Exhibit No.:	_____
Issue(s):	Cost of Service Rate Design
Witness:	Barb Meisenheimer
Type of Exhibit:	Direct
Sponsoring Party:	Public Counsel
Case Number:	GR-2009-0355
Date Testimony Prepared:	September 3, 2009

DIRECT TESTIMONY

OF

BARBARA A. MEISENHEIMER

Submitted on Behalf of
the Office of the Public Counsel

MISSOURI GAS ENERGY

Case No. GR-2009-0355

September 3, 2009

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-2009-0355

AFFIDAVIT OF BARBARA A. MEISENHEIMER

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

Barbara A. Meisenheimer, of lawful age and being first duly sworn, deposes and states:

1. My name is Barbara A. Meisenheimer. I am Chief Utility Economist for the Office of the Public Counsel.

2. Attached hereto and made a part hereof for all purposes is my direct testimony.

3. I hereby swear and affirm that my statements contained in the attached testimony are true and correct to the best of my knowledge and belief.

Barbara A. Meisenheimer

Subscribed and sworn to me this 3rd Day of September, 2009.

NOTARY PUBLIC NOTARY SEAL STATE OF MISSOURI

SHYLAH C. BROSSIER
My Commission Expires
June 8, 2013
Cole County
Commission #09812742

Shylah C. Brossier
Notary Public

My Commission expires June 8th, 2013.

DIRECT TESTIMONY
OF
BARBARA A. MEISENHEIMER

MISSOURI GAS ENERGY

(RATE DESIGN)

CASE NO. GR-2009-0355

Introduction and Summary

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

A. Barbara A. Meisenheimer, Chief Utility Economist, Office of the Public Counsel (OPC or Public Counsel), P. O. Box 2230, Jefferson City, Missouri 65102. I am also employed as an adjunct Economics and Statistics Instructor for William Woods University.

Q. HAVE YOU TESTIFIED PREVIOUSLY IN THIS CASE?

A. No.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. My testimony addresses Public Counsel's opposition to the Missouri Gas Energy's (MGE's or the Company's) existing rate design and offers a proposal to return to the traditional rate design. I will also describe the class cost of service study I prepared for this case and the results of the study.

Q. PLEASE SUMMARIZE YOUR EDUCATIONAL AND EMPLOYMENT BACKGROUND.

A. I hold a Bachelor of Science degree in Mathematics from the University of Missouri-Columbia and have completed the comprehensive exams for a Ph.D. in Economics from the same institution. My two fields of study are Quantitative Economics and Industrial Organization. My outside field of study is Statistics.

I have been with the Office of the Public Counsel since January 1996. I have testified on economic issues and policy issues in the areas of telecommunications, gas, electric, water and sewer.

Over the past 14 years I have also taught courses for the University of Missouri-Columbia, William Woods University, and Lincoln University. I currently teach undergraduate and graduate level economics courses and undergraduate statistics for William Woods University.

Q. DO YOU HAVE EXPERIENCE SPECIFIC TO MGE RATE CASES?

A. Yes. I testified in MGE's two most recent general rate cases; GR-2006-0422 and GR-2004-0209.

Q. WHAT INFORMATION HAVE YOUR REVIEWED?

A. I reviewed the Company's proposed tariff sheets, direct testimony and workpapers on cost of service and rate design, portions of the Company's current tariff, the Missouri Public Service Commission Staff's (Staff's) workpapers, accounting schedules and cost of service report, materials from MGE's last general rate case No. GR-2006-0422, customer complaints and comments filed

with the Commission and data request responses provided to the Staff and Public Counsel by MGE.

Q. PLEASE PROVIDE BACKGROUND ON MGE'S CURRENT RESIDENTIAL RATE DESIGN.

A. Prior to Case No. GR-2006-0422, MGE recovered a portion of non-gas costs in a fixed customer charge and the remainder of costs through a volumetric rate. This traditional rate design had been in place for as long as MGE had tariffs on file with the Commission. Under the traditional rate design consumers had the ability to control the non-gas portion of their bill by reducing use, low use customers paid less than high use customers and the Company and customers shared the risk associated with weather.

In Case No. GR-2006-0422 the Commission approved MGE's request for an alternative rate design that recovers all non-gas costs through a flat fixed monthly charge called a Straight-Fixed Variable Charge (SFV). Staff and MGE argued that recovery of all non-gas costs through a flat fixed monthly charge would "decouple" usage and revenue removing disincentives for MGE to promote conservation. In exchange for obtaining the SFV rate design MGE committed to implement a water heater conservation program that was to be funded by customers. In contrast to the traditional rate design, the SFV rate design requires customers to pay the same rate regardless of the customer's usage, low use customers pay as much as high use customers and MGE's weather related risk is shifted to customers.

In this case, Public Counsel encourages the Commission to return to a traditional residential rate design that recovers a portion of costs through a fixed

customer charge and a portion through a volumetric rate similar to the rate design approved in Case No. GR-2004-0209. In that case, the Commission limited the collection of 55% of non-gas revenue through a fixed customer charge. The remaining 45% of costs were recovered through a uniform volumetric rate applied to all Ccf of consumption Based on the class cost of service study described later in this testimony, I believe establishing a customer charge for the Residential class that recovers 55% of class cost will exceed the cost directly related to serving an individual customer. To the extent that the customer charge exceeds the cost directly related to serving an individual customer, the Company is allowed some protection against revenue volatility due to weather.

Traditional Rate Design Provides a Better Conservation Incentive than SFV

Q. DO YOU BELIEVE THAT A TRADITIONAL RATE DESIGN THAT RECOVERS A PORTION OF COSTS IN A CUSTOMER CHARGE AND A PORTION IN A VOLUMETRIC RATE PER UNIT PROVIDES A BETTER INCENTIVE FOR CONSERVATION THAN RECOVERING ALL COST IN A FIXED FLAT RATE?

A. Yes. The traditional rate design provides a better incentive for customer to conserve than does the SFV rate design because under the traditional rate design increasing consumption increases the non-gas charges a customer must pay. Under the SFV rate design a customer using little or no natural gas in a month pays just as much in non-gas cost recovery as a customer using limitless natural gas. Setting non-gas rates in a manner that recovers a portion of costs based on volumes creates a financial incentive for a customer to turn back the thermostat and to reduce the gas used for cooking and water heating.

Q. WASN'T THE SFV RATE DESIGN INTENDED TO ELIMINATE DISINCENTIVE FOR MGE TO PURSUE EFFICIENCY AND CONSERVATION PROGRAMS THAT WOULD BENEFIT CONSUMERS?

A. Yes. However, until recently customers have received limited benefit from the program. For example, in the two year period April 2007, through March 2009, the Company spent $80,575 on water heater and space heating rebates compared to the $1,410,000 originally designated over the same period to fund the water heater rebate portion of the program. In terms of rate payer savings, Mr. Hendershot states that total water heater savings through December 2008, were 16,154 Ccf per year. At volumetric rates of $0.15443[1] per Ccf and a PGA rate of $0.77358, the total Residential savings from April 2007 through December 2008 is worth approximately $26,234.[2] In contrast, the Residential class paid $18,109,155 more during the same period under the SFV rate design than would have been paid under traditional rate design. In addition to Residential customers bearing this substantial increase due to the SFV rate design and losing the ability to control the non-gas related portion of the bill by controlling their gas usage, the

[1] In work papers, Company witness Feingold uses a $13.64 Residential customer charge and $0.15443 Residential volumetric rate to compare the SFV rate design approved in GR-2006-0422 to the previously approved rate design increased by the same percentage.

[2] There would also be a public benefit associated with the reduction of CO2 emissions.

$1.41 million cost of the efficiency program was included in the revenue requirement and recovered in customer rates.

Q. WHAT IMPROVEMENTS TO THE CONSERVATION AND EFFICENCY PROGRAM WOULD BETTER BALANCE THE INTEREST OF CUSTOMERS WITH THOSE OF THE COMPANY?

A. Public Counsel witness Ryan Kind proposed changes to the efficiency and conservation funding mechanism in his direct revenue requirement testimony filed in this case.

Q. WHAT RATE DESIGN HAS MGE PROPOSED IN THIS CASE?

A. The Company's proposal for residential rates is to continue to collect all non-gas costs through a flat fixed fee approved in GR-2006-422. The Company proposes to increase the fee from $24.62 to $29.83. The Company proposes to split the existing Small General Service and Large General Service classes. Customers using less than or equal to 10,000 Ccf annually would be included in a new Small General Service class subject to a flat fixed fee of $41.20. Customers using greater than 10,000 Ccf annually would be included in a new Large General Service class paying a portion of costs through a customer charge and a portion through volumetric rates;

TABLE 1

Large General Service Rates

Current Rates	Proposed Rates

Monthly charge	$108.91	Monthly charge	$140
Per ccf all gas delivered (April-Oct)	$0.14498	Per Ccf <=1,800 Ccf (All Months)	$0.11466
Per ccf all gas delivered (Nov-Mar)	$0.08892	Per Ccf > 1,800 Ccf (All Months)	$0.07808

The Company proposal for the Large Volume class retains a customer and volumetric rates for the winter months but eliminates the volumetric rates for the summer months;

TABLE 2

Large Volume Service Rates

Current Rates		Proposed Rates	
Monthly charge	$860.95	Monthly charge	$929.57
Per ccf <= 30k Ccf (Nov-Mar)	$0.05209	Per ccf <= 30k Ccf (Nov-Mar)	$0.04361
Per ccf > 30k Ccf (Nov-Mar)	$0.04088	Per ccf > 30k Ccf (Nov-Mar)	$0.03261
Per ccf <= 30k Ccf (Apr-Oct)	$0.03294	Per ccf <= 30k Ccf (Apr-Oct)	**Free**
Per ccf > 30k Ccf (Apr-Oct)	$0.02174	Per ccf > 30k Ccf (Apr-Oct)	**Free**

Q. IS MGE'S PROPOSED RATE DESIGN CONSISTENT WITH AN OBJECTIVE TO CONSERVE NATURAL GAS?

A. No, to the contrary, the Company's proposal for non-gas rates provides no conservation incentive for Residential year round, Small General Service year round or Large Volume during the months of April through October. MGE's

declining block rate proposal for the Large General Service class would also discourage conservation.

Q. WHAT ARE YOUR CONCLUSIONS REGARDING THE SFV RATE DESIGN COMPARED TO A TRADITIONAL RATE DESIGN AS A METHOD FOR PROMOTING CONSERVATION?

A. With respect to rate design, the efficiency and conservation programs have not benefited Residential customers to a level that justifies the SFV rate design. While touting the SFV as a method to promote conservation, the Company has proposed a rate design for Large Volume that promotes greater summer use.

It would be appropriate to reinstate a traditional rate design that contains price signals that encourage conservation and that allow residential customers some control over the non-gas portion of the bill. Similarly, I recommend that the rate structure for Small General Service should not be changed to a SFV rate design.

Traditional Rate Design Better Reflects Cost Causation

Q. HOW IS COST CAUSATION INCORPORATED INTO SETTING THE PORTION OF COSTS TO BE RECOVERED THROUGH THE CUSTOMER CHARGE AND THE PORTION TO RECOVER THROUGH VOLUMETRIC RATES?

A. While an analysis uses judgment in allocating costs and designing rates it is common in regulated industries for companies to recover costs that are incurred independent of usage in a fixed fee and to recover costs that vary with usage

through a usage based fee. Recovering a usage based cost through a usage based fee insures that those who did not cause the cost are not required to pay for it. This objective can be met through establishing a fixed component and a variable component of rates. The cost of meters that tend to be sized the same for the majority of Residential customers can be described as being independent of use and therefore reasonably recovered through a uniform fixed fee. Other facilities and equipment such as measuring equipment at the entry point to the local distribution system are associated with the volumetric flow of gas to the system and are therefore reasonably recovered on a per unit basis through a volumetric rate.

Q. DOES THE SFV RATE DESIGN MEET THE OBJECTIVE OF DESIGNING RATES BASED ON COST CAUSATION?

A. No. The SFV rate design is inappropriate for recovering all non-gas costs because while the SFV is a fixed fee that recovers all non-gas costs, a portion of costs vary with use. Even the Company acknowledges that some portion of costs vary with use. The Company's cost of service studies identify a significant portion of cost as demand related. As illustrated below, the Company study shows over 20% of the cost of serving the Residential class is demand related. For SGS the proportion is even greater with over 34% classified as demand related;

TABLE 3

Residential

Customer Related	Demand Related	Commodity Related	Total Cost of Service Before Revenue Credits
$132,458,406	$34,193,277	$91,000	$166,742,683
79.44%	20.51%	0.05%	

Small General Service

Customer Related	Demand Related	Commodity Related	Total Cost of Service Before Revenue Credits
$25,345,560	$13,257,636	$37,671	$38,640,867
65.59%	34.31%	0.10%	

MGE's Class Cost of Service witness F. Jay Cummings also describes a demand related component of costs in his direct testimony at page 9, line 21, through page 10, line 4;

> …As a gas distribution utility builds its system of mains to reach its customers, its mains must be constructed simply to reach customers regardless of the amount of gas that they use, i.e., the customer-related component of the investment, **while the sizing of the mains depends on the expected usage of the customers during peak periods, i.e., the demand-related component of the investment.** Similarly, a "minimum" size meter, regulator, and service must be installed at each customer's location in order to make service available to the customer, i.e., the pure customer-related cost. The sizing of services, meters, and regulators may vary across customer classes to meet typical class load requirements…

MGE witness Cummings goes on to identify only 38.41% of Mains costs as customer related according to his zero-intercept method.

Traditional Rate Design Ensures That Those Who Use More Pay More

Q. DOES USAGE VARY SIGNIFICANTLY WITHIN THE RESIDENTIAL CUSTOMER CLASS?

A. Yes. While customers within the Residential customer class share some fundamental characteristics such as meter size and seasonal demand characteristics, there is a significant difference in the amount of gas consumed by customers within the Residential class. A study of customer bills for the years 2006, 2007 and 2008 prepared by the Company and provided to Public Counsel in response to DR #19, indicates that customer use in a given month may range from "0" use to thousands of Ccfs. Based on information developed for my class cost of service study, the weather normalized average monthly use for the Residential Service class is just under 70 Ccf per month.

Q. HAVE YOU PERFORMED AN ANALYSIS TO EVALUATE THE RANGE OF RESIDENTIAL NON-GAS BILL IMPACTS THAT COULD RESULT FROM THE TRADITIONAL AND SFV RATE DESIGN?

A. Yes. A comparison of non-gas recovery under the SFV rate design and traditional rate structure is shown below;

TABLE 4

Residential Bill Impacts

	Customer Use (Ccf)	SFV Rate Design	Traditional Rate Design	Difference Per Bill
	-	$ 24.62	$ 13.64	$ (10.98)
	10	$ 24.62	$ 15.19	$ (9.43)
	20	$ 24.62	$ 16.73	$ (7.89)
	30	$ 24.62	$ 18.28	$ (6.34)
	40	$ 24.62	$ 19.82	$ (4.80)
	50	$ 24.62	$ 21.36	$ (3.26)
Average →	60	$ 24.62	$ 22.91	$ (1.71)
	70	$ 24.62	$ 24.45	$ (0.17)
	80	$ 24.62	$ 26.00	$ 1.38
	90	$ 24.62	$ 27.54	$ 2.92
	100	$ 24.62	$ 29.09	$ 4.47
	200	$ 24.62	$ 44.53	$ 19.91
	300	$ 24.62	$ 59.97	$ 35.35
	400	$ 24.62	$ 75.42	$ 50.80
	500	$ 24.62	$ 90.86	$ 66.24
	600	$ 24.62	$ 106.30	$ 81.68
	700	$ 24.62	$ 121.75	$ 97.13
	800	$ 24.62	$ 137.19	$ 112.57
	900	$ 24.62	$ 152.63	$ 128.01
	1,000	$ 24.62	$ 168.08	$ 143.46
	2,000	$ 24.62	$ 322.51	$ 297.89
	3,000	$ 24.62	$ 476.94	$ 452.32
	4,000	$ 24.62	$ 631.38	$ 606.76
	5,000	$ 24.62	$ 785.81	$ 761.19
	6,000	$ 24.62	$ 940.24	$ 915.62
	7,000	$ 24.62	$ 1,094.67	$ 1,070.05
	8,000	$ 24.62	$ 1,249.11	$ 1,224.49

	Traditional Charges		
SFV Charge	Cust Charge	Vol Charge
$ 24.62	$ 13.64	$ 0.15443

Q. HOW WOULD RETURNING TO A TRADITIONAL RATE DESIGN IMPACT RESIDENTIAL CLASS?

A. Customers with below average to average use would pay less under the traditional rate design. Customers with higher than average use would pay more under a

traditional rate design. Through all levels of use, as a customer uses more, they would pay more.

Q. DOES USAGE VARY SIGNIFICANTLY WITHIN THE SMALL GENERAL SERVICE CUSTOMER CLASS?

A. Yes. There is a significant difference in the amount of gas consumed by customers within the Small General Service class. A study of customer bills for the years 2006, 2007 and 2008 prepared by the Company and provided to Public Counsel in response to DR #20, indicates that customer use in a given month may range from "0" use to over ten thousand Ccfs. Based on information developed for my class cost of service study, the weather normalized average monthly use for the Small General Service class is just under 190 Ccf per month.

Q. HAVE YOU PERFORMED AN ANALYSIS TO EVALUATE THE RANGE OF SMALL GENERAL SERVICE NON-GAS BILL IMPACTS THAT COULD RESULT FROM THE TRADITIONAL AND SFV RATE DESIGN?

A. Yes. A comparison of non-gas recovery under the SFV rate design and traditional rate structure is shown below;

TABLE 5

Small General Service Bill Impacts

Winter (Nov-Mar)

Customer Use (Ccf)	SFV Rate Design	Traditional Rate Design	Difference Per Bill
-	$ 53.00	$ 18.39	$ (34.61)
10	$ 53.00	$ 20.19	$ (32.82)
20	$ 53.00	$ 21.98	$ (31.02)
30	$ 53.18	$ 23.78	$ (29.41)
40	$ 53.18	$ 25.57	$ (27.61)
50	$ 53.18	$ 27.37	$ (25.82)
60	$ 53.18	$ 29.16	$ (24.02)
70	$ 53.18	$ 30.96	$ (22.23)
80	$ 53.18	$ 32.75	$ (20.43)
90	$ 53.18	$ 34.55	$ (18.64)
100	$ 53.18	$ 36.34	$ (16.84)
200	$ 53.18	$ 54.29	$ 1.11
300	$ 53.18	$ 72.24	$ 19.06
400	$ 53.18	$ 90.19	$ 37.01
500	$ 53.18	$ 108.14	$ 54.96
600	$ 53.18	$ 126.09	$ 72.91
700	$ 53.18	$ 142.84	$ 89.66
800	$ 53.18	$ 159.59	$ 106.41
900	$ 53.18	$ 176.35	$ 123.16
1,000	$ 53.18	$ 193.10	$ 139.92
2,000	$ 53.18	$ 360.62	$ 307.44
3,000	$ 53.18	$ 528.14	$ 474.96
4,000	$ 53.18	$ 695.66	$ 642.48
5,000	$ 53.18	$ 863.18	$ 810.00
6,000	$ 53.18	$ 1,030.70	$ 977.52
7,000	$ 53.18	$ 1,198.22	$ 1,145.04
8,000	$ 53.18	$ 1,365.74	$ 1,312.56
9,000	$ 53.18	$ 1,533.26	$ 1,480.08
10,000	$ 53.18	$ 1,700.78	$ 1,647.60

SFV Charge	Traditional Charges	
	Cust Charge	Vol Charge
		First 600
$ 53.18	$ 18.39	$ 0.17950
		Additional
		$ 0.16752

Summer (Apr-Oct)

Customer Use (Ccf)	SFV Rate Design	Traditional Rate Design	Difference Per Bill
-	$ 53.18	$ 18.39	$ (34.79)
10	$ 53.18	$ 19.62	$ (33.56)
20	$ 53.18	$ 20.85	$ (32.33)
30	$ 53.18	$ 22.08	$ (31.10)
40	$ 53.18	$ 23.31	$ (29.87)
50	$ 53.18	$ 24.54	$ (28.64)
60	$ 53.18	$ 25.77	$ (27.41)
70	$ 53.18	$ 27.00	$ (26.18)
80	$ 53.18	$ 28.23	$ (24.95)
90	$ 53.18	$ 29.46	$ (23.72)
100	$ 53.18	$ 30.69	$ (22.49)
200	$ 53.18	$ 42.98	$ (10.20)
300	$ 53.18	$ 55.28	$ 2.10
400	$ 53.18	$ 67.58	$ 14.40
500	$ 53.18	$ 79.88	$ 26.69
600	$ 53.18	$ 92.17	$ 38.99
700	$ 53.18	$ 103.28	$ 50.09
800	$ 53.18	$ 114.38	$ 61.20
900	$ 53.18	$ 125.48	$ 72.30
1,000	$ 53.18	$ 136.58	$ 83.40
2,000	$ 53.18	$ 247.61	$ 194.43
3,000	$ 53.18	$ 358.64	$ 305.46
4,000	$ 53.18	$ 469.67	$ 416.49
5,000	$ 53.18	$ 580.70	$ 527.52
6,000	$ 53.18	$ 691.73	$ 638.55
7,000	$ 53.18	$ 802.76	$ 749.58
8,000	$ 53.18	$ 913.79	$ 860.61
9,000	$ 53.18	$ 1,024.82	$ 971.64
10,000	$ 53.18	$ 1,135.85	$ 1,082.67

SFV Charge	Traditional Charges	
	Cust Charge	Vol Charge
		First 600
$ 53.18	$ 18.39	$ 0.12297
		Additional
		$ 0.11103

Q. HOW WOULD RETURNING TO A TRADITIONAL RATE DESIGN IMPACT THE SMALL GENERAL SERVICE CLASS?

A. As was also true for the Residential class, Small General Service customers with below average to average use would pay less under the traditional rate design. Customers with higher than average use would pay more under a traditional rate design. Through all levels of use, as a Small General Service customer uses more, they would pay more.

Q. HAS THE STAFF PREVIOUSLY REJECTED PROPOSALS TO RECOVER ALL NON-GAS COSTS THROUGH A FIXED CHARGE DUE TO CONCERNS REGARDING THE POTENTIAL DETRIMENT TO LOW USE CUSTOMERS?

A. Yes. The detrimental impact on low use customers of full non-gas recovery through a fixed flat rate was foreseen by Staff witness Dr. Michael Proctor in his Surrebuttal Testimony in Laclede Gas Case No. GR-2002-356. In testimony responding to Laclede's proposed weather mitigation rate design proposal, Dr. Proctor explained: "While the Staff favors using rate design as a weather mitigation measure, because of the detrimental impact on small users, the **Staff was not willing to recommend recovering all of the non-gas costs in** either **the customer charge**, first block rate or a combination of these rate components…." The SFV has exactly the effect that Dr. Proctor rejected because it is designed to collect all non-gas costs through a monthly customer charge.

Traditional Rate Design Is Consistent With The Purpose Of Regulation

Q. IS THE TRADITIONAL RATE DESIGN THAT CORRELATES HIGHER USE WITH HIGHER CHARGES CONSISTENT WITH THE PURPOSE OF REGULATION?

A. Yes. Utility regulation is intended to mimic the outcomes and market environment that is faced by competitive firms. The use of utility regulation to simulate a competitive environment and encourage the benefits that would accrue if the industry were suitable for a competitive structure has been referred to as the competitive market paradigm. This paradigm was described by Dr. James Bonbright on page 93 of *Principles of Public Utility Rates* in the following manner:

> Regulation, it is said, is a substitute for competition. Hence its objective should be to compel a regulated enterprise, despite its possession of complete or partial monopoly, to charge rates approximating those which it would charge if free from regulation but subject to market forces of competition. In short, regulation should be not only a substitute for competition, but a closely imitative substitute.

Q. IS THE TRADITIONAL RATE DESIGN THAT CORRELATES HIGHER USE WITH HIGHER CHARGES CONSISTENT WITH PRICING IN COMPETITIVE SERVICE MARKETS?

A. Absolutely. In highly competitive markets it is common for firms to recover all cost through only usage based fees. Even in more concentrated markets rate structures that recover some portion of costs through volumetric charges are the norm. For example, telephone rates typically include a fixed minimum fee charged for basic access to the telephone network and additional usage based incremental fees that recover a portion of the investment and associated expenses. If customers demand either more services "over the pipe" or "a larger pipe" the customer pays more.

It is also the norm in competitive markets for customers to have some control over the charges they pay to the service provider. This not the case with the SFV rate design. From a rate design perspective, recovery of all costs through a flat fixed rate is a recovery method of choice for firms with sufficient market power to impose flat fees or enough regulatory support to impose them. Rate designs that consist of a customer charge and volumetric charge are supportable based on recognizing that the value of service is both in having access to gas as well as in using gas so cost would not be uniformly allocated to customers. In my opinion, recovery through a customer charge and volumetric rate is reasonable

and fair from both an economic and policy perspective. Historically, this Commission has determined that it is appropriate for those who use more to pay more. Public Counsel encourages the Commission to reinstate this policy.

Q. IS THE TRADITIONAL RATE DESIGN CONSISTENT WITH MIMICKING THE RATE OF RETURN OPPORTUNITIES AND RISK THAT EXIST IN COMPETITIVE MARKETS?

A. Yes. The Commission's ordered non-gas revenue requirement is not a fixed or guaranteed level of revenue that a Company is entitled to recovery each year. Instead, the level of revenue requirement approved by the Commission is a target level of costs including expenses, taxes and return on investment that an efficiently run company, barring unforeseen events has the opportunity to recover under long term average weather conditions. The Commission approved revenue requirement accounts for and is intricately related to potential weather variations that may affect costs and revenues from year to year. The process of normalizing demand determinates to account for weather and establishing a rate of return sufficient to attract investment despite the risk of weather variations are probably the two most obvious elements linking weather variations to revenue requirement. After the revenue requirement is determined, rates are set at a level anticipated to recover the target level of costs. However, the ratemaking process only reflects the anticipated cost and revenues at a snap shot in time. It does not guarantee or limit levels of either future costs or revenues and is not designed or intended to provide uniform recovery each year. Once rates are set, by improved efficiency or circumstances a Company has an opportunity to earn a return above that incorporated in the revenue requirement. Likewise, by inefficiency a Company faces the potential to earn a return below that incorporated in the revenue

requirement. This process mimics a competitive business environment by creating incentives for the Company to minimize costs.

Utility regulation does not create an "entitlement" for the utility to earn a Commission determined return that fully compensates the utility for its cost of service. If that were the case, there would be no reason to determine an appropriate level of a risk adjusted return that should be included in a utility's rates. Instead, utility regulation is intended to mimic the outcomes and market environment that is faced by competitive firms. While viewed by investors as undesirable, earnings uncertainty serves an important role in the efficient operation of competitive markets by providing inherent protections for consumers. Earnings uncertainty motivates competitive business entities to minimize costs and to strive for customer satisfaction. Eliminating earnings uncertainty in a regulated environment would have a similar detrimental affect on consumers as would eliminating earnings uncertainty in an unregulated market. However, in a competitive environment, consumers retain the ability to reduce or forgo purchases in response to excessive prices or poor service.

In recognition and in consideration of the service it provides as a natural monopoly, a local gas distribution company is granted an additional concession not ordinarily available in a competitive business environment. It is allowed to request a rate review to, when justified, realign revenue to costs. This concession together with other concessions made by the PSC and other governmental entities more than adequately addresses issues of potential under earnings. For example, direct pass through of costs such as those flowed through the PGA, have substantially shifted weather related risks to consumers. It is undesirable and unnecessary to shift all earnings risk to consumers.

Q. CAN YOU CITE ANY ANALYSIS BY A RECOGNIZED UTILITY INDUSTRY EXPERT THAT SUPPORTS YOUR BELIEF THAT UTILITY COMMISSIONS GENERALLY SET RATES AT A LEVEL WHICH ALLOWS UTILITIES THE OPPORTUNITY (AS OPPOSED TO A GUARANTEE) TO ATTAIN THEIR AUTHORIZED RETURN?

A. Yes, the following quote from page 202 of A. J. G. Priest's *Principles of Public Utility Regulation* supports this widely recognized regulatory principle:

> ...the utility's return allowance might be compared with fishing or hunting license with a limit on the catch. Such a license does not guarantee that the holder will catch anything at all; it simply makes the catch legal (up to a specified limit) provided the holder is successful in his own efforts.

Class Cost of Service Study Method

Q. WHAT IS THE REGULATORY PURPOSE OF A CLASS COST OF SERVICE STUDY?

A. A class cost of service study is a tool used by regulators to aid in determining an appropriate rate structure. It can be used as a guide in identifying, on a cost causative basis, the cost of serving a particular group of customers. A class cost of service Study can also be used to evaluate the relative cost of service among classes. This comparison of relative cost is the focus of Public Counsel's study and is reflected in the study assumption that the Company's revenue requirement is equal to the level of current revenue.

Q. WHAT IS THE RELATIVE IMPORTANCE OF CLASS COST OF SERVICE STUDY RESULTS IN RATE DESIGN?

A. A class cost of service study provides the Commission with a general guide for a service based on costs to determine just and reasonable rates. The Commission must on a case by case basis balance the results of a cost of service study with other relevant factors that go into the rate making decision process. Other relevant factors include the value of a service, the affordability of service, rate impacts, and rate continuity, to highlight a few.

Q. WHAT COSTS ARE REFLECTED IN YOUR CLASS COST OF SERVICE STUDY?

A. The class cost of service study includes only non-gas or margin costs associated with transporting and delivering gas from MGE's city-gate to its customers. Gas costs recovered through the purchased gas adjustment rate are determined in a separate proceeding and are not at issue in this case.

Q. WHAT ARE THE REPRESENTATIVE CLASSES INCLUDED IN PUBLIC COUNSEL'S CLASS COST OF SERVICE STUDY?

A. For class cost of service study purposes, customers are grouped into "classes" based on type of customer and utilization patterns. Public Counsel's class cost of service study reflects four distinct classes of customers: Residential, Small General Services, Large General Services and Large Volume.

Q. ON WHAT DATA IS YOUR CLASS COST OF SERVICE STUDY BASED?

A. The data is associated with a test year ending December, 31, 2008, updated through April 30, 2009. The Accounting Schedules filed with the Staff's direct revenue requirement testimony were the source of most of the revenue and cost data that I utilized in preparing my study. I did adjust Staff's residential revenues and billing units to reflect the revenue and usage that would be expected under normal weather if the Straight Fixed Variable rate design were not in place. I used Staff and Company data on customer counts and usage patterns to develop allocation factors for assigning revenues and costs to customer classes. Except where specified, my use of Staff and Company information should not be viewed as an endorsement of either Staff's or the Company's methods for calculating accounting costs, billing determinants, peak demands or allocation factors.

Q. IS THERE IS POSSIBILITY THAT SOME INFORMATION USED IN YOUR STUDY WILL BE UPDATED AND REVISED AS THIS CASE PROGRESSES?

A. Yes. It is common for the Staff and Company to update or reconcile information as case progresses. I will update my studies accordingly.

Q. PLEASE DESCRIBE THE ASSIGNMENT OF COST TO THE CUSTOMER CLASSES.

A. The assignment of costs to customer classes involves a three-step process in which costs are first functionalized, then classified, and finally allocated to customer classes based on factors that reflect cost causation.

Q. PLEASE DESCRIBE THE FUNCTIONALIZATION OF COSTS.

A. Functionalization involves categorizing cost accounts by associated function. Functional categories include; Production, Storage, Transmission, Distribution, Customer Accounts and Administrative and General (A&G).

Q. PLEASE DESCRIBE THE CLASSIFICATION OF COSTS.

A. Classification is achieved by further categorizing costs into customer related, commodity related, demand related or "other related" costs. Some costs are categorized as having multiple cost components.

Q. PLEASE DESCRIBE CUSTOMER RELATED COSTS.

A. Customer related costs vary directly (in fixed proportion) with the number of customers served. Examples of customer related costs include: expenses associated with metering, reading, billing, and the costs associated with metering equipment and service connections.

Q. PLEASE DESCRIBE COMMODITY RELATED COSTS.

A. Commodity related costs vary with the quantity of gas purchased. While Missouri's local distribution companies recover purchased gas cost through the PGA, other plant accounts may still be categorized as commodity related.

Q. PLEASE DESCRIBE DEMAND RELATED COSTS.

A. Demand related costs vary with the capacity requirement of plant or equipment. They are related to the maximum system requirements that reflect the capacity

necessary to serve demand during peak periods. Demand related costs include: production, transmission and storage costs and expenses associated with these types of plant. In addition, some distribution plant and related expenses are demand related costs.

Q. PLEASE DESCRIBE THE ALLOCATION PROCESS.

A. Following functionalization and classification, allocation factors are applied to distribute a reasonable share of jurisdictional costs to each customer class. Some costs are uniquely attributable to, and therefore directly assignable to a particular customer class. For costs that are jointly attributable, in measurable proportions, to a group of customer classes, the costs are assigned to each customer class based on factors that reflect each class's share of joint use. Finally, cost accounts associated with common facilities or common overheads that can not be directly or jointly assigned are allocated to classes based on general factors. Typical allocation factors include measures of usage, sales, or weighted measures of customer counts.

Q. WHAT TYPES OF PLANT COST ARE ALLOCATED IN A CLASS COST OF SERVICE STUDY?

A. Common types of plant allocated in a class cost of service study include intangible plant, production plant, storage plant, transmission plant, distribution plant and general plant.

Q. HOW ARE INTANGIBLE PLANT ACCOUNTS ALLOCATED?

A. Intangible plant accounts include expenses related to organizing the enterprise, obtaining franchise and consent and other miscellaneous items. (Accounts 301, 302, and 303) These costs are not directly or jointly attributable to particular customer classes, instead they are common costs allocated on the basis of the portion of overall cost of service assigned to each customer class.

Q. ARE ANY GAS STORAGE, PRODUCTION OR TRANSMISSION PLANT ACCOUNTS ALLOCATED IN YOUR STUDY?

A. No. MGE reports no jurisdictional investment in gas storage, production or transmission plant.

Q. HOW ARE DISTRIBUTION PLANT ACCOUNTS ALLOCATED?

A. Mains transport gas throughout the Company's service area and are represent a significant portion of distribution plant. The system of mains serves three primary purposes. It is designed to reach customers throughout the service area, to provide gas year round and to satisfy periods of peak demand. Therefore, I developed an allocator for Mains (Account 376) that reflects these three purposes.

The first component of my mains allocator is related to reaching customers throughout the service area. Although I do not recognize any portion of mains costs as directly related to the number of customers, I do recognize that indirectly the number of customers and the dispersion of customers affect the cost of mains. To reflect the indirect affect of customers on mains costs, I have use one of the Company's allocation methods for developing a "customer related" component for allocating mains. The Company's method uses regression analysis to determine the portion of mains cost on an integrated system that would be incurred even if "0" gas were provided. This method identifies 38.41% of mains costs as "customer related" so I allocated 38.413% of Mains (Account 376) on the basis of weighted customers. The remaining 61.9% of the Mains allocation is divided between a commodity related component based on average use and a demand related component based on peak day demand that occurs in excess of average daily demand.

The commodity related component of my mains allocator is related to the use of mains to deliver gas throughout the year. I allocated 17.96% of Mains (Account 376) based on each customer class's share of annual sales volumes measured in Ccf.

The demand related component of my mains allocator (the remaining 43.63%) is related to the use of mains to deliver gas during periods of peak use. I allocated this portion of Mains (Account 376) based on each customer class's share of peak day demand in excess of average daily demand measured in Ccf.

Land and Land Rights, Structures and Improvements (Accounts 374 and 375) are closely related to the system of distribution mains. I allocated these costs on the same basis as Mains (Account 376).

Measuring and Regulating Station Equipment (Accounts 378 and 379) are related to the year round flow of gas and are therefore classified as commodity related. I allocated these costs based on each customer class's share of annual sales volumes measured in Ccf.

Accounts 380 through 385 include cost directly related to serving customer premises. For example, services connect the customer premise to distribution mains. Similarly, meters and regulators at the customer premise measure and regulate gas flow at the premise. While these types of cost may differ by customer class, for example the cost of a typical meter associated with residential use is less expensive than the typical meter used to serve a large industrial customer, within each class; the costs tend to vary directly with the number of customers served. Based on this direct relationship between the number of customer served and costs, I classified these costs as customer related and developed allocation factors based on customer numbers weighted to reflect cost differences between customer classes. The the type of allocation for each account is shown below;

TABLE 6

Account	**Description**	**Allocation based on**
380	Services	Weighted services
381	Meters	Weighted meters
382	Meter Installations	Weighted meter installation
383	House Regulators	Weighted regulators
384	Electronic Gas Meters	Large Volume customers
385	Meas. and Reg. Station Equip. - Industrial	Commercial and Industrial Customers

Q. HOW ARE GENERAL PLANT ACCOUNTS ALLOCATED?

A. General plant accounts are allocated to customer classes based on each class's allocation of net non-general plant.

Q. HOW ARE OTHER RATE BASE ITEMS ALLOCATED?

A. Other rate base items include additions and deductions to net plant in service. For each I selected an allocator that seemed most clearly related to cost causation. The types of cost and allocation factor used in my study are listed below;

TABLE 7

Rate Base Additions	**Allocation Factor**
Cash Working Capital	Cost of Service
Materials and Supplies	Total Net Plant
Prepayments	Cost of Service
Prepaid Pension Asset	Labor
Alternative Minimum Tax Credit	Rate Base
Net Cost of Removal Reg Asset	Total Net Plant
Natural Gas Stored Underground	MGE's Gas Inventory Factor
Rate Base Deductions	**Allocation Factor**
Interest Offset	Cost of Service
Federal Income Tax Offset	Rate Base
State Income Tax Offset	Rate Base
City Tax Offset	Rate Base
Customer Advances	Bills

Customer Deposits Bills

Deferred Income Taxes Rate Base

Q. PLEASE DESCRIBE HOW OPERATION AND MAINTENANCE EXPENSES ARE ALLOCATED IN YOUR CLASS COST OF SERVICE STUDY?

A. For allocating most of the accounts in this category, I used the "expenses follow plant principle". For example, the operations and maintenance expenses related to mains and services are allocated to customer classes on the same basis as the mains and services plant accounts. Similarly, operations and maintenance expenses related to non-customer specific measuring and regulating station equipment are allocated on the basis of annual Ccf as was the plant account related to measuring and regulating station equipment. For cost accounts not directly associated with a corresponding plant account, I selected an allocator that seemed most clearly related to cost causation. The types of operation or maintenance expense and allocation factor used in my study are listed below;

TABLE 8

Operations

Account	Description	Allocation based on
870	Supervision & Engineering	Net Distribution Plant
871	Load Dispatch	Annual Ccf
874	Mains and services	Net Mains/Services Plant
875	Measuring & Regulating Stations	Annual Ccf
876	Measuring & Reg. Commercial	Large Ind. Bills
877	Measuring & Regulating City Gate	Annual Ccf

878	Meter & House Regulating	Weighted Meters
879	Customer Installations	Bills
880	Other Expenses	Net Distribution Plant
881	Rents	Net Distribution Plant

Maintenance

Account	Description	Allocation based on
885	Supervision & Engineering	Net Distribution Plant
886	Structures and Improvements	Net Distribution Plant
887	Mains	Mains
889	Measuring & Regulating Stations	Annual Ccf
890	Measuring & Reg. Commercial	Large Ind. Bills
891	Measuring & Regulating City Gate	Annual Ccf
892	Services	Weighted Services
893	Meters & House Regulators	Weighted Meters
894	Other Equipment	Net Distribution Plant

Q. HOW ARE CUSTOMER ACCOUNTS, CUSTOMER SERVICE, AND SALES PROMOTION EXPENSES ALLOCATED?

A. Customer service expenses are indirectly related to the number of customers and are allocated on the basis of number of customer bills. Sales promotion expenses are allocated on the basis of the overall class cost of service. Of all the customer accounts expenses Meter Reading and Customer Records and Collections (Accounts 902 and 903) seem directly related to the number of customers and are therefore allocated on the number of customer bills. Because these accounts include the majority of customer accounts expense, I have allocated Supervision

(Account 901) on the same basis. I do not view uncollectibles as having a direct relationship to the number of customers so I have allocated Uncollectibles (Account 904) on the basis of overall cost of service. For each account the type of expense and allocation factor used in my study are listed below;

TABLE 9

Customer Accounts

Account	Description	Allocation based on
901	Supervision	Weighted Meters
902	Meter reading	Wt Meter Read (Bills- LV)
903	Customer Records and Collection	Weighted Meters
904	Uncollectible Accounts	Cost of Service
905	Miscellaneous	Customer Acct. Expense

Customer Service and Information

Account	Description	Allocation based on
908	Customer Assistance	Bills
909	Inform & Instruct Advertising	Bills

Sales

Account	Description	Allocation based on
912	Demonstrating and Selling	Bills
913	Advertising	Bills
916	Miscellaneous	Bills

Q. HOW ARE ADMINISTRATIVE AND GENERAL (A & G) EXPENSES ALLOCATED?

A. Property insurance (Account 924) is allocated on the basis of net non-general plant. Expenses related to salaries, administration, outside services, injuries and damages and employee pensions and benefits (Accounts 920, 921, 922, 923, 925 and 926) are allocated on the basis of payroll. The remainder of A & G expenses are allocated on the basis of the overall class cost of service.

Q. HOW ARE TAXES ALLOCATED?

A. Property taxes are allocated on the basis of the net plant previously allocated to each class. Franchise taxes are allocated on the basis of rate base. Payroll taxes are allocated as a function of payroll expense. Income taxes are allocated according to the rate base attributable to each class.

CLASS COST OF SERVICE STUDY RESULTS

Q. WHAT ARE THE RESULTS OF PUBLIC COUNSEL'S CLASS COST OF SERVICE STUDY?

A. Based on my class cost of service studies, (Schedule BAM DIR-1), to equalize the classes' rates of return, the Residential class revenues would need to be reduced by 3.44%, the Small General Service Class revenues would need to be increased by 19.22%, the Large General Service Class revenues would need to be reduced by 23.57% and Large Volume revenue would need to be reduced by about 14.17%. The percent above or below cost of service is shown for each class on Line 24, Schedule BAM DIR-1.

Q. DO YOU HAVE CONCERNS WITH THE STUDY RESULTS?

A. Yes. I am concerned with the results for Small General Service, Large General Service and Large Volume. This may be due to miscatigorization of revenues or billing units within the accounting and other data provided to Public Counsel. I am aware that Staff has been reviewing the class billing units originally filed as Appendix 5, to the Staff's Report on Cost of Service filed on August 21, 2009 and reviewing differences between the Staff and Company revenues. If significant corrections are made I will update my studies.

Q. WHAT LEVEL OF RESIDENTIAL CUSTOMER CHARGE IS SUPPORTED BY YOUR CLASS COST OF SERVICE STUDY?

A. My cost of service study results indicates that the customer related costs are $11.54. This includes costs that vary directly with the number of customers served. This amount includes a return on the Company's investment in meters, regulators, services and other customer premise, operating and maintenance expenses associated with those investments, meter reading expenses and billing expenses.

Class Cost of Service Study Results and Rate Design Recommendations

Q. WHAT RATE DESIGN WOULD YOU PROPOSE BASED ON YOU CLASS COST OF SERVICE STUDY RESULTS?

Public Counsel recommends that where the existing revenue structure departures greatly from the class cost of service, the Commission should impose, at a maximum, class revenue shifts equal to one half of the "revenue neutral shifts" indicated by Public Counsel's class cost of service study. Revenue neutral shifts

are shifts that hold overall company revenue at the existing level but allow for the share attributed to each class to be adjusted to reflect the cost responsibility of the class. In addition to moving half way to the revenue neutral shifts, I recommend that if the Commission determines that an overall increase in revenue requirement is necessary, then no customer class should receive a net decrease as the combined result of: (1) the revenue neutral shift that is applied to that class, and (2) the share of the total revenue increase that is applied to that class. Likewise, if the Commission determines that an overall decrease in revenue requirement is necessary, then no customer class should receive a net increase as the combined result of: (1) the revenue neutral shift that is applied to that class, and (2) the share of the total revenue decrease that is applied to that class.

Q. HAVE YOU PREPARED AN EXAMPLE OF THIS RATE DESIGN METHOD?

A. Yes. Line 8 of Schedule BAM DIR-2 illustrates one half of the revenue neutral shift indicated by my class cost of service study. Lines 12 illustrates the spread of a hypothetical $10 million dollar increase in total revenue. Line 14 illustrates the combined effect of one half of the revenue neutral shift indicated by my class cost of service study and a $10 million dollar increase in the total revenue requirement. Lines 18-22 illustrate adjustments that ensure that no customer class receives a net increase as the combined result of: (1) the revenue neutral shift that is applied to that class, and (2) the share of the total revenue decrease that is applied to that class.

Q. IF THE COMMISSION DETERMINES IT REASONABLE IN THIS CASE, CAN YOUR RATE DESIGN METHOD BE APPLIED TO DIFFERENT REVENUE REQUIREMENTS?

A. Yes, it can. This method could be utilized to calculate class revenue requirements for any practical level of overall revenue requirement.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes.