Exhibit No.:	
Issues:	Class Cost-of-Service
Witness:	Daniel I. Beck
Sponsoring Party:	MO PSC Staff
Type of Exhibit:	Rebuttal Testimony
Case No.:	GR-2009-0355
Date Testimony Prepared:	September 28, 2009

MISSOURI PUBLIC SERVICE COMMISSION

UTILITY OPERATIONS DIVISION

REBUTTAL TESTIMONY

OF

DANIEL I. BECK

MISSOURI GAS ENERGY

CASE NO.

GR-2009-0355

Jefferson City, Missouri
September 2009

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Missouri Gas Energy and Its Tariff Filing to Implement a General Rate Increase for Natural Gas Service	)))	Case No. GR-2009-0355

AFFIDAVIT OF DANIEL I. BECK

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

Daniel I. Beck, of lawful age, on his oath states: that he has participated in the preparation of the following Rebuttal Testimony in question and answer form, consisting of 9 pages of Rebuttal Testimony to be presented in the above case, that the answers in the following Rebuttal Testimony were given by him; that he has knowledge of the matters set forth in such answers; and that such matters are true to the best of his knowledge and belief.

Daniel I Beck
Daniel I. Beck

Subscribed and sworn to before me this 28th day of September, 2009.

NOTARY PUBLIC NOTARY SEAL STATE OF MISSOURI

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

Susan L Sundermeyer
Notary Public

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Q. Please state your name and business address.

A. Daniel I. Beck, P.O. Box 360, Jefferson City, Missouri 65102.

Q. Are you the same Daniel I. Beck who contributed as a witness to the Missouri Public Service Commission Staff's (Staff's) Class Cost-of-Service and Rate Design Report?

A. Yes.

EXECUTIVE SUMMARY

Q. Please summarize your rebuttal testimony.

A. I will respond to the Class Cost-of-Service (CCOS) Studies filed in the direct testimony of the Office of the Public Counsel witness Barbara A. Meisenheimer and Missouri Gas Energy witness F. Jay Cummings. I would summarize my testimony as follows:

1. The three CCOS studies filed in this case show significantly different results. The allocation of mains and the allocation of services accounts for most of the differences.
2. When allocating the customer related portion of mains to the classes, one should take into account the fact that there are significant differences between each of the classes for a typical customer.

3. When allocating services to the classes, one should take into account the fact that both the diameter and the length of services (service pipes) affect the cost to serve a typical customer.

4. The parties should work to resolve or quantify differences in billing determinants and revenues. If the differences can be resolved, the parties should file revised CCOS studies reflecting agreed upon billing determinants and revenues.

COMPARISON OF THE RESULTS OF THE CLASS COST-OF-SERVICE STUDIES

Q. Have you reviewed the CCOS studies filed in this case?

A. Yes. Studies were filed in the direct testimony of the Office of the Public Counsel (OPC) witness Barbara A. Meisenheimer, the direct testimony of Missouri Gas Energy (MGE or Company) witness F. Jay Cummings and in the Staff's Class Cost-of-Service and Rate Design Report. The table below summarizes the results of the three studies as shown in direct testimony:

	Residential	SGS	LGS	LVS
OPC	-3.4%	19.2%	-23.6%	-14.2%
MGE	6.0%	-14.0%	-16.2%	-17.0%
Staff	0.8%	-8.5%	1.78%	14.11%

I would note that the table above reflects the percent of increase/decrease in non-gas margin revenues required to adjust each classes' revenues to cost of service assuming no revenue increase. A negative value indicates that the class should receive a decrease

(assuming no revenue increase) and a positive value indicates that the class should receive an increase.

The most obvious observation is that there are no classes where all three studies show that a decrease or increase is indicated.

Q. Have you attempted to determine what the differences are between the studies?

A. Yes. Based on past experience and the simple knowledge that FERC Account 376 - Mains is the account with the largest amount of gross plant rate base investment, I first examined the mains allocators. By directly substituting OPC's and MGE's Mains allocators into the Staff CCOS study, I was able to determine that the Mains allocator does indeed account for most of the differences between the studies.

Significantly, while the table above shows that OPC and Staff studies consistently indicate adjustments in opposite directions for all classes, the Staff's CCOS using OPC's mains allocator shows agreement in the direction of zero revenue increase for all classes. Although the magnitude of the increase or decrease was still not the same, the fact that the direction was the same clearly indicates the importance of the mains allocator.

Similarly, the Staff's CCOS with MGE's mains allocator showed a significant narrowing in the differences between the two studies for all classes. About one-third to one-half of the differences can be explained by substituting MGE's mains allocator for Staff's.

DIFFERENCES IN THE MAINS ALLOCATORS

Q. What do you believe are the primary differences between the Mains allocators used by the parties?

A. When comparing Staff's mains allocator to MGE's, I believe the primary differences are the determination of the amount of mains that is customer-related and

allocation of the customer-related portion to the classes. Staff's methodology is based on the concept that part of the mains is customer-related, the Staff's stand alone component, while the remainder is demand-related and is referred to as the integrated system component. The Company uses the concept of a zero intercept main to determine a customer and a demand portion of the mains. While these two methodologies are quite different in concept, both result in a customer-related component and a demand-related component. Staff's stand-alone component accounts for 28.2% of the cost of mains while MGE's customer component is 38.4%.

Since both Staff and MGE used annual peak demands to allocate the demand-related or integrated system component, the primary difference in methods to allocate the costs to the classes is for the customer or stand alone component. MGE's allocation to the classes of their mains customer component is extremely simple: all customers receive an equal allocation. While the Company's allocation of the customer component is simple, the Staff maintains that treating all customers the same, from residential to large volume, for a significant amount of costs isn't logical. Instead, the Staff maintains that the same computations that determined the stand alone component should also be used to allocate those costs to the classes.

Q. Is the Staff's allocation of the cost of mains a theoretical allocation and not a direct allocation of costs?

A. Yes. All allocations of mains are theoretical in nature because mains are joint costs and, therefore, cannot be directly assigned to a specific customer or class.

Q. Is a zero-intercept study theoretical?

A. Yes. The zero intercept theory assumes a zero-inch diameter pipe. Although the data used in the regression analysis to determine the zero intercept is often real, I have

never been able to buy a pipe with a zero inch diameter at a local hardware store and, even in theory, a pipe with zero inches of diameter would have no practical use, at least as a pipe.

Q. You previously described the theory that the Company used to allocate its customer–related mains costs to the classes, that is each customer gets an equal share, regardless of the class. What is the theory supporting the Staff's stand alone component for mains?

A. Staff's theory that determines the stand alone component for mains and determines the stand alone component allocated to each class is based on the concept that there are costs to extend the system to the next customer and those costs make up the stand alone component. For example, if I bought a parcel of land on a street but MGE's mains had only been extended to the house next door, I would need the main to be extended to my parcel. That extension would require the main to be extended from my neighbor's yard to my yard. It would also require a main that is at least as large as my service line.

Q. Did the Staff measure the length for every customer on MGE's system to determine the length for the stand-alone component?

A. No. The Staff did not have the resources or the money required to measure over 500,000 customer's lots. Instead, in Staff data request 117, the Staff requested that the Company choose a random sample of 100 customers for each customer class. Using this random sample, the Staff used internet geographic information systems, GIS, to estimate the length of frontage for a given parcel. Several county assessors have this type of information available to the public. In addition, internet software such as Google Earth allows an analyst to use maps, satellite images, and customer addresses to estimate the frontage of a given parcel without leaving your desk. Staff was not successful in every instance but almost every

sampled customer was identified. In a few instances, the Staff requested additional information from MGE operations personnel to help identify a parcel or a boundary. In addition, some Internet sites allow an analyst to view a parcel from a street view which helps the analyst confirm information about the parcel. The individual estimates for each customer were provided to the parties in Staff's workpapers in a file titled "HC – Allocators using random sample accounts.XLS".

Q. Earlier, you said that it would also require a main that is at least as large as my service line. What did you mean by this and how did you gather that information?

A. Before the Staff received the random sample form the Company, the Staff reviewed MGE's workpapers. The Company's allocation of services specified the diameter and cost to install 100 feet of service lines for the typical customer in each class. Staff used this cost per foot information together with the length information described above to estimate the cost of a typical customer for each class and then multiply those costs by the number of customers in each class to determine each class's stand alone component allocator.

Q. Page 12 of MGE witness Cummings direct testimony states that "The Commission endorsed the zero-intercept methodology in MGE's 2004 general rate case". What is your opinion of this statement?

A. Since I would rather let the Commission's Report and Order in Case No. GR-2004-0209 speak for itself, I would simply point out that I was unable to find the word "endorse" in any form on pages 50 to 52 where the allocations of mains is discussed. Instead the subsection of the report which was titled "Class Cost of Service Issues" concluded by stating that a class cost of service study that included the zero intercept method "provides the best estimate of the actual revenue that might appropriately be derived from each class." The

very next sentence, which is in the next subsection and is titled "Revenue Requirement to be Assigned to Each Class", begins with the following sentence: "The class cost of service studies are just the starting point in the Commission's determination of the amount of revenue that should be recovered from each class."

Q. Has the Commission ever expressed a preference for another method of allocating mains, such as the Staff's stand alone/integrated system methodology?

A. Yes. In Case No. GR-98-140 the Commission expressed a preference for the Staff's CCOS study and the Staff's stand alone/integrated system methodology but the Commission also came to similar conclusions regarding the use of a CCOS study as a starting point.

Q. Do you agree that the CCOS studies are just a starting point in the Commission's determination of the amount of revenue that should be recovered from each class?

A. Yes. MGE witness Cummings also appears to agree with this statement. On page 4, lines 6-10, of MGE witness Cummings direct testimony, he specifically refers to a CCOS study as a "starting point."

Q. You have discussed differences between the Staff's allocation of mains and MGE's allocation of mains. What are the primary differences between the Staff's allocation of mains and OPC's allocation of mains.

A. OPC's method uses the Company's zero-intercept analysis to determine the customer and demand split. OPC then uses the Company's "service weighted customers," which does take into account the diameter of service needed to serve a typical customer, to allocate the customer portion of mains. Although this weighting is a step in the right

direction, it does not take into account the length component that Staff's stand alone method does. In addition, OPC uses what I would characterize as an average and excess methodology to allocate the demand portion to the classes. In other words, OPC allocates the demand portion based on peak day usage and annual usage.

DIFFERENCES IN THE SERVICES ALLOCATORS

Q. What do you believe are the primary differences between the Services allocators used by the parties?

A. The Company used a customer weighted services allocator that uses the cost to install 100 feet of services for the diameter of service line that typically would be used for each class. OPC used the Company's service weights also. The Staff used the same information regarding the cost to install services but combined that with information regarding average service length for each class to develop a services weight that takes into account the costs that are related to the diameter of a service line as well as the length of that line. Simply stated, I maintain that a typical service line for each class is not always 100 feet or not equal for all classes. Instead, Staff used the property records provided by the Company for the random sample, Data Request 117, to estimate a typical service line length for each class.

DIFFERENCES IN BILLING DETERMINATES AND REVENUES

Q. Were all the studies based on the same revenues, expenses, billing determinates, … etc.?

A. No. The Company used test year data while the Staff and OPC primarily used update period information. As the areas of agreement (and disagreement) become more

obvious in the days ahead, the parties should continue to work together to reach agreement, especially with regards to billing determinates and current revenues.

Q. Why do you maintain that billing determinants and current revenues are particularly important to get right?

A. Since the rates that the Company will use after the Commission has made its decision in rate case will be based on the billing determinants, any errors in the billing determinants will result in errors in the rates. These errors could result in too little or too much revenue being collected by the Company.

Q. Does that conclude your Rebuttal Testimony?

A. Yes.