BEFORE THE STATE CORPORATION COMMISSION
OF THE STATE OF KANSAS

In the Matter of the Application of Kansas Gas Service, a Division of ONE Gas, Inc. for Adjustment of its Natural Gas Rates in the State of Kansas.	))))	**Docket No. 24-KGSG-610-RTS**

DIRECT TESTIMONY

PREPARED BY

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UTILITIES DIVISION

KANSAS CORPORATION COMMISSION

July 1, 2024

I. STATEMENT OF QUALIFICATIONS

Q. What is your name?

A. Lana J. Ellis.

Q. By whom and in what capacity are you employed?

A. I am employed by the Kansas Corporation Commission (KCC or Commission) as Deputy Chief of the Economics and Rates Section within the Utilities Division.

Q. What is your business address?

A. 1500 S.W. Arrowhead Road, Topeka, Kansas, 66604-4027.

Q. What is your educational background and professional experience?

A. I have a B.S.B.A with a major in Honors Economics from Missouri Western State University, an M.A. in economics and an Interdisciplinary Ph.D. in economics and political science from the University of Missouri-Kansas City, an M.B.A. from Rockhurst University, and a J.D. from Seattle University. Before I began my employment with the Commission, I worked for Sprint Corporation and The Baltimore Sun, serving primarily in strategic planning and market research positions. In addition, I have taught graduate-level business and economics courses as an adjunct instructor at several universities.

Q. Have you previously submitted testimony before this Commission?

A. Yes, I filed testimony in Docket Nos. 14-KCPE-272-RTS, 14-BHCG-502-RTS, 15-WSEE-181-TAR, 16-KCPE-446-TAR, 17-WSEE-147-RTS, 18-WSEE-328-RTS, 18-KCPE-480-RTS, 18-KGSG-560-RTS, 19-EPDE-223-RTS, 20-SPEE-169-RTS, 21-BHCG-418-RTS, 22-EKME-254-TAR, 23-ATMG-359-RTS, 23-EKCE-

775-RTS, and 24-SPEE-415-TAR. I have also participated, as a member of Commission Staff (Staff), in a number of other dockets.

II. INTRODUCTION

Purpose

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to sponsor Staff's recommendations regarding Revenue Requirement Allocation and Rate Design.

Organization

Q. How is your testimony organized?

A. My testimony is organized in three major sections. First, I will discuss Kansas Gas Service's (KGS) proposed Rate Design. Then, I will discuss Staff's proposed Allocation of the Revenue Requirement Increase and Rate Design. Finally, I will conclude by recommending the Commission accept Staff's Revenue Requirement Allocation and Rate Design proposals.

III. ANALYSIS

<u>KGS's Proposed Rate Design</u>

Residential Class

KGS's Proposal

Q. What are KGS's recommended Residential customer and usage charges?

A. KGS is proposing to offer two usage-level rate options for residential customers (A/B Rates).[1]

[1] Direct Testimony of Paul Raab (Raab Direct), p. 39.

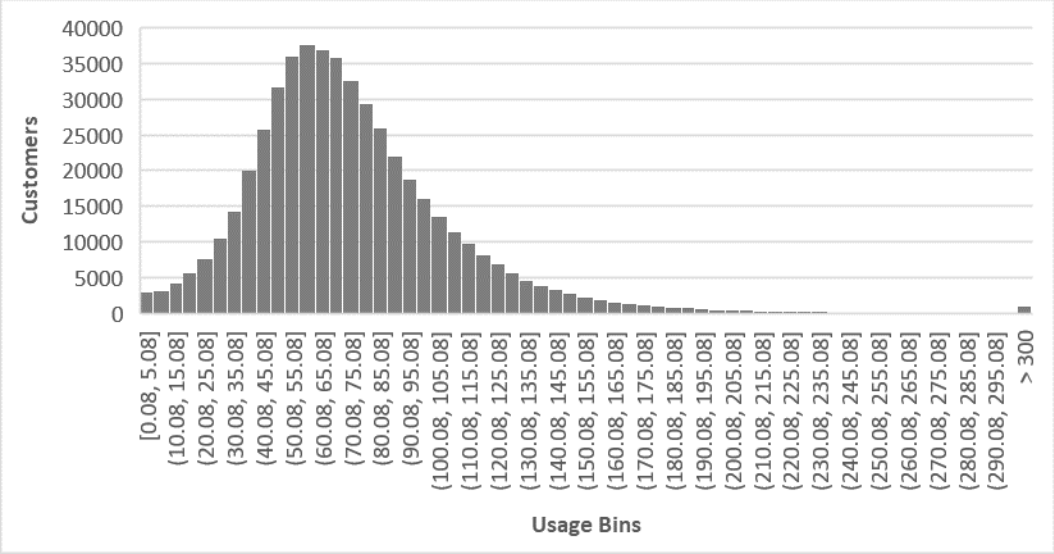
Q. What is a usage-level rate?

A. Usage-level rates are optional rates available within a class based on customers' usage. Lower-usage customers are charged a lower customer charge and higher volumetric charge while higher-usage customers are charged a higher customer charge and lower volumetric charge.

Q. Is it typical to separate rate classes into sub-classes by usage level?

A. Traditionally, different rate classes are identified by unique behavior—Space Heating uses more electricity in the winter and at night, Industrial customers are separated by demand or load factor. But with the A/B rate design, there is no usage difference at the breakpoint whether they are A or B customers. Figure 1 below shows the frequency distribution of Residential Customer usage.[2]

Figure 1: Frequency Distribution of Residential Customer Usage



[2] Note the distribution is right-skewed with a mean of 73.19, median of 67.20, and mode of 56.71. KGS selected the mean as its breakpoint. Because the mean overestimates the most common values in a positively-skewed distribution, Staff targeted the mode for its breakpoint. However, given the constraint of recovering the revenue requirement while maintaining bill parity at the breakpoint, Staff found the optimal breakpoint to be slightly less than the mode.

Q. Why is KGS proposing to provide Residential Customers with these two new rate options?

A. KGS states it is proposing to provide Residential Customers with these new rate options for the following reasons:

- In Docket No. 22-KGSG-466-TAR, KGS agreed to study whether the residential class would benefit from being separated into multiple subclasses and present the results in its next rate case;[3]
- ONE Gas offers usage-based rates in other jurisdictions;[4]
- Usage-based rates provide benefits to both the Company and its customers;
    - Mitigates bill impacts associated with the revenue increase;[5]
    - Provides customers with billing choices;[6]
    - Better provides the Company with an opportunity to earn its authorized return;[7]
    - Mitigates the high bills associated with high natural gas usage;
    - Reduces revenue erosion, arrearages; and the number of rate cases.[8]

KGS also states that the usage level options can be shown to better reflect the Company's cost structure, therefore, economic efficiency gains should accrue.[9] Lastly, KGS contends that because current residential service charges are below the

[3] Raab Direct, p. 40.
[4] Raab Direct, p. 40. "ONE Gas has served both residential and commercial customers in Oklahoma under so-called 'A/B' rates for almost 20 years. In Texas, such rates have been implemented in numerous service territories throughout the state."
[5] Raab Direct, p. 39.
[6] Raab Direct, p. 39.
[7] Raab Direct, p. 39.
[8] Raab Direct, p. 40-41. On p. 41, Paul Rabb states falling volumes cause revenue erosion, requiring more frequent rate cases.
[9] Raab Direct, p. 40.

fixed cost indicated by the CCOS study, higher-use customers are currently paying a disproportionate amount of the class costs.[10]

Q. What are KGS's recommended Residential customer and usage charges?

A. *A Rate*:

For Residential customers whose weather normalized consumption is less than or equal to 73 Mcf per year (Lower-Usage Customers), KGS recommends the following charges:

Customer charge: $20.00 per month

Volumetric Charge: $4.3818 per Mcf [11]

B Rate:

For Residential customers whose weather normalized consumption is greater than 73 Mcf per year (Higher-Usage Customers), KGS recommends the following charges:

Customer charge: $35.00 per month

Volumetric Charge: $1.9160 per Mcf[12]

Q. How would KGS determine which rate option to apply to customers?

A. KGS proposes to initially assign each residential customer to the rate determined to be the least cost based on historical usage and then allow customers to choose

[10] Raab Direct pp. 43-45. "If the customer charge is too low to fully recover fixed costs, higher-use customers pay part of the cost to serve lower use customers who do not consume enough to pay the fixed costs imbedded in the variable charge. And, because prices applied to the lower usage customers do not fully collect the cost to serve them, the revenues need to be made up by other customers on the system."
[11] Raab Direct, p 45.
[12] Raab Direct, p 45.

the alternative rate if the customer believes it would better suit them. But they would only be allowed to switch one time in a twelve-month period.[13]

Q Please describe how KGS developed its Customer charges.

A. First, KGS separated lower-usage customers from higher-usage customers using mean consumption (73 mcf) as the break point. Then, KGS set the customer charge for lower-usage customers equal to $20.00 per month, a level close to the current residential basic service charge. KGS assigned higher usage customers a higher customer charge ($32 per month) closer to the average customer's assigned fixed cost from the Company's CCOS.[14]

Q. Please describe how KGS developed its variable charges.

A. Once the customer charges were set, KGS found the prices that would recover the current revenue requirement and where a break-point customer would be indifferent to either the A or B rate. In other words, the average-usage customer would pay the same amount on the A or B rate.

Q. How were these charges adjusted for KGS's proposed increase in Revenue Requirement?

A. KGS maintained the $20 customer charge for lower-usage customers but raised the customer charge for higher-usage customers from $32 to $35, then went through the same process as discussed above to find the delivery charges that would recover the current revenue requirement and the average-usage customer would pay the same amount on the A or B rate.

[13] Raab Direct, p. 50. "New or existing customers with less than 12 months of billing history will be placed on a rate plan based on their expected annual usage (using historical consumption). New properties with no or less than 12 months of usage will be automatically placed in the Small Residential plan."
[14] Raab, Direct p. 45.

Q. What process would you use to develop an A/B Rate?

A. First, I would construct revenue neutral A/B rates that don't shift revenue from higher-use customers to lower-use customers. Then, I would apply the revenue requirement increase pro rata across the A/B rate components.

Q. Did KGS follow this process?

A. No, KGS shifted $8.5 million dollars from higher-use customers to lower-use customers in the first step as illustrated in Table 1.

Table 1: KGS A/B Rate Design Step 1

		Two-Part Rate	Share of Class Revenue Requirement	A/B Revenue	Share of Class Revenue Requirement	Delta
A	Service Charge	$ 74,723,347		$ 82,203,902		$ 7,480,555
	Delivery Charge	$ 40,150,361		$ 41,152,026		$ 1,001,665
	Total	$ 114,873,708	50%	$ 123,355,928	54%	$ 8,482,220
B	Service Charge	$ 54,136,518		$ 95,289,801		$ 41,153,283
	Delivery Charge	$ 60,902,987		$ 11,267,506		$ (49,635,480)
	Total	$ 115,039,505	50%	$ 106,557,307	46%	$ (8,482,198)
	Revenues	$ 229,913,213		$ 229,913,235		$ 22

KGS then shifted $9.8 million of the burden back to higher-use customers in the second step by increasing the revenue requirement $47.4 million for higher-use customers as shown in Table 2 below instead of $37.6, which would have maintained the Step 1 sub-class share of the revenue requirement illustrated in Table 3 below.

Table 2: KGS A/B Rate Design Step 2

		A/B Revenue KGS Rev Req	Share of Class Revenue Requirement	Delta	Revenue Requirement Increase
A	Service Charge	$ 82,203,902		$ -	
	Delivery Charge	$ 74,912,008		$ 33,759,983	
	Total	$ 157,115,911	51%	$ 33,759,983	27%
B	Service Charge	$ 104,223,219		$ 8,933,419	
	Delivery Charge	$ 49,687,087		$ 38,419,580	
	Total	$ 153,910,306	49%	$ 47,352,999	44%
	Revenues	$ 311,026,216		$ 81,112,982	35%

Q. What A/B rates would have maintained the class share of the revenue requirement?

A. Table 3 shows a hypothetical of KGS's A/B Rate Design Step 2 with the equal revenue requirement increase in percentage terms, which would have maintained the class share of the revenue requirement.

Table 3: KGS A/B Rate Design Step 2 with Equal Increase

		A/B Revenue KGS Rev Req	Class Share of Revenue Requirement	Delta	Equal Revenue Requirement Increase
A	Service Charge	$ 111,205,293.28		$ 29,001,391	
	Delivery Charge	$ 55,670,387.27		$ 14,518,362	
	Total	$ 166,875,681	54%	$ 43,519,753	35%
B	Service Charge	$ 128,907,873		$ 33,618,073	
	Delivery Charge	$ 15,242,663		$ 3,975,156	
	Total	$ 144,150,536	46%	$ 37,593,229	35%
	Revenues	$ 311,026,216		$ 81,112,982	35%

Q. Does this revenue shifting address the intra-class subsidy KGS identified?

A. No, the net effect of the revenue shifts seems to increase the intra-class subsidy KGS identified.

Bill Impacts

Q. What are the bill impacts of KGS's proposed A/B rates?

A. KGS developed three separate comparisons to quantify the bill impacts, which are summarized in Exhibit PHR-9. Each page of the exhibit shows ranges of residential weather normalized annual consumption, the number of customers observed to fall within each range during the test year, and the bill impacts calculated over the range as follows:

Page 1 shows the bill impact of an A/B rate structure compared to the current, two-part rate structure that collects the same level of revenues.[15]

Page 2 shows the bill impact of an A/B rate structure that collects the proposed revenue requirement compared to the current, two-part rate.[16]

Page 3 shows the bill impact of an A/B rate structure that collects the proposed revenue level compared to a two-part rate that also collects the proposed revenue level.[17]

KGS explains the primary reason for the Page 2 impacts is not the A/B rate structure itself, but rather the revenue requirement increase. KGS then references Page 3 to demonstrate that the movement to A/B rates would help those residential consumers

[15] Raab Direct, p. 48. "At existing rates, annual charges would have been between $218.16 (for 0 Mcf customers) and $229.59 (for 5 Mcf customers). If these same customers were billed under KGS's hypothetical A/B rate structure collecting the current revenue requirement, annual bills would have totaled between $240.00 and $251.71, a bill amount change of $1.82 to $1.84 (10%) per month. As can be seen from the schedule, this represents the largest percentage increase of any customer consumption segment. The largest actual bill impact is only about $2 per month."
[16] Raab Direct, pp. 47-48.
[17] Raab Direct, pp. 46-47.

at the lower and upper consumption levels and that any bill increases as a result of the A/B rate structure would be modest.[18]

Q. Do you agree that moving to A/B rates would help those residential consumers at the outer lower and upper annual consumption levels?

A. Yes, moving to KGS's proposed A/B rates would help those residential consumers at the lower and upper consumption level tails. But mid-distribution customers would pay more as shown in Table 4 below.

Table 4: KGS A/B Rates Average Bill Comparison

	Current Bill	A/B Bill	
	Current Rev Req	Current Rev Req	KGS Rev Req
A	$ 389.60	$ 415.72	$ 559.87
B	$ 389.60	$ 415.72	$ 559.87

Other Rate-Class Specific Issues

GSTE and STk Rate Synchronization

Q. What is KGS proposing with regards to the GSTE and STk-Rate classes?

A. In an effort to provide a smoother transition between sales and transportation service for large general service customers, the Company proposes to synchronize the General Service Transport Eligible (GSTE) and the Small Transport – k System (STk) rates."[19]

Q Why is KGS proposing to synchronize the GSTE and STk-Rate classes?

A. KGS explains that when rates were approved in Docket No. 12-KGSG-835-RTS, the GSTE rates were intended to be equivalent to transportation rates so that

[18] Raab, Direct p. 48.
[19] Raab, Direct p. 39.

customers would not be incented to take either service type. As a result of rate changes that have occurred since these rates were implemented, GSTE rates have diverged from the equivalent transportation rates, primarily STk. Therefore, the Company is proposing to reimplement the intended equivalency in this case.

Q. How did KGS synchronize the GSTE and STk rates?

A. KGS equalized the rates by combining the revenues and billing determinants for the two classes. The revenue requirement increase (10.2%, $1,603,924) was then applied to create a revenue requirement for the two classes combined. First, the increase was applied to the average of the existing customer charges to determine the new customer charge ($60.26). Then, the remainder was divided by the combined volumes to derive the volumetric charge ($1.7325/Mcf) needed to produce the required revenue.[20]

Large Volume Transportation (LVT) Rates

Q. What is KGS proposing with regards to the LVT-Rate class?

A. To maintain internal rate consistency of the current rates, KGS proposed to keep the delivery charges within the tiers of the proposed Large Volume Transportation (LVT) rates equal to one another.[21]

[20] Raab Direct, pp. 50-51.
[21] Raab Direct p. 40.

Remaining Classes

Q. How did KGS allocate its Revenue Requirement Increase to the remaining classes?

A. KGS increased rates only for those remaining classes who had relative rates of return less than one according to the Company's Class Cost of Service.[22] To minimize intra-class rate impacts, KGS increased the service charge and the delivery charge of each rate by the same percentage.[23]

Staff's Allocation of the Revenue Requirement Increase

Q. How did Staff allocate its increase in Revenue Requirement?

A. Staff began with its Class Cost of Service (CCOS) study. The CCOS study allocated revenue, expenses, and rate base among customer classes so that the rate of return for each class could be calculated.

Q. What is a relative rate of return index?

A. The relative rate of return index normalizes the class rates of return for easier comparison. For a particular class, the index is calculated by dividing that class' rate of return by the system-wide rate of return as shown in the following formula:

$$\textbf{\textit{Relative Rate of Return Index}} = \frac{\textbf{\textit{Class Rate of Return}}}{\textbf{\textit{System Average Rate of Return}}}$$

In other words, the relative rate of return index compresses the data for easier analysis. For example, assume that the system average rate of return is 8% and one class has a rate of return of 7% and another class has a rate of return of 9%. The class with the 7% rate of return would have a relative rate of return of 0.875 $\left(\frac{7\%}{8\%}\right)$

[22] See Proof of Revenue: Allocation of Deficiency tab.
[23] Raab Direct, p. 39. "The percentage increase amounts are those provided within the 'Percent Increase' associated with the 'Demand Classification of Mains' definition of class cost of service."

and the class with the 9% rate of return would have a relative rate of return of 1.125 $\left(\frac{9\%}{8\%}\right)$. A class with the same rate of return as the system average would have a relative rate of return index of 1.0. Thus, a class with an index above 1.0 is overearning while a class with an index below 1.0 is underearning.

Q. Did Staff use only the relative rate of return index to develop its class allocations?

A. No, Staff started with the relative rates of return for the class revenue allocation but then applied the principle of gradualism, which resulted in a moderate change in revenue allocation.[24] Using only the relative rate of return index to allocate revenue forces all class rates of return to the system-wide rate of return, which means all class indexes would be forced to 1.0. The opposite extreme is to use the system wide percentage increase for all classes so that every class's base rates increase the same percentage and the relative rates of return remain unchanged. Somewhere in between these two extremes lies an approach that moves classes closer to the system-wide rate of return without causing a disruption of sudden large changes in rates. The principle of gradualism moderates changes in class revenue allocation while allowing movement toward the system-wide rate of return.

Q. How did Staff develop its class allocation?

A. Staff started by dividing Staff's proposed revenue requirement increase into two parts: the part of the revenue requirement increase that is the result of the GSRS rebasing, $35,026,489; and the remaining part of the revenue requirement increase,

[24] Lowell E. Alt, Jr. *Energy Utility Rate Setting*, pp. 72-74. Alt lists three principles of rate design—"cost causation, equalized rates of return and gradualism." p. 72.

$31,691,480. Staff allocated the GSRS rebasing part based on how much each class paid into the GSRS. For example, the Residential Class paid $24,981,721 into the GSRS after adjusting for the Residential Rate Cap of $3.57 per month. Thus, Staff assigned $24,981,721 in GSRS rebasing revenue requirement to the Residential Class. The same was done for each class—each class was assigned the same revenue requirement increase it paid into the GSRS.

The rest of the revenue requirement was allocated using Staff's CCOS as a guide to divide the classes into the following six groups:

(1) ROR < 0 ⇒ class got a 17.612% increase,

(2) 0 < ROR ≤1.00 ⇒ class got a 10.375% increase,

(3) 1.00 < ROR ≤ 1.50 ⇒ class got a 9.9% increase,

(4) 1.50 < ROR ≤ 5.00 ⇒ class got a 8.5% increase,

(5) 5.00 < ROR ≤ 20.00 ⇒ class got a 5.00 % increase, and

(6) ROR < 20.00 ⇒ class got no increase.

Q. Were there any exceptions to the guidelines described above for allocation of Staff's revenue requirement increase?

A. Yes. Because the base rates for the General Service Transport Eligible and the Small Transport k-System are to be identical, I first allocated the rate increases to each class based on the guidelines outlined above. Then, I added the two revenue requirements together. For the Large Transport k and t tiers I did something similar. I first allocated the revenue requirement to the individual tiers based on the guidelines above, and then aggregated the total for Large Transport k tiers and aggregated the totals for Large Transport t tiers.

Table 5 below has Staff's recommended revenue requirement class allocations. The table shows the revenue generated by the present rates in column (a), the percentage of total revenue each class contributes in column (b), current GSRS allocation in column (c), the percentage of total GSRS each class contributes in column (d), the class relative rate of return (e), hypothetical across-the-board class revenue allocation in column (f), the proposed class revenue allocation in column (g), class percent increase in column (h), and proposed revenue allocation in column (i).

Table 5: Staff's Class Revenue Allocation

Customer Classes	Current Revenue	% of Current Revenue	Class GSRS Allocation $ 35,026,489	% of GSRS	Relative Rate of Return	Across the Board Revenue Allocation	Class Revenue Allocation $ 31,691,480	Class % Increase	Proposed Revenue Allocation
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
Residential	$ 230,503,866	72.7%	**$ 24,981,574**	71.3%	0.78	23,029,206	**$ 23,913,688**	10.4%	**$ 279,399,128**
General Service - Small	$ 23,157,049	7.3%	**$ 2,387,563**	6.8%	1.66	2,313,577	**$ 1,968,349**	8.5%	**$ 27,512,961**
General Service - Large	$ 17,782,088	5.6%	**$ 1,843,074**	5.3%	0.89	1,776,575	**$ 1,844,808**	10.4%	**$ 21,469,970**
General Service - TE	$ 4,935,859	1.6%	**$ 263,914**	0.8%	1.26	493,132	**$ 488,650**	9.9%	**$ 5,688,423**
Small Generator Service	$ 473,188	0.1%	**$ 47,776**	0.1%	6.30	47,275	**$ 23,659**	5.0%	**$ 544,623**
Irrigation Sales	$ 225,134	0.1%	**$ 36,744**	0.1%	0.99	22,493	**$ 23,357**	10.4%	**$ 285,234**
Irrigation Transport	$ 1,054,391	0.3%	**$ 188,887**	0.5%	1.53	105,342	**$ 89,623**	8.5%	**$ 1,332,901**
Sales for Resale	$ 44,122	0.0%	**$ 10,814**	0.0%	60.01	4,408	**$ -**	0.0%	**$ 54,936**
Sales for Resale - Black Hills	$ 4,175	0.0%	**$ -**	0.0%	(3.13)	417	**$ 735**	15.0%	**$ 4,910**
Small Transport k-System	$ 10,983,520	3.5%	**$ 1,273,223**	3.6%	1.90	1,097,343	**$ 933,599**	8.5%	**$ 13,190,342**
Small Transport t-System	$ 4,566,524	1.4%	**$ 491,861**	1.4%	1.58	456,233	**$ 388,155**	8.5%	**$ 5,446,540**
CNG k-System	$ 288,000	0.1%	**$ 18,069**	0.1%	3.97	28,774	**$ 24,480**	8.5%	**$ 330,549**
CNG t-System	$ 81,198	0.0%	**$ 7,443**	0.0%	2.15	8,112	**$ 6,902**	8.5%	**$ 95,543**
Wholesale Transport	$ 2,316,138	0.7%	**$ 161,042**	0.5%	21.71	231,401	**$ -**	0.0%	**$ 2,477,180**
Large Transport k - Tier 1	$ 1,262,830	0.4%	**$ 193,787**	0.6%	0.74	126,167	**$ 131,013**	10.4%	**$ 1,587,630**
Large Transport k - Tier 2	$ 1,836,218	0.6%	**$ 186,554**	0.5%	0.92	183,453	**$ 190,499**	10.4%	**$ 2,213,271**
Large Transport k - Tier 3	$ 2,081,098	0.7%	**$ 165,736**	0.5%	1.92	207,919	**$ 176,893**	8.5%	**$ 2,423,727**
Large Transport k - Tier 4	$ 7,409,146	2.3%	**$ 987,287**	2.8%	2.58	740,234	**$ 629,777**	8.5%	**$ 9,026,211**
Large Transport t - Tier 1	$ 277,337	0.1%	**$ 76,766**	0.2%	2.05	27,708	**$ 23,574**	8.5%	**$ 377,676**
Large Transport t - Tier 2	$ 622,525	0.2%	**$ 86,967**	0.2%	(0.03)	62,195	**$ 109,639**	17.6%	**$ 819,132**
Large Transport t - Tier 3	$ 1,163,811	0.4%	**$ 70,573**	0.2%	7.66	116,274	**$ 87,286**	7.5%	**$ 1,321,669**
Large Transport t - Tier 4	$ 6,138,051	1.9%	**$ 1,546,836**	4.4%	0.79	613,241	**$ 636,794**	10.4%	**$ 8,321,681**
TOTAL:	$ 317,206,268	100.0%	**$ 35,026,489**	100.00%	1.00	31,691,480	**$ 31,691,480**	10.0%	**$ 383,924,237**

Staff's Proposed Rate Design

Q. After determining the revenue allocation among classes, what is the next step in the rate design process?

A. The next, and final, step is to use the class revenue allocations to develop rates that will allow KGS the opportunity to collect its approved revenue requirement. Specifically, how much of the revenue allocated to each customer class is collected

through the service charges and how much is collected by the delivery charges must be determined.

Residential Class

A/B Rates

Q. Has Staff evaluated the A/B rate options?

A. Yes, Staff has evaluated the A/B rate options and has found that this proposal has both pros and cons, as follows:

Pros:

- Gives customers choice; and
- Increases Fixed Cost Recovery.

Cons:

- Shifts revenue collection to customers with average usage patterns;
- Benefits customers with especially low or high usage (tail customers) at expense of customers with average usage patterns (customers in the middle of the distribution);
- Doesn't specifically benefit low-income customers (i.e. usage is unrelated to income according to KGS);[25] and

[25] Raab Direct pp. 49-50. "Based on these analyses, the Company was unable to discern any correlation between income level and natural gas consumption level. Ms. Buchanan concludes that, 'For KGS residential customers, income is not predictive of usage.' I agree, and I would add that this observation is consistent with my general experience with other natural gas LDCs…[Thus, t]he conclusion that I draw is that the A/B rate structure will provide the same benefits to low-income customers that were identified above for all customers. Those low-income customers whose consumption falls at the lower and higher ends of the annual consumption range observed over all customers in the test year will clearly benefit. Those low-income customers whose consumption is about 'average' based on the annual consumption range observed over all customers in the test year will not experience much impact either positively or negatively."

- Increasing fixed recovery can be accomplished, without a fundamental shift in residential rate design, through a traditional two-part rate.

Q. What is Staff' recommendation with regards to the A/B rate?

A. Because there are both pros and cons to the establishment of the A/B rate, Staff is not recommending approval at this time. Accordingly, Staff recommends retaining the traditional two-part rate for Residential customers. If the Commission determines rate choice for Residential customers is preferred, Staff recommends revenue neutral A/B rates be developed using Staff's methodology, which doesn't shift revenue from higher-use customers to lower-use customers in the first step and applies the revenue requirement pro rata across the A/B rate components in the second step. Table 6 below shows Staff's proposed revenue neutral first step.

Table 6: Staff's Recommended A/B Rates Step 1

BP	52							BP Bill	
Rate Option	Component	Current Rates	Billing Determinants	A/B Rates	Current Revenue	A/B Revenue	Delta	Current	A/B
A	Service Charge	$ 18.18	163,604	$ 16.18	$ 35,691,755	$ 31,765,269	$ (3,926,486)	$ 218.16	$ 194.16
	Delivery Charge	$ 0.23485	60,745,612	$ 0.29949	$ 14,266,107	$ 18,192,593	$ 3,926,486	$ 122.12	$ 155.73
	Total				$ 49,957,862	$ 49,957,862	$ -	$ 340.28	$ 349.89
	Fixed Cost Recovery				71.44%	63.58%			
B	Service Charge	$ 18.18	427,218	$ 20.18	$ 93,201,858	$ 103,455,087	$ 10,253,230	$ 218.16	$ 242.16
	Delivery Charge	$ 0.23485	371,914,610	$ 0.20718	$ 87,344,146	$ 77,053,449	$ (10,290,697)	$ 122.12	$ 107.73
	Total				$ 180,546,004	$ 180,508,536	$ (37,468)	$ 340.28	$ 349.89
	Fixed Cost Recovery				51.62%	57.31%			$ (0.00)

Q. Why does the average bill increase for both A and B customers when switching to an A/B rate even though the revenue collected by each sub-class does not change?

A. The reason the average bill increases for both A and B customers when switching to an A/B rate is because the revenue collection burden is moved from the tails toward the center of the distribution. For A customers, the lower fixed charge benefits very low-use customers because they have less volumes subject to the

higher volumetric charge. For B customers, the lower volumetric charge benefits very high-use customers because they have more volumes subject to the lower volumetric charge, which offsets the increased customer charge.

As shown in Table 6 above, service charge revenues for the break-point A customers decrease $24 (from $218.16 to $194.16), while delivery charge revenues increase $34 (from $122.12 to $155.73). Conversely, service charge revenues for the break-point B customer increase $24 (from $218.16 to $194.16), while delivery charge revenues decrease $14 (from $122.12 to $107.73). Each result in a $10 increase for the break-point customers. As with any zero-sum game, there are winners and losers. In this case, mid-distribution customers pay for the benefits the tail customers receive from the A/B rate design.

Q. How did Staff increase the A/B rate to reflect Staff's revenue requirement increase?

A. First, Staff added the GSRS charge to the Step 1 A/B customer charge. Staff then rolled the remaining Revenue Requirement shortfall into the delivery charge as shown in Table 7 below.

Table 7: Staff's Recommended A/B Rates Step 2

BP	52								BP Bill	
Rate Option	Component	Current Rates	Billing Determinants	A/B Rates	Current Revenue	A/B Revenue	Delta	Current	A/B
A	Service Charge	$ 18.18	163,604	$ 19.75	$ 35,691,755	$ 38,774,046	$ 3,082,291	$ 218.16	$ 237.00
	Delivery Charge	$ 0.23485	60,745,612	$ 0.35409	$ 14,266,107	$ 21,509,119	$ 7,243,012	$ 122.12	$ 184.12
	Total				$ 49,957,862	$ 60,283,166	$ 10,325,303	$ 340.28	$ 421.12
	Fixed Cost Recovery				71.44%	64.32%			
B	Service Charge	$ 18.18	427,218	$ 23.75	$ 93,201,858	$ 121,757,102	$ 28,555,245	$ 218.16	$ 285.00
	Delivery Charge	$ 0.23485	371,914,610	$ 0.26178	$ 87,344,146	$ 97,358,860	$ 10,014,714	$ 122.12	$ 136.12
	Total				$ 180,546,004	$ 219,115,962	$ 38,569,958	$ 340.28	$ 421.12
	Fixed Cost Recovery				51.62%	55.57%			$ (0.00)

Traditional Two Part Rate

Q. Does Staff have an alternative to the A/B rate design for Residential customers that is more traditional?

A. Yes, Staff recommends maintaining the traditional two-part rate for residential customers.

Q. How did Staff set the rates for the traditional two-part rate?

A. Staff started with the existing service charge of $18.18 and then added the GSRS monthly amount allocated to Residential customers—$3.57—resulting in a new Residential service charge of $21.75.

Q. Why did you choose this method for setting the service charge?

A. There were two factors that determined the rate for the service charge. First, gas utilities, and utilities in general, prefer higher fixed charges for customers. For gas utilities in particular, increasing the fixed charge should reduce the gap between the gas utility's approved revenue requirement and the actual revenue collected by the gas utility. Since the mid-1980s, Residential customers' average usage has declined for several reasons: improved efficiency of gas appliances, no new major Residential uses for natural gas, and temperatures have generally beeen slowly rising since the 1970s, especially at night in the winter. Thus, reliance on collecting fixed costs in the delivery charge (volumetric charge) has resulted in gas utilities failing, on average, to collect their revenue requirement.

Second, the GSRS is collected as a fixed monthly charge, which Residential customers have been paying. De facto, Residential customers have been paying a fixed charge of $21.75 rather than $18.18. Increasing the service charge to the combination of the existing service charge and the GSRS monthly charge

accomplishes two objectives: it increases the service charge to help provide revenue stability for KGS, and it will not provide rate shock for Residential customers since they are already paying $21.75 in fixed charges.

Q. How did Staff determine the delivery charge for Residential customers?

A. Staff first set the service charge, then determined the delivery charge that would collect the remaining class revenue requirement. After determining the delivery charge, Staff rounded the delivery charge to five digits after the decimal point—KGS rates only go out five decimal places in their delivery charges.

Other Rate-Class Specific Issues

GSTE and STk Rate Synchronization

Q. Do you agree the GSTE and STK Rate classes should be synchronized?

A. Yes, the GSTE and STk rates should be synchronized to regain parity between the classes. The only difference should be the commodity cost of gas so that KGS is on equal footing with alternative gas suppliers. To accomplish this, I set the service charge to $59.00 for both classes, the same service charge that was set for Small Transport t-System. Then, I solved for the delivery charge that fully recovered the remaining revenue requirement—$1.89317.

Large Volume Transportation LVT Rates

Q. Do you agree that maintaining equalized delivery charges within the LVT class for the k and t systems is appropriate?

A. Yes, the delivery charges must be kept equal to maintain the current rate structure across the LVT tiers. The Large Transport k – Tiers all have the same delivery charge but have different service charges, and the Large Transport t – Tiers all have the same delivery charges but have different service charges. Therefore, I assigned

the services charges to each tier of both systems based in part on what the service charge was before, and in part on what the ROR for the individual tier was. Then, I solved for the delivery charge so that the aggregated revenue requirement was recovered by each system's tiers.

Remaining Classes

Q. Did Staff follow the same procedure for determining rates for the remaining classes as was done for the Residential two-part rate?

A. No. Instead, Staff set the service charges based on the existing service charge and the ROR from Staff's CCOS so that the proposed increase in the service charge is proportional to the ROR while using the existing service charge as a base. The procedure was to first set the service charge and then solve for the delivery charge that recovers the rest of the revenue requirement allocated to the class. The resulting service charge and delivery charge for each class is below in Table 8.

Table 8: KGS Revenue with Staff's Proposed Rates, Bill Count, and Usage

Customer Classes	Number of Customers	Total Volumes	Proposed Service Charge	Proposed Delivery Charge	Service Charge Revenue	Delivery Charge Revenue	Proposed Total Base Rate Revenue	Proposed Revenue Target
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
Residential	590,821	43,266,022	21.75	2.89360	$ 154,204,405	$ 125,194,562	$ 279,398,967	$ 279,399,128
General Service - Small	36,970	4,596,298	32.10	2.88758	$ 14,240,770	$ 13,272,178	$ 27,512,947	$ 27,512,961
General Service - Large	11,908	6,404,866	54.00	2.14732	$ 7,716,649	$ 13,753,298	$ 21,469,947	$ 21,469,970
General Service - TE	639	2,488,751	59.00	1.89317	$ 452,725	$ 4,711,628	$ 5,164,354	$ 5,688,423
Small Generator Service	745	22,208	59.00	0.78540	$ 527,181	$ 17,442	$ 544,623	$ 544,623
Irrigation Sales	178	90,370	48.26	2.01590	$ 103,058	$ 182,176	$ 285,234	$ 285,234
Irrigation Transport	504	888,804	45.00	1.19318	$ 272,397	$ 1,060,504	$ 1,332,900	$ 1,332,901
Sales for Resale	6	31,389	80.00	1.56708	$ 5,747	$ 49,189	$ 54,936	$ 54,936
Sales for Resale - Black Hills	1	1,997	148.50	1.56708	$ 1,782	$ 3,129	$ 4,911	$ 4,910
Small Transport k-System	3,349	5,991,815	59.00	1.89317	$ 2,370,885	$ 11,343,524	$ 13,714,409	$ 13,190,342
Small Transport t-System	1,184	1,973,247	59.00	2.33532	$ 838,374	$ 4,608,164	$ 5,446,538	$ 5,446,540
CNG k-System	10	345,958	50.00	0.93812	$ 6,000	$ 324,550	$ 330,550	$ 330,549
CNG t-System	2	83,094	50.00	1.13538	$ 1,200	$ 94,343	$ 95,543	$ 95,543
Wholesale Transport	37	1,318,548	50.00	1.86179	$ 22,325	$ 2,454,860	$ 2,477,185	$ 2,477,180
Large Transport k - Tier 1	159	870,794	280.00	1.10279	$ 535,523	$ 960,303	$ 1,495,826	$ 1,587,630
Large Transport k - Tier 2	107	1,650,298	300.00	1.10279	$ 383,850	$ 1,819,932	$ 2,203,782	$ 2,213,271
Large Transport k - Tier 3	67	2,040,836	320.00	1.10279	$ 257,120	$ 2,250,614	$ 2,507,734	$ 2,423,727
Large Transport k - Tier 4	65	7,988,610	300.00	1.10279	$ 233,720	$ 8,809,759	$ 9,043,479	$ 9,026,211
Large Transport t - Tier 1	23	136,065	430.00	1.79924	$ 117,498	$ 244,813	$ 362,310	$ 377,676
Large Transport t - Tier 2	23	380,141	480.00	1.79924	$ 131,520	$ 683,964	$ 815,484	$ 819,132
Large Transport t - Tier 3	27	748,624	500.00	1.79924	$ 164,250	$ 1,346,955	$ 1,511,205	$ 1,321,669
Large Transport t - Tier 4	24	4,456,291	470.00	1.79924	$ 133,245	$ 8,017,937	$ 8,151,182	$ 8,321,681
TOTAL:	646,850	85,775,027			$ 182,720,222	$ 201,203,825	$ 383,924,047	$ 383,924,237

IV. CONCLUSION

Q. Please summarize your recommendation.

A. I recommend the Commission reject KGS's A/B rate proposal and, instead, accept Staff's allocation of the revenue requirement increase and rate design. However, if the Commission determines rate choice for Residential customers is preferred, I recommend Staff's alternative A/B rates be adopted.

Q. Does this conclude your testimony?

A. Yes. Thank you.

STATE OF KANSAS)
) ss.
COUNTY OF SHAWNEE)

VERIFICATION

Lana Ellis, being duly sworn upon her oath deposes and states that she is Deputy Chief of Economics and Rates for the Utilities Division of the Kansas Corporation Commission of the State of Kansas, that she has read and is familiar with the foregoing *Direct Testimony*, and attests that the statements contained therein are true and correct to the best of her knowledge, information and belief.

Lana Ellis
Deputy Chief of Economics and Rates
State Corporation Commission of the
State of Kansas

Subscribed and sworn to before me this 26 day of June, 2024.

Notary Public

My Appointment Expires: 4/28/25

NOTARY PUBLIC - State of Kansas
ANN M. MURPHY
My Appt. Expires 4/28/25

CERTIFICATE OF SERVICE

24-KGSG-610-RTS

I, the undersigned, certify that a true and correct copy of the above and foregoing Testimony was served via electronic service on the 1st day of July, 2024, to the following:

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