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LACLEDE GAS COMPANY
MISSOURI GAS ENERGY

GR-2017-0215
GR-2017-0216

REBUTTAL TESTIMONY

OF

TIMOTHY S. LYONS

OCTOBER 2017

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REBUTTAL TESTIMONY OF TIMOTHY S. LYONS

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

A. My name is Timothy S. Lyons. I am a Partner at ScottMadden, Inc. My business address is 1900 West Park Drive, Suite 250, Westborough, Massachusetts 01581.

Q. ARE YOU THE SAME TIMOTHY S. LYONS WHO PREVIOUSLY SPONSORED DIRECT TESTIMONY IN THIS PROCEEDING?

A. Yes, I am. I provided direct testimony ("Direct Testimony") before the Missouri Public Service Commission (the "Commission") on behalf of Laclede Gas ("LAC") and Missouri Gas Energy ("MGE"), operating units of Laclede Gas Company ("Laclede" or "Company").

Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

A. The purpose of this rebuttal testimony ("Rebuttal Testimony") is to respond to the Staff of the Missouri Public Service Commission's ("Staff") Class Cost of Service Report ("Staff Report") related to the LAC and MGE proposed Class Cost of Service Study ("CCOS") and Rate Design. In addition, this rebuttal testimony will respond to the direct testimony of Brian C. Collins on behalf of the Missouri Industrial Energy Consumers ("MIEC") related to the LAC and MGE CCOS and Rate Design proposals.

Q. HAVE YOU PREPARED SCHEDULES SUPPORTING YOUR REBUTTAL TESTIMONY?

A. Yes. Schedule TSL-R1 supports this rebuttal testimony. This Schedule was prepared by me or under my direction and is incorporated herein by reference.

I. SUMMARY OF POSITIONS

Q. PLEASE SUMMARIZE STAFF'S RECOMMENDATIONS RELATED TO LAC AND MGE'S PROPOSED CCOS AND RATE DESIGN.

A. Staff recommends the following changes to the LAC and MGE CCOS and Rate Design proposals:

1. Consolidate LAC's three Commercial and Industrial General Service classes into one General Service Class.
2. Consolidate MGE's Small and Large General Service classes into one General Service Class.
3. Utilize Staff's CCOS as the basis for establishing revenue targets and rate design.
4. Set LAC's revenue targets by apportioning the rate increase to each rate class on an equal percentage basis. For the portion of the rate increase at or below Staff's recommendation of $12.0 million, apportion the rate increase to each rate class on an equal percentage basis; however, the portion of the increase that would be applicable to the Large Volume, Transportation and Interruptible rate classes are allocated to the consolidated General Service class. For the portion of the rate increase above Staff's recommendation of $12.0 million,

apportion the rate increase to each rate class on an equal percentage basis. The revenue targets reflect Staff's approach that each rate class should not overpay or underpay by more than 5.0 percent of their revenue requirement.

5. Set MGE's revenue targets by apportioning the rate increase to each rate class based on an equal percentage following a $0.7 million shift in revenue responsibility to the Large Volume rate class from the Residential rate class. The revenue targets reflect Staff's approach that each rate class should not overpay or underpay by more than 5.0 percent of their revenue requirement.
6. Eliminate the Residential, C1, C2, and C3 Seasonal air conditioning customer classes for LAC.
7. Revise LAC's Residential rates to reflect a customer charge of $26.00 per month and a flat, per-therm volumetric rate. As an alternative, Staff prepared an inclining block rate design.
8. Revise MGE's Residential rates to reflect a customer charge of $20.00 per month and a flat, per therm volumetric rate. As an alternative, Staff prepared an inclining block rate design.
9. Set LAC's consolidated General Service rates to reflect a customer charge of $48.52 per month and a flat, per-therm volumetric rate.
10. Set MGE's consolidated General Service rates to reflect a customer charge of $37.50 per month and a flat, per-therm volumetric rate.
11. Set LAC's Large Volume, Large Volume Transport and Interruptible rates to reflect no change in revenue requirement.

12. Set MGE's Large Volume and Unmetered Lighting Service to reflect an equal percentage increase in each rate element.

Q. PLEASE SUMMARIZE THE AREAS OF AGREEMENT WITH STAFF.

A. LAC and MGE generally agree with many of Staff's CCOS and rate design methodologies and recommendations, including:

1. The overall approach to developing the CCOS that determines each customer class's responsibility to the overall cost of service. Staff's CCOS follows the same underlying principle as the LAC and MGE CCOS: to allocate costs in a manner that best reflects cost causation. However, there are some important methodology differences between the studies that are discussed below.
2. Key principles considered in developing rate design recommendations. LAC and MGE agree that rates should be fair, minimizing inter-and intra-class inequities to the extent possible, and rate changes should be tempered by rate continuity and equity concerns.
3. LAC and MGE generally agree with Staff's approach to simplify the rate design, but only in the context of the proposed Revenue Stabilization Mechanisms ("RSM"). The proposed RSM, as noted in direct testimony, provides flexibility in the rate design that enables LAC and MGE to better balance their rate design objectives, including moderating customer bill impacts on low use customers and adopting a simpler rate design.

Q. PLEASE SUMMARIZE LAC'S AND MGE'S POSITION ON STAFF'S RECOMMENDATIONS.

A. The position of LAC and MGE on Staff's recommendation is presented below.

1. LAC and MGE continue to support their proposed Small General Service ("SGS") and Large General Service ("LGS") rate classes. They believe that the proposed rate classes better reflect the underlying cost differences in serving different types of customers within the General Service class. The General Service class includes customers that have a wide variety of gas demands. The General Service class includes, for example, small, storefront businesses whose gas demands are very similar to those of a residential customer in addition to large commercial businesses whose gas demands are substantially greater. The differences in gas demand have an impact on the cost of service, with some customers, for example, having significantly higher service connection costs (e.g., meters, regulators and services) than other customers. In addition, the proposed SGS and LGS rate classes help to mitigate bill impacts on General Service customers, especially low-use customers through lower customer charges.

2. LAC and MGE continue to support the main, service and meter allocators used in their respective CCOS studies since they are more consistent with previously filed CCOS studies, are recognized by NARUC and other authorities of utility rate design, better reflect the planning of facilities investments, and better reflect the underlying cost of service than those respective allocators used in Staff's CCOS.

3. LAC and MGE continue to support their proposed revenue targets based on the proposed rate increase since it moves each rate class – including the SGS and LGS rate classes – closer to their individual class cost of service (i.e., at equalized rates of return). The proposed revenue targets also better reflect customer bill impact considerations when adjusted to align LAC's and MGE's and Staff's revenue requirement increases, especially for low-use SGS customers.
4. LAC does not oppose the proposed elimination of the Residential, C1, C2, and C3 seasonal air conditioning customer classes.
5. LAC and MGE continue to support, in the context of the proposed RSM, steps to moderate the impact of customer charges on low-use customers as well as remove the financial disincentive to promote customer conservation and energy efficiency measures, which, without the RSM, would have an adverse impact on utility earnings since traditional utility rate designs tie revenues to customer use.
6. LAC and MGE continue to support, in the context of their proposed RSM, setting volumetric charges through a single volumetric charge, with a few exceptions for large Commercial and Industrial ("C&I") customers.[1] LAC and MGE do not support the alternative approach of an inclining block rate design.

Q. PLEASE DESCRIBE MIEC'S RECOMMENDATIONS.

[1] Declining block rates for large industrial customers are supportive of increased economic output so long as the block margin exceeds the incremental cost of service

A. The MIEC proposes a correction to MGE's CCOS related to an incorrect cell reference in the spreadsheet.[2] In addition, MIEC proposes to move class revenue targets closer to their full cost of service.

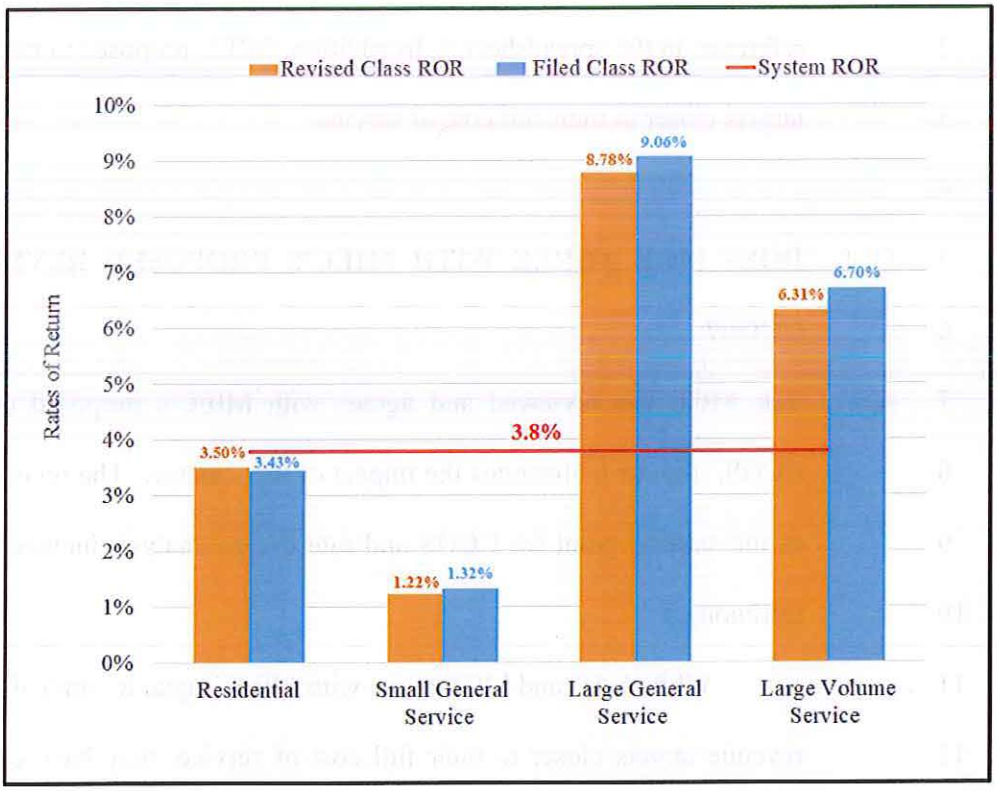
Q. DOES MGE AGREE WITH MIEC'S PROPOSED REVISION TO THE CCOS?

A. Yes, MGE has reviewed and agrees with MIEC's proposed correction to the CCOS. Figure 1 illustrates the impact of that change. The revised CCOS is used as the starting point for CCOS and rate design analysis included in this rebuttal testimony.

While LAC and MGE agree with MIEC's goal to gradually move the class revenue targets closer to their full cost of service, they have concerns with the customer bill impacts associated with the proposed rate increases.

[2] Direct Testimony of Brian C. Collins on behalf of Missouri Industrial Energy Consumers, pg. 7

Figure 1: Revised Comparison of Class Rates of Return (MGE)



Q. WHY IS THE RSM IMPORTANT TO THE RATE DESIGN PROPOSALS?

A. Gas utility costs are largely fixed and change very little in the short run as usage levels change. However, distribution rates, especially for residential and small commercial customers, generally have a significant variable or usage-based component (or per Therm) that changes customer bills and revenues substantially as usage levels change. To the extent that actual usage is significantly lower than the level assumed in rates, then the utility rates no longer recover the full cost of service. Conversely, to the extent that actual usage is significantly higher than the amount assumed in rates, then the utility rates recover revenues in excess of the cost of service. This represents a misalignment between utility costs and rates.

There are many causes for variations in usage, including the impact of weather, energy conservation, and installation of energy efficiency measures.

Q. WHY IS THE MISALIGNMENT A PROBLEM?

A. The misalignment between utility costs and rates is a problem for two reasons. First, increases or decreases in usage will cause the utility to over- or under-collect its fixed costs. This creates improper financial incentives, including incentives for utilities to sell as much natural gas as possible. It also creates financial disincentives for utilities to encourage customers to be more energy efficient.

Second, the mismatch between utility costs and rates creates bill volatility for customers as well as revenue and earnings volatility for utilities. For example, colder-than-normal winter temperatures may lead to higher customer bills and higher utility revenues without a corresponding increase in utility delivery costs, a result that is exacerbated for customers as gas prices tend to also increase during such winters. Conversely, warmer-than-normal winter temperatures may lead to lower customer bills and lower utility revenues without a corresponding decrease in utility delivery costs, and at a time when gas prices tend to moderate.

Q. HOW DOES THE RSM CORRECT THIS PROBLEM?

A. The RSM adjusts the relationship between the amount of natural gas delivered by a utility and the rates it charges from such delivery in order to keep revenue and the distribution portion of customers' bills more consistent. Such stabilization

impacts revenues due to weather and energy efficiency, but keeps the utility accountable for maintaining customer levels and controlling costs. According to The American Council for an Energy-Efficiency Economy (ACEEE) 2017 Scorecard, 22 states have implemented a decoupling mechanism for gas utilities, and seven states have a form of partial decoupling know as a "Lost Revenue Adjustment Mechanism (LRAM)". [3]

Q. WHAT ARE THE MAIN BENEFITS OF THE RSM?

A. There are several benefits associated with the RSM. The RSM:

- Stabilizes customer bills and improves LAC's and MGE's ability to recover their costs;
- Provides LAC and MGE with a more stable stream of revenues, and prevents over-collection and under-collection of costs as actual sales vary from test year sales due to weather and/or energy efficiency;
- Eliminates LAC's and MGE's financial disincentive to promote energy efficiency; and
- Helps ensure fixed cost recovery while preventing over-recoveries.

II. CONSOLIDATION OF GENERAL SERVICE CLASSES

Q. WHAT IS STAFF'S RECOMMENDATION REGARDING THE PROPOSED CONSOLIDATION OF LAC'S THREE COMMERCIAL AND

[3] Berg et. al., *The 2017 State Energy Efficiency Scorecard* (2017), http://aceee.org/research-report/u1710.

INDUSTRIAL GENERAL SERVICE CLASSES INTO ONE GENERAL SERVICE CLASS?

A. Staff proposes to consolidate LAC's three Commercial and Industrial General Service classes (*i.e.,* C1, C2 and C3) into one General Service Class, as well as consolidate MGE's Small and Large General Service classes into one General Service.[4] Staff's rationale for the proposed consolidation is:

1. The billing determinants for the SGS and LGS rate classes do not reflect the appropriate number of customers and usage associated with those rate classes since some customers classified as SGS have annual usage consistent with the LGS rate class, while some customers classified as LGS have annual usage consistent with the SGS rate class.
2. Many customers would receive a lower bill for the same usage if served on a rate schedule different than the schedule for their annual usage. This result is inconsistent with the results of the CCOS. The issue is further complicated following a rate change as customers move to their appropriate rate class resulting in a shift of customers, usage and revenues among the rate classes.
3. Class consolidation would better mitigate bill impacts resulting from the proposed increase.

Q. WHAT IS THE GENERAL APPROACH TO ESTABLISHING RATE CLASSES?

[4] Staff Class Cost of Service Report, pg. 14

A. The general approach to establishing rate classes is to group together those customers with similar demand characteristics while keeping distinct those customers with different demand characteristics. Demand characteristics are an important driver of utility costs and thus an important driver of assigning costs to each rate class.

The approach is discussed in industry literature related to developing sound rate structures.[5] The NARUC Gas Distribution Rate Design Manual notes,

> "In order to design rates, it is first necessary to divide the utility's customers into various rate classes. This is done by defining rate classes according to certain characteristics which are common to all members of the class. The specific factors used to define rate classes will depend upon the characteristics of the customer population and the goals to be achieved. Factors which have been used to define rate classes include: (1) size, (2) customer type, (3) type of usage, (4) interruptible or firm service, (5) load factor, and (6) alternate fuel capability...In determining which factors to use in setting rate classes, it is necessary to consider the objectives to be achieved. In theory utility rates could be designed for only a single rate class. However, an appropriate division of customers into rate classes can achieve a variety of goals, including economic efficiency, fairness and equity, reflection of costs, social needs, competitiveness, operating efficiency, business climate

[5] See e.g., Bonbright, James, Danielsen, Albert, and Kamerschen, David. "Principles of Public Utility Rates." Public Utilities Reports, Inc. pp. 377-407 (2nd ed. 1988).

development, rate stability, conservation and political feasibility. The need for a reasonable division of rate classes to achieve these goals exists whether the rates are designed based on cost of service principles or some other means."[6]

The proposed SGS and LGS classes represent customers with distinct demand characteristics, as shown in Figure 2. Specifically, the LGS use per customer is more than 30 times the SGS use per customer for LAC and more than 20 times for MGE.

Figure 2: Comparison of SGS and LGS Demand Characteristics

	Use per Customer (Therms)	
Rate Classes	**LAC**	**MGE**
SGS	2,095	1,898
LGS	63,160	39,185

Q. DO LAC AND MGE AGREE WITH STAFF'S RECOMMENDATION TO CONSOLIDATE THE GENERAL SERVICE CLASS?

A. No, LAC and MGE continue to support their proposed Small General Service ("SGS") and Large General Service ("LGS") rate classes rather than Staff's proposed consolidation into one General Service class. LAC and MGE believe that the proposed rate classes better reflect the underlying cost differences in serving different types of customers within the General Service class. The General Service class includes customers that have a wide variety of gas

[6] National Association of Regulatory Utility Commissioners, Staff Subcommittee on Gas. "Gas Distribution Rate Design Manual" pp. 15-17 (June 1989).

demands. The General Service class includes, for example, small, storefront businesses whose gas demands are very similar to those of a residential customer in addition to large commercial businesses whose gas demands are substantially greater. The differences in gas demand have an impact on the cost of service, with some customers, for example, having significantly higher service connection costs (e.g., meters and services) than other customers. In addition, the proposed approach is consistent with the approach taken by other gas utilities in the Midwest.

In addition, proposed SGS and LGS rate classes help to mitigate bill impact on General Service customers, especially low-use customers.

Q. DO LAC AND MGE AGREE THAT THE BILLING DETERMINANTS USED TO DESIGN THE RATES MIGHT INCLUDE CUSTOMERS CLASSIFIED IN ANOTHER RATE CLASS?

A. No, LAC and MGE performed rate switching and classification adjustments as part of the rate case process to reflect customers who switched rates throughout the test year, as well as adjusting for customers who were determined would switch customer classes based on an annual usage review.[7]

Q. DOES LAC AGREE THAT MANY CUSTOMERS WOULD RECEIVE A LOWER BILL FOR THE SAME USAGE IF SERVED ON A RATE

[7] Direct Testimony of Keri A. Feldman, pgs. 12-14.

SCHEDULE DIFFERENT THAN THE SCHEDULE FOR THEIR ANNUAL USAGE?

A. It would depend on the rate class and annual usage. Schedule TSL-R1, page 1 of 7 compares for LAC the customer bill impacts of the proposed SGS and LGS rates across a range of annual usage. Specifically, the Schedule shows that SGS customers would have lower annual bills if billed on SGS rates rather than LGS rates. In addition, most LGS customers would have lower annual bills if billed on LGS rates rather than SGS rates, although there are cases where certain LGS customers would have lower annual bills if billed on SGS rates, especially low use customers due to the impact of the higher customer charge on the LGS rates as compared to the SGS rates.

Q. DOES MGE AGREE THAT MANY CUSTOMERS WOULD RECEIVE A LOWER BILL FOR THE SAME USAGE IF SERVED ON A RATE SCHEDULE DIFFERENT THAN THE SCHEDULE FOR THEIR ANNUAL USAGE?

A. Yes, however that situation exists today, and appears to be largely related to a cross-subsidy in rates between the SGS and LGS rate classes. While it would be desirable to eliminate such cross-subsidy to better reflect the underlying cost of service differences between the SGS and LGS classes, MGE recognizes that in the interest of bill continuity concerns, such disparity should be addressed over time as reflected in the proposed rate design. There are, however, potential variations to the proposed rate design that could help reduce the disparity, including

modifications to the proposed customer charges. In any case, however, General Service consolidation would only mask the cost differences in the SGS and LGS classes.

Q. PLEASE EXPLAIN.

A. Schedule TSL-R1, page 5 of 7, compares for MGE the customer bill impacts of the proposed SGS and LGS rates across a range of annual usage. Specifically, the Schedule shows that SGS customers would have lower annual bills if billed on SGS rates rather than LGS rates. In addition, LGS customers would also have lower annual bills if billed on the SGS rates rather than the LGS rates. This reflects the approach used to develop the SGS and LGS rates, including setting of revenue targets that reflect subsidies for the SGS class.

However, this is not a new issue. Presently, MGE's SGS customer and volumetric charges are lower than that of LGS, as summarized in Figure 3.

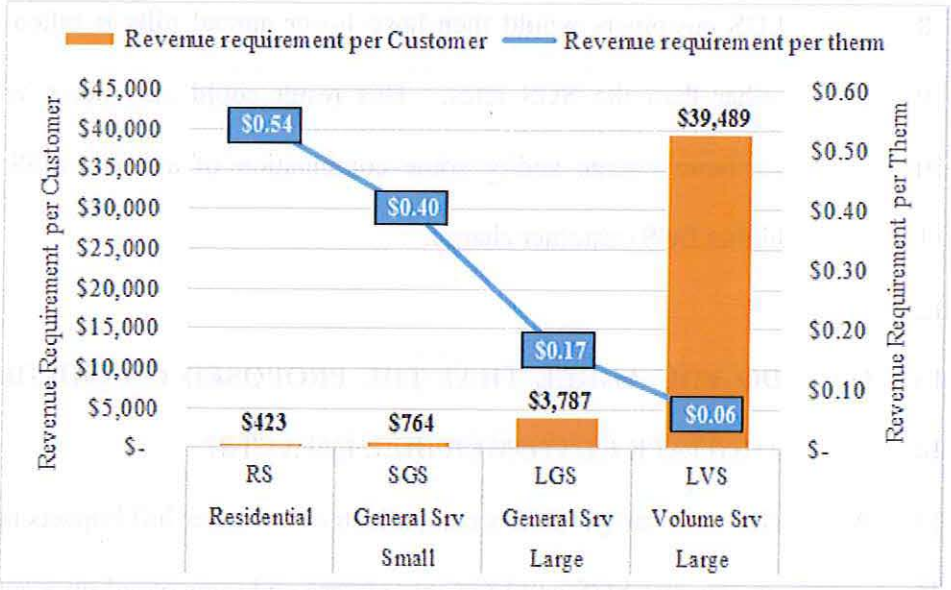
Figure 3: Comparison of MGE's Current SGS and LGS Rates

	SGS	LGS
Customer Charge	$34.00	$125.00
Volumetric Charge (Peak)	$0.05430	$0.13268
Volumetric Charge (Off-Peak)	$0.05430	$0.07647

Presently, the SGS customer charge of $34.00 and volumetric charge of $0.05430 per therm are less than the LGS customer charge of $125.00 and volumetric charges of $0.13268 in the peak and $0.07647 in the off-peak.

However, SGS rates are lower than LGS rates not due to the underlying differences in the cost of service. SGS's cost of service is higher than LGS, as shown in Figure 4. Specifically, SGS's cost of service is $0.40 per therm while the LGS's cost of service is $0.17 per therm. While Figure 4 represents the results of the Company's CCOS, Staff's CCOS shows a similar result that SGS's cost of service on a $ per therm basis is more than LGS's cost of service.

Figure 4: MGE'S Cost of Service by Rate Class



Instead, SGS rates are lower than the LGS rates largely due to the cross subsidy between the SGS and LGS classes. Specifically, MGE's proposed SGS rates are based on a revenue target that is less than its revenue requirement by over $1.9 million, or 8.5 percent. Conversely, MGE's proposed LGS rates are based on a revenue target that exceeds its revenue requirement by over $1.9 million, or 15.7 percent.

Thus, the approach to correct the misalignment between MGE's SGS and LGS rates and cost of service is not to consolidate the rate classes but to eliminate

the subsidies over a reasonable time period in recognition of the bill continuity concerns discussed earlier. Consolidating the rate classes would only serve to mask the underlying cost of service differences.

There are options to mitigate the misalignment between the SGS and LGS rates and costs during the transition period to setting rates based on the cost of service. For example, MGE could lower the SGS customer charge, which would raise the volumetric charge to be higher than LGS volumetric charge. High-use LGS customers would then have lower annual bills if billed on the LGS rates rather than the SGS rates. This result could also occur with a higher LGS customer charge and/or some combination of a lower SGS customer charge/ higher LGS customer charge.

Q. DO YOU AGREE THAT THE PROPOSED CONSOLIDATION WOULD MIGITATE CUSTOMER BILL IMPACTS?

A. Not necessarily. Staff's comparison of customer bill impacts between rates based on separate SGS and LGS rate classes and rates based on a consolidated General Service class is based on different revenue requirements, making the comparison an apples-to-oranges comparison. MGE's proposed SGS and LGS rates are based on an overall rate increase of $50.4 million while Staff's proposed consolidated General Service rates are based on an overall rate increase of $8.7 million.

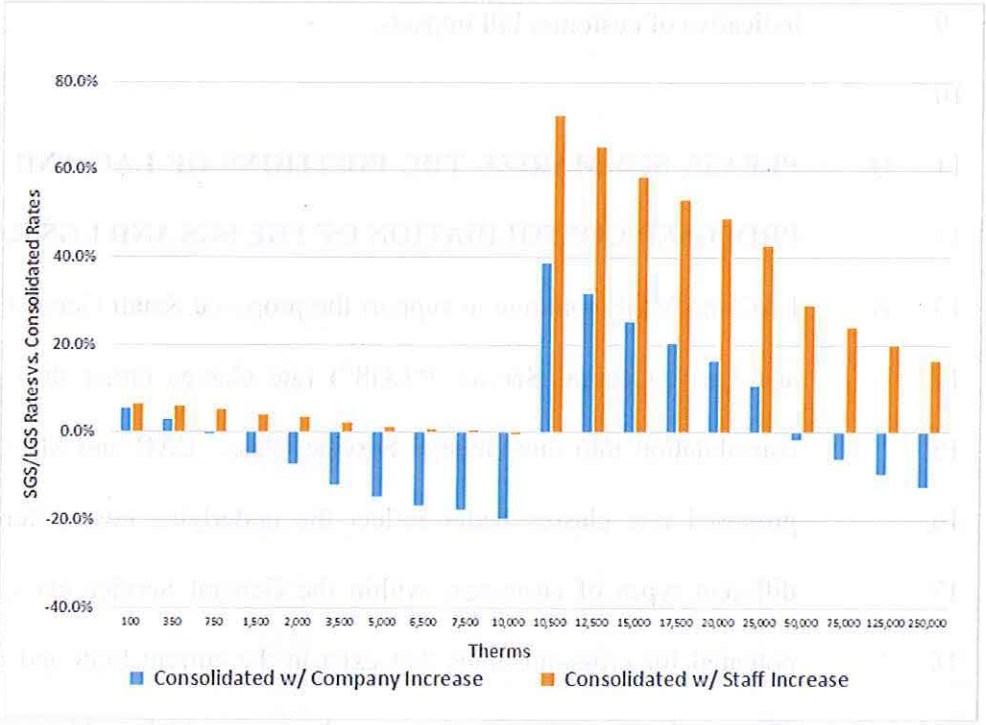
To correct for that mismatch, MGE calculated a consolidated General Service rate based on the combined proposed revenue targets for the SGS and

LGS rate classes based on the proposed revenue requirements. This reflects an 'apples-to-apples' comparison.

Q. WHAT ARE THE CUSTOMER BILL IMPACTS ASSOCIATED WITH THE APPLES-TO-APPLES COMPARISON?

A. The customer bill impacts associated with the apples-to-apples comparison is shown on Figure 5.

Figure 5: Comparison of Bill Impacts (MGE)



The Figure compares the percentage difference between annual bills based on the proposed SGS and LGS rates and annual bills based on a consolidated General Service class, separately calculated based on Staff's proposed rate increase and MGE's proposed rate increase. Figure 5 shows lower percentage bill impacts

when the comparison is based on MGE's proposed rate increase than Staff's proposed rate increase.

Even with the apples-to-apples comparison, there are large differences in the LGS bill impacts to rates (i.e., annual usage of 10,000 therms and higher). These are largely attributable to MGE's proposed customer charge of $125.00 per month as compared to Staff's proposed customer charge of $37.50 per month. It is important to note that MGE's LGS customers today are assessed a customer charge of $115.00 per month, thus the changes reflected in Figure 5 are not indicative of customer bill impacts.

Q. PLEASE SUMMARIZE THE POSITIONS OF LAC AND MGE ON THE PROPOSED CONSOLIDATION OF THE SGS AND LGS RATE CLASSES.

A. LAC and MGE continue to support the proposed Small General Service ("SGS") and Large General Service ("LGS") rate classes rather than Staff's proposed consolidation into one General Service Class. LAC and MGE believe that the proposed rate classes better reflect the underlying cost differences in serving different types of customers within the General Service class, and reduces the potential for cross-subsidies that exist in the current SGS and LGS rate classes. The misalignment between rates and costs could be addressed over time with consideration for bill continuity concerns, or in the near-term with rate design changes.

III. CLASS COST OF SERVICE STUDIES

Q. HOW ARE THE RESULTS DIFFERENT BETWEEN LAC AND MGE'S CCOS AND STAFF'S CCOS?

A. Figures 6 and 7 summarize the results between the LAC and MGE CCOS and Staff's CCOS, respectively. The Figures compare the CCOS studies based on class returns as a percentage of the system rate of return since the CCOS studies are based on different system rates of return.

Figure 6 shows that for LAC Staff's CCOS produced a higher residential return as a percent of the system rate of return (98.0 percent) than LAC's CCOS (86.0 percent). In general, Staff's CCOS produced higher relative returns for the residential class and lower returns for the C&I classes.

Figure 6: Comparison of CCOS Studies (LAC)

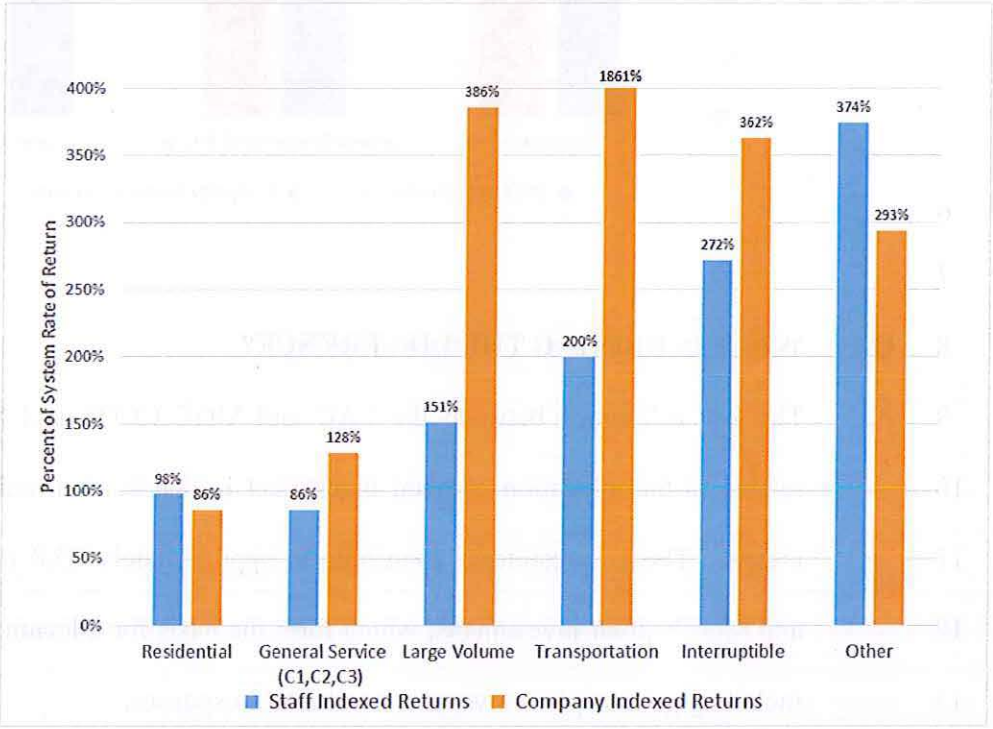
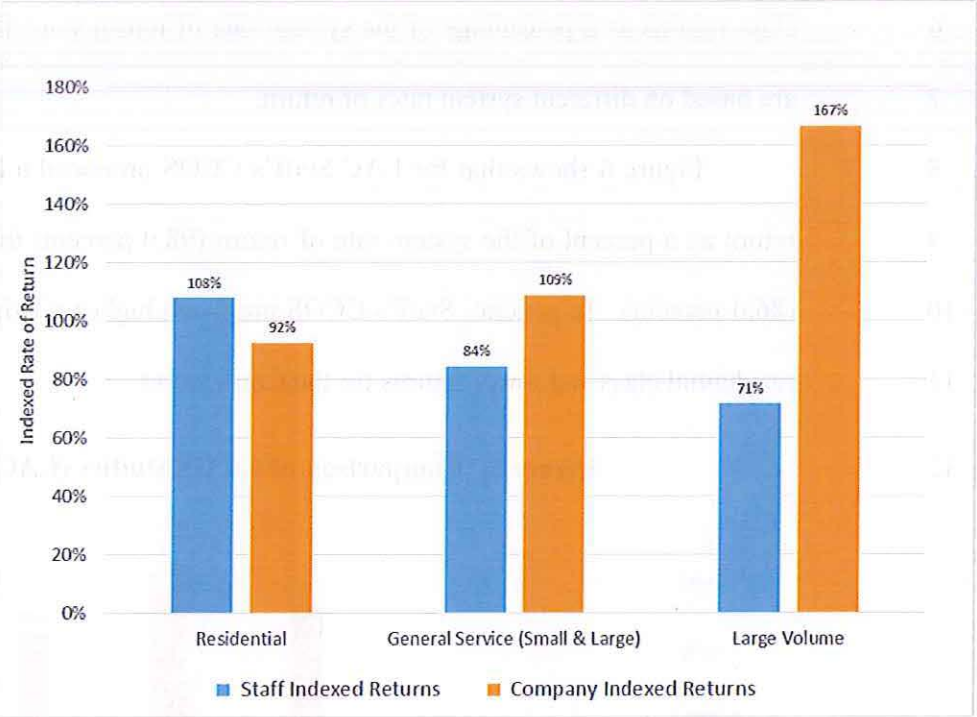


Figure 7 shows that Staff's CCOS for MGE produced a higher residential return as a percent of the system rate of return (108.0 percent) than MGE's CCOS (92.0 percent). In general, Staff's CCOS produced higher relative returns for the residential class and lower returns for the C&I rate classes.

Figure 7: Comparison of CCOS Studies (MGE)



Q. WHAT IS DRIVING THE DIFFERENCE?

A. The key difference between the LAC and MGE CCOS and Staff's CCOS is related to the allocation of plant investment in distribution mains, services and meters. These investments contribute to approximately 85.0 percent of LAC's and MGE's plant investments, which form the basis for allocation of other costs, including general plant investment and O&M expenses.

Q. WHAT IS THE DIFFERENCE BETWEEN LAC'S AND MGE'S AND STAFF'S ALLOCATION OF DISTRIBUTION MAINS?

A. Figures 8 and 9 show the difference between LAC's and MGE's and Staff's allocation of distribution mains, respectively. The Figures compare the percentage of distribution main allocated to each rate class. Figure 8 shows that Staff's CCOS for LAC allocated 68.2 percent of distribution main investment to the Residential class as compared to LAC's CCOS that allocated 75.9 percent of distribution main investment to the Residential class.

Figure 8: Comparison of Mains Allocator (LAC)

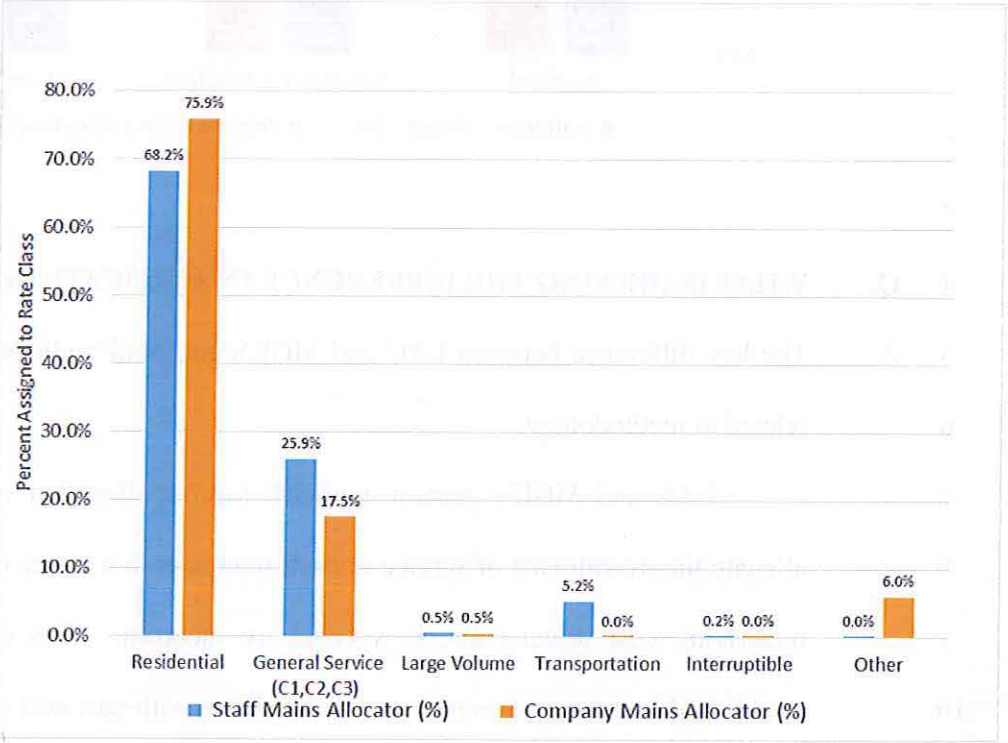
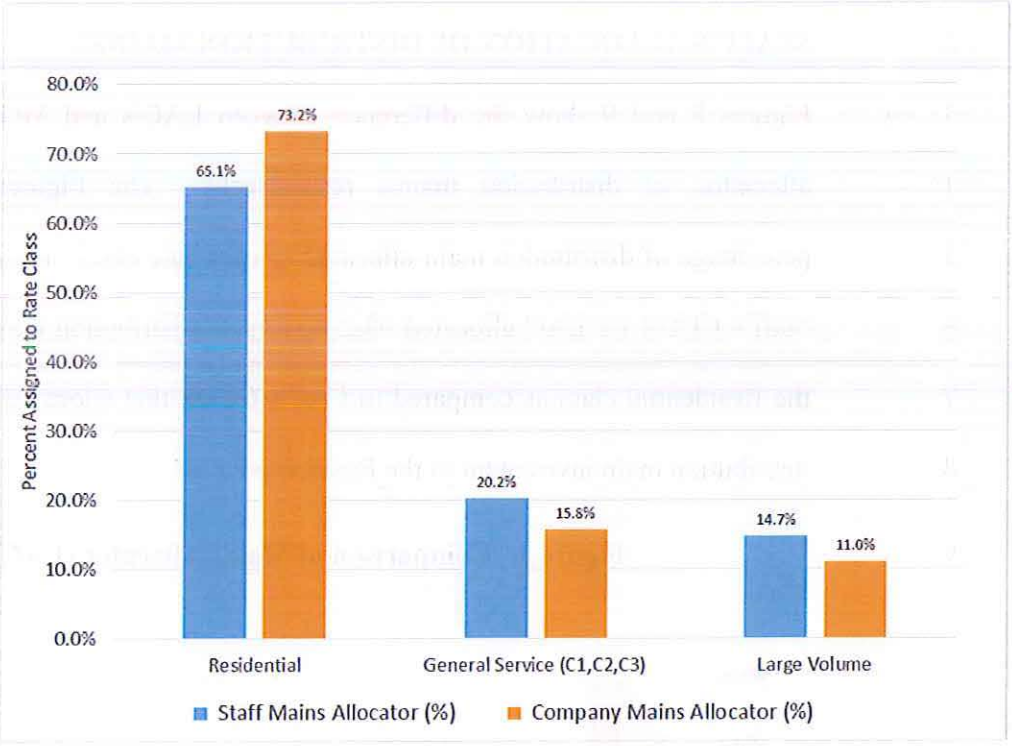


Figure 9 shows that Staff's CCOS for MGE allocated 65.1 percent of distribution main investment to the Residential class as compared to MGE's CCOS that allocated 73.2 percent of distribution main investment to the Residential class.

Figure 9: Comparison of Mains Allocator (MGE)



Q. WHAT IS DRIVING THE DIFFERENCE IN ALLOCATION OF MAINS?

A. The key difference between LAC and MGE's and Staff's allocation of mains is related to methodology.

LAC and MGE's general approach to cost allocation was to assign or allocate the overall cost of service to each rate class in a manner that reflects the underlying cost drivers; *i.e.,* how costs are incurred. This approach is well established in industry literature and is consistent with past cost of service studies filed with the Commission.

There are two cost drivers associated with investment in distribution mains: (a) to provide customer access to the distribution system; and (b) to meet customer demands on the peak day or at their maximum demand.

The approach taken by LAC and MGE is consistent with those cost drivers and was based on a zero-inch or zero-intercept analysis that is recognized by NARUC[8] and other authorities on utility rate design. The approach recognizes that there are two cost drivers for distribution mains: (a) the number of customers, since distribution mains are designed to provide customer access to the natural gas system; and (b) design day demands, since distribution mains are designed to serve customer demands on the design day.

Staff's approach to the allocation of distribution mains was based on a Stand Alone/ Integrated System allocator. The Stand Alone component reflects the cost to extend a main from one customer to the next if the diameter of that main extension is the same diameter as that of customer's service line.[9] The Integrated System component reflects the cost of serving peak day demands.

There are several important differences between these approaches. First, the zero-inch approach establishes a clear distinction between main investments to provide customers access to the natural gas distribution system, i.e. customer-related investment, and the remaining portion to providing service to meet the customers' peak day demands, i.e. demand-related investment. However, this distinction is not as clear in the Stand Alone/ Integrated System allocator since customer classes are assigned different diameters of main.

Second, the Stand Alone/ Integrated System allocator appears to double-count that portion of mains designed to serve customer peak demands since General Service customers are allocated higher diameter mains in the Stand Alone

[8] NARUC Gas Distribution Rate Design Manual, pg. 22
[9] Staff Class Cost of Service Report, pg. 9

portion of the allocator and then allocated costs based on their peak demands in the Integrated System portion of the allocator. The zero-inch study has no such double count since the allocator assigns a portion of the mains to providing access to the natural gas distribution system based on the number of customers and then assigns the remaining portion of the mains to meeting peak day demands based on peak day demands of the rate classes.

Finally, in the zero-inch study, the portion of mains used to meet peak days demands are allocated based on class peak day demands, which are calculated on the basis of the maximum heating degree days ("HDD") of 72 HDD, consistent with how LAC and MGE designs its distribution mains. The Stand Alone/ Integrated System allocator appears to use 58.3 HDD to determine its class peak day demands, which is not consistent with how LAC and MGE designs its distribution mains. Lower HDDs would result in a lower estimate of peak day demands, and thus a lower allocation of peak day costs to the heating class, including the residential class.

Q. HOW ARE THE RESULTS DIFFERENT BETWEEN LAC AND MGE's AND STAFF'S ALLOCATION OF METERS?

A. Figures 10 and 11 summarize the results between LAC and MGE's and Staff's allocation of meter investment. The Figures compare the percentage of meter investment allocated to each rate class. Figure 10 shows that Staff's CCOS for LAC allocated 80.4 percent of meter investment to the Residential class as

compared to LAC's CCOS that allocated 81.8 percent of meter investment to the Residential class.

Figure 10: Comparison of Meters Allocator (LAC)

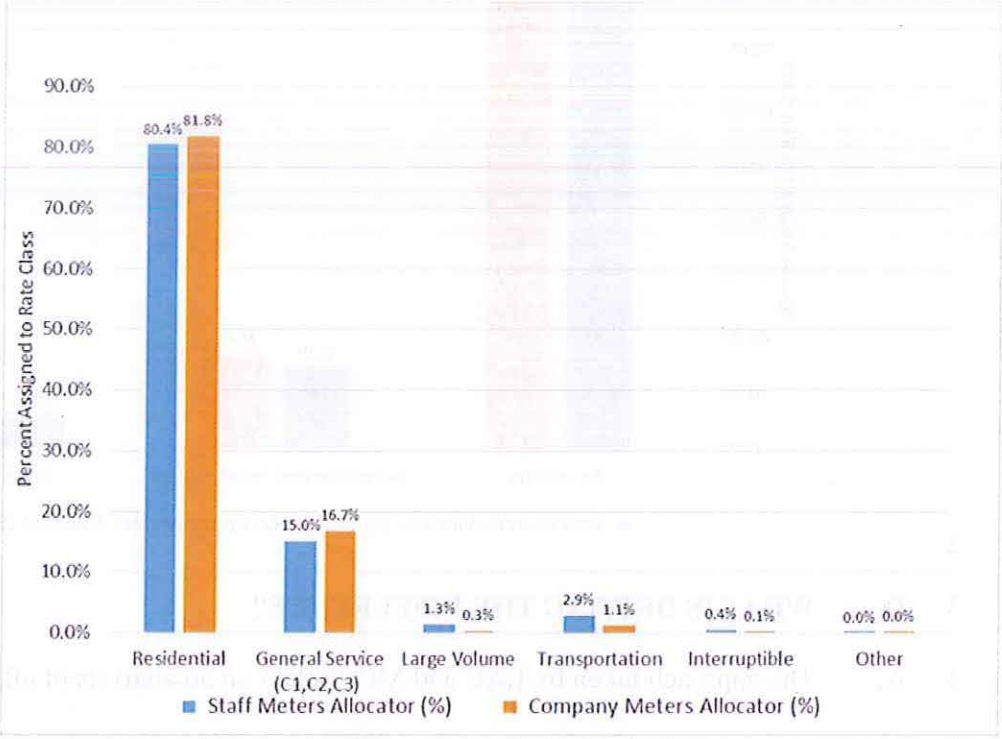
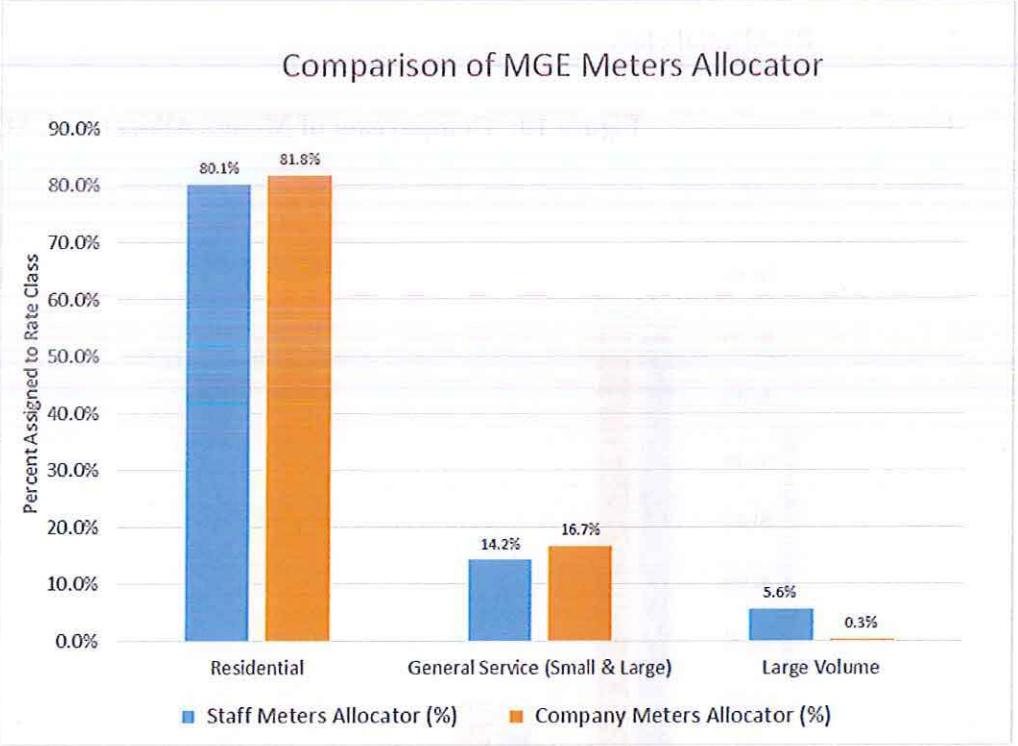


Figure 11 shows that Staff's CCOS for MGE allocated 80.1 percent of meter investment to the Residential class as compared to MGE's CCOS that allocated 81.8 percent of meter investment to the Residential class.

Figure 11: Comparison of Meter Allocators (MGE)



Q. WHAT IS DRIVING THE DIFFERENCE?

A. The approach taken by LAC and MGE relied on an analysis of all meters within a rate class. Rather than develop an allocator based on typical or a sample of meter types within a rate class, LAC and MGE prepared an analysis of all meter types within a rate class. This approach adds a level of precision to the allocator since there is a wide range of meters within each rate class. Staff's approach appears to rely on a typical or sample of meters rather than the full population. There are certain meter types within a rate class, for example, that are included in the LAC and MGE study that are not included in Staff's study.

Q. HOW ARE THE RESULTS DIFFERENT BETWEEN LAC'S AND MGE'S AND STAFF'S ALLOCATION OF SERVICES?

A. Figures 12 and 13 summarize the differences between LAC's and MGE's and Staff's allocation of service investment. The Figures compare the percentage of service investment allocated to each rate class. Figure 12 shows that Staff's CCOS for LAC allocated 89.2 percent of service investment to the Residential class as compared to LAC's CCOS that allocated 92.7 percent of services investment to the Residential class.

Figure 12: Comparison of Services Allocator (LAC)

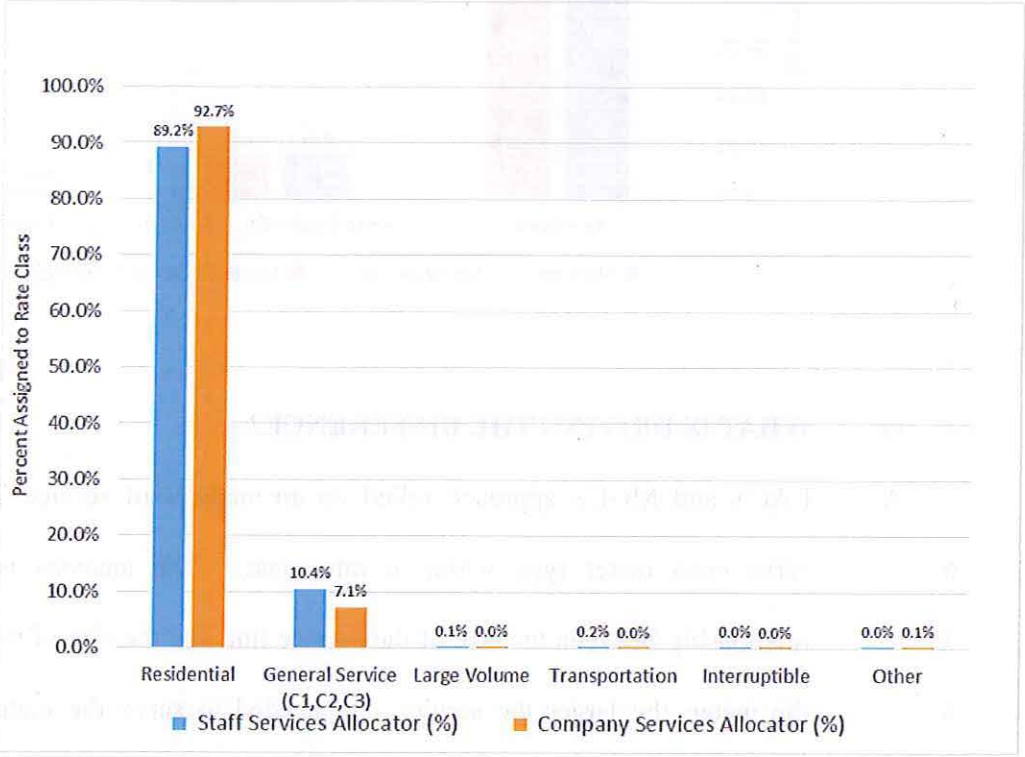
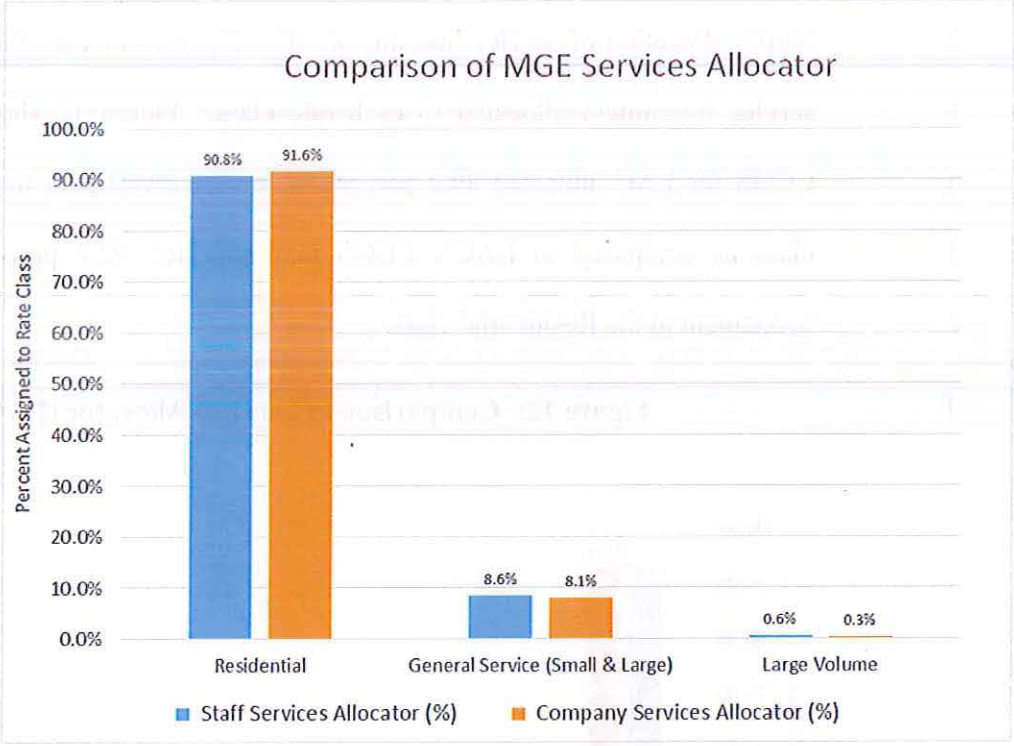


Figure 13 show that Staff's CCOS for MGE allocated 90.8 percent of service investment to the Residential class as compared to MGE's CCOS that allocated 91.6 percent of services investment to the Residential class.

Figure 13: Comparison of Service Allocators (MGE)



Q. WHAT IS DRIVING THE DIFFERENCE?

A. LAC's and MGE's approach relied on an analysis of service investments that serve each meter type within a rate class. The analysis is based on the relationship between the size of the service line and the size of meter. The larger the meter, the larger the service line needed to serve the meter. Rather than develop an allocator based on a typical or sample of service lines that serves customers within the rate class, LAC and MGE prepared analysis of service lines that serve all meter types within a rate class. This approach adds a level of precision to the allocator since there is a wide range of meters and thus a wide range of service lines within each rate class. Staff's approach appears to rely on a typical or sample of service lines rather than the full population.

Q. PLEASE SUMMARIZE LAC AND MGE'S POSITION ON THE DIFFERENCES IN THE CCOS STUDIES?

A. LAC and MGE continue to support the mains, services and meter allocators used in their CCOS study since they are more consistent with past studies they have filed, are recognized by NARUC and other authorities of utility rate design, better reflect LAC and MGE's planning of facilities investments, and better reflect their underlying cost of service than those used in Staff's CCOS study.

In addition, MGE prepared a revised CCOS to reflect MIEC's proposed correction.

IV. REVENUE TARGETS

Q. WHAT WAS LAC AND MGE'S APPROACH IN SETTING THE PROPOSED REVENUE TARGETS?

A. The proposed revenue targets were guided by several principles common throughout the industry, including: (a) rates should recover the overall cost of providing service; (b) rates should be fair, minimizing inter- and intra-class inequities, to the extent possible; and (c) rate changes should be tempered by rate continuity and equity concerns.[10] Because these principles can conflict, the target setting process also included a level of judgment to balance these principles.

[10] See Bonbright, James, Danielsen, Albert, and Kamerschen, David. "Principles of Public Utility Rates." Public Utilities Reports, Inc. pp. 377-407 (2nd Ed. 1988).

The specific approach to setting the proposed revenue targets was based on the results of LAC and MGE's CCOS. The CCOS identified some customer classes with rates of return less than the system rate of return, such as the residential and SGS classes, and other customer classes with rates of return higher than the system rate of return, such as the LGS, LV and Transportation classes. One of the goals of the target setting process was to move customer classes toward the system rate of return, *i.e.*, move customer classes toward the system rate of return. To accomplish that objective, however, would require substantial rate increases for certain classes. For example, the SGS class for LAC would require a 27.6 percent increase to move to the system rate of return as compared to the overall increase of 17.9 percent. Such a class increase would be significant. LAC believed that such a class increase was not reasonable. Instead, LAC proposed a class increase of 21.8 percent.

LAC and MGE also recognized the importance of customer bill impacts in moving those classes with high returns to the system average. For example, the LGS class for LAC would require a 10.6 percent decrease to move to the system rate of return as compared to the overall increase of 17.9 percent. However, such a decrease was not equitable since it would require a corresponding and substantial increase in those classes whose rate of return was less than the system average.

Thus, LAC and MGE's proposed revenue targets that reflected a balance of moving classes toward the system rate of return, while recognizing the customer bill impacts from such movement.

Q. HOW ARE THE RESULTS DIFFERENT BETWEEN THE COMPANY AND STAFF'S SETTING OF REVENUE TARGETS?

A. Staff's revenue targets for each customer class were based on a total revenue increase of $12.0 million for LAC and $8.7 million for MGE. Since LAC and MGE proposed a total revenue increase of $58.1 million for LAC and $50.4 million for MGE, the specific revenue targets used to support the rate design are not comparable.

Further, Staff's methodology to set revenue targets is based on the magnitude of the rate increase. Specifically, the rate increase is allocated to each customer class using one method up to Staff's proposed rate increase of $12.0 million and $8.7 million for LAC and MGE, respectively; and then allocated using a second method for that portion of the rate increase above Staff's proposed rate increase.

However, adjusting for the differences in the proposed rate increases, it would appear that LAC and MGE's residential revenue targets are generally set higher for the residential class than Staff's residential revenue targets. Conversely, LAC and MGE's C&I revenue targets are generally set lower than Staff's C&I revenue targets. The difference is largely related to differences in the class cost of service study results, as discussed earlier.

Q. WHAT IS LAC AND MGE'S POSITION ON MIEC'S PROPOSAL TO MOVE THE CLASS REVENUE TARGETS CLOSER TO THEIR FULL COST OF SERVICE?

A. While LAC and MGE agree with MIEC's goal to gradually move the class revenue targets closer to their full cost of service, LAC and MGE are concerned with the customer bill impacts associated with the proposed rate increases.

V. RATE DESIGN

Q. PLEASE SUMMARIZE THE POSITION OF LAC AND MGE ON KEY DIFFERENCES WITH STAFF'S APPROACH TO RATE DESIGN? [11]

A. The positions of LAC and MGE on the several key differences with Staff's approach to rate design are discussed below.

1. LAC and MGE continue to support their proposed SGS and LGS rate classes, as discussed earlier. The proposed rate classes better reflect the cost differences between the SGS and LGS rate classes but also better reflect cost differences within the SGS and LGS rate classes by setting rates consistent with the underlying cost drivers. Specifically, the proposed SGS and LGS rate classes enable LAC and MGE to set customer charges consistent with the underlying customer-related cost of service for SGS and LGS customers.

2. LAC and MGE continue to support their proposed approach to residential customers in the context of the RSM to moderate the impact of its customer charges on low-use customers by reducing customer charges. The current customer charges were designed to recover customer-related

[11] Staff Class Cost of Service Report, pg. 11

costs as well as to mitigate the impact of weather on customer bills and utility revenues.

3. LAC and MGE continue to support, in the context of their RSM proposal, setting volumetric charges through a single volumetric charge, with a few exceptions for large C&I customers.

4. LAC supports Staff's proposal to eliminate the Residential, C1, C2, and C3 Seasonal air conditioning customer classes.

5. LAC and MGE do not support the alternative rate design of inclining block rates. First, there is concern about the potential bill impacts related to moving from declining block rates to inclining block rates, especially for high-use customers. Second, LAC's proposal to migrate from declining block rates to flat rates could be viewed as a first step toward inclining block rates, since high-use customers will pay higher rates than if LAC continued with a declining block rate structure. Third, LAC is concerned about the potential intra-class subsidies associated with inclining block rates along with certain unintended financial consequences as discussed by Staff. This alternative should accordingly not be adopted, especially in the absence of further analysis of the issues mentioned above.

Q. HAVE LAC AND MGE CONDUCTED A BILL IMPACT ANALYSIS TO COMPARE RESIDENTIAL RATES PROPOSED BY STAFF?

A. Yes. The results of the bill impact analysis for LAC's residential customers show lower percentage bill impacts for lower usage customers when based on LAC's

proposed rates than on Staff's proposed rate design, which was adjusted for analysis purposes to reflect the proposed revenue requirements. LAC applied Staff's recommended customer charge of $26.00 to recover the revenue requirement proposed by LAC, and derived the resulting volumetric charge. The results of the bill impact analysis are provided in Schedule TSL-R1, page 4 of 7.

VI. CONCLUSION

Q. PLEASE SUMMARIZE THE REBUTTAL POSITIONS OF LAC AND MGE.

A. LAC and MGE continue to support their CCOS methodology and rate design proposals. These include:

1. Proposed SGS and LGS rate classes.
2. Results of LAC and MGE's CCOS study, including allocation of mains, services and meters.
3. Proposed revenue targets.
4. Proposed customer charges.
5. Adoption of their proposed RSM.

LAC agrees with Staff's proposal to eliminate the air conditioning rates. In addition, MGE has revised its CCOS to reflect MIEC's proposed correction.

Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?

A. Yes, it does.

LACLEDE GAS COMPANY

Bill Impacts: SGS vs. LGS Company Proposed Rates

		Customer Chg	Consumption Chg
Company	SGS	$ 35.00	$ 0.20318
Company	LGS	$ 125.00	$ 0.14625

Bill Impact Analysis

	Annual Use	Cumulative Bills	Cumulative Use	Annual Bill (w/o PGA) Proposed SGS Bill	Proposed LGS Bill	Difference ($)	Difference (%)
SGS	50	6%	0%	$ 430	$ 1,507	$ (1,077)	-71.5%
SGS	200	16%	1%	$ 461	$ 1,529	$ (1,069)	-69.9%
SGS	500	34%	5%	$ 522	$ 1,573	$ (1,052)	-66.8%
SGS	1,000	54%	13%	$ 623	$ 1,646	$ (1,023)	-62.1%
SGS	1,750	68%	23%	$ 776	$ 1,756	$ (980)	-55.8%
SGS	2,500	76%	32%	$ 928	$ 1,866	$ (938)	-50.3%
SGS	3,500	83%	42%	$ 1,131	$ 2,012	$ (881)	-43.8%
SGS	4,500	87%	51%	$ 1,334	$ 2,158	$ (824)	-38.2%
SGS	5,000	89%	56%	$ 1,436	$ 2,231	$ (795)	-35.6%
SGS	5,500	90%	60%	$ 1,537	$ 2,304	$ (767)	-33.3%
SGS	6,000	92%	65%	$ 1,639	$ 2,377	$ (738)	-31.1%
SGS	6,500	93%	69%	$ 1,741	$ 2,451	$ (710)	-29.0%
SGS	7,000	94%	73%	$ 1,842	$ 2,524	$ (681)	-27.0%
SGS	7,500	95%	77%	$ 1,944	$ 2,597	$ (653)	-25.1%
SGS	8,000	96%	80%	$ 2,045	$ 2,670	$ (625)	-23.4%
SGS	9,000	98%	88%	$ 2,249	$ 2,816	$ (568)	-20.2%
LGS	10,000	1%	0%	$ 2,452	$ 2,962	$ (511)	-17.2%
LGS	12,500	23%	9%	$ 2,960	$ 3,328	$ (368)	-11.1%
LGS	15,000	38%	16%	$ 3,468	$ 3,694	$ (226)	-6.1%
LGS	17,500	48%	21%	$ 3,976	$ 4,059	$ (84)	-2.1%
LGS	20,000	56%	26%	$ 4,484	$ 4,425	$ 59	1.3%
LGS	25,000	67%	35%	$ 5,500	$ 5,156	$ 343	6.7%
LGS	30,000	74%	42%	$ 6,515	$ 5,887	$ 628	10.7%
LGS	35,000	79%	47%	$ 7,531	$ 6,619	$ 913	13.8%
LGS	45,000	85%	55%	$ 9,563	$ 8,081	$ 1,482	18.3%
LGS	50,000	87%	58%	$ 10,579	$ 8,812	$ 1,767	20.0%
LGS	55,000	89%	61%	$ 11,595	$ 9,544	$ 2,051	21.5%
LGS	60,000	90%	64%	$ 12,611	$ 10,275	$ 2,336	22.7%
LGS	70,000	92%	69%	$ 14,643	$ 11,737	$ 2,905	24.8%
LGS	85,000	94%	74%	$ 17,690	$ 13,931	$ 3,759	27.0%
LGS	100,000	96%	78%	$ 20,738	$ 16,125	$ 4,613	28.6%
LGS	150,000	98%	87%	$ 30,897	$ 23,437	$ 7,460	31.8%

LACLEDE GAS COMPANY

Bill Impacts: SGS and LGS Company Proposed Rates vs. Consolidated SGS/LGS Rate

(Consolidated SGS/LGS Rate based on Staff's Revenue Requirement)

		Customer Chg	Consumption Chg
Company	SGS	$ 35.00	$ 0.20318
Company	LGS	$ 125.00	$ 0.14625
Staff	SGS/LGS	$ 48.52	$ 0.14048

Bill Impact Analysis

	Annual Use	Cumulative Bills	Cumulative Use	Annual Bill (w/o PGA) Proposed Company Bill	Proposed Staff SGS/LGS Bill	Difference ($)	Difference (%)
SGS	50	6%	0%	$ 430	$ 589	$ (159)	-27.0%
SGS	200	16%	1%	$ 461	$ 610	$ (150)	-24.5%
SGS	500	34%	5%	$ 522	$ 652	$ (131)	-20.1%
SGS	1,000	54%	13%	$ 623	$ 723	$ (100)	-13.8%
SGS	1,750	68%	23%	$ 776	$ 828	$ (53)	-6.3%
SGS	2,500	76%	32%	$ 928	$ 933	$ (5)	-0.6%
SGS	3,500	83%	42%	$ 1,131	$ 1,074	$ 57	5.3%
SGS	4,500	87%	51%	$ 1,334	$ 1,214	$ 120	9.9%
SGS	5,000	89%	56%	$ 1,436	$ 1,285	$ 151	11.8%
SGS	5,500	90%	60%	$ 1,537	$ 1,355	$ 183	13.5%
SGS	6,000	92%	65%	$ 1,639	$ 1,425	$ 214	15.0%
SGS	6,500	93%	69%	$ 1,741	$ 1,495	$ 245	16.4%
SGS	7,000	94%	73%	$ 1,842	$ 1,566	$ 277	17.7%
SGS	7,500	95%	77%	$ 1,944	$ 1,636	$ 308	18.8%
SGS	8,000	96%	80%	$ 2,045	$ 1,706	$ 339	19.9%
SGS	9,000	98%	88%	$ 2,249	$ 1,847	$ 402	21.8%
LGS	10,000	1%	0%	$ 2,962	$ 1,987	$ 975	49.1%
LGS	12,500	23%	9%	$ 3,328	$ 2,338	$ 990	42.3%
LGS	15,000	38%	16%	$ 3,694	$ 2,689	$ 1,004	37.3%
LGS	17,500	48%	21%	$ 4,059	$ 3,041	$ 1,019	33.5%
LGS	20,000	56%	26%	$ 4,425	$ 3,392	$ 1,033	30.5%
LGS	25,000	67%	35%	$ 5,156	$ 4,094	$ 1,062	25.9%
LGS	30,000	74%	42%	$ 5,887	$ 4,797	$ 1,091	22.7%
LGS	35,000	79%	47%	$ 6,619	$ 5,499	$ 1,120	20.4%
LGS	45,000	85%	55%	$ 8,081	$ 6,904	$ 1,177	17.1%
LGS	50,000	87%	58%	$ 8,812	$ 7,606	$ 1,206	15.9%
LGS	55,000	89%	61%	$ 9,544	$ 8,309	$ 1,235	14.9%
LGS	60,000	90%	64%	$ 10,275	$ 9,011	$ 1,264	14.0%
LGS	70,000	92%	69%	$ 11,737	$ 10,416	$ 1,322	12.7%
LGS	85,000	94%	74%	$ 13,931	$ 12,523	$ 1,408	11.2%
LGS	100,000	96%	78%	$ 16,125	$ 14,630	$ 1,495	10.2%
LGS	150,000	98%	87%	$ 23,437	$ 21,654	$ 1,783	8.2%

LACLEDE GAS COMPANY

Bill Impacts: SGS and LGS Company Proposed Rates vs. Consolidated SGS/LGS Rate

(Consolidated SGS/LGS Rate based on the Company's Revenue Requirement)

		Customer Chg	Consumption Chg
Company	SGS	$ 35.00	$ 0.20318
Company	LGS	$ 125.00	$ 0.14625
Staff	SGS/LGS	$ 48.52	$ 0.15464

Bill Impact Analysis

	Annual Use	Cumulative Bills	Cumulative Use	Annual Bill (w/o PGA) Proposed Company Bill	Proposed Staff SGS/LGS Bill	Difference ($)	Difference (%)
SGS	50	6%	0%	$ 430	$ 590	$ (160)	-27.1%
SGS	200	16%	1%	$ 461	$ 613	$ (153)	-24.9%
SGS	500	34%	5%	$ 522	$ 660	$ (138)	-20.9%
SGS	1,000	54%	13%	$ 623	$ 737	$ (114)	-15.4%
SGS	1,750	68%	23%	$ 776	$ 853	$ (77)	-9.1%
SGS	2,500	76%	32%	$ 928	$ 969	$ (41)	-4.2%
SGS	3,500	83%	42%	$ 1,131	$ 1,123	$ 8	0.7%
SGS	4,500	87%	51%	$ 1,334	$ 1,278	$ 56	4.4%
SGS	5,000	89%	56%	$ 1,436	$ 1,355	$ 80	5.9%
SGS	5,500	90%	60%	$ 1,537	$ 1,433	$ 105	7.3%
SGS	6,000	92%	65%	$ 1,639	$ 1,510	$ 129	8.5%
SGS	6,500	93%	69%	$ 1,741	$ 1,587	$ 153	9.7%
SGS	7,000	94%	73%	$ 1,842	$ 1,665	$ 178	10.7%
SGS	7,500	95%	77%	$ 1,944	$ 1,742	$ 202	11.6%
SGS	8,000	96%	80%	$ 2,045	$ 1,819	$ 226	12.4%
SGS	9,000	98%	88%	$ 2,249	$ 1,974	$ 275	13.9%
LGS	10,000	1%	0%	$ 2,962	$ 2,129	$ 834	39.2%
LGS	12,500	23%	9%	$ 3,328	$ 2,515	$ 813	32.3%
LGS	15,000	38%	16%	$ 3,694	$ 2,902	$ 792	27.3%
LGS	17,500	48%	21%	$ 4,059	$ 3,288	$ 771	23.4%
LGS	20,000	56%	26%	$ 4,425	$ 3,675	$ 750	20.4%
LGS	25,000	67%	35%	$ 5,156	$ 4,448	$ 708	15.9%
LGS	30,000	74%	42%	$ 5,887	$ 5,221	$ 666	12.8%
LGS	35,000	79%	47%	$ 6,619	$ 5,995	$ 624	10.4%
LGS	45,000	85%	55%	$ 8,081	$ 7,541	$ 540	7.2%
LGS	50,000	87%	58%	$ 8,812	$ 8,314	$ 498	6.0%
LGS	55,000	89%	61%	$ 9,544	$ 9,087	$ 456	5.0%
LGS	60,000	90%	64%	$ 10,275	$ 9,861	$ 414	4.2%
LGS	70,000	92%	69%	$ 11,737	$ 11,407	$ 330	2.9%
LGS	85,000	94%	74%	$ 13,931	$ 13,727	$ 204	1.5%
LGS	100,000	96%	78%	$ 16,125	$ 16,046	$ 79	0.5%
LGS	150,000	98%	87%	$ 23,437	$ 23,778	$ (341)	-1.4%

LACLEDE GAS COMPANY

Bill Impacts: Residential Company Proposed Rates vs. Staff Proposed Rates

(Staff Proposed Rates based on the Company's Revenue Requirement)

		Customer Chg	Consumption Chg
Company	Residential	$ 17.00	$ 0.37962
Staff	Residential	$ 26.00	$ 0.24556

Bill Impact Analysis - Residential

Annual Use	Cumulative Bills	Cumulative Use	Annual Bill (w/o PGA) Proposed Company Bill	Proposed Staff Bill	Difference ($)	Difference (%)
226	5%	1%	$ 290	$ 368	$ (78)	-21.1%
376	15%	6%	$ 347	$ 404	$ (58)	-14.2%
476	27%	14%	$ 385	$ 429	$ (44)	-10.3%
525	35%	19%	$ 403	$ 441	$ (38)	-8.5%
725	64%	46%	$ 479	$ 490	$ (11)	-2.2%
824	75%	58%	$ 517	$ 514	$ 3	0.5%
974	86%	72%	$ 574	$ 551	$ 23	4.1%
1,247	95%	87%	$ 677	$ 618	$ 59	9.6%
1,448	97%	91%	$ 754	$ 667	$ 86	12.9%
1,848	99%	95%	$ 905	$ 766	$ 140	18.2%

MISSOURI GAS ENERGY

Bill Impacts: SGS vs. LGS Company Proposed Rates

		Customer Chg	Consumption Chg	Consumption Chg
Company	SGS	$ 40.00	$ 0.11273	
Company	LGS	$ 125.00	$ 0.15293	$ 0.08814

66.6% Peak Usage

Bill Impact Analysis

	Annual Use	Cumulative Bills	Cumulative Use	Annual Bill (w/o PGA) Proposed SGS Bill	Proposed LGS Bill	Difference ($)	Difference (%)
SGS	100	6%	0%	$ 491	$ 1,513	$ (1,022)	-67.5%
SGS	350	20%	2%	$ 519	$ 1,546	$ (1,026)	-66.4%
SGS	750	43%	9%	$ 565	$ 1,598	$ (1,034)	-64.7%
SGS	1,500	65%	22%	$ 649	$ 1,697	$ (1,048)	-61.7%
SGS	2,000	72%	30%	$ 705	$ 1,763	$ (1,057)	-60.0%
SGS	3,500	84%	48%	$ 875	$ 1,960	$ (1,085)	-55.4%
SGS	5,000	91%	63%	$ 1,044	$ 2,156	$ (1,113)	-51.6%
SGS	6,500	95%	76%	$ 1,213	$ 2,353	$ (1,141)	-48.5%
SGS	7,500	97%	84%	$ 1,325	$ 2,485	$ (1,159)	-46.7%
SGS	10,000	100%	100%	$ 1,607	$ 2,813	$ (1,206)	-42.9%
LGS	10,500	6%	3%	$ 1,664	$ 2,879	$ (1,215)	-42.2%
LGS	12,500	26%	13%	$ 1,889	$ 3,141	$ (1,252)	-39.9%
LGS	15,000	43%	22%	$ 2,171	$ 3,469	$ (1,298)	-37.4%
LGS	17,500	54%	31%	$ 2,453	$ 3,798	$ (1,345)	-35.4%
LGS	20,000	63%	38%	$ 2,735	$ 4,126	$ (1,391)	-33.7%
LGS	25,000	74%	48%	$ 3,298	$ 4,782	$ (1,484)	-31.0%
LGS	50,000	94%	77%	$ 6,116	$ 8,065	$ (1,948)	-24.2%
LGS	75,000	98%	86%	$ 8,935	$ 11,347	$ (2,412)	-21.3%
LGS	125,000	99%	93%	$ 14,571	$ 17,912	$ (3,340)	-18.6%
LGS	250,000	100%	98%	$ 28,662	$ 34,323	$ (5,661)	-16.5%

MISSOURI GAS ENERGY

Bill Impacts: SGS and LGS Company Proposed Rates vs. Consolidated SGS/LGS Rate

(Consolidated SGS/LGS Rate based on Staff's Revenue Requirement)

		Customer Chg	Consumption Chg	Consumption Chg
Company	SGS	$ 40.00	$ 0.11273	
Company	LGS	$ 125.00	$ 0.15293	$ 0.08814
Staff	SGS/LGS	$ 37.50	$ 0.11606	

Bill Impact Analysis

	Annual Use	Cumulative Bills	Cumulative Use	Annual Bill (w/o PGA) Proposed Company Bill	Proposed Staff SGS/LGS Bill	Difference ($)	Difference (%)
SGS	100	6%	0%	$ 491	$ 462	$ 30	6.4%
SGS	350	20%	2%	$ 519	$ 491	$ 29	5.9%
SGS	750	43%	9%	$ 565	$ 537	$ 28	5.1%
SGS	1,500	65%	22%	$ 649	$ 624	$ 25	4.0%
SGS	2,000	72%	30%	$ 705	$ 682	$ 23	3.4%
SGS	3,500	84%	48%	$ 875	$ 856	$ 18	2.1%
SGS	5,000	91%	63%	$ 1,044	$ 1,030	$ 13	1.3%
SGS	6,500	95%	76%	$ 1,213	$ 1,204	$ 8	0.7%
SGS	7,500	97%	84%	$ 1,325	$ 1,320	$ 5	0.4%
SGS	10,000	100%	100%	$ 1,607	$ 1,611	$ (3)	-0.2%
LGS	10,500	6%	3%	$ 2,879	$ 1,669	$ 1,210	72.5%
LGS	12,500	26%	13%	$ 3,141	$ 1,901	$ 1,240	65.3%
LGS	15,000	43%	22%	$ 3,469	$ 2,191	$ 1,278	58.4%
LGS	17,500	54%	31%	$ 3,798	$ 2,481	$ 1,317	53.1%
LGS	20,000	63%	38%	$ 4,126	$ 2,771	$ 1,355	48.9%
LGS	25,000	74%	48%	$ 4,782	$ 3,352	$ 1,431	42.7%
LGS	50,000	94%	77%	$ 8,065	$ 6,253	$ 1,812	29.0%
LGS	75,000	98%	86%	$ 11,347	$ 9,155	$ 2,192	23.9%
LGS	125,000	99%	93%	$ 17,912	$ 14,958	$ 2,954	19.7%
LGS	250,000	100%	98%	$ 34,323	$ 29,465	$ 4,858	16.5%

MISSOURI GAS ENERGY

Bill Impacts: SGS and LGS Company Proposed Rates vs. Consolidated SGS/LGS Rate

(Consolidated SGS/LGS Rate based on the Company's Revenue Requirement)

		Customer Chg	Consumption Chg	Consumption Chg
Company	SGS	$ 40.00	$ 0.11273	
Company	LGS	$ 125.00	$ 0.15293	$ 0.08814
Staff	SGS/LGS	$ 37.50	$ 0.15473	

Bill Impact Analysis

	Annual Use	Cumulative Bills	Cumulative Use	Annual Bill (w/o PGA) Proposed Company Bill	Proposed Staff SGS/LGS Bill	Difference ($)	Difference (%)
SGS	100	6%	0%	$ 491	$ 465	$ 26	5.5%
SGS	350	20%	2%	$ 519	$ 504	$ 15	3.0%
SGS	750	43%	9%	$ 565	$ 566	$ (2)	-0.3%
SGS	1,500	65%	22%	$ 649	$ 682	$ (33)	-4.8%
SGS	2,000	72%	30%	$ 705	$ 759	$ (54)	-7.1%
SGS	3,500	84%	48%	$ 875	$ 992	$ (117)	-11.8%
SGS	5,000	91%	63%	$ 1,044	$ 1,224	$ (180)	-14.7%
SGS	6,500	95%	76%	$ 1,213	$ 1,456	$ (243)	-16.7%
SGS	7,500	97%	84%	$ 1,325	$ 1,610	$ (285)	-17.7%
SGS	10,000	100%	100%	$ 1,607	$ 1,997	$ (390)	-19.5%
LGS	10,500	6%	3%	$ 2,879	$ 2,075	$ 804	38.7%
LGS	12,500	26%	13%	$ 3,141	$ 2,384	$ 757	31.8%
LGS	15,000	43%	22%	$ 3,469	$ 2,771	$ 698	25.2%
LGS	17,500	54%	31%	$ 3,798	$ 3,158	$ 640	20.3%
LGS	20,000	63%	38%	$ 4,126	$ 3,545	$ 581	16.4%
LGS	25,000	74%	48%	$ 4,782	$ 4,318	$ 464	10.7%
LGS	50,000	94%	77%	$ 8,065	$ 8,187	$ (122)	-1.5%
LGS	75,000	98%	86%	$ 11,347	$ 12,055	$ (708)	-5.9%
LGS	125,000	99%	93%	$ 17,912	$ 19,791	$ (1,880)	-9.5%
LGS	250,000	100%	98%	$ 34,323	$ 39,133	$ (4,809)	-12.3%

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Laclede Gas Company's Request to Increase its Revenues for Gas Service	)))	File No. GR-2017-0215
In the Matter of Laclede Gas Company d/b/a Missouri Gas Energy's Request to Increase its Revenues for Gas Service	)))	File No. GR-2017-0216

AFFIDAVIT

COMMONWEALTH OF MASSACHUSETTS)
) SS.
COUNTY OF WORCESTER)

Timothy S. Lyons, of lawful age, being first duly sworn, deposes and states:

1. My name is Timothy S. Lyons. My business address is 1900 West Park Drive, Suite 250, Westborough, MA 01581 and I am a Partner at ScottMadden Inc..

2. Attached hereto and made a part hereof for all purposes is my rebuttal testimony on class cost of service and rate design on behalf of Laclede Gas Company and MGE.

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

Timothy S. Lyons

Subscribed and sworn to before me this 20th day of October, 2017.

Notary Public

KIMBERLY H. DAO
MY COMM. EXPIRES
MARCH 11, 2022
NOTARY PUBLIC
COMMONWEALTH OF
MASSACHUSETTS