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Witness:	Donald E. Johnstone
Type of Exhibit:	Rebuttal Testimony
Sponsoring Party:	CMSU, MGUA, UMKC
Case Number:	GR-2004-0209
Date Prepared:	May 24, 2004

Missouri Gas Energy

GR-2004-0209

Rebuttal Testimony of

Donald E. Johnstone

on behalf of

Central Missouri State University
Midwest Gas Users' Association
University of Missouri at Kansas City

May 24, 2004

Competitive Energy
DYNAMICS

BEFORE THE

PUBLIC SERVICE COMMISSION OF MISSOURI

In the Matter of Missouri Gas Energy's Tariffs to Implement a General Rate Increase for Natural Gas Service	)))	**Case No. GR-2004-0209** Tariff No. YG-2004-0624

Affidavit of Donald E. Johnstone

State of Missouri)
) SS
County of Camden)

Donald E. Johnstone, being first duly sworn, on his oath states:

1. My name is Donald E. Johnstone. I am a consultant and President of Competitive Energy Dynamics, L. L. C. I reside at 19 Black Hawk Drive, Lake Ozark, MO 65049. I have been retained by Central Missouri State University, the Midwest Gas Users' Association and the University of Missouri at Kansas City.

2. Attached hereto and made a part hereof for all purposes are my rebuttal testimony and schedules in written form for introduction into evidence in the above captioned proceeding.

3. I hereby swear and affirm that my rebuttal testimony and schedules are true and correct and show the matters and things they purport to show.

Donald E. Johnstone

Subscribed and sworn before me this 24th day of May, 2004

Sarah Sosnowski

Notary Public

SARAH SOSNOWSKI
Notary Public - State of Missouri
County of Camden
My Commission Expires Sep. 27, 2005

Competitive Energy
DYNAMICS

Missouri Gas Energy

GR-2004-0209

Rebuttal Testimony of Donald E. Johnstone

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Missouri Gas Energy

GR-2004-0209

Rebuttal Testimony of Donald E. Johnstone

INTRODUCTION

Q PLEASE STATE YOUR NAME AND ADDRESS.

A Donald E. Johnstone. My address is 19 Black Hawk Drive, Lake Ozark, MO 65049.

Q BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A I am President of Competitive Energy Dynamics, L. L. C. My qualifications and experience are set forth in Appendix A to this testimony.

Q ON WHOSE BEHALF ARE YOU APPEARING?

A I am appearing on behalf of the Central Missouri State University (CMSU), The Midwest Gas Users' Association (MGUA) and the University of Missouri at Kansas City (UMKC). Members of the MGUA and the universities purchase transportation service from MGE under rate schedule LVS.

Q WHAT IS THE INTEREST OF YOUR CLIENTS IN THIS PROCEEDING?

A My clients share an interest in appropriate rates, terms and conditions of service for the transportation services they buy from MGE. Like many other parties, they support the proposition that the cost of providing services should be the fundamental starting point for the design of rates. As a matter of principle, the customers that cause the costs to be incurred should pay those costs through appropriate rates. This is known as the principle of cost causation in matters of rate design. Conversely, one group of customers should not be required to pay costs created by others in addition to paying their own costs. In other words, rates should be based on costs in order to eliminate subsidies between and among the customer classes. There are additional appropriate considerations such as rate stability, understandability, rate administration, and gradualism. In appropriate circumstances these considerations should be applied in conjunction with the principle of cost causation.

CMSU, MGUA, and UMKC share a concern that rate LVS as proposed by MGE is too high. Costs associated with sales service are included in the rate even though my clients purchase only transportation service. Transportation customers take responsibility for arranging their own gas supplies. Nevertheless, MGE has included significant costs for planning, acquiring, managing, and financing its natural gas supplies in the LVS transportation rates. These costs need to be fully identified and removed from rate LVS. In addition, the allocation of the cost of distribution mains overstates the cost to serve LVS customers. For the purposes of this proceeding, the LVS rate should be set no higher than the level recommended by the company (after lowering LVS and all other rates to account for the overall approved revenue level) since that level will necessarily overstate the rates for transportation customers. A preferable result will incorporate recommendations set forth in this testimony to remove some of the inappropriate costs from rate LVS.

Silence on other issues and the testimonies of other parties does not indicate either support or acquiescence to any other particular proposal and my clients reserve the right to assert additional positions at appropriate times in this proceeding.

THE MGE RATE DESIGN PROPOSAL

Q PLEASE SUMMARIZE THE CLASS COST-OF-SERVICE RESULTS OF MGE WITNESS F. JAY CUMMINGS.

A Mr. Cummings submitted a class cost-of-service study that allocated test year costs among the customer classes. The study followed the procedure of grouping costs according to function, classifying the costs as customer related, volume related or demand related and then allocating the costs among the customer classes. For the purposes of this proceeding I recommend use of this study with some modifications as recommended below. The study as submitted fails to fully identify differences between the cost of serving transportation customers and sales customers, and the allocation of the cost of distribution mains overstates the costs to serve LVS customers. As a result, the cost of serving the large volume transportation customers is overstated. MGE proposes increased revenues from the customer classes generally consistent with results of the costs of service study, but with one notable exception. MGE proposes no change of the large general service class even though the study shows that the class should receive a decrease. It is preferable to adjust the rates to produce revenues equal to the cost of service for each class of customers. At this time there are no impact considerations that should limit the move to cost-based class revenue responsibility.

Q PLEASE SUMMARIZE THE CHANGES IN RATE STRUCTURE FOR RATE LVS THAT ARE PROPOSED BY MGE.

A MGE proposes to change the seasonal design of the rate LVS. Currently there are higher charges for 5 winter months and lower charges for the remaining 7 months. MGE proposes to increase the rate for service in April by including it in the winter period. The proposed increases are 56% for the first block (usage up to 30,000 Ccf) and 83% for the second block (usage over 30,000 Ccf). MGE also proposed to increase the monthly customer charge from $409.30 to $614.00, a 50% increase.

Q DO YOU DISAGREE WITH THE PROPOSED CHANGES IN THE LVS RATES?

A Yes. The cost of providing service should be the primary guiding principle in the design of rates. First, there should be a move to the class cost-of-service results for all customer classes. Second, I disagree with the changes proposed for the Rate LVS.

Q HOW SHOULD ANY APPROVED INCREASE BE SPREAD AMONG THE CUSTOMER CLASSES?

A In this case, based on testimony filed to date, it appears unlikely that that the increase will be so large that it will be necessary to mitigate the impacts of the appropriate cost-of-service adjustments on the customer classes according to the MGE proposal. Therefore, for the purpose of this case, I recommend a spread of the increase to yield rate revenues by class according to the MGE class cost-of-service study based on the approved cost and revenue level. If a study that reflects the approved costs and revenue requirements is not available, the rates should be adjusted to yield class revenues in equal proportion to the class revenues according to the MGE class cost-of-service study instead of mitigating the move to cost-of-service based class revenues as proposed by MGE. Of course, it is also desirable to incorporate into the class cost-of-service study the modifications I recommended elsewhere in this testimony.

Q HOW SHOULD RATE LVS BE DESIGNED?

A The seasonal differential employed in the current design of Rate LVS is based on the principle of cost causation and helps to price service correctly within the class. The seasonal differential should be continued based on the current definition, which includes 5 months for the winter period. An important cost factor is the demand for transportation capacity during the winter peak and the higher charges during the winter season assist in collecting revenue based on the type of usage that creates the cost. Conversely, lower charges during the rest of the year reflect lower costs as compared to the winter period. April is far from the winter peak usage which, based on weather, is most likely to occur in January or February. MGE has provided no evidence to suggest that the current winter definition is incorrect and the MGE proposal has the appearance of being arbitrary. The arbitrary proposal would increase the April rates as follows:

Rate Block	Present	Proposed	Increase
Usage up to 30,000 Ccf	$.02826	$.04576	53%
Over 30,000 Ccf	$.01865	$.03615	83%

These are very large moves in the wrong direction. Instead, I recommend that April remain a non-winter month for Rate LVS customers.

Another concern is with the 50% increase in the customer charge. This increase presents a disproportionate increase for UMKC because it receives gas through 5 rate LVS meters and for CMSU because it receives gas through 14 rate LVS meters. In both cases the deliveries are consolidated for the management of transportation gas deliveries. The universities have paid the substantial cost of electronic metering as required by the MGE tariff for each of the meters and also pay a monthly fee and the monthly cost of a telephone line. The result is more efficient administration for MGE. In recognition of this efficiency and the lower cost it is more reasonable to continue the current dollar amount of the charge for multiple meters. For customers with 3 or more meters, the multiple meter factor should be adjusted to maintain the present rate of $204.65 per meter.

THE MGE CLASS COST-OF-SERVICE STUDY

Q PLEASE SUMMARIZE THE PROBLEMS IN THE MGE CLASS COST-OF-SERVICE STUDY?

A As a general observation, MGE has not adequately accounted for the lower than average costs associated with LVS customers. First, there are a number of costs that are necessary for service to customers that purchase gas from MGE that are inapplicable to transportation service. Second, the larger volume of LVS customers means that they do not use the smaller 2” and 4” distribution mains to any significant degree and this should be explicitly recognized in the class cost-of-service study. Third, the LVS tariff requires customers to pay the cost of electronic gas metering equipment and customers must not be required to pay any of these costs again as a result of the class cost-of-service study procedures.

Q DO THE PROBLEMS IN THE MGE CLASS COST-OF-SERVICE STUDY LEAD TO AN OVERSTATEMENT OF THE COST OF SERVING LVS CUSTOMERS?

A Yes, adjustments to the study are needed to correct these problems. The result would be a more accurate study in which the cost of serving LVS customers is lower than shown in the MGE study.

Q WHAT ADJUSTMENTS DO YOU RECOMMEND FOR THE MGE CLASS COST-OF-SERVICE STUDY?

A The first point was that some of the costs incurred by MGE are almost entirely for the benefit of sales customers and not for transportation customers. The first example is the cost of gas inventory. The cost of gas in inventory is a rate base item incurred predominantly for the benefit of sales customers and they should bear the costs. The only connection to transportation customers is in any small amount of gas usage that may be associated with balancing. To account for the balancing use I recommend an allocation computation for the LVS class based on 1% of the peak usage of the transportation customers. This is a reasonable amount because usage associated with imbalances will be either positive or negative form time to time and also will average to zero over time. The computation of the allocation factor is shown on Schedule 1. It should be used to allocate the Gas Inventory cost appearing in the MGE class cost-of-service study at Ex ____, Schedule FJC-3, page 17, line 203. It should also be used for the allocation of commodity-related working capital requirements.

Another example is the lower cost of meter reading due to the electronic gas metering equipment used for LVS customers. The unit cost of reading the meters of LVS customers is much less and should be fully recognized.

Yet another example is the cost of gas supply acquisition planning and administration. These costs have not yet been quantified, but are a part of the cost of A & G that are allocated among all customers, including transportation customers. Unfortunately, I do not at this time have a quantified estimate of these costs.

My second point is that the larger usage of the LVS customers means that MGE uses the larger mains for service to these customers. It follows that the investment in smaller mains is for service to the smaller customers in the other rate classes. As computed by Mr. Beck, the average diameter of service lines to LVS customers is 5.3". It follows that 5" and smaller mains are not practical for delivering gas to LVS customers and the costs of the smaller mains cannot, therefore, be appropriately allocated to LVS customers. Instead mains of a diameter of 6" or more are necessary. The cost of mains that are 6" or larger in diameter, those used to serve LVS and all other customers represent 47% of the installed cost of mains by the MGE cost data. Since these larger mains are also used to feed gas to the smaller mains used to serve the smaller customers the cost of these mains is properly allocated among all customer classes.

There is a similar set for circumstances related to the mains used to serve the LGS customers. They are predominantly served from mains of a 4" diameter or larger since the average service line is 3.3". Finally, the smaller mains are do not have enough capacity to meet the needs of either the LVS or

LGS customers and the costs of these mains are therefore properly allocated among the SGS and residential customers.

Schedule 2 sets forth the cost of the mains by size according the MGE Mains Study and computes a weighted allocation factor according to which mains are useful in service to the various classes of customers. The resulting allocation factor is necessary for an accurate determination of cost responsibility under the MGE class cost-of-service study. It should be used for the peak demand related allocation of the cost of distribution mains. Since MGE did not make this computation, the cost of serving the LVS class is overstated in the MGE study.

In regard to my third point, the LVS customers should receive appropriate recognition in the class cost-of-service study of the $5000 dollar contribution each is required to make to MGE to defray the cost of metering. MGE develops the installed cost of meters by class, but the analysis makes no recognition of the contribution. The dollar value is in total $2.4 million at this time, as shown on Schedule 3.

In reviewing the workpapers related to meter costs I identified a mathematical mistake in the weights computed for the meter installation costs. The weights should be as shown on Schedule 4.

THE MPSC STAFF CLASS COST-0F-SERVICE STUDY

Q PLEASE SUMMARIZE THE CLASS COST-OF-SERVICE STUDY PREPARED BY THE MPSC STAFF.

A Mr. Beck has submitted a class cost-of-service study. However, I do not believe the study as filed reasonably reflects the costs of serving the customer classes. After review I prepared one modification to the study which addresses some of the problems. Other problems remain and I do not recommend use of the original Staff study or the modified study by the Commission.

Q PLEASE SUMMARIZE THE STAFF METHOD FOR ALLOCATING COSTS RELATED TO THE DISTRIBUTION MAINS ON THE MGE SYSTEM.

A As a preliminary matter the Staff method relies on data that is old and in some cases borrowed. Mr. Beck refers parties to his testimony in Docket GR-96-285 for a description of the method. In that case Staff presented a method which was intended to identify a portion of the cost of distribution mains based on a hypothetical stand alone system of distribution mains. A second portion of the cost of the distribution mains was allocated among classes in proportion to Staff's calculation of normalized class peak demands.

Q PLEASE DESCRIBE THE STAND ALONE SYSTEM DEVELOPED BY STAFF.

A As I understand the history of the method, the installed costs of distribution mains of various vintages were, in Staff's work for the 1996 case, escalated to then current cost levels. The results were "replacement costs" by pipe size.

Staff developed a method for calculating the amount of pipe that would be required by each class of customers under what Staff characterized as a stand alone system. Staff borrowed data from a variety of sources and made an estimate of the average length of distribution main attributable to each customer, by customer class. It should be noted that the data excluded Kansas City because of the cost to acquire the data. Some data was borrowed from other areas. Staff in its direct testimony in this proceeding makes virtually no attempt to explain the use of the data, to establish the current appropriateness of the data, or to explain the method and calculations used for this case. In my opinion, Staff in these circumstances should bear the responsibility for explaining the extent to which all such data may be appropriate to the purposes for which it was used in this proceeding. My further comments on the method and the adjustments made to the method will address the methods used, without agreeing in any way that the data used by Staff (and therefore in my illustration) is appropriate to the purpose.

Q HAS THE STAFF DESIGNED A REASONABLE STAND ALONE COMPONENT FOR THE ALLOCATION OF THE COST OF DISTRIBUTION MAINS?

A While the concept of finding a cost and class cost responsibility for a stand alone system of distribution mains could have some merit, there is little proof that the Staff approach accomplishes the objective. The result seems to reflect a stand alone system more in name than in reality. First, there is the problem of stale data, some of which is even more questionable because it is not from the MGE service territory. Second, Staff uses a replacement cost approach that may in the circumstances of MGE distort the costs. Third, Staff assumes pipe sizes for its stand alone system that are insufficient to serve the aggregate requirements of the customer classes. Fourth, there is no evidence that the class length responsibilities are accurate in either an absolute or a relative sense. It seems that the concept of a fully allocated cost study has been intertwined with the stand alone concept in a way that thwarts the goal of identifying a stand alone system cost. The resulting distribution mains in the stand alone systems for the classes are not of sufficient size or length to indeed stand alone in providing service to the classes. Fifth, the pipe sizes selected are non-standard sizes and to a certain extent are unrealistic for the purpose of defining a bonafide stand alone system of distribution mains.

On the first point, the data for the replacement cost of the pipes is the same as in the 1996 case. Thus, current replacement costs are not reflected. Also the customer density calculations did not include data for Kansas City while using data from outside of the service area. I find nothing in the materials provided by Staff which addresses these issues or explains or defends the appropriateness of the data that on its face is of dubious applicability.

On the second point, there is no evidence that replacement costs result in a more accurate representation of class cost responsibility than the per book costs. Depending on where expansion occurs and for what purpose, it may be that the use of replacement cost introduces distortion in the relative costs of mains as compared to using book costs.

On the third point, Staff uses the average size of service lines as the basis for its stand alone system. However, assuming the approach is indeed intended to serve the stand alone needs of each customer class, it misses the mark because there is no recognition of the aggregate needs of each class. For example the residential class is assumed to be comprised of .88 inch diameter mains. However, it is clear that larger mains are also required to deliver the gas required in aggregate for the residential class. The other classes also have a need for mains larger than the average service line size used in computations for the classes. Furthermore, on a stand alone basis the sum of the costs to service each of the classes should logically be greater than the integrated system cost. However, under the Staff study it is only 28% of the total. If the stand alone costs were really only 28% of the total there would be no need for the public utility service as it exists because separate stand alone systems would be more economical. It has been demonstrated with customer transportation service that a public utility approach to gas supply is not always a benefit and the Staff result, if correct, calls into question the need for a public utility in regard to distribution mains. I do not believe that is a reasonable conclusion and I therefore question what the Staff characterizes as a stand alone cost for the distribution mains.

Fourth, the customer stand alone length responsibilities are not only dubious because of the data sources, as discussed above, but also because of the calculation and the result. According to Staff calculations, a stand alone system for the residential class would not need 18% of the current length of mains. On the other end of the spectrum, the LGS and LVS classes together would have no need for 99% of the total length of current mains. If this were true these customers should either have their own utility or be allocated substantially less cost than any party has proposed in this proceeding. Instead, I seriously question the reasonableness of the stand alone length calculation.

Fifth, the stand alone pipe sizes selected are non-standard sizes and therefore unrealistic. As a practical matter, there are existing discrete pipe sizes. This means that a stand alone system of mains must use a size of pipe larger than the average computed by Staff. For the purpose of illustration, I adjusted the Residential and SGS stand alone main sizes to 2", the LGS size to 4", and the stand alone LVS size to 6". Assuming all other aspects of the Staff approach are valid (an assumption questioned hereinabove) I recomputed the stand alone allocation. The LVS allocation is reduced from 3.06 % to 2.19%, a 28% reduction in allocated stand alone costs. In addition, the stand alone costs as a percentage of the total cost of mains increases from 28% to 47%. Thus, small adjustments towards more reasonable stand alone costs make a big difference in the result. However, the result is still dubious. With the sum of the costs of the stand alone systems at 47% of the integrated system cost it is clear that all stand alone costs have still not been identified. This is not surprising since the need for larger mains to feed the smaller ones has not been incorporated into the analysis.

Q PLEASE DESCRIBE THE MEASURE OF PEAK DEMAND USED BY STAFF AS A PART OF THE DISTRIBUTION MAINS ALLOCATION FACTOR.

A The Staff develops an allocation factor based on an estimate of the weather normalized peak demands of each rate class. Monthly usage and weather statistics are used in a regression analysis to estimate the impact of weather on usage (measured as MCF per heating degree day). Staff then combines the estimated usage relationships with an estimate of peak weather to derive an estimate of class peak demands. The estimates of peak demand are given a weight of 72% when combined with the stand alone allocation factor to produce the allocation factor used for distribution mains.

Q HAS THE STAFF DEVELOPED A REASONABLE PEAK COMPONENT FOR THE ALLOCATION OF THE COST OF DISTRIBUTION MAINS?

A No, there are several problems. First, it would be preferable in the case of the LVS class to obtain actual peak day usage thru use of the electronic measurement devices required by the LVS tariff. An appropriate weather adjustment would be better applied to the actual peak demand. Instead, Staff has made a series of computations to derive a normalized peak without the benefit of any calibration of the computations with actual peaks. In addition, Staff assumes an 80% monthly load factor for the non-weather sensitive usage in its computations. This is an important assumption that would be unnecessary with the use of actual peak data.

The Staff replacement cost and stand alone calculations, while subject to question, at least illustrate an important characteristic of the distribution mains. That is the fact that smaller mains are used to reach smaller customers, not larger customers. The average size of the service line of LVS customers is estimated by Staff in excess of 5". It logically follows that 2" and 4" mains have a predominant use that is not for LVS customers, but rather residential, SGS and LGS customers. Similarly, the average service line for LGS customers is over 3". Again it follows that the predominant use of 2" mains will be for the smaller residential and SGS customers. These considerations should be incorporated into the allocation of the demand related costs of distribution mains.

Once the peak demands are estimated, they are weighted by 72% in the Staff's Distribution Mains allocation factor. The 72% weight represents the proportion of the Staff's computation of the replacement cost of distribution mains that is not captured by the stand alone cost. In this testimony above I explained an adjustment to the stand alone computation to incorporate the discrete pipe sizes used for distribution mains. An effect was to increase the stand alone component to 47%. A corresponding consequence is a reduction in the peak demand weight from 72% to 53%.

Q PLEASE QUANTIFY THE EFFECT OF YOUR CHANGED ASSUMPTIONS ON THE STAFF ALLOCATION FACTOR FOR DISTRIBUTION MAINS.

A The computation of the allocation factor with the modifications is set forth in attached Schedules 5 and 6. As compared to the Staff approach the amount of costs allocated to the residential class increases while the costs allocated to other classes goes down.

Q ARE THERE ADDITIONAL CONCERNS WITH THE STAFF STUDY?

A Yes, and several are the same concerns I presented in regard to the MGE class cost-of-service study. The allocation of rate base costs associated with gas supplies should reflect the negligible contribution of LVS transportation customers to these costs. Similarly, the $2.4 million contribution of LVS transportation customers should be accurately credited to the meters and installation costs. Also other costs not associated with transportation service should be identified and removed from costs allocated to the LVS class.

<u>THE OPC CLASS COST-0F-SERVICE STUDY</u>

Q PLEASE SUMMARIZE THE CLASS COST-OF-SERVICE STUDY PREPARED BY OPC.

A Mr. James A. Busch has submitted a class cost-of-service study for the OPC, while some of the theory in support of the study was submitted by Ms. Barbara A. Meisenheimer. In my opinion the OPC study overstates the cost of serving the transportation customers. It does not account for important differences in the cost of providing service to large customers versus small and to higher load factor customers versus lower load factor customers. Also, the absence of certain costs for transportation customers that provide their own gas supplies should be recognized and the reduced customer costs for the transportation customers that are required to pay up front for the cost of electronic metering should be recognized. Consequently, I disagree with several important aspects the theories as applied by OPC, the OPC class cost-of-service study results, and the OPC recommendations based on the results.

Q HOW WERE THE COSTS RELATED TO DISTRIBUTION MAINS ADDRESSED IN THE OPC CLASS COST-OF-SERVICE STUDY?

A The cost of mains is an important part of OPC's class cost-of-service study simply because the cost is large: $217 million of the $504 million of rate base in the OPC study. OPC discusses economies of scale, but adapts and adjusts the concept in ways that produce an unreasonable result. For example, the cost per unit of monthly peak demand according to the OPC calculation should be 30% higher during the off-peak months than it is during the 5 winter months. Instead, in recognition of the undeniable fact that the system must install capacity sufficient to meet the higher winter usage requirements, the unit cost must be higher in the winter. Indeed, the current rate LVS has a volumetric charge that is 56% higher in the 5 winter months for usage up to 3,000 MCF. For additional usage (over 3,000 MCF per month) the charge per MCF is 88% higher in the winter. This is one illustration of the variation of the OPC study from accepted theory.

Another measure is to compare the effect among classes. I calculated the relative unit cost for the residential class and LVS class based on January demand. I found the cost allocated by OPC to be 57% higher for the large customers as compared to the residential customers. However, the January residential class peak usage according to OPC workpapers was 19 times higher than July peak usage. This is the result of a very poor load factor, a consideration that inevitably leads to higher unit costs.

An additional point in regard to mains is raised by the difference between the OPC and MGE analyzes. Mr. Cummings used a method that accounts for 35% of the cost of mains as customer related due to the fact that a portion of the costs of mains must be incurred just to extend the mains to customers, regardless of the size of customer loads. This consideration is ignored or perhaps denied by OPC, but as compared to the OPC analysis, the MGE study has the economy of scale effect going in the correct direction. More pipes have to be installed to reach multiple small customers and at the same time the small customer size means that the customer component has a relatively larger impact. As a result, the unit costs are higher, not lower, for residential customers.

Q HAS OPC CORRECTLY ACCOUNTED FOR THE DIFFERENCE BETWEEN TRANSPORTATION SERVICE AND SALES SERVICE?

A No. For example, Mr. Busch allocates $11.9 million of the gas inventory costs to transportation customers. This is 25% of the total inventory cost. There can be no persuasive explanation of this when one considers that transportation customers, by definition, furnish their own gas. One can address balancing requirements, but any such use would be small, possibly negligible. Imbalances arise from small percentage variations between supplies and usage that vary in both directions, positive and negative, and over time must average to zero. Moreover, as a result of recent tariff changes any net imbalance remaining at the end of each month will be cashed out, further ensuring that MGE's gas in storage will not be there on behalf of transportation customers. In summary, the failure to properly recognize and/or account for the difference between gas supplies for sales service and the lack of gas supply cost for transportation service leads OPC to an overstatement of the costs to serve the LVS customers.

One additional consideration I will address at this time is the cost of metering. As a term of service, transportation customers must pay up front to install electronic metering at a cost of up to $5,000 per meter. In addition, a dedicated phone line is provided by the transportation customers for each meter. Absent an appropriate accounting for the monies contributed by transportation customers, there will be what amounts to duplicative charges for metering costs previously paid for by the transportation customers.

SUMMARY OF RECOMMENDATIONS

Q WHAT ARE YOUR RECOMMENDATIONS?

A They are as follows:

1. I recommend revisions to the MGE class cost-of-service study to more accurately reflect the cost of service. Absent a revised class cost-of-service study the MGE study should be considered as a maximum for the LVS class (after adjustment reduce the results to the overall revenue level approved in this proceeding).
2. If a revised class cost-of-service study is not available, adjust the rate revenue by class to yield class revenues in equal proportion to the class revenues according to the MGE class cost-of-service study.
3. For Rate LVS, reject the proposal of MGE to change the seasonal structure; April should not be changed to a winter month.
4. For Rate LVS, adopt a reasonable increase in the customer charge and, for customers with 3 or more meters, adjust the multiple meter factor to maintain the present rate of $204.65. After accommodating the recommended changes to the customer charges, adjust the volumetric charges on an equal percentage basis to yield recommended class rate revenues.

Q DOES THIS CONCLUDE YOUR TESTIMONY?

A Yes it does.

Qualifications of Donald E. Johnstone

Q PLEASE STATE YOUR NAME AND ADDRESS.

A Donald E. Johnstone. My address is 19 Black Hawk Drive, Lake Ozark, MO 65049.

Q PLEASE STATE YOUR OCCUPATION.

A I am President of Competitive Energy Dynamics, L.L.C. and a consultant in the field of public utility regulation.

Q PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.

A In 1968, I received a Bachelor of Science Degree in Electrical Engineering from the University of Missouri at Rolla. After graduation, I worked in the customer engineering division of a computer manufacturer. From 1969 to 1973, I was an officer in the Air Force, where most of my work was related to the Aircraft Structural Integrity Program in the areas of data processing, data base design and economic cost analysis. Also in 1973, I received a Master of Business Administration Degree from Oklahoma City University.

From 1973 through 1981, I was employed by a large Midwestern utility and worked in the Power Operations and Corporate Planning Functions. While in the Power Operations Function, I had assignments relating to the peak demand and net output forecasts and load behavior studies which included such factors as weather, conservation and seasonality. I also analyzed the cost of replacement energy associated with forced outages of generation facilities. In the Corporate Planning Function, my assignments included developmental work on a generation expansion planning program and work on the peak demand and sales forecasts. From 1977 through 1981, I was Supervisor of the Load Forecasting Group where my responsibilities included the Company's sales and peak demand forecasts and the weather normalization of sales.

In 1981, I began consulting, and in 2000, I created the firm Competitive Energy Dynamics, L.L.C. As a part of my twenty years of consulting practice, I have participated in the analysis of various electric, gas, water, and sewer utility matters, including the analysis and preparation of cost-of-service studies and rate analyses. In addition to general rate cases, I have participated in electric fuel and gas cost reviews and planning proceedings, policy proceedings, market price surveys, generation capacity evaluations, and assorted matters related to the restructuring of the electric and gas industries. I have also assisted companies seeking locations for new manufacturing facilities.

I have testified before the state regulatory commissions of Delaware, Hawaii, Illinois, Iowa, Kansas, Massachusetts, Missouri, Montana, New Hampshire, Ohio, Pennsylvania, Tennessee, Virginia and West Virginia, and the Rate Commission of the Metropolitan St. Louis Sewer District.

Missouri Gas Energy

Peak Volume Allocation Factor

Line	Class	MGE Study Peak Volume	Allocation Recommended For Gas Supply Related Costs Volume	Factor
1	Residential	4,441,060	4,441,060	0.73732
2	Small General Service	1,369,852	1,369,852	0.22743
3	Large General Service	199,346	199,346	0.03310
4	Large Volume Service	1,302,260	13,023	0.00216
5	Total	7,312,518	6,023,281	1.00000

Missouri Gas Energy

Cost of Mains by Size Category
Size Weighted Peak Volume Allocation Factor

Item	Total	6" or Larger	4"	Less than 4"
Mains Cost	$820,850,942	$382,643,290	$198,129,323	$240,078,329
Main Usage Weight	1.00000	0.46615	0.24137	0.29247

Class	Peak Volume Allocation Factor	Peak Volume on Mains 6" or Larger Amount	Peak Volume on Mains 6" or Larger Percent	Peak Volume on 4" Mains Amount	Peak Volume on 4" Mains Percent	Peak Volume on Mains Less Than 4" Amount	Peak Volume on Mains Less Than 4" Percent
Residential	0.68499	4,441,060	0.60732	4,441,060	0.73891	4,441,060	0.76426
Small General Service	0.21128	1,369,852	0.18733	1,369,852	0.22792	1,369,852	0.23574
Large General Service	0.02071	199,346	0.02726	199,346	0.03317	-	0.00000
Large Volume	0.08302	1,302,260	0.17809	-	0.00000	-	0.00000
	1.00000	7,312,518	1.00000	6,010,258	1.00000	5,810,912	1.00000

Schedule 2

Note: The Source of the cost of mains by size is the MGE spreadsheet workpaper "Mains Study".

LVS Adjustment May 23 2004
5/24/2004
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Missouri Gas Energy

LVS Customer Contribution Credit

Billable meter count (per response to Jackson County DR No. 10)	5800
Number of Meters	483.33
Contribution Amount per meter	$5,000
Total Contribution Amount	$2,416,667

Note: The tariff provides for a contribution of up to $5,000 per meter. The actual contribution amounts should be used for the credit.

Schedule 3

Missouri Gas Energy

Weighted Meter Installations
Allocation Factor

Line	Class	Billing Determinants	Average Bills	Meter Installation	Meter Installation Weight
1	Residential	5,337,625	444,802	$ 366.84	1.00
2	Small General Service	633,020	52,752	$ 366.84	1.00
3	Large General Service	4,742	395	$ 1,467.32	4.00
4	Large Volume Service	5,681	473	$ 5,373.79	14.65

Note: The meter installation weights appearing at line 18, page 27 in Schedule FJC-3 of Exhibit ____ should be replaced with the above weights.

Missouri Gas Energy - Case No. GR- 2004-0209
Mains Allocation Factor Workpaper - Modified for Staff Study

24-May-04
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Stand Alone Allocator Stand Alone Allocation Percent: 46.7264%

Class	Service Line Diameter	Stand Alone Diameter	Stand Alone Cost/ Length	Weight	Customers	Weighted Customers	Main Length/ Customer	Total Length	Stand Alone Cost	Percent	Stand Alone Allocation Factor
Residential	0.8888	2"	$ 16.0457	1.00	436,132	436,132	70.63	30,805,854	$494,302,680	0.8011	0.3743
Small General Service	1.3832	2"	$ 16.0457	1.44	63,969	92,115	101.71	6,506,499	$104,401,579	0.1692	0.0791
Large General Service	3.3318	4"	$ 30.1719	5.30	425	2,253	374.36	159,104	$4,800,464	0.0078	0.0036
Large Volume	5.1099	6"	$ 45.5233	8.76	479	4,196	618.76	296,384	$13,492,386	0.0219	0.0102
					501,005	534,696		37,767,840	$616,997,108	1.0000	0.4673
									$1,320,445,792		

Service Line Diameter is the average diameter of the service line for each class.
Stand Alone Diameter is the smallest diameter main line available to handle the average service line. 1.634078708 1.1595765 4.5975
Stand Alone Cost/Length estimate is calculated using the following equation: @EXP(1.634079+(@LN(Diameter)*1.159577))+4.5975 5.124734446
Weight was based on length calculations that take into acount the average size of lot (parcel of land) for each class.
Customers based on Staff data.
Weighted Customers is the product of Weight and Customers.
Main Length/Customer is based on the total length of main for the system that provided by the Company.
Total Length for each class is the product of Main Length/Customer and Customers.
Stand Alone Cost is the product of Total Length and Stand Alone Cost/Length.
Percent is the ratio of the Stand Alone Cost for each class to the Total Stand Alone cost for the system.
Stand Alone Allocator is the ratio of the Stand Alone Cost for each class to the Total Replacement Cost for the system.
Main Usage Weight represents the portion of mains cost used to serve the classes.
For LVS, the minimum system size is 5.1". Therefore cost of 4" and 2" mains is not allocated to LVS
For LGS, the minimum system size is 3.3". Therefore cost of 2" mains is not allocated to LGS

Integrated Demand Allocator Demand Allocation Percent: 53.2736%

Class	Integrated Demand Allocator	Peak Day GE 6" Demand	Percent	Peak Day 4" Demand	Percent	Peak Day 2" Demand	Percent
Residential	0.345605	4,328,785	0.586356	4,328,785	0.717598	4,328,785	0.733831
Small General Service	0.125355	1,570,099	0.212678	1,570,099	0.260281	1,570,099	0.266169
Large General Service	0.007996	133,446	0.018076	133,446	0.022122	0	0.000000
Large Volume	0.053781	1,350,194	0.182891	0	0.000000	0	0.000000
	0.532736	7,382,524	1.000000	6,032,330	1.000000	5,898,884	1.000000
Main Usage Weight			0.551981		0.227431		0.220588

Missouri Gas Energy - Case No. GR-2004-0209
Mains Allocators
Modified for Staff Study

Distribution Mains Allocation Factor

Class	Stand Alone Allocator	Integrated Demand Allocator	Total Allocator
Residential	0.374345	0.345605	0.719950
Small General Service	0.079065	0.125355	0.204420
Large General Service	0.003635	0.007996	0.011631
Large Volume	0.010218	0.053781	0.063999
	0.467264	0.532736	1.000000