

Exhibit No.: _____

Issues: Rate Class Restructuring,
Class Revenue Allocation,
and Rate Design

Witness: Russell A. Feingold

Sponsoring Party: Missouri Gas Energy

Case No.: GR-2009-_____

Date Testimony Prepared: April 2, 2009

MISSOURI PUBLIC SERVICE COMMISSION

MISSOURI GAS ENERGY

CASE NO. GR-2009-_____

FILED²

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**Missouri Public
Service Commission**

DIRECT TESTIMONY OF

RUSSELL A. FEINGOLD

Jefferson City, Missouri

April 2, 2009

NGE Exhibit No. 7
Case No(s). GR-2009-0355
Date 10-26-09 Rptr 4

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INDEX TO TESTIMONY

	<u>Page Number</u>
1. PURPOSE OF TESTIMONY.....	3
2 RATE CLASS RESTRUCTURING.....	5
2. CLASS REVENUE ALLOCATION.....	9
3. RATE DESIGN.....	13

DIRECT TESTIMONY OF RUSSELL A. FEINGOLD

CASE NO. GR-2009-

APRIL 2, 2009

1 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 A. My name is Russell A. Feingold and my business address is 2525 Lindenwood Drive,
3 Wexford, Pennsylvania 15090.

4

5 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

6 A. I am employed by Black & Veatch Corporation ("Black & Veatch") as a Vice President and I
7 lead the Rate & Regulatory Advisory Group of its Enterprise Management Solutions ("EMS")
8 Division.

9

10 **Q. PLEASE DESCRIBE THE FIRM OF BLACK & VEATCH.**

11 A. Black & Veatch has provided comprehensive engineering and management services to
12 utility, industrial, and governmental entities since 1915. EMS is the management consulting
13 division of Black & Veatch. EMS delivers management consulting solutions in the energy
14 and water sectors. Our services include broad-based strategic, regulatory, financial, and
15 information systems consulting. In the energy sector, EMS delivers a variety of services for
16 companies involved in the generation, transmission, and distribution of electricity and
17 natural gas. From an industry-wide perspective, Black & Veatch has extensive experience in
18 all aspects of the North American natural gas industry, including utility costing and pricing, gas
19 supply and transportation planning, competitive market analysis and regulatory practices and

1 policies gained through management and operating responsibilities at gas distribution, pipeline
2 and other energy-related companies, and through a wide variety of client assignments. Black
3 & Veatch has assisted numerous gas distribution companies located in the U.S. and Canada.
4

5 **Q. WHAT HAS BEEN THE NATURE OF YOUR WORK IN THE UTILITY**
6 **CONSULTING FIELD?**

7 A. I have over thirty-three (33) years of experience in the utility industry, the last thirty (30)
8 years of which have been in the field of utility management and economic consulting.
9 Specializing in the gas industry, I have advised and assisted utility management, industry
10 trade and research organizations and large energy users in matters pertaining to costing and
11 pricing, competitive market analysis, regulatory planning and policy development, gas
12 supply planning issues, strategic business planning, merger and acquisition analysis,
13 corporate restructuring, new product and service development, load research studies and
14 market planning. In addition to my presentation of expert testimony in utility regulatory
15 proceedings that was just discussed, I have spoken widely on issues and activities dealing
16 with the pricing and marketing of gas utility services. Further background information
17 summarizing my work experience, presentation of expert testimony, and other industry-
18 related activities is included in Schedule RAF-1.
19

20 **Q. MR FEINGOLD, HAVE YOU PREVIOUSLY TESTIFIED BEFORE THIS**
21 **COMMISSION OR ANY OTHER REGULATORY AUTHORITY?**

22 A. Yes. I have presented expert testimony before the Federal Energy Regulatory Commission
23 ("FERC") and numerous state and provincial regulatory commissions, including the

1 Missouri Public Service Commission (the "Commission"). My expert testimony has dealt
2 with the costing and pricing of energy-related products and services for gas and electric
3 distribution and gas pipeline companies. In addition to traditional utility costing and rate
4 design concepts and issues, my testimony has addressed revenue decoupling concepts and
5 other innovative ratemaking approaches, gas transportation rates, gas supply planning issues
6 and activities, market-based rates, Performance-Based Ratemaking ("PBR") concepts and
7 plans, competitive market analysis, gas merchant service issues, strategic business alliances,
8 market power assessment, merger and acquisition analyses, multi-jurisdictional utility cost
9 allocation issues, inter-affiliate cost separation and transfer pricing issues, seasonal rates,
10 cogeneration rates, and pipeline ratemaking issues related to the importation of gas into the
11 United States.

12
13 **Q. ON WHOSE BEHALF ARE YOU APPEARING IN THIS PROCEEDING?**

14 **A.** I am appearing on behalf of Missouri Gas Energy ("MGE" or the "Company").
15

16 **1. PURPOSE OF TESTIMONY**

17 **Q. FOR WHAT PURPOSE HAVE YOU BEEN RETAINED BY MGE?**

18 **A.** I have been retained by MGE as a consultant in the area of utility rate design and related
19 regulatory matters. Specifically, MGE has requested that Black & Veatch provide assistance
20 with the development of its: (1) measure of normal weather for purposes of adjusting its base
21 rates for the effect of weather (Company witnesses Dr. Robert E. Livezey and Larry W. Loos
22 will cover this topic in their testimonies); (2) revenue adjustments to weather normalize its
23 gas volumes and to annualize its current level of customers (Company witness Loos will

1 cover this topic in his testimony); (3) cash working capital allowance (Company witness
2 Robert L. O'Brien will cover this topic in his testimony); (4) annual depreciation rates for
3 certain plant accounts (Company witness Thomas J. Sullivan will cover this topic in his
4 testimony); (5) restructuring of current rate classes; (6) class revenue allocation; and (7) rate
5 design proposals.
6

7 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?**

8 A. The purpose of my testimony is to present and explain the proposed restructuring of the
9 Company's current rate classes, its class revenue allocation, and its rate design proposals.
10

11 **Q. PLEASE SUMMARIZE THE KEY POINTS OF YOUR TESTIMONY.**

12 A. The key points of my testimony are summarized as follows:

- 13 • The Company has proposed to restructure its existing Small General Service ("SGS")
14 and Large General Service ("LGS") rate classes to establish new SGS and LGS rate
15 classes to achieve more homogeneous rate classes to better reflect the recovery of
16 costs through rates.
- 17 • Under the Company's class revenue proposal, the Residential Service ("RS") rate
18 class will receive an increase in base revenues of \$27,654,329, the new SGS rate
19 class will receive an increase of \$2,835,461, the new LGS rate class will receive an
20 increase of \$883,396, and the LVS rate class will receive an increase of \$1,041,920
21 in base revenues.
- 22 • The Company has proposed to establish a Straight Fixed-Variable ("SFV") rate
23 structure for its new SGS rate class, and the utilization of traditional rate structures

1 for its new LGS rate class and its existing LVS rate class - with an increased
2 emphasis on recovering the Company's fixed costs of delivery service through its
3 Fixed Monthly Charges.

- 4 • The Company has proposed to eliminate the seasonal differentials in the Volumetric
5 Delivery Charges contained in its current SGS, LGS, and LVS rate classes.

7 2. RATE CLASS RESTRUCTURING

8 **Q. PLEASE EXPLAIN THE COMPANY'S PROPOSAL TO RESTRUCTURE ITS**
9 **EXISTING RATE CLASSES.**

10 **A.** The Company has proposed to restructure its existing SGS and LGS rate classes to establish
11 new SGS and LGS rate classes to achieve more homogeneous rate classes to better reflect
12 the recovery of costs through rates. As a general proposition, it is good ratemaking policy to
13 establish a utility's rate classes so that they exhibit relatively homogenous load and cost
14 characteristics where feasible. This enables the derivation of average unit rates that have
15 broad applicability to the customers served under these rate classes. Where this outcome is
16 not possible, the variation in customers within a particular rate class can be accommodated
17 through intra-class rate design concepts. Therefore, the objective in this class restructuring
18 process was to derive a new SGS rate class that exhibited greater customer homogeneity than
19 in the Company's existing SGS rate class in order to apply an SFV rate structure. Because it
20 would be necessary to transfer certain larger customers out of the SGS rate class into a
21 different rate class, it was concluded that the customers served under the Company's LGS
22 rate class should also be reviewed in a manner similar to that of the SGS rate class.

1 The variation in the load characteristics of customers served under the existing SGS rate
2 confirmed the degree of customer diversity that is present within this rate class. Based on
3 this review of the customers served under the Company's existing SGS rate class and a
4 review of customers served under the Company's existing LGS rate class, it was determined
5 that new SGS and LGS rate classes should be established. In this regard, it was further
6 determined that certain larger customers from the existing SGS class needed to be
7 reclassified to the new LGS rate class, and that certain smaller customers from the existing
8 LGS rate class needed to be reclassified to the new SGS rate class. Schedule RAF-2
9 illustrates the reclassification of customers and annual gas volumes by rate class under the
10 Company's rate class proposal and the resulting average annual use per customer.

11

12 **Q WHAT WAS THE RESULT OF THE COMPANY'S RATE CLASS**
13 **RESTRUCTURING PROCESS?**

14 A. The Company's existing SGS rate class was split into two separate groups, with one group
15 composed of smaller customers with gas usage characteristics similar to those of MGE's
16 Residential Service customers and the other group composed of moderate and larger sized
17 commercial and industrial customers. The former group will remain in the SGS rate class
18 while the later group will be included in the new LGS rate class. The Company's existing
19 LGS rate class resulted in a similar set of new customer groupings. When each of these two
20 new LGS groups were combined with each of the two groups created from the restructuring
21 of the SGS rate class, the Company's proposed new SGS and LGS rate classes were derived,
22 with the load characteristics exhibited in Schedule RAF-2.

23

1 Q. CAN YOU DEMONSTRATE THAT THE COMPANY'S NEW SGS RATE CLASS
2 EXHIBITS MORE HOMOGENEOUS LOAD CHARACTERISTICS COMPARED
3 TO THE LEVELS UNDER ITS CURRENT SGS RATE CLASS?

4 A. Yes. First, you can observe in Schedule RAF-3 that the average annual use per customer of
5 2,376 Ccf for the Company's existing SGS rate class decreases significantly (by almost
6 50%) to 1,370 Ccf in the new SGS rate class. This result demonstrates that the additional
7 larger customers reclassified from the existing SGS rate class to the new LGS rate class and
8 the additional smaller customers reclassified from the existing LGS rate class to the new
9 SGS rate class causes the class to be comprised of a greater number of much smaller
10 customers than in the existing SGS rate class. Second, a review of the change in the
11 maximum annual use per customer to the average annual use per customer (based on actual
12 load data for 2008) in the Company's new SGS rate class compared to the corresponding
13 ratio for its existing SGS rate class shows a material decrease in the range of gas usage by
14 customers. These results provided in Table 1 below demonstrate that there is less variation
15 in the size of customers under the Company's new SGS rate class compared to its existing
16 rate class. This means that there is more homogeneity in the class load characteristics of the
17 new rate class which, in turn, means there is a greater likelihood that the cost characteristics
18 of this class will be more homogeneous. This outcome is a benefit in the design of rates for
19 the new SGS rate class and enables an appropriate application of an SFV rate structure to the
20 pricing of delivery service in this class.

21 **Table 1 – Maximum Use to Average Use – SGS Rate Class**

Description	Existing Rate Class	Proposed Rate Class
SGS Rate Class		

Average Annual Use – Top 10 Customers	206,499 Ccf	10,000 Ccf
Average Annual Use – All Class Customers	2,670 Ccf	1,532 Ccf
Ratio	77.35	6.53

1

2 **Q. HOW WILL THE COMPANY RECLASSIFY THE CUSTOMERS IT CURRENTLY**
3 **SERVES UNDER ITS EXISTING SGS AND LGS RATE CLASSES INTO ITS NEW**
4 **RATE CLASSES?**

5 A. The Company will reclassify its current SGS and LGS customers into its new SGS and LGS
6 rate classes based on each customer's annual gas usage for calendar year 2008 and the
7 applicability provisions of the new tariffs for these rate classes. The customer applicability
8 provisions of the Company's new rate classes are as follows:

- 9 • **SGS Rate Class** - applicable to customers with annual gas usage less than or
10 equal to 10,000 Ccf.
- 11 • **LGS Rate Class** - applicable to customers with annual gas usage greater than
12 10,000 Ccf.

13

14 **Q. WHAT IS THE PRIMARY BENEFIT THAT WILL RESULT FROM THE**
15 **COMPANY'S PROPOSED RATE CLASS RESTRUCTURING?**

16 A. The Company's proposed rate class restructuring will enable the unit rates in the new SGS
17 rate class to more closely reflect the estimated cost basis for serving these customers,
18 prospectively, because of the greater customer homogeneity achieved through the rate class
19 restructuring process. This means that the current level of intra-class cross-subsidies in the
20 Company's current SGS rate class will be reduced – all other things being equal - which is
21 an important rate design objective.

1

2

3. CLASS REVENUE ALLOCATION

3 **Q. PLEASE EXPLAIN THE COMPANY'S PROPOSED ALLOCATION OF THE**
4 **REVENUE INCREASE TO ITS RATE CLASSES.**

5 A. The apportionment of revenues among rate classes consists of deriving a reasonable balance
6 between various criteria or guidelines that relate to the design of utility rates. The various
7 criteria that were considered in the process included: (1) cost of service; (2) class
8 contribution to present revenue levels; and (3) customer impact considerations. These
9 criteria were evaluated for each of the Company's rate classes. Based on this evaluation,
10 adjustments to class revenue levels were made so that the rates proposed by the Company
11 moved class revenues closer to the costs of serving those classes.

12

13 **Q. WHAT BASIS DID YOU USE TO EVALUATE THE COSTS OF PROVIDING**
14 **DELIVERY SERVICE TO THE COMPANY'S CUSTOMERS?**

15 A. I relied upon the cost of service study results presented by Company witness F. Jay
16 Cummings in Schedule FJC-1. Specifically, I utilized the total cost of service and the
17 corresponding revenue-to-cost ratio for each of the Company's existing rate classes to
18 evaluate the costs of providing delivery service to its customers.

19

20 **Q. HOW DID YOU UTILIZE THE COMPANY'S COST OF SERVICE STUDY**
21 **RESULTS TO EVALUATE THE COST TO SERVE THE CUSTOMERS INCLUDED**
22 **IN MGE'S NEW RATE CLASSES?**

1 A. I utilized the total cost of service at proposed revenue levels derived for the Company's
2 existing SGS and LGS rate classes, restated on a unitized basis, and applied the resulting
3 cost factors to the SGS and LGS group billing determinants included within each of the new
4 SGS and LGS rate classes. For customers that were reclassified into the new LGS rate class
5 from the existing SGS rate class, unit cost factors were utilized to reflect the average unit
6 cost of the Company's existing SGS and LGS customers. The same unit cost factors were
7 utilized for customers that were reclassified into the new SGS rate class from the existing
8 LGS rate class. This approach was chosen to recognize that these customers were not the
9 average-sized customers served under the Company's existing SGS and LGS rate classes and
10 that the associated unit costs would most likely not be representative of the costs to serve
11 these customers. That process provided me with a total cost of service basis at proposed
12 revenues for the Company's new rate classes which enabled me to evaluate the cost to serve
13 the customers within these new rate classes relative to their present revenues and rates. In a
14 similar manner, I also developed a comparable weighted customer cost basis for the
15 Company's new SGS rate class based on the number of SGS customers within this new rate
16 class.

17
18 **Q. HAVE YOU PREPARED A SCHEDULE THAT SHOWS THE COST OF SERVICE**
19 **BASIS FOR THE COMPANY'S NEW SGS AND LGS RATE CLASSES?**

20 A. Yes. Schedule RAF-3 presents this information for the Company's new SGS and LGS rate
21 classes. This information was used in conjunction with the Company's cost of service study
22 results for its existing RS and LVS rate classes to evaluate and determine the Company's
23 interclass revenue proposal.

1

2 **Q. DID YOU CONSIDER VARIOUS CLASS REVENUE OPTIONS IN CONJUNCTION**
3 **WITH YOUR EVALUATION AND DETERMINATION OF THE COMPANY'S**
4 **INTERCLASS REVENUE PROPOSAL?**

5 A. Yes, I did. Using MGE's proposed revenue increase, I evaluated various options for the
6 assignment of that increase among its rate classes and, in conjunction with Company
7 personnel, ultimately decided upon one of those options as the preferred resolution of the
8 interclass revenue issue. It should be noted that present base revenues from Residential
9 customers (71%) and SGS customers (20%) represents approximately 91% of the
10 Company's total base revenues. Out of necessity, then, the majority of the Company's
11 proposed revenue increase must be recovered from these two classes.

12

13 The first and benchmark option that I evaluated under MGE's proposed total revenue level
14 was to adjust the current class revenue level for each rate class so that the relative revenue-
15 to-cost ratio for each class was equal to the Company's overall revenue-to-cost ratio of 1.00.

16 Page 1 of Schedule FJC-1 in conjunction with the results presented in Schedule RAF-3
17 provided the basis for determining the change in each class' revenue requirement (excluding
18 gas costs) necessary to achieve that benchmark. This option indicated that revenue
19 increases were required for the residential and SGS rate classes and that decreases were
20 required for the LGS and LVS rate classes. As a matter of judgment, I decided that this
21 fully cost-based option was not the preferred solution to the interclass revenue issue. It
22 should be pointed out, however, that those results represented an important guide for
23 purposes of evaluating subsequent rate design options from a cost of service perspective.

1

2 The second option I considered was assigning the increase in revenues to the Company's rate
3 classes based on an equal percentage basis of its current base revenues. By definition, this
4 option resulted in each rate class receiving an increase in revenues. However, when this
5 option was evaluated against the class cost of service results (as measured by changes in the
6 revenue-to-cost ratio for each rate class), there was no movement towards cost for any of the
7 Company's rate classes. While this option also was not the preferred solution to the
8 interclass revenue issue, together with the fully cost-based option, it defined a range of
9 results that provided me with further guidance to develop the Company's class revenue
10 proposal.

11

12 **Q. WHAT WAS THE NEXT STEP IN THE PROCESS?**

13 A. I then evaluated other class revenue options and, after further discussions with MGE, I
14 concluded that the appropriate interclass revenue proposal would be one that relied equally
15 upon the "cost-based" and "equal percentage" approaches. This combined approach resulted
16 in a meaningful movement of class revenue-to-cost based ratios towards unity or 1.00. That
17 result is reflected in Schedule RAF-4, wherein the relative revenue-to-cost based ratios by
18 class are shown to converge towards unity or 1.00 compared to the same ratios calculated
19 under present rates. From a cost of service standpoint, this type of movement is desirable.

20

21 **Q. HAVE YOU DEVELOPED A COMPARISON OF THE COMPANY'S PRESENT**
22 **AND PROPOSED REVENUES BY RATE CLASS?**

1 A. Yes. Schedule RAF-5 presents a comparison of present and proposed revenues for each of
2 the Company's rate classes.

3
4 **4. RATE DESIGN**

5 **Q. PLEASE SUMMARIZE THE RATE DESIGN CHANGES THE COMPANY HAS**
6 **PROPOSED IN THIS PROCEEDING.**

7 A. The Company has proposed the following rate design changes:

- 8 • The establishment of a Fixed Monthly Charge in the new SGS rate class that
9 reflects the inclusion of all fixed costs of delivery service incurred by the
10 Company (i.e., an SFV rate structure) and the elimination of the Volumetric
11 Delivery Charges. Under an SFV rate structure, SGS customers will simply pay
12 a flat monthly fee for the delivery services provided by MGE, and will continue
13 to pay on a volumetric basis through the Purchased Gas Adjustment ("PGA") for
14 the amount of gas commodity used each month.
- 15 • For customers served under its new LGS rate class, the Company proposes to
16 increase its Fixed Monthly Charge towards the estimated customer cost of
17 service, with commensurate decreases in its Volumetric Delivery Charges.
- 18 • For LVS customers, the Company proposes to increase all current charges by the
19 overall percent increase in base revenues proposed for this rate class.
- 20 • The Company proposes to eliminate the seasonal differentials in the Volumetric
21 Delivery Charges contained in its SGS, LGS, and LVS rate classes.

22 I will present the specific rate structure changes for each of the Company's rate classes later
23 in my testimony.

1

2 **Q. WHY IS MGE PROPOSING THE ABOVE-DESCRIBED RATE DESIGN CHANGES**
3 **AT THIS TIME?**

4 A. The Company is proposing these rate design changes at this time because they best address
5 the major business challenges faced by gas utilities, such as MGE, causing increased risk and
6 price volatility, including:

- 7 • Weather variability;
- 8 • Declining use per customer;
- 9 • High and volatile wholesale natural gas prices; and
- 10 • Resulting increases and volatility in customers' bills.

11 These are serious challenges to the financial integrity of the Company and to the ability of its
12 customers to manage their energy needs. While the rate design changes that were proposed
13 by the Company, and approved by this Commission, in MGE's last rate case address these
14 challenges as they relate to its residential customers, they continue to present a material
15 problem within the Company's SGS rate class.

16

17 At the same time, there is a strong recognition in the energy industry by a diverse group of
18 stakeholders that under the traditional utility ratemaking structure, a utility is financially
19 motivated to increase its sales levels in a future period above that established in its previous
20 rate case because its rates are designed to recover most fixed costs on a volumetric basis –
21 causing the utility's revenues to increase as its sales increase. Under traditional utility
22 ratemaking, an increase in the recovery of fixed costs will occur (compared to the level
23 approved in the utility's most recently completed rate case) when sales are higher than

1 assumed in the design of the utility's rates. Conversely, a decrease in the recovery of fixed
2 costs will occur when sales are low relative to assumed levels. This situation creates a
3 natural disincentive for utilities to promote conservation or energy efficiency initiatives
4 because such actions will reduce the utility's revenues and resulting earnings. The
5 Company's SFV rate design proposed for its new SGS rate class, coupled with the same rate
6 design previously approved for its RS rate class, effectively eliminates the revenue impact of
7 increases or decreases in sales volumes. By doing so, the Company's rate design approach
8 for the new SGS rate class would effectively eliminate the link between sales volumes and
9 revenues. Hence, it would encourage MGE to be supportive of measures which would
10 promote decreased energy usage, conservation, or other energy efficiency initiatives.

11

12 In the Company's last rate case, I presented evidence which demonstrated that these business
13 challenges warranted a change in ratemaking concepts and proposed the adoption of an SFV
14 rate design for the Company's Residential Service class. The rate design proposals
15 presented in this proceeding represent the next steps in the process of moving to a
16 ratemaking approach that is consistent with, and supportive of, the current and expected
17 future state of the gas distribution industry, and the utility industry more broadly. Clearly,
18 the above described business challenges coupled with the increased emphasis being placed
19 on energy efficiency and conservation initiatives warrant ratemaking approaches that remove
20 any financial disincentives the utility has to support these important initiatives. These
21 business challenges and important energy efficiency initiatives are also applicable to the
22 Company's SGS rate class. In my opinion, this Commission has recognized these business
23 challenges, the fixed cost nature of the gas distribution business, and the need for this type of

1 ratemaking reform, by its approval in the Company's last rate case of an SFV rate design for
2 its Residential Service class.

3
4 Under its proposed SFV rate design, the Company will be able to promote energy efficiency
5 and conservation programs for its smaller commercial customers served under the new SGS
6 rate class without the continual real threat of margin revenue losses due to declining gas
7 sales per customer. It is therefore entirely reasonable for the Company to condition its
8 willingness to undertake the expanded natural gas conservation initiatives described by MGE
9 witness David Hendershot in his direct testimony on the Commission's adoption of the SFV
10 rate design proposed by MGE for its new SGS rate class.

11
12 **Q. IS THE SFV RATE DESIGN FOR THE COMPANY'S RESIDENTIAL CUSTOMERS**
13 **ACHIEVING THE OBJECTIVES UPON WHICH THIS RATE DESIGN**
14 **APPROACH WAS ORIGINALLY PREMISED?**

15 **A.** Yes. As discussed by Company witness Robert J. Hack, the Company's experience to date
16 with its SFV rate design for the Residential Service has clearly demonstrated that the desired
17 objectives are being achieved under this rate design approach. For example, the SFV rate
18 design provided distinct benefits to the Company's residential customers during the winter of
19 2007-2008 and the current 2008-2009 winter in the form of monthly gas bills that were
20 significantly lower than what would have been under the Company's previous volumetric
21 rate design. This result is illustrated in Schedule RAF-6 which shows the monthly gas bills
22 of residential customers under the SFV rate design compared to the bills under the previous
23 volumetric rate design recomputed at the Company's revenue level approved in its last rate

1 case. Over the last nine month winter periods, each of the Company's residential customers
2 saved on average approximately \$81.00, or about \$36.4 million in the aggregate, under the
3 SFV rate design compared to the amounts that would have been billed under a volumetric
4 rate design. At the same time, this Schedule shows that the Company's monthly margin
5 revenue was stabilized under the SFV rate design. Quite simply, within the context of
6 MGE's residential market, the SFV rate design is achieving the desirable alignment of the
7 Company's and customers' interests and is providing significant and long-lasting benefits to
8 its customers.

9
10 **Q. PLEASE EXPLAIN HOW THE COMPANY'S PROPOSED RATE DESIGN FOR ITS**
11 **SGS CUSTOMERS WILL ADDRESS THE IMPACT OF WEATHER AND**
12 **DECLINING USE PER CUSTOMER ON MGE'S ABILITY TO RECOVER ITS**
13 **APPROVED MARGIN LEVEL?**

14 **A.** Since virtually all of MGE's margin consists of fixed costs, and because the Fixed Monthly
15 Charge under its proposed SFV rate structure for SGS customers is designed to recover
16 100% of those fixed costs, the Company's ability to recover its Commission-approved level
17 of margin through base revenues for its SGS customers no longer will be subject to the
18 ongoing fluctuations in customer usage caused by weather, energy conservation, and energy
19 efficiency activities. Of course, the Company's ability to earn a reasonable rate of return on
20 its investment will continue to be impacted by how well management can control its costs of
21 providing delivery service relative to the levels assumed, and ultimately approved by the
22 Commission, in MGE's most recently completed base rate case.

23

1 **Q. DOES THE COMPANY'S PROPOSED RATE DESIGN FOR ITS SGS CUSTOMERS**
2 **REPRESENT AN EFFECTIVE SOLUTION TO THE AFOREMENTIONED**
3 **RATEMAKING PROBLEMS IT HAS EXPERIENCED?**

4 A. Yes. MGE's proposed rate design is cost-based, equitable, and beneficial to the Company
5 and its customers. Under the proposed SFV rate structure, when it is colder-than-normal,
6 customers do not overpay for the Company's fixed costs, and the Company does not over-
7 recover margin. Conversely, when it is warmer-than-normal, customers do not underpay for
8 the Company's fixed costs, and the Company does not under recover margin.

9

10 **Q. PLEASE EXPLAIN THE CHANGES TO THE COMPANY'S CURRENT**
11 **RESIDENTIAL RATE STRUCTURE.**

12 A. The only change to the Company's current Residential Service rate structure is that the level
13 of the current Fixed Monthly Charge has been adjusted to recover the class revenues
14 proposed for the RS rate class at the level which I discussed previously.

15

16 **Q. PLEASE EXPLAIN HOW THE COMPANY'S PROPOSED RS RATE DESIGN**
17 **WILL IMPACT CUSTOMERS' GAS BILLS.**

18 A. Pages 1 and 2 of Schedule RAF-7 present monthly bill comparisons for various ranges of
19 monthly gas consumption for RS customers and an annual bill comparison for the average
20 RS customer.

21

22 **Q. PLEASE EXPLAIN THE PROPOSED RATE DESIGN FOR THE COMPANY'S**
23 **NEW SGS CLASS.**

1 A. A Fixed Monthly Charge of \$41.20 was established in the new SGS rate class that
2 reflects the inclusion of all fixed costs of delivery service incurred by the Company (i.e., an
3 SFV rate structure) and the elimination of the Volumetric Delivery Charges. This is the
4 same type of rate structure that currently exists in the Company's RS rate class.

5
6 **Q. WHY HAS THE COMPANY DECIDED TO PROPOSE AN SFV RATE STRUCTURE**
7 **FOR ITS SGS CUSTOMERS?**

8 A. This type of rate structure best addresses the business challenges faced by MGE that I
9 discussed previously, it is supportive of the energy efficiency and conservation initiatives
10 available to SGS customers, and it is reflective of the underlying cost basis for providing gas
11 delivery service to the customers included in the Company's new SGS rate class.

12
13 **Q. HAVE YOU PREPARED AN ANALYSIS DEMONSTRATING THAT THE**
14 **COMPANY'S COSTS OF GAS DELIVERY SERVICE ARE THE SAME**
15 **REGARDLESS OF SIZE FOR ALL SGS CUSTOMERS?**

16 A. Yes. I have developed the cost for various sizes of distribution main in Table 2 below.
17 Since the Company uses a common size of two inches as the smallest size of main, I have
18 analyzed the ability of two inch main to serve SGS customers using the system average
19 density, the standard operating pressure, and the standard pressure drop at the house
20 regulator. By applying pipeline flow formulas, it is possible to determine the amount of gas
21 that would flow through the pipe under design day conditions and to estimate the maximum
22 demand that the pipe would serve. This type of analysis recognizes that there are substantial
23 economies of scale associated with the gas distribution infrastructure such that the unit cost

of capacity for gas delivery declines with size at relatively rapid rate.

Table 2 - Economies of Scale for Distribution Mains

Size of Main (inches)	Material Cost (\$ per foot)	Installation Cost (\$ per foot)	Total Cost (\$ per foot)	Design Day Flow Capacity (Mcf/d)	Unit Cost (\$ per Mcf/d)
2	\$0.63	\$11.20	\$11.83	783	\$0.015
4	\$2.08	\$25.43	\$27.51	4,591	\$0.006

The design day flow in the above calculations is based on a one-mile segment of main. The company serves about 59 customers per mile of main based on the average customer density within MGE's service area.

Q. PLEASE DESCRIBE THE ECONOMIES OF SCALE ASSOCIATED WITH A UTILITY'S SYSTEM OF DISTRIBUTION MAINS.

A. The scale economies of gas distribution systems reflect the relationship between the installed cost of pipe by size and type coupled with the increased capacity from pressure and pipe diameter. For gas distribution mains, when the size of the main is doubled, the available design day capacity of that main more than doubles. The unit cost of the larger main is less than twice the cost of the smaller size main, all else being equal. For a low pressure system, increasing pipe size from two inch to four inch allows over five times the amount of gas to flow, and under higher pressure, the flow rate increases by more almost six times that of two inch pipe, all else being equal. The resulting cost causation implies that larger customers

1 impose lower unit costs on the distribution system than do smaller customers. Further, given
2 the customer density and standard operating pressure for the MGE system, the minimum size
3 of pipe installed (2 inch main) will serve the design day load characteristics of its entire size
4 range of customers included in its new SGS rate class.

5
6 Table 2 above illustrates the scale economies associated with two and four inch mains based
7 on the current costs of the Company. In this Table, the installed cost per foot of design day
8 flow capacity is approximately 250 percent less for four inch pipe than for two inch pipe.
9 Further, the two inch pipe will serve customers with a design day requirement of
10 approximately 13.2 Mcf.¹ Using a 20 percent annual load factor to estimate the annual gas
11 consumption of a customer with a design day requirement of 13.2 Mcf, this translates to
12 approximately 9,600 Ccf. Essentially, the smallest size installed main will serve over 99%
13 of the Company's customers served under its new SGS rate class. The design day
14 requirements of the new SGS rate class are satisfied by the smallest main installed on the
15 system. This implies that all customers are equally responsible for MGE's gas delivery
16 service costs and that a single monthly charge (under an SFV rate structure) is an appropriate
17 basis to recover the delivery service costs incurred by the Company to serve its SGS
18 customers.

19
20 **Q. PLEASE EXPLAIN HOW THE COMPANY'S PROPOSED SGS RATE DESIGN**
21 **WILL IMPACT CUSTOMERS' GAS BILLS.**

¹ 783 Mcf/d divided by 59 customers equals 13.2 Mcf/d per customer.

1 A. Pages 3 and 4 of Schedule RAF-7 present an annual bill comparison for the average SGS
2 customer and monthly bill comparisons for various ranges of monthly gas consumption for
3 the Company's existing SGS customers, respectively. Pages 5 and 6 of this Schedule present
4 an annual bill comparison for the average existing LGS customer and monthly bill
5 comparisons for various ranges of monthly gas consumption for the Company's existing
6 LGS customers, respectively.

7
8 **Q. PLEASE EXPLAIN THE PROPOSED RATE DESIGN FOR THE COMPANY'S**
9 **NEW LGS CLASS.**

10 A. A Fixed Monthly Charge of \$140.00 was established in the new LGS rate class guided by the
11 monthly customer cost basis for the new LGS rate class presented in Schedule RAF-3.
12 Volumetric Delivery Charges were then established at levels necessary to recover the
13 balance of the proposed revenue increase assigned to this class not recovered through the
14 monthly Fixed Monthly Charge.

15
16 **Q, HOW DID YOU DETERMINE THE NUMBER AND SIZE OF THE RATE BLOCKS**
17 **FOR THE VOLUMETRIC DELIVERY CHARGES PROPOSED IN THE NEW LGS**
18 **RATE CLASS?**

19 A. While the customers that comprise the new LGS rate class are somewhat more homogeneous
20 than the customers in the Company's existing LGS rate class, there is still a moderate level
21 of diversity in this new rate class. As a result, it was determined that multiple Volumetric
22 Delivery Charges were appropriate. Based on an annual bill frequency for the customers

1 contained in the new LGS rate class, two rate blocks were created with the first block
2 applicable to the first 1,800 Ccf or less of gas delivered per month and the second rate block
3 applicable to all additional gas delivered over 1,800 Ccf per month.
4

5 **Q. PLEASE EXPLAIN HOW THE COMPANY'S PROPOSED LGS RATE DESIGN**
6 **WILL IMPACT CUSTOMERS' GAS BILLS.**

7 A. Pages 7 and 8 of Schedule RAF-7 present an annual bill comparison for the average LGS
8 customer and monthly bill comparisons for various ranges of monthly gas consumption for
9 the Company's existing LGS customers, respectively. Pages 9 and 10 of this Schedule
10 present an annual bill comparison for the existing average SGS customer and monthly bill
11 comparisons for various ranges of monthly gas consumption for the Company's existing
12 SGS customers, respectively.
13

14 **Q. PLEASE EXPLAIN THE PROPOSED RATE DESIGN FOR THE LVS CLASS.**

15 A. The Company proposes to increase all current charges for the LVS rate class by the overall
16 percent increase in revenues proposed for this rate class. This approach preserved the
17 relative mix of fixed and volumetric-based revenues within this rate class.
18

19 **Q. PLEASE EXPLAIN HOW THE COMPANY'S PROPOSED LVS RATE DESIGN**
20 **WILL IMPACT CUSTOMERS' GAS BILLS.**

21 A. Page 11 of Schedule RAF-7 presents monthly bill comparisons for various ranges of monthly
22 gas consumption for LVS customers.
23

1 **Q. PLEASE EXPLAIN WHY THE COMPANY HAS PROPOSED TO ELIMINATE THE**
2 **SEASONAL DIFFERENTIALS IN THE VOLUMETRIC DELIVERY CHARGES**
3 **CONTAINED IN ITS SGS, LGS, AND LVS RATE CLASSES.**

4 **A.** This rate design change was proposed in recognition of the fact that a gas distribution
5 utility's costs of delivery service are fixed in nature and do not vary by season. Indeed, in
6 the Company's cost of service study, these costs are not allocated to its classes of service on
7 any type of seasonal or time-differentiated basis.

8
9 **Q. IN YOUR OPINION, WHY DO THE COMPANY'S CURRENT VOLUMETRIC**
10 **DELIVERY CHARGES FOR THESE RATE CLASSES REFLECT A SEASONAL**
11 **DIFFERENTIAL IN RATES?**

12 **A.** I believe that the seasonal differential in the Company's Volumetric Delivery Charges is a
13 vestige of the past when the rates of a gas distribution utility such as MGE were designed on
14 a bundled basis. In other words, before the advent of end-user transportation service, a gas
15 distribution utility's rates reflected in the same volumetric charges the inclusion of delivery
16 service costs and purchased gas costs (often through the establishment of a base cost of gas
17 with any cost differences recovered through the PGA). In the past, there was a stronger
18 seasonality to purchased gas costs, with costs higher in the winter months (typically
19 November through March) and lower in the summer months (typically April through
20 October). With the Company's purchased gas costs now fully excluded from its Volumetric
21 Delivery Charges and recoverable through its PGA, there is no longer any rational
22 ratemaking basis to maintain a seasonal rate differential for the remaining delivery service
23 costs reflected in these Charges.

1

2 **Q. MR. FEINGOLD, DOES THIS COMPLETE YOUR DIRECT TESTIMONY?**

3 **A. Yes, it does.**

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

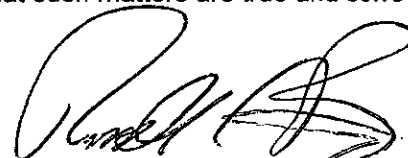
In the Matter of Missouri Gas Energy's
Tariff Sheets Designed to Increase Rates
for Gas Service in the Company's Missouri
Service Area.

Case No. GR-2009-____

AFFIDAVIT OF RUSSELL A. FEINGOLD

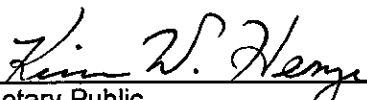
STATE OF MISSOURI)
)
COUNTY OF JACKSON) ss.

Russell A. Feingold, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Direct Testimony in question and answer form, to be presented in the above case; that the answers in the foregoing Direct 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.

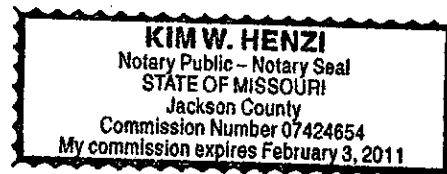


RUSSELL A. FEINGOLD

Subscribed and sworn to before me this 27th day of MARCH 2009.


Notary Public

My Commission Expires: 2-3-11



**EDUCATIONAL BACKGROUND, WORK EXPERIENCE
AND REGULATORY EXPERIENCE
RUSSELL A. FEINGOLD**

EDUCATIONAL BACKGROUND

- Bachelor of Science degree in Electrical Engineering from Washington University in St. Louis
- Master of Science degree in Financial Management from Polytechnic University of New York

WORK EXPERIENCE

2007 – Present	Black & Veatch Corporation Vice President, Enterprise Management Solutions Division and Rate & Regulatory Advisory Lead
1996 – 2007	Navigant Consulting, Inc. Managing Director, Energy Practice - Litigation, Regulatory & Markets Group
1990 – 1996	R.J. Rudden Associates, Inc. Vice President and Director
1985 – 1990	Price Waterhouse Director, Gas Regulatory Services Public Utilities Industry Services Group
1978 – 1985	Stone & Webster Management Consultants, Inc. Executive Consultant Regulatory Services Division
1973 – 1978	Port Authority of New York and New Jersey Staff Engineer and Utility Rate Specialist

PRESENTATION OF EXPERT TESTIMONY

- Federal Energy Regulatory Commission
- Arkansas Public Service Commission
- British Columbia Utilities Commission (Canada)
- California Public Utilities Commission
- Connecticut Department of Public Utility Control
- Delaware Public Service Commission
- Georgia Public Service Commission
- Illinois Commerce Commission
- Indiana Utility Regulatory Commission
- Iowa Utilities Board
- Manitoba Public Utilities Board (Canada)
- Massachusetts Department of Public Utilities
- Michigan Public Service Commission
- Minnesota Public Utilities Commission
- Missouri Public Service Commission
- Montana Public Service Commission
- New Hampshire Public Utilities Commission
- New Jersey Board of Public Utilities
- New Mexico Public Regulation Commission
- New York Public Service Commission
- North Carolina Utilities Commission
- North Dakota Public Service Commission
- Ohio Public Utilities Commission
- Oklahoma Corporation Commission
- Ontario Energy Board (Canada)

- Pennsylvania Public Utility Commission
- Philadelphia Gas Commission
- Quebec Natural Gas Board (Canada)
- South Dakota Public Service Commission
- Utah Public Service Commission
- Vermont Public Service Board
- Virginia State Corporation Commission
- Washington Utilities and Transportation Commission
- Public Service Commission of Wyoming

EDUCATIONAL AND TRAINING ACTIVITIES

- Past Chairman, Rate Training Subcommittee, Rate and Strategic Issues Committee of the American Gas Association.
- Seminar organizer and co-moderator at the American Gas Association, "Workshop on Unbundling and LDC Restructuring," July 1995.
- Course organizer and speaker at the annual industry course, American Gas Association – Gas Rate Fundamentals Course, University of Wisconsin – Madison, 1985 – 2009.
- Course organizer and speaker at the annual industry course, American Gas Association – Advanced Regulatory Seminar, University of Maryland - College Park, 1987 – 1992.
- Co-founder, course director and instructor in the annual course, "Principles of Gas Utility Rate Regulation" sponsored by The Center for Professional Advancement 1982-1987.
- Contributing Author of the Fourth Edition of "Gas Rate Fundamentals," American Gas Association, 1987 edition.
- Organizer, Editor, and Contributing Author of the upcoming Fifth Edition of "Gas Rate Fundamentals," American Gas Association (in progress).

PUBLICATIONS AND PRESENTATIONS

- “Breaking the Link Between Sales and Profits: Current Status and Trends,” Energy Bar Association, Electricity Regulation and Compliance Committee, February 17, 2009.
- “State Ratemaking Issues for Gas Distribution Utilities,” Energy Law Journal, Volume 29, No. 2, 2008 (Report of the Natural Gas Regulation Committee).
- “Current Issues in Cost Allocation and Rate Design for Utilities,” SNL Energy, Utility Rate Cases Today: The Issues and Innovations, November 6, 2008.
- “Current Issues in Revenue Decoupling for gas Utilities,” American Gas Association, Financial and Investor Relations Webcast, October 16, 2008.
- “Addressing Utility Business Challenges Through the State Regulatory Process,” American Gas Association, 2008 Legal Forum, July 20-22, 2008.
- “Earning on Natural Gas Energy Efficiency Programs,” American Gas Association Rate and Regulatory Issues Conference Webcast, May 23, 2008.
- “State Regulatory Directions: Utility Challenges and Solutions,” American Gas Association Financial Forum, May 4, 2008.
- “Ratemaking and Financial Incentives to Facilitate Energy Efficiency and Conservation,” The Institute for Regulatory Policy Studies, Illinois State University, May 1, 2008.
- “Update on Revenue Decoupling and Innovative Rates,” American Gas Association, Rate Committee Meeting and Regulatory Issues Seminar, March 10, 2008.
- “Update on Revenue Decoupling and Utility Based Energy Conservation Efforts,” American Gas Association, Rate and Regulatory Issues Conference Webcast, May 30, 2007.
- “A Renewed Focus on Energy Efficiency by Utility Regulators,” American Gas Association, Rate and Regulatory Issues Seminar and Committee Meetings, March 26, 2007.
- “The Continuing Ratemaking Challenge of Declining Use Per Customer,” American Public Gas Association, Gas Utility Management Conference, October 31, 2006.

- “Understanding and Managing the New Reality of Utility Costs in the Natural Gas Industry,” Financial Research Institute, Public Utility Symposium, University of Missouri – Columbia, September 27, 2006.
- “Ratemaking and Energy Efficiency Initiatives: Key Issues and Perspectives,” American Gas Association, Ratemaking Webcast, September 14, 2006.
- “Ratemaking Solutions in an Era of Declining Gas Usage and Price Volatility,” Northeast Gas Association, 2006 Executive Conference, September 10-12, 2006.
- “Rethinking Natural Gas Utility Rate Design,” American Gas Foundation and The NARUC Foundation, Executive Forum, Ohio State University, May 2006.
- “Rate Design, Trackers, and Energy Efficiency – Has the Paradigm Shifted?” Energy Bar Association, Midwest Energy Conference, March 2006.
- “Key Regulatory Issues Affecting Energy Utilities,” American Gas Association, Lunch ‘n Learn Session, November 2005.
- “Decoupling, Conservation, and Margin Tracking Mechanisms,” American Gas Association, Rate & Regulatory Issues – Audio Conference Series, October 2005.
- “In Search of Harmony, [Utilities and Regulators] Respondents Weigh in with Needed Actions”, Public Utilities Fortnightly, November 2005
- “The Use of Trackers as a Regulatory Tool,” Midwest Energy Association – Legal, Regulatory, and Government Relations Roundtable, October 9-11, 2005.
- “Rate Design and the Regulatory Environment,” American Gas Association Finance Committee Meeting, October 2005.
- “Creative Utility Regulatory Strategies in a High Price Environment,” American Gas Association Executive Conference, September 2005.
- “Revenue Decoupling Programs: Aligning Diverse Interests,” The Institute for Regulatory Policy Studies, Illinois State University, May 2005.
- “Key Regulatory Issues Affecting Energy Utilities” American Gas Association Financial Forum, May 2005.
- “Energy Efficiency and Revenue Decoupling: A True Alignment of Customer and Shareholder Interests,” American Gas Association Rate and Regulatory Issues Seminar and Committee Meetings, April 2005.
- “Rate Case Techniques: Strategies and Pitfalls” American Gas Association, Rate & Regulatory Issues – Audio Conference Series, March 2005.

- "Regulatory Uncertainty: The Ratemaking Challenge Continues" Public Utilities Fortnightly, Volume 142, No. 11, November 2004.
- "Current Trends in Utility Rate Cases and Pricing: Surveying the Landscape," Platts Rate Case & Pricing Symposium, October 25-26, 2004.
- "State Regulatory Oversight of the Gas Procurement Function" Energy Bar Association, Natural Gas Regulation Committee, Energy Law Journal, Volume 25, No. 1, 2004.
- "Cost Allocation Across Corporate Divisions", American Gas Association, Rate and Strategic Issues Committee Meeting, April 2003.
- "Unbundling Initiatives – How Far Can We Go?" American Gas Association Restructuring Seminar: Service and Revenue Enhancements for the Energy Distribution Business, December 2002.
- "Utility Regulation and Performance-Based Ratemaking (PBR)," PBR Briefing Session sponsored by BC Gas Utility Ltd., April 2002.
- "LDC Perspectives on Managing Price Volatility" American Gas Association, Rate and Strategic Issues Committee Meeting, March 2002.
- "Can a California Energy Crisis Occur Elsewhere?" American Gas Association, Rate and Strategic Issues Committee Meeting, March 2001.
- "Downstream Unbundling: Opportunities and Risks," American Gas Association, Rate and Strategic Issues Committee Meeting, April 2000.
- "Form Follows Function: Which Corporate Strategy Will Predominate in the New Millennium?" American Gas Association 1999 Workshop on Regulation and Business Strategy for Utilities in the New Millennium, August 1999
- "Total Energy Providers: Key Structural and Regulatory Issues," American Gas Association, Rate and Strategic Issues Committee Meeting, April 1999.
- "The Gas Industry: A View of the Next Decade," National Association of Regulatory Utility Commissioners (NARUC) Staff Subcommittee on Accounts, 1998 Fall Meeting, September 1998.
- "Regulatory Responses to the Changing Gas Industry," Canadian Gas Association, 1998 Corporate Challenges Conference, September 1998
- "Trends in Performance-Based Pricing," American Gas Association Financial Analysts Conference, May 1998.

- “Unbundling – An Opportunity or Threat for Customer Care?” presented at the American Gas Association/Edison Electric Institute Customer Services Conference and Exposition, May 1998.
- “Experiences in Electric and Gas Unbundling,” presented at the 1997 Indiana Energy Conference, December 1997.
- “Asset and Resource Migration Strategies,” presented at the Strategic Marketing For The New Marketplace Conference sponsored by Electric Utility Consultants, Inc. and Metzler & Associates, November 1997.
- “The Status of Unbundling in the Gas Industry,” presented at the American Gas Association Finance Committee, March 1997.
- Seminar organizer and co-moderator at the American Gas Association, “Workshop on Unbundling and LDC Restructuring,” July 1995.
- “State Regulatory Update,” presented at the American Gas Association - Financial Forum, May 1995.
- “Gas Pricing Strategies and Related Rate Considerations,” presented before the Rate Committee of the American Gas Association, April 1995.
- “Avoided Cost Concepts and Management Considerations,” presented before the Workshop on Avoided Costs in a Post-636 Industry, sponsored by the Gas Research Institute and Wisconsin Center for Demand-Side Research, June 1994.
- “DSM Program Selection Under Order No. 636: Effect of Changing Gas Avoided Costs,” presented before the NARUC-DOE Fifth National Integrated Resource Planning Conference, Kalispell, MT, May 1994.
- “A Review of Recent Gas IRP Activities,” presented before the Rate Committee of the American Gas Association, March 1994.
- Seminar organizer and co-moderator at the American Gas Association seminar, “The Statue of Integrated Resource Planning,” December 1993.
- “Industry Restructuring Issues for LDCs, presented before the American Gas Association—Advanced Regulatory Seminar, University of Maryland, 1993-1996.
- “Acquiring and Using Gas Storage Services,” presented before the 8th Cogeneration and Independent Power Congress and Natural Gas Purchasing ’93, June 1993.
- “Capitalizing on the New Relationships Arising Between the Various Industry Segments: Understanding How You Can Play in Today’s Market,” presented

before the Institute of Gas Technology's Natural Gas Markets and Marketing Conference, February 1993.

- "The Level Playing Field for Fuel Substitution (or, the Quest for the Holy Grail)," presented before the 4th Natural Gas Industry Forum - Integrated Resource Planning: The Contribution of Natural Gas, October 1992.
- "Key Methodological Considerations in Developing Gas Long-Run Avoided Costs," presented before the NARUC-DOE Fourth National Integrated Resource Planning Conference, September 1992.
- "Mega-NOPR Impacts on Transportation Arrangements for IPPs," co-presented before the 7th Cogeneration and Independent Power Congress and Natural Gas Purchasing '92, June 1992.
- "Cost Allocation in Utility Rate Proceedings," presented before the Ohio State Bar Association - Annual Convention, May 1992.
- "The Long and the Short of LRACs," presented before the Natural Gas Least-Cost Planning Conference April 1992, sponsored by Washington Gas Company and the District of Columbia Energy office.
- Seminar organizer and moderator at the American Gas Association seminar, "Integrated Resource Planning: A Primer," December 1991.
- Session organizer and moderator on integrated resource planning issues at the American Gas Association Annual Conference, October 1991.
- "Strategic Perspectives on the Rate Design Process," presented before the Executive Enterprises, Inc. conference, "Natural Gas Pricing and Rate Design in the 1990s," September 1990.
- "Distribution Company Transportation Rates," presented before the American Gas Association-Advanced Regulatory Seminar, University of Maryland 1987-1992.
- "Design of Distribution Company Gas Rates," presented before the American Gas Association - Gas Rate Fundamentals Course, University of Wisconsin, 1985-1998.
- Seminar organizer, speaker and panel moderator at the American Gas Association seminar, "Natural Gas Strategies: Integrating Supply Planning, Marketing and Pricing," 1988-1990.
- "Local Distribution Company Bypass - Issues and Industry Responses," (Co-author) June 1989.

- “So You Think You Know Your Customers!,” presented before the American Gas Association—Annual Marketing Conference, April 1990.
- “Gas Transportation Rate Considerations - A Review of Gas Transportation Practices Based on the Results of the A.G.A. Annual Pricing Strategies Survey,” presented before the Rate Committee of the American Gas Association, April 1985-1991.
- “Market-Based Pricing Strategies - Targeted Rates to Meet Competition,” presented before the American Gas Association Annual Marketing Conference, March 1989.
- “Gas Rate Restructuring Issues - Targeted Prices to Meet Competition,” presented before the Fifteenth Annual Rate Symposium, University of Missouri, February 1989.
- “Gas Transportation Rates - An Integral Part of a Competitive Marketplace,” *American Gas Association, Financial Quarterly Review*, Summer 1987.
- “Gas Distributor Rate Design Responses to the Competitive Fuel Situation,” *American Gas Association, Financial Quarterly Review*, October 1983.
- “Demand-Commodity Rates: A Second Best Response to the Competitive Fuel Situation,” presented before the American Gas Association, Ratemaking Options Forum, September 1983.
- Cofounder, course director and instructor in the annual course, “Principles of Gas Utility Rate Regulation” sponsored by The Center for Professional Advancement 1982-1987.
- “Current Rate and Regulatory Issues,” presented before the National Fuel Gas Regulatory Seminar, July 1986.

AFFILIATIONS AND HONORS

- Financial Associate Member, American Gas Association
- Member, Rate Committee of the American Gas Association
- Member, Energy Bar Association
- Member, Institute of Electrical and Electronic Engineers
- Listed in Who’s Who of Emerging Leaders in America, 1989-1992

(Current as of March 2009)

Missouri Gas Energy
Rate Class Restructuring - SGS and LGS Rate Classes
Normalized and Annualized Customers, Volumes, Average Use Per Customer

Schedule RAF-2
Page 1 of 1

Line No.	Existing Rate Classes	Proposed Rate Classes	
		Small General Service - SGS	Large General Service - LGS
		≤ 10,000 Ccf per Year	Over 10,000 Ccf per Year
1	Small General Service - SGS		
2	SALES CUSTOMERS		
3	Number of Customers	60,904	57,864
4	Volume - Ccf	138,090,333	77,867,043
5	Annual Use Per Customer - Ccf	2,267	1,346
6	SCHOOL AGGREGATION - RATE 674		
7	Number of Customers	685	331
8	Volume - Ccf	8,226,897	1,331,210
9	Annual Use Per Customer - Ccf	12,015	4,016
10	Total Small General Service		
11	Number of Customers	61,589	58,196
12	Volume - Ccf	146,317,231	79,198,253
13	Annual Use Per Customer - Ccf	2,376	1,361
14	Large General Service - LGS		
15	SALES CUSTOMERS		
16	Number of Customers	267	34
17	Volume - Ccf	12,859,099	129,229
18	Annual Use Per Customer - Ccf	48,126	3,762
19	SCHOOL AGGREGATION - RATE 694		
20	Number of Customers	32	3
21	Volume - Ccf	1,001,939	12,586
22	Annual Use Per Customer - Ccf	31,589	4,233
23	Total Large General Service		
24	Number of Customers	299	37
25	Volume - Ccf	13,861,038	141,815
26	Annual Use Per Customer - Ccf	46,371	3,799
27	Total - Proposed Rate Classes		
28	Number of Customers		58,233
29	Volume - Ccf		79,340,067
30	Annual Use Per Customer - Ccf		1,362

Missouri Gas Energy
Cost of Service Basis for the Company's
New SGS and LGS Rate Classes

Schedule RAF-3
Page 1 of 1

Line No.	Description	[B] Existing Rate Classes	[C] Proposed Rate Classes		[D]
			SGS	LGS	
1	<u>Existing SGS Rate Class</u>				
2	Annual Volume (Ccf)	146,317,231	79,198,253		67,118,978
3	Annual Load Factor		19.52%		20.15%
4	Peak Day (Ccf)	2,023,986	1,111,376		912,610
5	Number of Customers	61,589	58,196		3,393
6	Unit Customer Costs (\$/cust)		34.25		161.71
7	Unit Demand Costs (\$/Peak Day)		6.46		6.44
8	Unit Commodity Costs (\$/Ccf)		0.00026		0.00026
9	Total Customer Costs		\$ 23,915,276	\$	6,584,612
10	Total Demand Costs		7,176,063		5,877,569
11	Total Commodity Costs		20,390		17,280
12	Total Cost of Service		\$ 31,111,729	\$	12,479,462
13	<u>Existing LGS Rate Class</u>				
14	Annual Volume (Ccf)	13,861,038	141,815		13,719,224
15	Annual Load Factor		20.15%		20.78%
16	Peak Day (Ccf)	182,847	1,928		180,919
17	Number of Customers	299	37		262
18	Unit Customer Costs (\$/cust)		161.71		289.18
19	Unit Demand Costs (\$/Peak Day)		6.44		6.42
20	Unit Commodity Costs (\$/Ccf)		0.00026		0.00026
21	Total Customer Costs		\$ 72,435	\$	907,741
22	Total Demand Costs		12,419		1,162,198
23	Total Commodity Costs		37		3,532
24	Total Cost of Service		\$ 84,890	\$	2,073,472
25	Total Cost of Service	\$ 45,749,553	\$ 31,196,620	\$	14,552,934
26	Total cost of Service - Existing SGS/LGS Rate Classes	40,855,920			
27	Cost of Service Synchronization Adjustment	(4,893,633)	(3,336,968)		(1,556,665)
28	Adjusted Cost of Service	40,855,920	27,859,651		12,996,269
29	Revenues Credited to Cost of Service	920,885	627,952		292,934
30	Adjusted Cost of Service Net of Revenue Credits	\$ 39,935,035	\$ 27,231,699	\$	12,703,335
31	<u>Class Revenue Determination</u>				
32	Revenue at Present Rates	\$ 39,522,785	\$ 26,213,822	\$	13,308,963
33	Required Revenue Change	412,249	1,017,877		(605,628)
34	Percent Change		3.9%		-4.6%
35	Revenue to Cost Ratio	0.9899	0.9635		1.0466
36	<u>Rate Design (Based on Adjusted Costs)</u>				
36	Monthly Cost of Service Net of Revenue Credits		\$ 38.97		
37	Monthly Customer Costs			\$	170.83

MISSOURI GAS ENERGY
Class Revenue Proposal

Schedule RAF-4
Page 1 of 1

Line No.	[A] Rate Class	[B] Proposed Base Revenue Increase \$	[C] [D] [E] Revenue-to-Cost Ratio		
			Present Rates		Proposed Rates
			Absolute Ratio	Relative Ratio	Absolute Ratio
1	Residential Service	27,654,329	0.8062	0.9449	0.9667
2	Small General Service	2,835,461	0.9635	1.1291	1.0647
3	Large General Service	883,396	1.0466	1.2266	1.1136
4	Large Volume Service	1,041,920	1.0229	1.1987	1.1146
5	Total Company	32,415,106	0.8533	1.0000	1.0000

Missouri Gas Energy
Comparison of Present and Proposed Revenues

Schedule RAF-5
Page 1 of 1

Line No.	Description	[A]	[B]	[C]	[D]	[E]
		Total Revenue				
		Present Rates	Proposed Rates	Revenue Change	% Change	
		\$	\$	\$		%
1	Residential Service	404,106,048	431,760,377	27,654,329		6.8%
2	Small General Service	86,554,069	89,389,530	2,835,461		3.3%
3	Large General Service	69,744,069	70,627,465	883,396		1.3%
4	Large Volume Service	15,735,777	16,777,696	1,041,920		6.6%
5	Total Revenue	576,139,962	608,555,068	32,415,106		5.6%

Missouri Gas Energy
Comparison of Winter Gas Revenues for Residential Service (RS) Customers
Current SFV Rate Structure v. Previous Volumetric Rate Structure

Schedule RAF-6
Page 1 of 1

Line No.	Month	Customers	Volumes	Revenue - SFV	Revenue - Historical Rate Structure			Difference	Diff Per Customer
					Customer Charge	Volumetric Charge	Total Charge		
1	Nov-07	442,904	2,161,855	\$ 10,904,296	\$ 6,042,679	\$ 3,338,616	\$ 9,381,295	\$ 1,523,002	\$ 3.44
2	Dec-07	447,580	5,426,428	11,019,420	6,106,475	8,380,194	14,486,668	(3,467,249)	(7.75)
3	Jan-08	451,895	7,552,737	11,125,655	6,165,346	11,663,915	17,829,261	(6,703,606)	(14.83)
4	Feb-08	453,815	7,902,594	11,172,925	6,191,541	12,204,210	18,395,751	(7,222,825)	(15.92)
5	Mar-08	455,746	6,150,983	11,220,467	6,217,886	9,499,145	15,717,032	(4,496,565)	(9.87)
6				\$ 55,442,763	\$ 30,723,927	\$ 45,086,080	\$ 75,810,007	\$ (20,367,244)	\$ (44.92)
7	Nov-08	443,898	2,538,380	\$ 10,928,769	\$ 6,056,240	\$ 3,920,095	\$ 9,976,336	\$ 952,433	\$ 2.15
8	Dec-08	448,858	6,161,662	11,050,884	6,123,911	9,515,637	15,639,548	(4,588,664)	(10.22)
9	Jan-09	451,610	7,918,111	11,118,638	6,161,457	12,228,173	18,389,630	(7,270,992)	(16.10)
10	Feb-09	452,648	6,565,016	11,144,194	6,175,619	10,138,548	16,314,167	(5,169,974)	(11.42)
11				\$ 44,242,485	\$ 24,517,228	\$ 35,802,453	\$ 60,319,681	\$ (16,077,196)	\$ (35.60)
12	Total Nine Months			\$ 99,685,247	\$ 55,241,155	\$ 80,888,533	\$ 136,129,688	\$ (36,444,440)	\$ (80.52)

	Previous Rate Structure	Before Rate Increase	After Rate Increase
12	Customer Charge	\$ 11.65	\$ 13.64
13	Volumetric Charge	\$ 0.13187	\$ 0.15443

MISSOURI GAS ENERGY
Schedule RAF-7
Estimated Average Monthly Bill Under Present and Proposed Rates
Page 1 of 11
Residential Service (RS)

Line No.	(a)	(b)	(c)	(d)	(e)	(f)
		Present Rates		Proposed Rates		
1	Fixed Monthly Charge	\$24.62		\$29.83		
2	PGA Rate	\$0.77358		\$0.77358		
		AVERAGE CCF PER CUSTOMER	REVENUE AT PRESENT RATES	REVENUE AT PROPOSED RATES	MONTHLY BILL CHANGE	
					AMOUNT	PERCENT
3	Jan-08	157	\$145.69	\$150.90	\$5.21	3.58%
4	Feb-08	156	\$145.06	\$150.27	\$5.21	3.59%
5	Mar-08	113	\$112.23	\$117.44	\$5.21	4.64%
6	Apr-08	68	\$77.07	\$82.28	\$5.21	6.76%
7	May-08	36	\$52.16	\$57.37	\$5.21	9.99%
8	Jun-08	19	\$39.03	\$44.24	\$5.21	13.35%
9	Jul-08	16	\$37.28	\$42.49	\$5.21	13.97%
10	Aug-08	14	\$35.61	\$40.82	\$5.21	14.63%
11	Sep-08	17	\$37.43	\$42.64	\$5.21	13.92%
12	Oct-08	19	\$39.24	\$44.45	\$5.21	13.28%
13	Nov-08	54	\$66.21	\$71.42	\$5.21	7.87%
14	Dec-08	129	\$124.36	\$129.57	\$5.21	4.19%
15	Total	796	\$911.37	\$973.89	\$62.52	6.86%

MISSOURI GAS ENERGY
Estimated Monthly Bill Impacts
Residential Service (RS)

Schedule RAF-7
Page 2 of 11

Line No.	(a)	(b)	(c)	(d)	(e)	(f)
		Present Rates		Proposed Rates		
1	Fixed Monthly Charge	\$24.62		\$29.83		
2	PGA Rate	\$0.77358		\$0.77358		
	MONTHLY CONSUMPTION (CCF)	REVENUE AT PRESENT RATES	REVENUE AT PROPOSED RATES	REVENUE CHANGE		
				AMOUNT	PERCENT	
3	0	\$24.62	\$29.83	\$5.21	21.16%	
4	25	\$43.96	\$49.17	\$5.21	11.85%	
5	30	\$47.83	\$53.04	\$5.21	10.89%	
6	35	\$51.70	\$56.91	\$5.21	10.08%	
7	40	\$55.56	\$60.77	\$5.21	9.38%	
8	45	\$59.43	\$64.64	\$5.21	8.77%	
9	50	\$63.30	\$68.51	\$5.21	8.23%	
10	60	\$71.03	\$76.24	\$5.21	7.33%	
11	66	\$75.68	\$80.89	\$5.21	6.88%	
12	70	\$78.77	\$83.98	\$5.21	6.61%	
13	80	\$86.51	\$91.72	\$5.21	6.02%	
14	90	\$94.24	\$99.45	\$5.21	5.53%	
15	100	\$101.98	\$107.19	\$5.21	5.11%	
16	110	\$109.71	\$114.92	\$5.21	4.75%	
17	120	\$117.45	\$122.66	\$5.21	4.44%	
18	130	\$125.19	\$130.40	\$5.21	4.16%	
19	140	\$132.92	\$138.13	\$5.21	3.92%	
20	150	\$140.66	\$145.87	\$5.21	3.70%	
21	160	\$148.39	\$153.60	\$5.21	3.51%	
22	170	\$156.13	\$161.34	\$5.21	3.34%	
23	180	\$163.86	\$169.07	\$5.21	3.18%	
24	190	\$171.60	\$176.81	\$5.21	3.04%	
25	200	\$179.34	\$184.55	\$5.21	2.91%	
26	210	\$187.07	\$192.28	\$5.21	2.79%	
27	220	\$194.81	\$200.02	\$5.21	2.67%	
28	230	\$202.54	\$207.75	\$5.21	2.57%	
29	240	\$210.28	\$215.49	\$5.21	2.48%	
30	250	\$218.02	\$223.23	\$5.21	2.39%	
31	300	\$256.69	\$261.90	\$5.21	2.03%	
32	350	\$295.37	\$300.58	\$5.21	1.76%	
33	400	\$334.05	\$339.26	\$5.21	1.56%	
34	450	\$372.73	\$377.94	\$5.21	1.40%	
35	500	\$411.41	\$416.62	\$5.21	1.27%	

MISSOURI GAS ENERGY
Schedule RAF-7
Estimated Average Monthly Bill Under Present and Proposed Rates
Page 3 of 11
Small General Service (SGS)

Line No.	(a)	(b)	(c)	(d)	(e)	(f)
		Present Rates		Proposed Rates		
1	Fixed Monthly Charge	\$18.39		\$41.20		
2	Nov-Mar: 1st 600 Ccf:	\$0.17950		\$0.00000		
3	Nov-Mar: >600 Ccf:	\$0.16752		\$0.00000		
4	Apr-Oct: 1st 600 Ccf:	\$0.12297		\$0.00000		
5	Apr-Oct: >600 Ccf:	\$0.11103		\$0.00000		
6	PGA Rate	\$0.77358		\$0.77358		
		AVERAGE CCF PER CUSTOMER	REVENUE AT PRESENT RATES	REVENUE AT PROPOSED RATES	MONTHLY BILL CHANGE	
					AMOUNT	PERCENT
7	Jan-08	264	\$270.48	\$245.81	(\$24.67)	-9.12%
8	Feb-08	276	\$281.22	\$254.53	(\$26.69)	-9.49%
9	Mar-08	210	\$218.78	\$203.85	(\$14.93)	-6.82%
10	Apr-08	116	\$122.38	\$130.92	\$8.55	6.98%
11	May-08	60	\$72.40	\$87.80	\$15.40	21.27%
12	Jun-08	31	\$46.37	\$65.34	\$18.97	40.91%
13	Jul-08	27	\$42.69	\$62.17	\$19.48	45.63%
14	Aug-08	25	\$41.05	\$60.75	\$19.70	48.00%
15	Sep-08	29	\$44.29	\$63.55	\$19.26	43.48%
16	Oct-08	32	\$47.18	\$66.04	\$18.86	39.98%
17	Nov-08	80	\$94.56	\$103.02	\$8.46	8.95%
18	Dec-08	211	\$219.70	\$204.59	(\$15.10)	-6.87%
19	Total	1,362	\$1,501.08	\$1,548.37	\$47.29	3.15%

Schedule RAF-7
Page 4 of 11

4/1/2009

MISSOURI GAS ENERGY
Schedule RAF-7
Estimated Average Monthly Bill Under Present and Proposed Rates
Page 5 of 11
Small General Service (SGS) - Customers Transferred From LGS Rate Class

Line No.	(a)	(b)	(c)	(d)	(e)	(f)
		Present		Proposed		
		LGS Rates		SGS Rates		
1	Fixed Monthly Charge	\$108.91		\$41.20		
2	Nov-Mar Usage:	\$0.14498		\$0.00000		
3	Apr-Oct Usage:	\$0.08892		\$0.00000		
4	PGA Rate	\$0.77358		\$0.77358		
		AVERAGE	REVENUE AT	REVENUE AT	MONTHLY BILL CHANGE	
		CCF PER	PRESENT	PROPOSED	AMOUNT	PERCENT
		CUSTOMER	RATES	RATES		
5	Jan-08	1,147	\$1,162.42	\$928.43	(\$233.99)	-20.13%
6	Feb-08	730	\$779.76	\$606.16	(\$173.59)	-22.26%
7	Mar-08	471	\$541.42	\$405.44	(\$135.97)	-25.11%
8	Apr-08	190	\$273.21	\$188.56	(\$84.65)	-30.98%
9	May-08	101	\$196.38	\$119.65	(\$76.73)	-39.07%
10	Jun-08	51	\$153.19	\$80.92	(\$72.28)	-47.18%
11	Jul-08	35	\$138.67	\$67.89	(\$70.78)	-51.04%
12	Aug-08	41	\$144.56	\$73.17	(\$71.39)	-49.38%
13	Sep-08	57	\$158.36	\$85.55	(\$72.81)	-45.98%
14	Oct-08	60	\$160.33	\$87.32	(\$73.01)	-45.54%
15	Nov-08	160	\$255.98	\$165.06	(\$90.92)	-35.52%
16	Dec-08	755	\$802.38	\$625.22	(\$177.16)	-22.08%
17	Total	3,799	\$4,766.65	\$3,433.37	(\$1,333.28)	-27.97%

Schedule RAF-7
Page 6 of 11

4/1/2009

MISSOURI GAS ENERGY

Schedule RAF-7

Estimated Average Monthly Bill Under Present and Proposed Rates

Page 7 of 11

Large General Service (LGS)

Line No.	(a)	(b)	(c)	(d)	(e)	(f)
		<u>Present LGS Rates</u>	<u>Proposed LGS Blocks</u>	<u>Proposed LGS Rates</u>		
1	Fixed Monthly Charge	\$108.91		\$ 140.00		
2	Nov-Mar Usage:	\$0.14498	1st 1,800 Ccf	\$ 0.11466		
3	Apr-Oct Usage:	\$0.08892	>1,800 Ccf	\$ 0.07808		
4	PGA Rate	\$0.77358		\$ 0.77358		
		<u>AVERAGE CCF PER CUSTOMER</u>	<u>REVENUE AT PRESENT RATES</u>	<u>REVENUE AT PROPOSED RATES</u>	<u>MONTHLY BILL CHANGE AMOUNT</u>	<u>PERCENT</u>
5	Jan-08	3,812	\$3,610.87	\$3,452.75	(\$158.12)	-4.38%
6	Feb-08	3,951	\$3,738.37	\$3,570.96	(\$167.40)	-4.48%
7	Mar-08	3,145	\$2,998.15	\$2,884.66	(\$113.49)	-3.79%
8	Apr-08	1,975	\$1,812.64	\$1,888.16	\$75.52	4.17%
9	May-08	1,199	\$1,142.92	\$1,161.02	\$18.09	1.58%
10	Jun-08	714	\$724.40	\$747.75	\$23.35	3.22%
11	Jul-08	621	\$644.18	\$668.54	\$24.36	3.78%
12	Aug-08	592	\$619.71	\$644.38	\$24.67	3.98%
13	Sep-08	685	\$699.43	\$723.10	\$23.67	3.38%
14	Oct-08	778	\$779.65	\$802.31	\$22.66	2.91%
15	Nov-08	1,529	\$1,513.58	\$1,498.30	(\$15.28)	-1.01%
16	Dec-08	3,117	\$2,972.16	\$2,860.56	(\$111.60)	-3.75%
17	Total	22,118	\$21,256.05	\$20,902.49	(\$353.56)	-1.66%

MISSOURI GAS ENERGY
Estimated Monthly Bill Impacts
Large General Service (LGS)

Schedule RAF-7
Page 8 of 11

Line No.	(a)	(b)	(c)	(d)	(e)	(f)
		Present Rates	Proposed Blocks	Proposed Rates		
1	Fixed Monthly Charge	\$108.91		\$140.00		
2	Nov-Mar:	\$0.14498	1st 1,800 Ccf	\$0.11466		
3	Apr-Oct:	\$0.08892	>1,800 Ccf	\$0.07808		
4	PGA Rate	\$0.77358		\$0.77358		
	MONTHLY CONSUMPTION (CCF)		REVENUE AT PRESENT RATES (Nov-Mar)	REVENUE AT PROPOSED RATES (Nov-Mar)	REVENUE CHANGE AMOUNT	PERCENT
5	0		\$108.91	\$140.00	\$31.09	28.55%
6	500		\$568.19	\$584.12	\$15.93	2.80%
7	600		\$660.05	\$672.94	\$12.90	1.95%
8	700		\$751.90	\$761.77	\$9.87	1.31%
9	800		\$843.76	\$850.59	\$6.83	0.81%
10	900		\$935.61	\$939.42	\$3.80	0.41%
11	1,000		\$1,027.47	\$1,028.24	\$0.77	0.07%
12	1,200		\$1,211.18	\$1,205.89	(\$5.29)	-0.44%
13	1,400		\$1,394.89	\$1,383.54	(\$11.36)	-0.81%
14	1,600		\$1,578.61	\$1,561.18	(\$17.42)	-1.10%
15	1,800		\$1,762.32	\$1,738.83	(\$23.49)	-1.33%
16	1,843	Average	\$1,801.82	\$1,777.03	(\$24.79)	-1.38%
17	2,000		\$1,946.03	\$1,909.16	(\$36.87)	-1.89%
18	2,500		\$2,405.31	\$2,334.99	(\$70.32)	-2.92%
19	3,000		\$2,864.59	\$2,760.82	(\$103.77)	-3.62%
20	3,500		\$3,323.87	\$3,186.65	(\$137.22)	-4.13%
21	4,000		\$3,783.15	\$3,612.48	(\$170.67)	-4.51%
22	4,500		\$4,242.43	\$4,038.31	(\$204.12)	-4.81%
23	5,000		\$4,701.71	\$4,464.14	(\$237.57)	-5.05%
24	5,500		\$5,160.99	\$4,889.97	(\$271.02)	-5.25%
25	6,000		\$5,620.27	\$5,315.80	(\$304.47)	-5.42%
26	6,500		\$6,079.55	\$5,741.63	(\$337.92)	-5.56%
27	7,000		\$6,538.83	\$6,167.46	(\$371.37)	-5.68%
28	7,500		\$6,998.11	\$6,593.29	(\$404.82)	-5.78%
29	8,000		\$7,457.39	\$7,019.12	(\$438.27)	-5.88%
30	8,500		\$7,916.67	\$7,444.95	(\$471.72)	-5.96%
31	9,000		\$8,375.95	\$7,870.78	(\$505.17)	-6.03%
32	10,000		\$9,294.51	\$8,722.44	(\$572.07)	-6.15%
33	11,000		\$10,213.07	\$9,574.10	(\$638.97)	-6.26%
34	12,000		\$11,131.63	\$10,425.76	(\$705.87)	-6.34%
35	13,000		\$12,050.19	\$11,277.42	(\$772.77)	-6.41%
36	14,000		\$12,968.75	\$12,129.08	(\$839.67)	-6.47%
37	15,000		\$13,887.31	\$12,980.74	(\$906.57)	-6.53%
38	17,000		\$15,724.43	\$14,684.06	(\$1,040.37)	-6.62%
39	19,000		\$17,561.55	\$16,387.38	(\$1,174.17)	-6.69%
40	21,000		\$19,398.67	\$18,090.70	(\$1,307.97)	-6.74%
41	23,000		\$21,235.79	\$19,794.02	(\$1,441.77)	-6.79%

MISSOURI GAS ENERGY
Schedule RAF-7
Estimated Average Monthly Bill Under Present and Proposed Rates
Page 9 of 11
Large General Service (LGS) - Customers Transferred From SGS Rate Class

Line No.	(a)	(b)	(c)	(d)	(e)	(f)
		<u>Present SGS Rates</u>	<u>Proposed LGS Blocks</u>	<u>Proposed LGS Rates</u>		
1	Fixed Monthly Charge	\$18.39		\$140.00		
2	Nov-Mar: 1st 600 Ccf:	\$0.17950	1st 1,800 Ccf	\$0.11466		
3	Nov-Mar: >600 Ccf:	\$0.16752	>1,800 Ccf	\$0.07808		
4	Apr-Oct: 1st 600 Ccf:	\$0.12297				
5	Apr-Oct: >600 Ccf:	\$0.11103				
6	PGA Rate	\$0.77358		\$0.77358		
		<u>AVERAGE CCF PER CUSTOMER</u>	<u>REVENUE AT PRESENT RATES</u>	<u>REVENUE AT PROPOSED RATES</u>	<u>MONTHLY BILL CHANGE AMOUNT</u>	<u>PERCENT</u>
7	Jan-08	3,395	\$3,220.63	\$3,097.24	(\$123.38)	-3.83%
8	Feb-08	3,525	\$3,342.87	\$3,207.87	(\$135.00)	-4.04%
9	Mar-08	2,825	\$2,684.19	\$2,611.79	(\$72.40)	-2.70%
10	Apr-08	1,770	\$1,591.26	\$1,712.13	\$120.87	7.60%
11	May-08	1,075	\$976.60	\$1,094.95	\$118.35	12.12%
12	Jun-08	647	\$597.46	\$714.25	\$116.79	19.55%
13	Jul-08	560	\$520.31	\$637.27	\$116.96	22.48%
14	Aug-08	538	\$500.89	\$618.03	\$117.14	23.39%
15	Sep-08	619	\$572.79	\$689.48	\$116.69	20.37%
16	Oct-08	694	\$639.45	\$756.41	\$116.97	18.29%
17	Nov-08	1,362	\$1,307.30	\$1,349.73	\$42.43	3.25%
18	Dec-08	2,771	\$2,633.71	\$2,566.10	(\$67.60)	-2.57%
19	Total	19,780	\$18,587.45	\$19,055.25	\$467.80	2.52%

Large General Service (LGS) - Customers Transferred From SGS Rate Class

Page 10 of 11

4/1/2009

MISSOURI GAS ENERGY
Estimated Monthly Bill Impacts
Large Volume Service (LVS)

Schedule RAF-7
Page 11 of 11

Line No.	(a)	(b)	(c)	(d)	(e)	(f)
		Present Rates		Proposed Rates		
1	Fixed Monthly Charge	\$860.95		\$929.57		
2	Nov-Mar: 1st 30k Ccf:	\$0.05209		\$0.04361		
3	Nov-Mar: >30k Ccf:	\$0.04088		\$0.03261		
4	Apr-Oct: 1st 30k Ccf:	\$0.03294		\$0.00000		
5	Apr-Oct: >30k Ccf:	\$0.02174		\$0.00000		
	PGA Rate	\$0.77358		\$0.77358		
	MONTHLY CONSUMPTION (CCF)	REVENUE AT PRESENT RATES (Nov-Mar)	REVENUE AT PROPOSED RATES (Nov-Mar)	REVENUE CHANGE		
				AMOUNT	PERCENT	
6	0	\$860.95	\$929.57	\$69	7.97%	
7	500	\$1,273.79	\$1,338.17	\$64	5.05%	
8	1,000	\$1,686.62	\$1,746.76	\$60	3.57%	
9	1,200	\$1,851.75	\$1,910.20	\$58	3.16%	
10	1,400	\$2,016.89	\$2,073.64	\$57	2.81%	
11	1,600	\$2,182.02	\$2,237.07	\$55	2.52%	
12	1,800	\$2,347.16	\$2,400.51	\$53	2.27%	
13	3,000	\$3,337.96	\$3,381.14	\$43	1.29%	
14	3,200	\$3,503.09	\$3,544.58	\$41	1.18%	
15	3,400	\$3,668.23	\$3,708.02	\$40	1.08%	
16	3,600	\$3,833.36	\$3,871.45	\$38	0.99%	
17	3,800	\$3,998.50	\$4,034.89	\$36	0.91%	
18	5,000	\$4,989.30	\$5,015.52	\$26	0.53%	
19	5,200	\$5,154.43	\$5,178.96	\$25	0.48%	
20	5,400	\$5,319.57	\$5,342.40	\$23	0.43%	
21	5,600	\$5,484.70	\$5,505.83	\$21	0.39%	
22	5,800	\$5,649.84	\$5,669.27	\$19	0.34%	
23	10,000	\$9,117.65	\$9,101.47	(\$16)	-0.18%	
24	10,200	\$9,282.78	\$9,264.91	(\$18)	-0.19%	
25	10,400	\$9,447.92	\$9,428.35	(\$20)	-0.21%	
26	10,600	\$9,613.05	\$9,591.78	(\$21)	-0.22%	
27	10,800	\$9,778.19	\$9,755.22	(\$23)	-0.23%	
28	20,000	\$17,374.35	\$17,273.37	(\$101)	-0.58%	
29	20,200	\$17,539.48	\$17,436.81	(\$103)	-0.59%	
30	20,400	\$17,704.62	\$17,600.25	(\$104)	-0.59%	
31	20,600	\$17,869.75	\$17,763.68	(\$106)	-0.59%	
32	20,800	\$18,034.89	\$17,927.12	(\$108)	-0.60%	
33	30,000	\$25,631.05	\$25,445.27	(\$186)	-0.72%	
34	30,200	\$25,793.94	\$25,606.51	(\$187)	-0.73%	
35	30,400	\$25,956.83	\$25,767.75	(\$189)	-0.73%	
36	30,600	\$26,119.73	\$25,928.98	(\$191)	-0.73%	
37	30,800	\$26,282.62	\$26,090.22	(\$192)	-0.73%	
38	40,000	\$33,775.65	\$33,507.17	(\$268)	-0.79%	
39	50,000	\$41,920.25	\$41,569.07	(\$351)	-0.84%	
40	44,200	\$37,196.38	\$36,893.17	(\$303)	-0.82%	
41	75,000	\$62,281.75	\$61,723.82	(\$558)	-0.90%	
42	100,000	\$82,643.25	\$81,878.57	(\$765)	-0.93%	
43	200,000	\$164,089.25	\$162,497.57	(\$1,592)	-0.97%	