)	(278,709)	(471,758)	(283,102)	(98,738)	(88,925)	(9,896)
January	9,906,665	1,131,638	1,799,210	1,424,116	419,420	388,600	43,243
February	(2,179,082)	(248,917)	(486,483)	(388,312)	(113,810)	(98,024)	(10,908)
March	(7,718,559)	(881,691)	(1,469,296)	(1,115,949)	(336,661)	(292,657)	(32,567)
April	3,783,926	432,238	843,495	420,177	104,858	169,203	10,881
May	2,416,995	276,093	547,665	207,339	63,095	82,019	5,275
June	(1,232,148)	(140,748)	(251,482)	(92,802)	(28,789)	(39,943)	(2,569)
	(5,721,026)	$ (653,513)	(1,402,665)	(737,331)	$(383,994)	(215,782)	$(37,014)

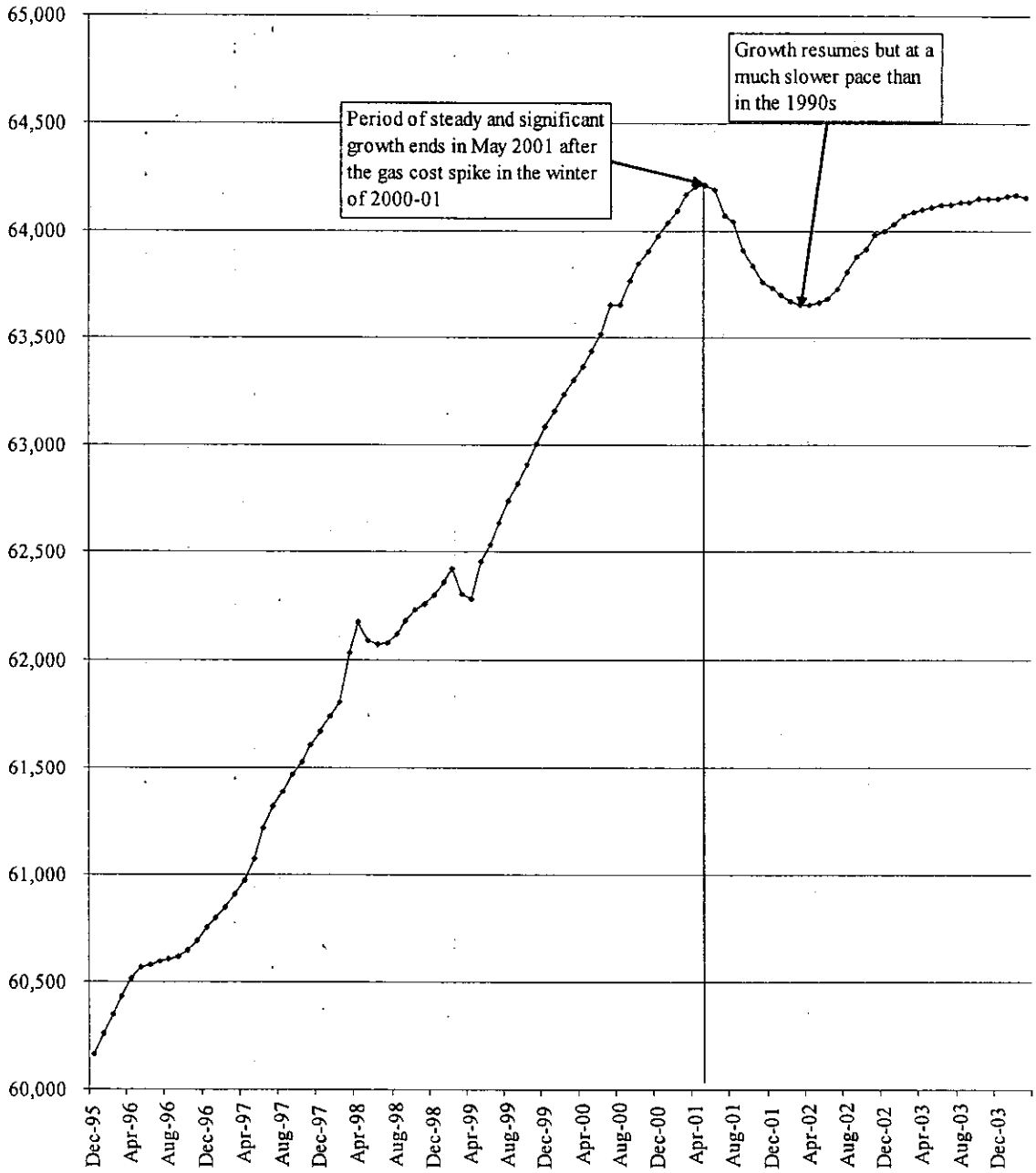
Alternative Weather Normalization Adjustment for the Test Year Ended June 20, 2003
Large Volume Service Schedule

	Volume Adjustment			Dollars		
	Total	First Block	Second Block	Total	First Block	Second Block
Kansas City						
July	112	55	56	3	2	1
August	3,558	1,747	1,810	83	49	34
September	317,309	150,965	166,343	7,369	4,266	3,102
October	(1,442,790)	(623,833)	(818,957)	(32,903)	(17,630)	(15,274)
November	(193,993)	(76,508)	(117,485)	(7,536)	(3,416)	(4,120)
December	1,082,735	400,528	682,207	41,809	17,884	23,925
January	175,814	59,985	115,829	6,740	2,678	4,062
February	(825,008)	(301,345)	(523,663)	(31,820)	(13,455)	(18,365)
March	274,339	119,918	154,420	10,770	5,354	5,416
April	252,009	117,803	134,206	5,852	3,329	2,523
May	(38,900)	(18,712)	(20,188)	(905)	(529)	(377)
June	(91,606)	(44,586)	(47,020)	(2,137)	(1,260)	(877)
Joplin						
July	-	-	-	-	-	-
August	174	168	6	5	5	0
September	24,774	23,919	855	692	676	16
October	(70,472)	61,189)	(9,283)	(1,902)	(1,729)	(173)
November	(37,074)	(28,449)	(8,625)	(1,573)	(1,270)	(302)
December	(957)	(668)	(289)	(40)	(30)	(10)
January	(33,522)	(20,718)	(12,804)	(1,374)	(925)	(449)
February	(77,650)	(52,633)	(25,017)	(3,227)	(2,350)	(877)
March	19,583	17,099	2,484	851	763	87
April	16,789	15,621	1,168	463	441	22
May	(1,802)	(1,707)	(95)	(50)	(48)	(2)
June	(7,843)	(7,529)	(314)	(219)	(213)	(6)
St. Joseph						
July	7	6	1	0	0	0
August	214	175	39	6	5	1
September	23,944	20,400	3,543	643	577	66
October	(102,431)	(77,713)	(24,718)	(2,657)	(2,196)	(461)
November	(13,681)	(9,286)	(4,394)	(569)	(415)	(154)
December	76,356	44,896	31,460	3,108	2,005	1,103
January	12,220	6,719	5,501	493	300	193
February	(57,343)	(34,518)	(22,825)	(2,342)	(1,541)	(800)
March	19,068	13,636	5,432	799	609	191
April	17,550	14,012	3,539	462	396	66
May	(2,500)	(2,022)	(478)	(66)	(57)	(9)
June	(5,609)	(4,585)	(1,025)	(149)	(130)	(19)
Total						
July	119	61	58	3	2	1
August	3,946	2,091	1,855	94	59	35
September	366,026	195,285	170,741	8,703	5,519	3,184
October	(1,615,693)	(762,735)	(852,958)	(7,463)	(1,555)	(5,908)
November	(244,747)	(114,243)	(130,504)	(9,678)	(5,101)	(4,577)
December	1,158,134	444,756	713,378	44,877	19,858	25,018
January	154,512	45,986	108,526	5,859	2,053	3,806
February	(960,001)	(388,496)	(571,505)	(37,389)	(17,346)	(20,043)
March	312,990	150,653	162,337	12,420	6,727	5,693
April	286,348	147,436	138,913	6,777	4,167	2,611
May	(43,202)	(22,441)	(20,761)	(1,021)	(634)	(387)
June	(105,058)	(56,700)	(48,358)	(2,504)	(1,602)	(902)
	(686,626)	(358,347)	(328,279)	$ (9,323)	$ (7,854)	$ (1,468)

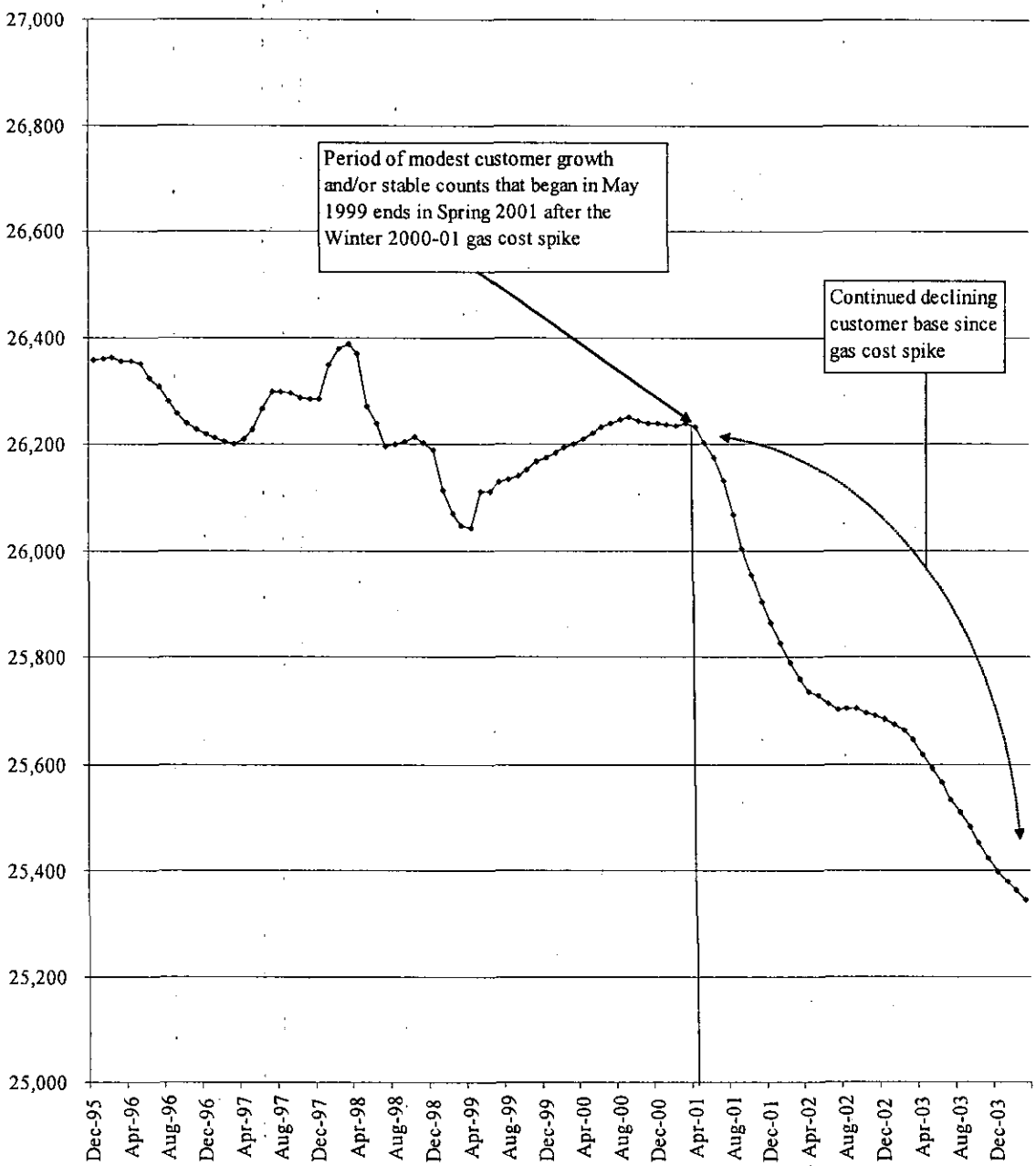
Kansas City Residential Regular Bills - Rolling 12-Month Average



Joplin Residential Regular Bills - Rolling 12-Month Average



St. Joseph Residential Regular Bills - Rolling 12-Month Average



Revenue Consequence of Changes in Service Charge as Accepted By Staff
Updated Though December 2003

Type	Recorded Dollars	Incidence	Current	Proposed	Added Revenue
Reconnects	536,685	12,974	35.00	45.00	$ 129,740
Collection	267,603	31,320	8.00	8.00	-
Returned Check	139,388	8,764	15.00	15.00	-
Reconnect at Curb	17,360	189	56.00	56.00	-
Reconnect at Main Customer Read	6,984	58	106.00	106.00	-
Normal	15	4	5.00	5.00	-
Appointment	30	2	10.00	10.00	-
Disconnect	209,567	25,245	8.00	8.00	-
Connect	809,240	41,621	20.00	45.00	$ 1,040,525
Transfer Fee	316,765	62,471	5.00	6.50	$ 93,707
	$ 2,303,637				$ 1,263,972

Other Revenue for Test Year Ended June 30, 2003 and Updated Through December 31, 2003

	Number of Orders:		
	TYE June 2003	YE December 2003	Change
Reconnects	15,334	12,974	(2,360)
Collection	33,450	31,320	(2,130)
Returned Check	9,295	8,764	(531)
Reconnect at Curb	310	189	(121)
Reconnect at Main	66	58	(8)
Customer Read			
Normal	3	4	1
Appointment	3	2	(1)
Disconnect	26,196	25,245	(951)
Connect	40,462	41,621	1,159
Transfer Fee	63,353	62,471	(882)

	Dollars		
	TYE June 2003	YE December 2003	Change
Reconnects	536,685	454,081	(82,604)
Collection	267,603	250,562	(17,041)
Returned Check	139,388	131,464	(7,924)
Reconnect at Curb	17,360	10,584	(6,776)
Reconnect at Main	6,984	6,142	(842)
Customer Read			
Normal	15	20	5
Appointment	30	20	(10)
Disconnect	209,567	201,960	(7,607)
Connect	809,240	832,420	23,180
Transfer Fee	316,765	312,355	(4,410)
	$ 2,303,637	$ 2,199,608	$ (104,029)
Late Payment	$ 1,102,130	$ 1,155,234	$ 53,104
Service Charge Credit	$ (136,799)	$ (226,886)	$ (90,087)
Total	$ 3,268,968	$ 3,127,956	$(141,013)

P.S.C. MO. No. 1 Original SHEET No. __

Missouri Gas Energy,
A Division of Southern Union Company For: All Missouri Service Areas

Weather Normalization Clause (WNC)

APPLICABLE

To customers served under Schedules RS and SGS.

WNC CALCULATION

The WNC refunds overcollections of base revenue due to colder than normal weather and surcharges undercollections of base revenue due to warmer than normal weather. Normal weather is as established in the Company's most recent rate case. Weather adjustments shall be computed for each billing cycle, by customer and area, as follows and applied to unadjusted volumes to compute customer bills:

$$\text{Weather Adjustment} = \text{Volume Adjustment} \times \frac{\text{Customer Volume}}{\text{Cycle Volume}}$$

where:

Volume Adjustment = A x (Normal HDD – Actual HDD) x Customers;

A is as follows:

Area	Class	A	Area	Class	A
Kansas City	RS	0.14631	Kansas City	SGS	0.36409
Joplin	RS	0.13983	Joplin	SGS	0.33127
St. Joseph	RS	0.15414	St. Joseph	SGS	0.41919

HDD is the number of heating degree days, actual or normal in the billing cycle;
Customers is the number of customer bills in the billing cycle each month at the the time that the bill is computed;

Customer Volume is the customer's actual volume (in Ccf) in the billing cycle; and
Cycle Volume is the total actual volume (in Ccf) in the billing cycle.

Values for Normal HDDs and A are those applied by the Commission in its weather normalization adjustment to revenues in Case No. GR-2004-0209. Changes in these values and/or in the weather adjustment methodology adopted in subsequent rate cases will be incorporated into this schedule as part of the Commission's resolution of the rate cases.

REPORTING REQUIREMENTS

The Company shall furnish Commission Staff and Office of Public Counsel monthly reports showing Volume Adjustments by billing cycle, customer class, and area within 30 days of the end of each billing month.

DATE OF ISSUE: _____ DATE EFFECTIVE: _____
month day year *month day year*

ISSUED BY: Robert. J. Hack, Vice President, Pricing and Regulatory Affairs
Missouri Gas Energy, 3420 Broadway, Kansas City, MO 64111

Rebuttal Schedule FJC-8

Large Volume Service Multi-Meter Customer Charge Discount and Associated Billing Determinants: Current and Revised Discount Levels

	Number of Meters:		Billing Determinants:			
			Current	Revised	Customer Charge Revenue at Proposed $614 Charge	
	Regular	Discounted	50%	66.67%		
Month	Meters	Meters	Discount	Discount	With 50%	With 66.67%
July	451	38	470.0	463.67	$ 288,580	$ 284,691
August	451	38	470.0	463.67	$ 288,580	$ 284,691
September	451	38	470.0	463.67	$ 288,580	$ 284,691
October	455	38	474.0	467.67	$ 291,036	$ 287,147
November	442	38	461.0	454.67	$ 283,054	$ 279,165
December	441	38	460.0	453.67	$ 282,440	$ 278,551
January	438	38	457.0	450.67	$ 280,598	$ 276,709
February	440	38	459.0	452.67	$ 281,826	$ 277,937
March	442	38	461.0	454.67	$ 283,054	$ 279,165
April	445	38	464.0	457.67	$ 284,896	$ 281,007
May	444	39	463.5	457.00	$ 284,589	$ 280,597
June	442	39	461.5	455.00	$ 283,361	$ 279,369
					$3,420,594	$3,373,716
					Difference	$ (46,878)

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Missouri Gas Energy's Tariff Sheets Designed to Increase Rates for Gas Service in the Company's Missouri Service Area.	))))	Case No. GR-2004-0209

AFFIDAVIT OF F. JAY CUMMINGS

STATE OF TEXAS)
) ss.
COUNTY OF TRAVIS)

F. Jay Cummings, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Rebuttal Testimony in question and answer form, to be presented in the above case; that the answers in the foregoing Rebuttal Testimony were given by him; that he has knowledge of the matters set forth in such answers; and that such matters are true and correct to the best of his knowledge and belief.

F. JAY CUMMINGS

Subscribed and sworn to before me this 18 day of May 2004.

Notary Public

My Commission Expires: 11/15/06

GLORIA BASHARA
NOTARY PUBLIC STATE OF TEXAS
COMMISSION EXPIRES:
NOVEMBER 15, 2006