

Exhibit No.:
Issue(s): Class Cost of Service
Study
Witness: Kelsey Ann Klein
Type of Exhibit: Direct Testimony
Sponsoring Party: Union Electric Company
File No.: GR-2021-0241
Date Testimony Prepared: March 31, 2021

MISSOURI PUBLIC SERVICE COMMISSION

FILE NO. GR-2021-0241

DIRECT TESTIMONY

OF

KELSEY ANN KLEIN

ON

BEHALF OF

UNION ELECTRIC COMPANY

D/B/A AMEREN MISSOURI

**St. Louis, Missouri
March 2021**

TABLE OF CONTENTS

I.	INTRODUCTION	1
II.	PURPOSE OF TESTIMONY	2
III.	SUMMARY OF SCHEDULES.....	2
IV.	CCOSS SUMMARY	3
V.	CCOSS CONCEPTS	5
VI.	DEVELOPMENT OF BILLING UNITS	18

DIRECT TESTIMONY

OF

KELSEY ANN KLEIN

FILE NO. GR-2021-0241

I. INTRODUCTION

1

2 **Q. Please state your name and business address.**

3 A. Kelsey Ann Klein, Union Electric Company d/b/a Ameren Missouri
4 ("Ameren Missouri" or "Company"), One Ameren Plaza, 1901 Chouteau Avenue, St.
5 Louis, Missouri 63103.

6 **Q. What is your position with Ameren Missouri?**

7 A. I am employed by Ameren Missouri as a Regulatory Analyst.

8 **Q. Please describe your educational background and employment**
9 **experience.**

10 A. I received a Bachelor's of Science Degree in Business Administration with
11 an emphasis in Marketing and a Bachelor of Arts Degree in International Studies from the
12 University of Missouri – Columbia in 2016. While pursuing my undergraduate degrees, I
13 interned at Ameren Services in the Strategic Sourcing Department twice. Following
14 completion of my undergraduate degrees, I was hired by Ameren Services as a
15 Procurement Specialist in the Strategic Sourcing Department. In this position, I was
16 responsible for supporting and executing the Ameren Sourcing process for our Facilitates
17 Management & Construction organization, Ameren's Human Resources – Talent
18 Management organization, and various professional service requests across Ameren
19 Missouri and Ameren Illinois.

1 customer rate class should be derived from the fixed customer charge and recovered from
2 the volumetric energy charge.

3 **IV. CCOSS SUMMARY**

4 **Q. Please summarize the results of the Company's CCOSS.**

5 A. Table 1 below is a summary of the CCOSS indicating the Realized Rate of
6 Return ("RROR") currently being earned on the natural gas service provided to the
7 Company's customer rate classes. A more detailed summary can be found in Schedule
8 KAK-D1. The results show what the RROR would be from each rate class based on
9 revenues from currently effective rates after incorporating all expenses for the test year
10 ending December 31, 2020. This study is based on the Company's present rate levels and
11 weather-normalized and adjusted billing units during the test year. The Missouri natural
12 gas jurisdictional annual revenue requirement calculated by Company witness Mitchell
13 Lansford formed the starting point for this study.

14 **Table 1 – Summary of CCOSS**

Customer Rate Class	RROR	Equalized Rate of Return
Residential Service	3.45%	6.943%
General Service	4.44%	6.943%
Interruptible Service	1.36%	6.943%
Standard Transport Service	12.11%	6.943%
Large Transport Service	5.23%	6.943%
Total	4.68%	6.943%

1 **Q. What general conclusions can be drawn from the information**
2 **contained in the table above?**

3 A. Any class that has a RROR less than 6.943% is not covering the cost to
4 serve that class, and any class that has a rate of return greater than 6.943% is covering more
5 than its fair share of the total costs. These new baseline amounts are used to determine the
6 change in base rates that would be necessary for the Company to recover its revenue
7 requirement with an equal RROR for all customer rate classes as calculated in Schedule
8 KAK-D2. Currently, almost all classes are providing a below average rate of return while
9 the Standard Transport class is providing an above average rate of return.

10 **Q. How was Schedule KAK-D2 developed?**

11 A. To develop Schedule KAK-D2, I modified the base revenues of each
12 customer rate class in Schedule KAK-D1 to reflect the class revenues necessary for the
13 Company to realize equalized rates of return consistent with the Company's weighted
14 average cost of capital from each customer rate class. This was referenced by Company
15 witness Michael Harding in his testimony, Section II, in the development of rates for each
16 class.

17 **Q. Please describe the method used to equalize rates of return for each**
18 **customer rate class, as reflected in your Schedule KAK-D2.**

19 A. The total net original cost rate base of each customer rate class was
20 multiplied by the proposed Missouri jurisdiction test year return of 6.943%, as indicated in
21 Mr. Lansford's testimony. This was used to obtain the required total net operating income
22 of each class. The net operating income was then added to the operating expenses of each
23 class to obtain the total operating revenue of each class required for equalized rates of

1 return. The resulting cost of service of each customer class is set forth on line 9 of Schedule
2 KAK-D2. Table 2 below highlights the revenues that each class would be responsible for
3 if they were all paying their equalized cost of service amount.

4 **Table 2 – Summary of CCOS: Equal Returns**

Item	Total Missouri	Residential Service	General Service	Interruptible Service	Standard Transport Service	Large Transport Service
Total Gas Operating Revenues	\$86,468,404	\$54,763,796	\$18,072,486	\$573,748	\$7,392,929	\$5,665,445
Net Utility Operating Income	\$21,555,311	\$12,670,860	\$4,803,994	\$177,836	\$2,184,651	\$1,717,970
Rate Base	\$310,461,084	\$182,498,355	\$69,191,915	\$2,561,376	\$31,465,523	\$24,743,916
RROR	6.943%	6.943%	6.943%	6.943%	6.943%	6.943%

5 **Q. How are the results of the class cost of service study used?**

6 A. The results of the study are utilized as the starting point of revenue
7 allocation and rate design as discussed further in the testimony of Mr. Harding, section II.

8 **V. CCOSS CONCEPTS**

9 **Q. What is a CCOSS?**

10 A. A CCOSS is a study completed to determine how to appropriately allocate
11 the Company's aggregated cost of providing utility services to the customers who utilize
12 our services and cause the costs to be incurred. In other words, a CCOSS is a tool for
13 designing rates that equitably assign cost responsibility to each customer class. The utility
14 services mentioned are those included in the distribution of natural gas in Ameren
15 Missouri's service territory. A CCOSS takes historical expenses and costs incurred to
16 identify the revenue requirements needed to serve our customers. The components of the
17 revenue requirement are then functionalized, classified, and allocated to our gas customer

1 classes to help determine what rates should be utilized for each customer rate class based
2 on those allocations.

3 **Q. What information is provided by the CCOSS?**

4 A. The study ultimately results in a target "cost to serve" or "revenue
5 requirement" for each rate class. The Company utilizes these target revenue requirements
6 as a guide for rate design and pricing changes proposed for each customer rate class so the
7 rates reasonably reflect the costs caused by each class.

8 **Q. Why is a CCOSS performed?**

9 A. The cost of service can vary, sometimes significantly, between customer
10 rate classes depending upon their use of our natural gas distribution system. A CCOSS is
11 performed to determine how the costs should be appropriately allocated based on how each
12 class uses the system.

13 **Q. What customer rate classes were included in the Company's CCOSS?**

14 A. The Company's CCOSS includes all existing customer rate classes: the
15 Residential, General Service, Interruptible Service, Standard Transportation Service, and
16 Large Volume Transportation Service classes.

17 **Q. Were the rate base investment and expenses associated with the
18 Company's Special Contract customers considered in the CCOSS you performed?**

19 A. Yes. However, in considering such costs in my study, I employed a cost of
20 service approach consistent with that utilized by the Company in its last gas general rate
21 review, File No. GR-2019-0077. This approach consists of allocating the total of all
22 Company investment and expense to the other customer classes as if there were no special
23 contract customers. The allocation of such costs to the non-special contract customers is

1 offset by also allocating, or crediting, existing special contract revenues to the other
2 customer classes. This allocation of special contract costs and revenues was done based on
3 each class' respective total net original cost rate base. This process presumes that the
4 Company's current special contract revenues, which constitute about 0.54% of the
5 Company's total revenues, currently provide a fair and reasonable recovery of the
6 Company's total costs of providing such service. Said another way, it is presumed that
7 allocated special contract revenues are equivalent to allocated special contract costs.

8 **Q. Were the Company's other revenues treated in a similar way?**

9 A. Yes. The Company takes a similar approach with its "other revenues,"
10 which include revenues associated with such things as forfeited discounts, miscellaneous
11 service revenue, and building rental agreements. Depending on the category of revenue,
12 these amounts were allocated based on either the number of total bills, or the Labor Ratio.
13 The Labor Ratio method of allocation calculates the percent of total production,
14 transmission, distribution, customer, and sales labor expense that are attributable to the
15 provision of service to each customer rate class, and allocates amounts based on that
16 percentage.

17 **Q. What steps are used to prepare the CCOSS?**

18 A. The three major steps to develop a CCOSS are:

- 19 1. Functionalization – the process of assigning the Company's rate base
20 and expenses into specified utility functions, such as production,
21 transmission, distribution, and customer service, based on the
22 Federal Energy Regulatory Commissions ("FERC ") Uniform
23 System of Accounts.

1 2. Classification – functionalized costs are further separated into
2 classifications based on a cost-causative basis, as demand-related,
3 energy-related, or customer-related.

4 3. Allocation – costs are allocated to the customer rate classes based
5 on their proportional share of the classified costs using allocation
6 factors.

7 **A. FUNCTIONALIZATION AND CLASSIFICATION**

8 **Q. Please describe the components of costs and revenues that are**
9 **contained in the CCOSS that the Company is filing in this case.**

10 A. A traditional CCOSS incorporates the aggregate jurisdictional (Missouri or
11 FERC) accounting and financial data normally submitted to a regulatory commission by a
12 utility in support of a request for an adjustment in its overall rate levels. The study is needed
13 to determine the level of revenues necessary for the Company to recover its operating and
14 maintenance expenses through rates, depreciation applicable to its investment in utility
15 plant, property taxes, income and other taxes, and provide a fair rate of return to the
16 Company's investors. As mentioned above, the CCOSS then allocates these jurisdictional
17 costs to the customer rate classes in a cost-based manner that fairly and equitably reflects
18 the cost of service being provide to each class.

19 **Q. What major cost categories were examined in the development of the**
20 **CCOSS, and why are the Company's costs classified into these categories?**

21 A. The major cost categories are classified into customer-related, demand-
22 related costs, and energy-related costs based on cost-causation principles. It is generally
23 accepted within the industry that the costs in each of these categories result from different

1 cost causation factors so they should be allocated appropriately among the customer rate
2 classes.

3 **Q. What are customer-related costs?**

4 A. Customer-related costs result from the very existence of a customer and are
5 the minimum costs necessary to make gas services available to the customer. The costs of
6 making service available include the costs of meter reading and billing, as well as the fixed
7 costs associated with the customer's meter, service pipe, and some portion of the
8 Company's investment in distribution mains. The customer components of the gas
9 distribution system are costs necessary to provide safe and reliable service to a customer,
10 without the consideration of the amount of the customer's gas usage.

11 **Q. What are demand-related costs?**

12 A. Demand-related costs are costs that the Company incurs in order to meet
13 the maximum daily gas demands imposed by customers. These costs include a significant
14 portion of all fixed costs associated with the Company's investment in plant and expenses
15 to meet customer' expected maximum loads on the Company's gas distribution system.

16 **Q. What are energy-related costs?**

17 A. Energy-related costs are the costs directly related to the actual volume of
18 gas delivered or sold. Purchased gas costs are excluded from the CCOSS, so only gas
19 supply expenses outside of the purchased gas costs and the costs of stored gas are
20 considered energy-related costs.

21 **Q. Why are purchased gas costs excluded from your CCOSS?**

22 A. Purchased gas costs, including the cost of the gas commodity, demand,
23 pipeline transportation, and a portion of storage costs, are fully recovered through the

1 Company's Purchased Gas Adjustment ("PGA"). Purchased gas costs do not affect the
2 operating income or rate of return earned by the Company, so they are not included in the
3 CCOSS.

4 **B. ALLOCATION**

5 **Q. How are the allocation factors determined for each customer rate class?**

6 A. The allocation factors for each customer class are determined by calculating
7 the proportionate share of classified costs based on the total energy- or demand-related
8 units of each class.

9 Customer-Related allocation factors are generally proportionate to the annual
10 number of customer bills issued to each rate class or to the weighted average of the
11 customer-related costs of certain items.

12 Demand-Related allocation factors are proportionate to either the coincident peak
13 ("CP") or the non-coincident peak ("NCP") day delivered demand of the various rate
14 classes through the usage of the Average and Excess Demand Method. CP and NCP
15 (average and excess) day demands are explained further, below.

16 Energy-Related allocation factors are proportionate to the volumes sold or
17 transported to each rate class.

18 **Q. Please describe how those costs and expenses were allocated to the**
19 **customer rate classes.**

20 A. The original cost and depreciation reserves of the major functional
21 components of the Company's natural gas rate base for the test year were allocated to the
22 customer classes as described below. The resulting dollar amounts allocated to each class
23 are provided in Schedule KAK-D1.

1 (1) Production Plant. Production plant (Accounts 304, 305, 311) was allocated to each
2 customer class on the basis of the class CP demand allocation factor. CP demand is the
3 customer class' peak load on the day of the Company's overall system peak. The CP day
4 demands for the rate classes were determined by summarizing the daily meter reads of all
5 customers by class and date. The coincident demand assigned to the Interruptible class was
6 zero, because there is no longer an assurance gas level associated with any of the contracts
7 of those customers. In other words, Ameren Missouri has the ability to curtail gas from its
8 Interruptible class customers to customers of another class during times of peak demand to
9 meet the requirements of the system as a whole without increasing the system peak demand
10 and causing an increase in the cost to serve all customers. Customers who only take
11 transportation service on the Company's distribution system were not allocated production
12 plant costs since they purchase their gas supply from a third party.

13 (2) Transmission Plant. Transmission plant investment (Accounts 365-369) is
14 demand-related and was allocated to each customer class based upon the Average and
15 Excess Demand Method. This method allocates a portion of this investment according to
16 the average use of all customers and a portion according to the additional use related to the
17 NCP demand of each customer class. NCP demand is the customer class' actual peak day
18 load regardless of the day of its occurrence. The class NCP day demands were determined
19 using daily meter reads for all customers in a given class throughout the test year.

20 (3) Distribution Plant. The Company's distribution plant was allocated to each
21 customer class based upon an analysis of the functions performed by the facilities in
22 Distribution Plant Accounts 374-387. This analysis determined the breakdown of each
23 account into its customer-related and demand-related functions. The customer-related

1 portions of the distribution system include Services (Account 380), Meters (Account 381),
2 and House and Industrial Regulators (Accounts 383 and 385). Distribution Account 380,
3 Services, was allocated to each of the customer classes using allocation factors that weigh
4 the results of multiplying the current cost of the typical services arrangement, determined
5 for each customer class, by the number of customers in each class. Distribution Account
6 381, Meters, was allocated to each of the customer classes using allocation factors that
7 weigh the results of multiplying the current cost of the typical metering arrangement,
8 determined for each customer class, by the number of meters used in serving that class.
9 Distribution Account 383, House Regulators, was allocated to each of the customer classes
10 using allocation factors that weigh the results of multiplying the current cost of a typical
11 regulator, determined for each customer class, by the number of regulators used in serving
12 that class. Distribution Account 385, Industrial Regulators, was allocated to the Large
13 Volume Transportation and Interruptible classes based on the number of customers in each
14 class. All distribution plant not located on the customer's property was classified as
15 demand-related and allocated on a demand basis. Land and Land Rights (Account 374),
16 Structures and Improvements (Account 375), Mains (Account 376), and Measuring and
17 Regulating Equipment – General and City (Accounts 378 and 379) were all allocated based
18 on the Average and Excess Demand Method.

19 (4) General and Intangible Plant. The balances in these accounts (Account 303, 389-
20 398) were allocated to each customer class on the basis of the proportion of labor expense
21 allocated to each class. This Labor Ratio method of allocation was described more in-depth
22 above in the question and answer regarding other revenues.

1 (5) Incentive Compensation Capitalized. This is the portion of the incentive
2 compensation that has been capitalized and booked to plant-in-service. It was also allocated
3 based on the proportion of labor expense allocated to each class.

4 (6) Accumulated Reserves for Depreciation. As they are functionalized by type of
5 plant, these reserves were allocated on the same basis as the corresponding plant accounts
6 described above.

7 (7) Materials and Supplies. This component consists of local materials related to
8 production, transmission, and distribution facilities and was allocated on the basis of
9 allocated gross plant.

10 (8) Gas Stored Underground. This component consists of natural gas storage
11 inventories and was allocated based on winter (November-March) sales volumes to each
12 respective customer class because winter is typically the period when such underground
13 storage is utilized. Transportation customers were not allocated stored gas since they
14 purchase their gas supply from third parties.

15 (9) Cash Working Capital. This item is related primarily to operating expenses, and
16 therefore was allocated to each customer class in proportion to the total operating expenses
17 allocated to each class.

18 (10) Customer Advances and Deposits. This component of rate base was assigned to
19 each class on the basis of the total customer deposits by rate class for the test year.

20 (11) Total Accumulated Deferred Income Taxes. This component is related primarily
21 to investment in property, and therefore was allocated to each customer class on the basis
22 of allocated gross plant.

1 **Q. How did you allocate the Missouri jurisdictional test year natural gas**
2 **operating and maintenance expenses, as developed by Mr. Lansford, to the various**
3 **customer classes?**

4 A. In general, with very few exceptions, the Missouri natural gas operating and
5 maintenance expenses were allocated to the customer rate classes on the same basis as the
6 related investment in plant. This type of allocation employs the familiar and widely used
7 "expenses follow plant" principle of cost allocation. For example, the allocator for
8 distribution main plant was utilized to allocate distribution main expenses. The only
9 exceptions to this allocation procedure are as follows:

10 (1) Production Expenses. This item consists of two categories: demand and
11 commodity. The demand, or fixed, portion of production expenses was allocated on the
12 same basis as production plant, while the commodity, or variable, portion was allocated
13 based on volumes delivered to each customer class.

14 (2) Customer Accounts Expenses. Account 903, Customer Records and Collection
15 Expenses, was allocated to each class based on the number of annual bills in each customer
16 class. Account 904, Uncollectible Accounts, uses an external allocation factor that assigns
17 costs on the basis of the amount of uncollectible accounts recorded in the test year for each
18 customer class. Accounts 902 and 905, Meter Reading and Miscellaneous Customer
19 Accounts Expense, were allocated to each class based on the number of customers in each
20 customer class. Account 901, Supervision, was allocated to each class on the basis of the
21 percentage of all other Customer Accounts Expenses (Accounts 902-905) allocated to each
22 class.

1 (3) Customer Service and Sales Expense. These expenses were allocated to each
2 customer class using the same methodology referenced above for the Supervision expenses
3 in Account 901.

4 (4) Administrative & General (A&G) Expense. A&G expenses were allocated to
5 the various customer classes on the basis of the class composite distribution of previously
6 allocated labor expenses. As indicated earlier, this allocation method calculates the
7 percentage of total production, transmission, distribution, customer, and sales labor
8 expense for each customer class and assigns A&G expenses to customer classes according
9 to that breakdown.

10 **Q. How did you allocate the test year depreciation expenses?**

11 A. Since depreciation expenses are functionalized and are directly related to
12 the Company's original cost investment in plant, this expense was allocated to each
13 customer class on the basis of the previously allocated original cost production,
14 transmission, distribution, and general plant.

15 **Q. How did you allocate the test year real estate and property taxes?**

16 A. Real estate and property tax expenses are directly related to the Company's
17 original cost investment in plant, so this expense was allocated to the customer classes on
18 the basis of gross plant.

19 **Q. How did you allocate the test year income taxes?**

20 A. Income tax expense is directly related to the Company's net operating
21 income as a proportion of its net rate base investment, i.e. rate of return on its net original
22 cost rate base. As a result, income taxes were allocated to each class on the basis of the net
23 original cost rate base of each customer class.

1 **C. UNBUNDLING FUNCTIONAL COST COMPONENTS**

2 **Q. Does Schedule KAK-D3 provide calculations similar to the calculations**
3 **shown in both KAK-D1 and KAK-D2?**

4 A. No. The first two schedules were focused on allocating costs to the customer
5 classes as a whole. Schedule KAK-D3 focuses on disaggregating, or further unbundling,
6 the Company's class revenue requirements in the CCOSS. This goes a step further than the
7 first two schedules to assign costs at a functional level to make sure that the rates being
8 paid by the individual customers in the classes are developed in a manner that is reasonably
9 consistent with the costs being caused by those customers. This requires that the costs be
10 divided into functionalized cost categories.

11 **Q. What were the functionalized cost categories used in unbundling?**

12 A. The costs from the Company's class revenue requirements were divided into
13 the following functionalized cost categories:

- (1) Customer-Related Costs;
- (2) Distribution / Demand-Related Costs;
- (3) Transmission / Demand Related Costs;
- (4) Production / Energy-Related Costs; and
- (5) Production / Demand-Related Costs.

14 **Q. Why is a breakdown of such costs necessary?**

15 A. This breakdown is required for Mr. Harding's use in the development of
16 proposed rates in this case, section II of his testimony. The unbundling informs how much
17 of the revenues from each customer class should be derived from the fixed customer charge
18 and how much should be recovered through the volumetric energy charge, if cost causation
19 was strictly followed.

1 **Q. Please describe the general method for unbundling the Company's**
2 **revenue requirement.**

3 A. This unbundling process entailed an even more detailed analysis of the
4 various components of the equalized customer class rates of return study presented in
5 Schedule KAK-D2. As the Company's various components of cost presented in Schedule
6 KAK-D2 were allocated to customer classes on either a customer, energy, or demand-
7 related basis, the unbundling process consisted of extracting these various components of
8 cost and summarizing them into the functional cost categories indicated earlier.

9 **Q. What is beneficial about identifying the functionalized cost for each of**
10 **these categories?**

11 A. The cost for each functionalized category (customer, production-demand,
12 production-energy, transmission-demand, and distribution-demand) allow us to determine
13 a target customer charge and delivery charge for each customer class. The customer
14 charges are developed by dividing the total functionalized cost attributable to customers
15 (as identified through unbundling) by the total number of annual bills. The remaining cost
16 amounts are added together and divided by the volume of sales in Ccf from the test year to
17 calculate an appropriate delivery charge for each customer class (demand and energy-
18 related costs for this example are both reflected in the delivery per Ccf charge). These
19 figures will be used by Mr. Harding as reference points in his development of rates being
20 proposed in this case.

1 **VI. DEVELOPMENT OF BILLING UNITS**

2 **Q. Please explain what is meant by the term "billing unit."**

3 A. A billing unit is a quantity of customers (customer count), and gas usage
4 (Ccf) data that filed rates are applied in determining customers' bills.

5 **Q. Did you conduct a billing unit analysis for this case?**

6 A. Yes. I conducted a billing unit analysis using the proposed test year for this
7 case, twelve months ending December 31, 2020, as the study period.

8 **Q. What was the result of the billing unit analysis?**

9 A. The analysis provides the normalized billing units to be used to develop
10 proposed rates. The analysis shows that the test year retail revenues should be increased by
11 \$3,855,076 to reflect normalized conditions. The resulting normalized retail revenues were
12 utilized by Mr. Lansford in his determination of the sufficiency of present rates to cover
13 the annual revenue requirement he calculated, and are summarized in Table 3 below:

14 **Table 3 – Normalized Billing Units**

Customer Rate Class	Calculated Revenues	Normalized Revenues	Total Adjustment
Residential Service	\$ 42,929,277	\$ 45,347,332	\$ 2,418,055
General Service	\$ 14,495,893	\$ 15,455,198	\$ 959,305
Interruptible Service	\$ 385,283	\$ 402,833	\$ 17,550
Standard Transport Service	\$ 8,281,488	\$ 8,663,604	\$ 382,116
Large Transport Service	\$ 4,892,584	\$ 4,970,634	\$ 78,049
Special Contract	\$ 403,909	\$ 403,909	\$ -
Total	\$ 71,388,434	\$ 75,243,509	\$ 3,855,076

15
16 **Q. What adjustments were made to normalize the billing units?**

17 A. There are four primary adjustments:

18 (1) Weather Normalization adjustment to reflect normal weather conditions;

- 1 (2) COVID-19 Normalization adjustment to reflect the normal Ccf usage during the
2 months of April, May and June for non-residential customers;
- 3 (3) Customer Growth adjustment for the Residential and General Service classes to
4 capture the expected customer growth through September 2021; and
- 5 (4) Days and Leap Year adjustment to adjust for the extra day in February and
6 adjust the energy used within the calendar days of each month.

7 **Table 4 – Billing Unit Adjustment Summary**

Customer Rate Class	Weather Adjustment	COVID-19 Adjustment	Growth Adjustment	Days & Leap Year Adjustment	Total Adjustment
Residential Service	\$ 1,702,769	\$ -	\$ 473,427	\$ 241,859	\$ 2,418,055
General Service	\$ 823,460	\$ 324,528	\$ 111,721	\$ (300,403)	\$ 959,305
Interruptible Service	\$ 19,031	\$ 40,164	\$ -	\$ (41,645)	\$ 17,550
Standard Transport Service	\$ 155,231	\$ 258,980	\$ -	\$ (32,095)	\$ 382,116
Large Transport Service	\$ 31,081	\$ 65,596	\$ -	\$ (18,628)	\$ 78,0049
Special Contract	\$ -	\$ -	\$ -	\$ -	\$ -
Total	\$2,731,573	\$689,268	\$585,148	\$(150,913)	\$ 3,855,076

8 **Q. What was the initial step you took in the development of the Company's**
9 **billing units for each customer class?**

10 A. I utilized Company reports containing aggregate Ccf sales, revenues, and
11 customer counts on a monthly basis for the Residential Service, General Service,
12 Interruptible Service, Standard and Large Transport Service, and Special Contract rate
13 classes to develop a detailed monthly report providing the billing units that are applied to
14 the Company's filed rates for calculated billed revenues.

1 **Q. Do the revenues calculated from this process exactly match the**
2 **revenues indicated on the Company's books ("reported revenue") for the same**
3 **period?**

4 A. While the comparison of the calculated revenue and reported revenue match
5 closely, there will always be some difference between the two. The difference results from
6 billing adjustments made to a number of accounts each month for corrected billings, and
7 initial and final pro-rated billings.

8 **Q. How were the billing units and revenues adjusted to reflect normal**
9 **weather?**

10 A. Weather adjustment ratios for each billing month were applied to adjust the
11 monthly reported sales of each customer rate class to normalize for any abnormal weather
12 conditions that occurred during the test year. Mr. Harding expands upon this adjustment in
13 his testimony, section II.

14 **Q. How were the billing units adjusted to reflect the change in usage**
15 **during the beginning of the COVID-19 pandemic?**

16 A. This adjustment took into account the average of the last two years of
17 normalized Ccf gas sales and deliveries and adjusted our weather normalized usage for the
18 test year during the months of April, May, and June. This adjustment reconciles the impact
19 of the change in usage during the initial lockdown months of the pandemic. This adjustment
20 was applied to non-residential rate classes because of the abnormal shift in usage of those
21 customers due to lockdowns during the beginning of the pandemic. The first lockdown
22 during the months of April, May, and June exhibited a larger decrease than the average and
23 relatively constant and ongoing decrease in sales observed during the remaining six months

1 of the test year. This ongoing level of sales decrease was determined by comparing the
2 normalized average sales from the last six months of the prior two calendar years, 2018
3 and 2019, to the sales reported in the last six months of the test year. Then, the non-
4 residential classes' decreased usage during the initial lockdown months were adjusted by
5 taking the percentage change in average usage during the remaining six months from the
6 average usage of those same months in the two years prior and adjusting the April, May,
7 and June usage so that the resulting decline in sales from the prior two year normalized
8 average was similar to the decline experienced in the last six months of the test year. This
9 gives us the normalized Ccf usage that should have occurred if we did not have the more
10 severe initial lockdown during the months of April, May, and June but still experienced the
11 more lasting decrease in sales that occurred due to a shift in usage because of COVID. This
12 adjustment is further detailed in the Gas COVID Adjustment Apr-Jun 2020 workpaper.

13 **Q. How were the billing units adjusted for Customer Growth?**

14 A. The normalized billing units were adjusted for customer growth by
15 calculating the average growth rate for the number of customers in the past 5 years for our
16 Residential and General Service customer classes and projecting that rate of growth
17 through the expected true-up date for the case. The average annual growth rate for
18 Residential customers is 0.83% and is 0.49% for General Service customers. During the
19 test year, customer counts are typically growing because of new customer connections
20 exceeding the number of customers that disconnect from the system. This adjustment
21 allows us to annualize the customer growth that would likely occur through September
22 2021 (to capture the proposed true-up period) based on our average growth rate of

1 customers for those classes. This adjustment is further detailed in the Customer Growth
2 Res & GS Adjustment workpaper.

3 **Q. How were the billing units adjusted for Days and Leap Year?**

4 A. The Company's observed billing units for a given billing month do not
5 necessarily represent Ccf that were used during the similarly named calendar month. In
6 fact, it is rare that a customer's billing month corresponds exactly to the calendar month
7 with the same name. The lack of correspondence between billing month and calendar
8 month is a result of the staggered reading of groups of meters, i.e. different customers have
9 different billing cycles. Therefore, customers whose billing cycle overlaps two calendar
10 months will have billing units assigned to a single billing month by the Company's billing
11 system, but truly have billing units which occurred in two different calendar months. The
12 lack of correspondence between billing months and calendar months can also result in
13 customers whose billing year is more or less than a 365-day calendar year, depending on
14 the schedule of the billing cycle in which their meter is read. Therefore, these customers'
15 billing units need to be decreased or increased to reflect a normal 365-day year. The days
16 adjustment corrects both of these deviations by shifting billing units across adjacent months
17 and constraining total billing units to the 365-day calendar year.

18 The Leap Year adjustment corrects the Ccf usage for the month of February to
19 exclude the extra day of usage that only occurs once every four years. This is calculated by
20 taking the normalized average of the month of February, to get the normal usage that would
21 occur daily during the month of February. One day of this daily usage was then subtracted
22 from the total Ccf usage for the month of February.

1 **Q. Were any other adjustments made to the class-level loads besides the**
2 **calculations listed above?**

3 A. Yes, the General Service and Transportation accounts have been reviewed
4 for rate switchers and customer accounts leaving the system during the test year. Where
5 identified, adjustments have been made to shift usage in the respective classes to adjust for
6 rate switchers based on the customer's most recent class selection in the test year. For
7 accounts identified as leaving the system during the test year that are not rate switchers,
8 their usage is removed for the full year to reflect the change in usage expected from them
9 leaving the system. This adjustment is made to attempt to reflect, as accurately as possible,
10 the expected, normalized revenues from each class based on the current status of those
11 customer accounts.

12 **Q. Does the Company intend to revise its billing units and associated test**
13 **year revenue to reflect a more recent 12-month period as this case progresses?**

14 A. Yes. The Company anticipates that rather than relying on the 12-months
15 ending December 31, 2020 data, a more current period will be utilized to allow the most
16 current usage information possible to be used to set rates in this case.

17 **Q. What do you do with the final normalized billing unit numbers?**

18 A. These are used in the development of the final rate design proposed in the
19 case.

20 **Q. Does this conclude your direct testimony?**

21 A. Yes, it does.

Ameren Missouri
MISSOURI GAS OPERATIONS
CLASS COST OF SERVICE ALLOCATION STUDY
12 MONTHS ENDED DECEMBER 2020

TITLE: COST OF SERVICE SUMMARY (Current Rates)

LINE #	ITEM	TOTAL				TRANSPORTATION SERVICE	
		MISSOURI	RESIDENTIAL	GENERAL	INTERRUPTIBLE	STANDARD	LARGE VOLUME
1							
2	<u>COST OF SERVICE SUMMARY</u>						
3							
4	GAS OPERATING REVENUE						
5	Sale of Gas	\$ 74,839,600	\$ 45,347,332	\$ 15,455,198	\$ 402,833	\$ 8,663,604	\$ 4,970,634
6	Special Contract Revenues	\$ 403,909	\$ 237,430	\$ 90,018	\$ 3,332	\$ 40,937	\$ 32,192
7	Other Operating Revenues	\$ 1,821,735	\$ 1,440,758	\$ 269,381	\$ 4,268	\$ 64,293	\$ 43,035
8							
9	TOTAL GAS OPERATING REVENUES	\$ 77,065,244	\$ 47,025,519	\$ 15,814,598	\$ 410,433	\$ 8,768,834	\$ 5,045,860
10							
11	EXPENSES:						
12	Total Gas O&M Expenses	\$ 36,127,728	\$ 24,881,293	\$ 6,909,348	\$ 172,697	\$ 2,402,127	\$ 1,762,263
13	Depreciation Expense	\$ 15,722,844	\$ 9,323,788	\$ 3,478,118	\$ 124,183	\$ 1,573,885	\$ 1,222,870
14	Taxes Other than Income Taxes	\$ 9,230,783	\$ 5,635,444	\$ 2,027,053	\$ 67,419	\$ 843,916	\$ 656,951
15							
16	INCOME TAXES	\$ 1,469,476	\$ 882,281	\$ 326,949	\$ 11,271	\$ 139,538	\$ 109,436
17							
18	NET UTILITY OPERATING INCOME	\$ 14,514,413	\$ 6,302,712	\$ 3,073,130	\$ 34,863	\$ 3,809,367	\$ 1,294,340
19							
20	RATE BASE	\$ 310,461,084	\$ 182,498,355	\$ 69,191,915	\$ 2,561,376	\$ 31,465,523	\$ 24,743,916
21							
22	RATE OF RETURN - REALIZED	4.68	3.45	4.44	1.36	12.11	5.23

Ameren Missouri
MISSOURI GAS OPERATIONS
CLASS COST OF SERVICE ALLOCATION STUDY
12 MONTHS ENDED DECEMBER 2020

TITLE: COST OF SERVICE SUMMARY (Equal Returns)

LINE #	ITEM	TOTAL				TRANSPORTATION SERVICE	
		MISSOURI	RESIDENTIAL	GENERAL	INTERRUPTIBLE	STANDARD	LARGE VOLUME
1							
2	<u>COST OF SERVICE SUMMARY</u>						
3							
4	GAS OPERATING REVENUE		17.064%	14.609%	40.542%	-15.881%	12.465%
5	Sale of Gas (Margin)	\$ 84,242,760	\$ 53,085,609	\$ 17,713,086	\$ 566,147	\$ 7,287,700	\$ 5,590,219
6	Special Contract Revenues	\$ 403,909	\$ 237,430	\$ 90,018	\$ 3,332	\$ 40,937	\$ 32,192
7	Other Operating Revenues	\$ 1,821,735	\$ 1,440,758	\$ 269,381	\$ 4,268	\$ 64,293	\$ 43,035
8							
9	TOTAL GAS OPERATING REVENUES	\$ 86,468,404	\$ 54,763,796	\$ 18,072,486	\$ 573,748	\$ 7,392,929	\$ 5,665,445
10							
11	EXPENSES:						
12	Total Gas O&M Expenses	\$ 36,127,728	\$ 24,881,293	\$ 6,909,348	\$ 172,697	\$ 2,402,127	\$ 1,762,263
13	Depreciation Expense	\$ 15,722,844	\$ 9,323,788	\$ 3,478,118	\$ 124,183	\$ 1,573,885	\$ 1,222,870
14	Taxes Other than Income Tax	\$ 9,230,783	\$ 5,635,444	\$ 2,027,053	\$ 67,419	\$ 843,916	\$ 656,951
15							
16	INCOME TAXES	\$ 3,831,738	\$ 2,252,411	\$ 853,973	\$ 31,613	\$ 388,350	\$ 305,392
17							
18	NET UTILITY OPERATING INCOME	\$ 21,555,311	\$ 12,670,860	\$ 4,803,994	\$ 177,836	\$ 2,184,651	\$ 1,717,970
19							
20	RATE BASE	\$ 310,461,084	\$ 182,498,355	\$ 69,191,915	\$ 2,561,376	\$ 31,465,523	\$ 24,743,916
21							
22	RATE OF RETURN - REALIZED	6.943	6.943	6.943	6.943	6.943	6.943

Ameren Missouri
 MISSOURI GAS OPERATIONS
 CLASS COST OF SERVICE ALLOCATION STUDY
 12 MONTHS ENDED DECEMBER 2020

	<u>Total</u>	<u>Residential</u>	<u>General</u>	<u>Interruptible</u>	<u>Transportation Service</u>	
					<u>Standard</u>	<u>Large Volume</u>
<u>Revenue Requirement</u>						
Customer	\$ 39,913,178	\$ 31,632,658	\$ 7,103,537	\$ 35,188	\$ 895,262	\$ 246,533
Production -- Demand	\$ 2,182,917	\$ 1,464,321	\$ 718,596	\$ -	\$ -	\$ -
Production -- Energy	\$ 377,988	\$ 248,330	\$ 115,057	\$ 4,815	\$ 5,338	\$ 4,447
Transmission -- Demand	\$ 416,438	\$ 205,722	\$ 96,596	\$ 4,763	\$ 60,080	\$ 49,276
Distribution -- Demand	\$ 43,577,884	\$ 21,212,763	\$ 10,038,700	\$ 528,982	\$ 6,432,249	\$ 5,365,189
	\$ 86,468,404	\$ 54,763,796	\$ 18,072,486	\$ 573,748	\$ 7,392,929	\$ 5,665,445
<u>Other Revenue</u>						
Customer	\$ 1,821,735	\$ 1,440,758	\$ 269,381	\$ 4,268	\$ 64,293	\$ 43,035
Production -- Demand	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Production -- Energy	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Transmission -- Demand	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Distribution -- Demand	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	\$ 1,821,735	\$ 1,440,758	\$ 269,381	\$ 4,268	\$ 64,293	\$ 43,035
<u>Special Contracts</u>						
Customer	\$ 403,909	\$ 237,430	\$ 90,018	\$ 3,332	\$ 40,937	\$ 32,192
Production -- Demand	\$ 130,874	\$ 100,992	\$ 26,510	\$ 66	\$ 2,888	\$ 418
Production -- Energy	\$ 3,823	\$ 2,577	\$ 1,247	\$ -	\$ -	\$ -
Production -- Energy	\$ 5,588	\$ 3,772	\$ 1,744	\$ 72	\$ (0)	\$ (0)
Transmission -- Demand	\$ 3,578	\$ 1,768	\$ 830	\$ 41	\$ 516	\$ 423
Distribution -- Demand	\$ 260,045	\$ 128,321	\$ 59,687	\$ 3,153	\$ 37,533	\$ 31,351
	\$ 403,909	\$ 237,430	\$ 90,018	\$ 3,332	\$ 40,937	\$ 32,192
<u>Base Revenue</u>						
Customer	\$ 37,960,569	\$ 30,090,909	\$ 6,807,646	\$ 30,854	\$ 828,080	\$ 203,080
Production -- Demand	\$ 2,179,094	\$ 1,461,745	\$ 717,349	\$ -	\$ -	\$ -
Production -- Energy	\$ 372,400	\$ 244,558	\$ 113,312	\$ 4,743	\$ 5,339	\$ 4,448
Transmission -- Demand	\$ 412,860	\$ 203,954	\$ 95,766	\$ 4,722	\$ 59,565	\$ 48,853
Distribution -- Demand	\$ 43,317,839	\$ 21,084,443	\$ 9,979,013	\$ 525,829	\$ 6,394,716	\$ 5,333,838
	\$ 84,242,760	\$ 53,085,609	\$ 17,713,086	\$ 566,147	\$ 7,287,700	\$ 5,590,219
Customer		\$ 20.92	\$ 43.61	\$ 367.31	\$ 104.70	\$ 828.90
Delivery		\$ 0.3078	\$ 0.3025	\$ 0.2733	\$ 0.1809	\$ 0.1811

**BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI**

In the Matter of Union Electric Company)
d/b/a Ameren Missouri's Tariffs to Adjust) Case No. GR-2021-0241
Its Revenues for Electric Service.)

AFFIDAVIT OF KELSEY ANN KLEIN

STATE OF MISSOURI)
)**ss**
CITY OF ST. LOUIS)

Kelsey Ann Klein, being first duly sworn on his oath, states:

My name is Kelsey Ann Klein, and on her oath declare that she is of sound mind and lawful age; that she has prepared the foregoing *Direct Testimony*; and further, under the penalty of perjury, that the same is true and correct to the best of my knowledge and belief.

/s/ Kelsey Ann Klein
Kelsey Ann Klein

Sworn to me this 30th day of March, 2021.