Exhibit No: ___
Issues: Revenue Adjustments
Weather Normals
Weather Normalization
Customer Annualization
Revenue Reconciliation
Witness: Larry W. Loos
Exhibit Type: Rebuttal
Sponsoring Party: Missouri Gas Energy
Case No: GR-2009-0355
Date: September 28, 2009

MISSOURI PUBLIC SERVICE COMMISSION

MISSOURI GAS ENERGY

CASE NO. GR-2009-0355

REBUTTAL TESTIMONY OF

LARRY W. LOOS

Jefferson City, Missouri

September 2009

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CASE NO. GR-2009-0355

INDEX TO TESTIMONY

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INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. Larry W. Loos, 11401 Lamar, Overland Park, KS 66211.

Q. ARE YOU THE SAME LARRY W. LOOS THAT SUBMITTED DIRECT TESTIMONY IN THIS CASE?

A. Yes, I am.

Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

A. I will respond to issues raised by the August 2009 Staff Report submitted in this Case.

Q. WHAT ISSUES DO YOU ADDRESS?

A. Based on the Staff Report, I will address the following issues:

1) Staff's adjustment of sales to reflect the average heating degree days during the 30-year period ended 2000; and,

2) Staff's proposed adjustment to annualize number of customers.

Q. DO YOU HAVE ANY GENERAL OBSERVATIONS REGARDING STAFF'S PROPOSED REVENUE ADJUSTMENTS?

A. Yes, I do. Staff uses numbers of bills and sales by billing cycle to develop its weather normalization adjustment and adjustment to reflect 365 days.

With regard to its 365 day adjustment, Staff assumes that each of the 21 billing cycles is equal. In other words implicit in Staff's approach is the underlying assumption that the number of meters read in Billing Cycle 1 is equal to the number of meters read in Cycle 2; the number of meters read in Cycle 2 is equal to the number of meters read in Cycle 3; and so forth.

With regard to its weather normalization adjustment, Staff again implicitly assumes that the number of meters read in each of the 21 billing cycles are the same. Staff also implicitly assumes that sales reported in each billing cycle are the same.

Staff's assumptions in this regard represents an over simplification that can lead to erroneous results.

Q. HAS STAFF'S OVER SIMPLIFICATION LED TO ERRONEOUS RESULTS IN THIS CASE?

A. Based on my initial analysis, I find that Staff's over simplification in this case has a minor effect on Staff's overall recommended revenue level. As a result, I do not address this issue further in my rebuttal testimony.

WEATHER NORMALIZATION ADJUSTMENT

Q. HOW DOES STAFF'S APPROACH TO NORMALIZE FOR NORMAL WEATHER COMPARE WITH YOURS?

A. The two approaches are similar. Staff and I both use linear regression to develop a factor (heat sensitive use) which defines the relationship between heating degree-days (HDDs) and sales. Heat sensitive use represents the change in sales (Ccf's) resulting from a change in HDDs. This heat sensitive use is calculated on a per customer basis. While Staff includes a daily factor as well, that factor does not appear to have a significant effect on the results.

Staff develops heat sensitive use, based on monthly use per customer (per day) and cycle heating degree-days. Staff uses cycle HDDs in order to recognize that sales reported in a month, generally represent deliveries during that month and the previous month. I develop heat sensitive use based on monthly use per customer and heating degree-days reported during the reporting month and the previous month. By regressing monthly use per customer against heating degree-days for the reported month and the previous month, I also recognize that sales reported in for example December, represent deliveries during November and December.

Staff develops heat sensitive use based solely on conditions during the test year. I develop heat sensitive use based on use characteristics for the test year and up to three prior years.

While there are differences between the coefficients Staff develops and mine, those differences appear relatively minor. For Kansas City (and St Joseph), the coefficients developed by Staff are less than five percent lower than those that I develop. For Joplin, the coefficients developed by Staff are about 10 percent lower than mine for the SGS customer class and about the same as mine for the LGS customer class. However, since Staff uses HDDs from the Springfield weather station, whereas I use HDDs from Joplin, a larger difference is expected.

Since the impacts appear relatively minor and in order to minimize the number of issues, I find that the Staff's coefficients are reasonable for use in this case.

Q. ARE THERE OTHER ISSUES WITH STAFF'S RECOMMENDED WEATHER NORMALIZATION ADJUSTMENT WHICH ARE MORE SIGNIFICANT?

A. Yes, there are. Staff has normalized sales to the 30-year average for the period ended 2000. I have relied on a normal based on data for the 58-year period ended with the test period. I develop that normal based on application of the hinge-fit method described and supported by Dr. Livezey in his direct testimony.

In the Staff's Report, Staff offers no justification for use of the 1971 through 2000 average beyond perhaps noting that this average is used by NOAA and WMO.

Q. DO YOU AGREE WITH USE OF THIS 30-YEAR AVERAGE TO DETERMINE NORMAL WEATHER?

A. No, I do not. As Dr. Livezey and I explain in detail in our direct testimony, the 30-year average can produce reasonable results during periods where there is no trend in climate.

We further demonstrate that, for the past 35 years, a very pronounced warming trend has persisted in MGE's service territory. The 30-year average relied on by Staff completely ignores this trend. As a result, normal HDDs developed relying on the hinge fit technique should be adopted for the purpose of this case. In the alternative, normal HDDs developed using the OCN discussed by Dr. Livezey should be used.

Since Staff has offered no justification for the normal level they recommend be used, I will not address this issue further in my prepared rebuttal testimony.

Q. DOES THIS COMPLETE YOUR REBUTTAL TESTIMONY REGARDING WEATHER NORMALIZATION?

A. Yes, it does.

CUSTOMER ANNUALIZATION ADJUSTMENT

Q. HOW DOES STAFF'S APPROACH TO ANNUALIZE NUMBER OF CUSTOMERS COMPARE TO YOURS?

A. The approaches are considerably different. I annualize customers based on the change in customers from year to year. For example, the number of residential customers reported in April 2009 total 442,198, whereas the number reported in April 2008 total 443,261. Thus, the year-to-year decrease in number of customers amounts to 1,063. I then adjust actual number of customers by uniformly reducing monthly number of customers reported during the test year so that the annual reduction in customers amounts to 1,063.

I show this development in detail in Schedule LWL-5 (and Revised Update Schedule LWL-5).

Staff approaches the adjustment in a completely different manner as described by Staff at Page 78 of the Staff Report. Though not in the order indicated by Staff, nor as expressed by Staff, the steps are as follows:

1) For each year during the 5-year period ending with the test period, divide annual number of bills by the number of bills reported in the month immediately preceding the beginning of that period. (Total bills reported during the 12 months ended December 2008 divided by bills reported in December 2007).

2) Calculate the average of the 5 numbers calculated in 1) above.

3) Multiply the number of bills reported during the final month of the test period by the average calculated in 2) above. The product represents the annualized number of bills during the test year.

4) To calculate the annualized number of bills by month:

Divide the number of bills each month by the total number of bills for the corresponding year.

Average that monthly ratio over 5 years.

Multiply the annualized number of bills during the test year (3 above) by the 5-year average of the ratio of monthly bills to annual bills.

Q. DO YOU CONSIDER THE STAFF APPROACH REASONABLE?

A. Staff's approach has certain advantages and shortcomings, as does mine. One of the shortcomings of the Staff approach is that when extended to a monthly number of customers, the result may be inconsistent with the purpose of the adjustment. The purpose of the annualization adjustment is to adjust test period number of customers to

the level existing at the end of the test period. With this purpose in mind, one would expect that annualized number of customers during the final month of the test period to equal the number of customers actually served in that month. For example, based on the update period, I expect that the annualized number of bills in April to equal the actual number of bills in April, after all we are annualizing customers to the end of period levels.

However, based on examination of Staff's work papers, the number of residential customers reported in April 2009 amounts to 442,198 (Revised Update Schedule LWL-5, Line 18). However, Staff shows an annualized number of April 2009 bills of 442,144.

Notwithstanding this inconsistency, provided caution is exercised, I generally believe the Staff approach reasonable.

Q. WHY DOES ONE NEED TO EXERCISE CAUTION WHEN USING STAFF'S APPROACH?

A. Staff's approach requires an extensive history of billing data. In this particular instance, Staff is relying on numbers of customers from the beginning of 2004 through the end of the test period. In the event there are problems in this history, errors can be introduced.

Q. ARE THERE ANY PROBLEMS WITH THE HISTORICAL DATA THAT STAFF RELIES ON?

A. Yes, there are. In July 2007, the Company experienced a "processing glitch." This problem resulted in a dramatic increase in the customer count (for that month). In August 2007, the number of customers returned to expected levels.

Further, in April 2007, the residential customer count in St. Joseph shown in Staff work papers fell to 21,722, about 4,000 less than what appears reasonable. There was an error in the number of customers the Company provided to staff which the Company corrected in its filing. In addition, the final bills reported for the LGS class, Kansas City district, in May 2008 had the regular bills duplicated on the final bills sheet, showing 242 regular bills and 244 final bills. The corrected amount is 2 final bills. These corrections were not reflected in the raw data provided to Staff.

In order to eliminate the implications of the incorrect data provided to Staff, Staff's recommended customer annualization adjustment should be recalculated with the proper number of customers. Correcting Staff's analysis to reflect the proper number of customers reduces Staff's recommended customer annualization adjustment by 13,702 customers. The revenue impact associated with this correction amounts to a reduction in Staff's recommended customer annualization adjustment of $365,854.

Q. ARE THERE ANY OTHER AREAS OF THE STAFF APPROACH WHICH SHOULD BE ADDRESSED?

A. Yes, there are. Staff bases its recommended adjustment on the five year average ratio of April number of customers to the succeeding year's total customers. The selection of the number of years to include in the average can affect the resulting adjustment.

For example, based on analysis on Staff's analysis corrected to reflect the data problems discussed above, in connection with the residential class, Staff relies on a five year average which includes monthly data for April 2004 through April 2008 and annual data for the 12 months ended April 2005 through April 2009. This five year average amounts

to 1.0134. In looking at the 5 individual values that make up this average, I note that values for the most recent three years represent 3 of the 4 largest during the 11 periods shown in Staff's work papers. The other two years included in Staff's average represent values which are less than the median of all 11. Examination of all 11 values indicates that the average amounts to 1.0109. This compares to the average of the three most recent years of 1.0163. The average of the other two years included in Staff's 5 year average amounts to 1.0089.

Based on consideration of the above, I believe that use of a three year average in the case is more reasonable than the five year average relied on by Staff. The five year average does not give adequate consideration to the more recent levels and the general trend exhibited especially more recently. Further, I understand that the three year average is more in line with when the Company implemented its current rate design. I therefore recommend that for the purpose of this case the annualization adjustment be based on the average of the most recent three years ratio of April numbers of bills divided by the succeeding year's total number of bills.

Q. HAVE YOU DETERMINED THE IMPACT ON STAFF'S ANNUALIZATION ADJUSTMENT OF USING A THREE YEAR AVERAGE?

A. Yes, I have. Using a three year average will result in a reduction in Staff's annualization adjustment (from the level resulting from use of the corrected number of bills as discussed above) of 19,629 customers or $544,374.

Q. HAVE YOU SUMMARIZED THE RECOMMENDATIONS YOU HAVE MADE TO STAFF'S ANNUALIZATION ADJUSTMENT?

A. Yes, I have. I summarize the implications in Rebuttal Schedule LWL-1. In Rebuttal Schedule LWL-1, I show by customer class, the impact on numbers of customers, volumes, and revenues of the above. In Column B, I show per books number of customers, volumes, and revenues. In Column C, I show Staff's customer annualization and normalization adjustments. In Column D, I show Staff's annualized and normalized customers, volumes, and revenues as filed in its direct testimony.

I show the impact on Staff's annualization and normalization adjustments as a result of correcting the number of customers Staff relied on in Column E. As I indicated previously, Staff relied on the number of bills provided by Company. The Company failed to inform Staff of these corrections. These corrections relate to the number of bills reported by the Company in July 2007, April 2007, and May 2008. As I show, correcting the number of bills results is a reduction in test year annualized bills of 13,702 bills or $365,854. In Column F, I show annualized test period number of bills, volumes, and revenues corrected to reflect the proper number of bills.

In Column G, I show the impact on Staff's annualization adjustment (corrected for the erroneous data provided by Company) of using a three year average of the ratio of April number of bills to the succeeding 12 months total bills, instead of the five-year average relied on by Staff. As I show, using the three year average results in a reduction in Staff's annualization adjustment of 19,629 bills and $544,374. Total test period numbers of customers and revenues reflecting correction of the erroneous data and using the three

year average results in total revenues of $168,163,935 for the Residential, SGS, and LGS classes.

I complete this schedule by showing the difference between the Company's proposed annualized number of customers and the corrected number based on the Staff approach.

Q. DOES THIS COMPLETE YOUR REBUTTAL TESTIMONY REGARDING STAFF'S RECOMMENDED ANNUALIZATION ADJUSTMENT?

A. Yes, it does.

SUMMARY

Q. PLEASE SUMMARIZE YOUR REBUTTAL TESTIMONY.

A. In my rebuttal testimony, I have addressed Staff's recommended weather normalization adjustment and customer annualization adjustment. While I do not necessarily agree with specific applications Staff relies on, I generally limit my rebuttal testimony to the following issues:

1) For the purpose of this case, how should the Commission determine normal weather? The Staff recommends using the 30-year annual average for the period ended December 31, 2000. I recommend the Commission rely on the hinge-fit method as outlined in Dr. Livezey's and my direct testimony.

2) For the purpose of this case, should Staff's recommended customer annualization adjustment be adjusted to eliminate erroneous historical data? I recommend that the most accurate and reasonable data be relied on.

3) For the purpose of this case, should Staff's recommended five-year average or my recommended three-year average be used in calculating the customer annualization adjustment? I recommend that the three year average be used.

Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?

A. Yes, it does.

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of the Application of Missouri Gas Energy to Increase Rates For Gas Service Provided to Customers In the Company's Missouri Service Area	))))	Case No. GR-2009-0355

AFFIDAVIT OF LARRY W. LOOS

STATE OF ARIZONA)
) **ss**
COUNTY OF PINAL)

Larry W. Loos, being first duly sworn, deposes and says that he is the witness who sponsors the accompanying testimony entitled "~~Direct~~ Rebuttal Testimony of Larry W. Loos"; that said testimony and schedules were prepared by him and/or under his direction and supervision; that if inquiries were made as to the facts in said testimony and schedules, he would respond as therein set forth; and that the aforesaid testimony and schedules are true and correct to the best of his knowledge.

Larry W. Loos

Subscribed and sworn before me this 23rd day of September 2009.

Notary Public

My commission expires: 9-3-12

JAEMA M. MEJIA
NOTARY PUBLIC - ARIZONA
PINAL COUNTY
My Commission Expires
September 03, 2012

JAEMA M. MEJIA
NOTARY PUBLIC - ARIZONA

Missouri Gas Energy
GR-2009-0355

Rebuttal Schedule LWL 1

Line No.	Description	[A] Per Books Value	[B] Staff Annualization/ Normalization Adjustment	[C] Staff Direct As Filed	[D] Impact of Data Corrections (Rev 1)[1]	[E] After Rev 1	[F] Impact of Using a 3-year Average for Staff Annualization (Rev 2)	[G] After Rev 2	[H] Impact of Different Methodology	[I] Company Values
	Number of Customers (bills)									
1	Residential	5,240,686	30,367	5,271,053	(13,155)	5,257,898	(15,730)	5,242,168	(7,379)	5,234,789
2	SGS	739,288	(9,337)	729,951	(502)	729,450	(3,985)	725,465	5,231	730,696
3	LGS	3,606	(120)	3,486	(45)	3,440	86	3,526	52	3,578
4	Total	5,983,580	20,910	6,004,490	(13,702)	5,990,788	(19,629)	5,971,159	(2,096)	5,969,063
	Volumes (Ccf)									
5	Residential	365,545,351	2,135,094	367,680,445	(718,893)	366,961,552	(1,101,878)	365,859,674	(14,175,154)	351,684,520
6	SGS	151,131,724	(12,690,890)	138,440,834	(31,303)	138,409,531	(841,196)	137,568,335	6,849,748	144,418,083
7	LGS	14,009,182	(704,433)	13,304,749	(160,704)	13,144,046	340,014	13,484,060	349,539	13,833,599
8	Total	530,686,257	(11,260,229)	519,426,028	(910,900)	518,515,128	(1,603,059)	516,912,069	(6,975,866)	509,936,203
	Revenue									
9	Residential	$130,103,150	$959,635	$131,062,785	($327,103)	$130,735,682	($391,120)	$130,344,562	($207,074)	$130,137,488
10	SGS	$40,578,138	($4,688,930)	$35,889,208	($13,133)	$35,876,075	($206,867)	$35,669,207	$1,199,095	$36,868,303
11	LGS	$2,419,064	($296,895)	$2,122,169	($25,618)	$2,096,552	$53,613	$2,150,165	$41,515	$2,191,681
12	Total	$173,100,352	($4,026,190)	$169,074,162	($365,854)	$168,708,308	($544,374)	$168,163,935	$1,033,537	$169,197,472

Notes:
(1) Rev 1 corrections includes April 2007 St Joe residential, July 2007 all classes, and May 2008 KC LGS