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MISSOURI PUBLIC SERVICE COMMISSION

FILE NO. GR-2024-0369

DIRECT TESTIMONY

OF

MICHAEL W. HARDING

ON

BEHALF OF

UNION ELECTRIC COMPANY

D/B/A AMEREN MISSOURI

St. Louis, Missouri
September, 2024

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I. INTRODUCTION

Q. Please state your name and business address.

A. Michael W. Harding, Union Electric Company d/b/a Ameren Missouri ("Ameren Missouri" or "Company"), One Ameren Plaza, 1901 Chouteau Avenue, St. Louis, Missouri 63103.

Q. What is your position with Ameren Missouri?

A. I am employed by Ameren Missouri as the Manager of Rates & Analysis.

Q. Please describe your educational background and employment experience.

A. I received a Bachelor of Science in Business Finance from the University of Kansas in 2007. I began my career with Union Electric Company at the end of 2007 as a Real-Time Trader, and was subsequently promoted to Term Trader in May 2008. In early 2014, I was appointed General Executive of Renewable Energy within Ameren Services Company. I assumed my current position as Manager of Rates & Analysis in April 2017, where I lead a team responsible for the Company's class cost of service studies, rate design, tariff administration, and various other regulatory projects. Prior to joining Ameren, I held several roles within the trading and asset management department at Westar Energy. Throughout my career at Ameren Missouri, I have had the privilege of testifying before

this Commission on multiple occasions. My testimony has covered a wide range of topics related to rate design, class cost of service studies, and other regulatory matters.

II. PURPOSE AND SUMMARY OF TESTIMONY

Q. What is the purpose of your direct testimony in this proceeding?

A. The purpose of my testimony in this proceeding is multifaceted and encompasses several key areas of the Company's rate case. First and foremost, I will explain the development and application of rates necessary to recover the proposed annual revenue requirement calculated by Company witness Benjamin Hasse. This involves a detailed analysis of how we translate the overall revenue requirement into specific rate structures for our various customer classes.

In conjunction with this, I will describe our methodology for apportioning revenue requirement changes to various rate classes. This includes an examination of the estimated impacts these changes will have on customers within these classes, ensuring that we balance the need for cost recovery with the potential effects on our customers.

Furthermore, I will detail the application of the Class Cost of Service Study ("CCOSS") in informing our revenue and rate component allocations. This involves a thorough explanation of how we use the results of the CCOSS to guide our decision-making in rate design and cost allocation among different customer classes.

My testimony will also cover the various adjustments made to billing units and normalized revenues at present rates. This includes not only weather normalization, but also adjustments for customer growth, and days and leap year variations. These adjustments are crucial for ensuring that our projected billing units accurately reflect expected future conditions.

Lastly, I will present and support various miscellaneous tariff changes that we are filing in conjunction with this case.

Through this testimony, I aim to provide a comprehensive overview of the Company's rate design process, cost allocation methodologies, billing units, and the rationale behind our proposed changes.

Q. Please identify any schedules presented in your testimony and provide a brief description of each.

A. The schedules presented in my testimony include:

Schedule MWH-D1: This schedule shows the distribution of the net revenue increase to the Company's various customer classes resulting from the proposed tariffs excluding gross receipts taxes levied on customer billings by the various municipalities within the Company's service area. It also details how the charges have been applied within each class for the recovery of the proposed revenue requirement.

Schedule MWH-D2: This schedule summarizes the results of the Company's CCOSS used in support of the Company's proposed revenue allocation and rate design.

Schedule MWH-D3: This schedule contains redlined sheets identifying the miscellaneous tariff updates proposed in this case.

III. SUMMARY OF PROPOSED CHANGES

Q. What is the revenue requirement change being proposed in this case?

A. As detailed in Mr. Hasse's Direct testimony, the Company is proposing a revenue requirement increase of approximately 39.6 million.

Q. How does Ameren Missouri propose to apply the revenue requirement increase across the rate classes?

A. A detailed description of the allocation of revenue to classes and class rate components is included in Schedule MWH-D1. The Company is proposing a revenue neutral shift of approximately $175,000 from the Standard Transportation Class to the Large Volume Transportation class before applying the proposed revenue requirement increase as an equal percentage increase. Table 1 below demonstrates how this revenue neutral shift would be applied prior to the application of the revenue requirement increase across the classes.

Table 1

Class Revenue Allocation

Customer Class	Current Rev.	RN Shift	Adjusted Rev.	Target Rev.	RR Change
Residential	$47,453,803		$47,453,803	$71,626,051	$24,172,248
General Service	$16,888,672		$16,888,672	$25,491,506	$8,602,834
Interruptible	$437,094		$437,094	$659,743	$222,649
Standard Trans.	$8,726,956	($174,539)	$8,552,416	$12,908,888	$4,181,932
Large Trans.	$4,328,192	$174,539	$4,502,731	$6,796,355	$2,468,162

Q. How are the proposed revenues assigned to each class allocated to the individual components within the classes?

A. All components will also receive an equal percentage increase with a few exceptions in the Transportation classes. The Administration charge will remain flat for both Transportation classes, with the Customer Charge remaining flat for Large Volume Transportation. Since the first 7000 Ccf rate remains consistent across all non-Residential classes, revenues assigned to these classes not collected through the increased Customer Charge will be reflected in the Over 7000 Ccf rate for the Transportation classes. This is detailed in the Schedule MWH-D1 and summarized below in Table 2.

Table 2

	Std. Trans.		LV Trans.	
	Current	Proposed	Current	Proposed
Customer Charge	$30.23	$45.78	$1,527.31	$1,527.31
1st 7000 Ccf	$0.3251	$0.4907	$0.3251	$0.4907
Over 7000 Ccf	$0.1815	$0.2664	$0.1561	$0.2571

	Residential		General Service		Interruptible	
	Current	Proposed	Current	Proposed	Current	Proposed
Customer Charge	$15.00	$22.64	$30.33	$45.78	$281.87	$425.45
1st 7000 Ccf	$0.3536	$0.5337	$0.3251	$0.4907	$.3251	$.4907
Over 7000 Ccf	$0.3536	$0.5337	$0.2129	$0.3213	$.1748	$.2638

IV. CURRENT RATE STRUCTURE OVERVIEW

Q. Please describe Ameren Missouri's current rate classes and rate structures, indicating if any changes are being proposed.

A. Ameren Missouri currently provides natural gas service through five rate classes, each with its own rate structure. The Company is not proposing any revisions or additions to these existing rate classes or structures in this proceeding. The current classes and their respective rate structures are as follows:

1. Residential Service

Available to customers using natural gas for domestic purposes. Rates consist of a monthly Customer Charge and a volumetric Delivery Charge.

2. General Service

Available to customers using natural gas in a single metered residential multiple occupancy dwelling, a combined residential and non-residential activity, or for any other non-residential purpose. Rates consist of a monthly Customer Charge and a volumetric Delivery Charge (with two tiers divided at the 7,000 Ccf threshold).

3. Interruptible Service

Available to non-residential customers whose natural gas service is subject to curtailment or interruption at the sole discretion of the Company. Rates consist of a monthly Customer Charge, an Interruptible Gas Delivery Charge (with two tiers divided at the 7,000 Ccf threshold), and an Assurance Gas Surcharge (with two tiers divided at the 250 Ccf per day threshold).

4. Standard Transportation Service

Available to non-residential customers who purchase gas from someone other than the Company, contract with the Company for the transportation of such gas through the Company's system, and whose annual transportation requirements are expected to be 600,000 Ccf (hundred cubic feet) or less. Rates consist of a monthly Customer Charge, an Electronic Gas Meter (EGM) Charge, a Transportation Charge (with two tiers divided at the 7,000 Ccf threshold), and an Aggregation and Balancing Charge for eligible school entities only.

5. Large Volume Transportation Service

Available to non-residential customers who purchase gas from someone other than the Company, contract with the Company for the transportation of such gas through the Company's system, and whose annual transportation requirements are expected to be greater than 600,000 Ccf. Rate structure is the same as Standard Transportation Service.

V. REVENUE ALLOCATION & RATE DESIGN

Q. What is the Company's rate design process?

A. Rate design, as it applies to this case, is the process of determining how the Company's revenue requirement (excluding gas supply costs collected through the

Purchase Gas Adjustment, Rider A) will be allocated among the different customer classes and to specific charge types applicable to each customer class. This process encompasses:

- The final allocation of the revenue requirement to each respective rate class.
- The development of any new rate classes (although none are being proposed in this case).
- The rate mechanisms used to recover the revenue requirement within each class.

Our rate design process is guided by several key principles:

Cost Causation: Rates should be designed to reflect costs, and costs should be allocated to the customers causing those costs to be incurred. This promotes economic efficiency in the use of gas and ensures equity across customers.

Embedded Cost of Service Study: The results of the embedded CCOSS serve as the starting point for the Company's proposed rate design. The CCOSS is used as a guide to ensure the costs incurred by the Company are being covered by those causing the costs.

Balancing Factors: While it is important to follow the principles of cost causation, the Company acknowledges there are other factors that must be considered in the final application of the respective class revenue requirement and design of the rate structure used to recover these costs. These may include rate stability, customer understanding, and regulatory precedent.

Q. Do the proposed rates recover each class' respective cost of service based revenue requirement?

A. The proposed rates for the Company's Residential, General Service, Interruptible Service, Standard Volume Transportation, and Large Volume Transportation

rate classes recover the cost-based revenue requirement on a combined basis. However, the individual class revenues do not match the CCOSS-based revenue requirements due to the significant change in price that would be realized by some classes if this change was implemented abruptly. The Residential and General Service class revenues in the test year are very close to their equal rate of return revenue recommendations in this case, each showing a potential need for a less than 5% revenue neutral adjustment. The Transportation classes however, each show a significant gap between their CCOSS equal rate of return recommendation and its current contribution to revenues in opposite directions. Given this, the Company has proposed an equal percentage increase across the Residential, General Service, and Interruptible classes and a small revenue neutral shift between the Standard and Large Volume Transportation classes. This adjustment recognizes the results of the Company's current CCOSS, which shows a recommendation for a decrease in the Standard Transportation class and an increase in the Large Volume Tranportation Class in order to achieve an equal rate of return across classes. In the longer term, the Company will continue to move rates towards the class cost of service where changes in the model look to be reasonably consistent over time while continuing to balance this goal with customer bill stability.

Q. How were the charges within each class adjusted to recover the proposed class revenue requirement?

A. The Residential class charges will receive an equal percentage change to each rate element consistent with the overall class change. For all non-residential classes, an equal percentage allocation to each rate element was proposed consistent with each class, with the exception being in cases where the Customer charge and first rate block

were held constant across classes. The increase to the first rate block in the General Service class was kept consistent across all non-residential classes to discourage the potential for customer rate-switching in an attempt to game rates. The same methodology has been applied to the Customer Charge between the General Service and Standard Transportation classes. The remaining revenue requirement changes not captured in the adjustments to the customer charge and first rate block of these non-residential classes were then recovered through the volumetric Delivery Charges in the second rate block while maintaining the existing rate design for all non-residential customers. The Company is proposing to maintain this design to minimize any rate migration or rate continuity concerns. The Company also proposes to hold the Large Volume Customer Charge at it's current level in order to not move it further from the Company's CCOSS results detailed in the following section of this testimony.

VI. CLASS COST OF SERVICE STUDY

Q. What is a class cost of service study?

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

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

Q. What information is provided by the class cost of service study?

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

Q. Why is a class cost of service study performed?

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

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

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

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

A. Yes. In considering such costs in my study, the Company employs a cost of service approach consistent with that utilized by the Company in its previous rate cases. This approach consists of allocating the total of all Company investment and expense to the other customer classes as if there were no special contract customers. The allocation of such costs to the non-special contract customers is offset by also allocating, or crediting

existing special contract revenues to the other customer classes. This allocation of special contract costs and revenues was done based on each class' respective total net original cost rate base. This process presumes that the Company's current special contract revenues, which constitute about 0.32% of the Company's total proposed revenues, currently provide a fair and reasonable recovery of the Company's total costs of providing such service. Said another way, it is presumed that allocated special contract revenues are equivalent to allocated special contract costs.

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

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

Q. What steps are used to prepare the CCOSS?

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

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

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

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

Q. Please describe the components of costs and revenues that are contained in the class cost of service study that the Company is filing in this case.

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

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

A. The major cost categories are classified into customer-related, demand-related costs, and energy-related costs based on cost-causation principles. It is generally accepted within the industry that the costs in each of these categories result from different cost causation factors so they should be allocated appropriately among the customer rate classes.

Q. What are customer-related costs?

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

Q. What are demand-related costs?

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

Q. What are energy-related costs?

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

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

A. Purchased gas costs, including the cost of the gas commodity, demand, pipeline transportation, and a portion of storage costs, are fully recovered through the Company's Purchased Gas Adjustment ("PGA"). Purchased gas costs do not affect the

operating income or rate of return earned by the Company, so they are not included in the CCOSS.

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

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

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

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

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

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

A. The original cost and depreciation reserves of the major functional components of the Company's natural gas rate base for the test year were allocated to the customer classes as described below.

(1) Production Plant. Production plant (Accounts 304, 305, 311) was allocated to each customer class on the basis of the class CP demand allocation factor. CP demand is the customer class' peak load on the day of the Company's overall system peak. The CP

day demands for the rate classes were determined by summarizing the daily meter reads of all customers by class and date. The coincident demand assigned to the Interruptible class was zero, because there is no longer an assurance gas level associated with any of the contracts of those customers. In other words, Ameren Missouri has the ability to curtail gas from its Interruptible class customers to customers of another class during times of peak demand to meet the requirements of the system as a whole without increasing the system peak demand and causing an increase in the cost to serve all customers. Customers who only take transportation service on the Company's distribution system were not allocated production plant costs since they purchase their gas supply from a third party.

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

(3) Distribution Plant. The Company's distribution plant was allocated to each customer class based upon an analysis of the functions performed by the facilities in Distribution Plant Accounts 374-387. This analysis determined the breakdown of each account into its customer-related and demand-related functions. The customer-related portions of the distribution system include Services (Account 380), Meters (Account 381), and House and Industrial Regulators (Accounts 383 and 385). Distribution Account 380, Services, was allocated to each of the customer classes using allocation factors that weigh

the results of multiplying the current cost of the typical services arrangement, determined for each customer class, by the number of customers in each class. Distribution Account 381, Meters, was allocated to each of the customer classes using allocation factors that weigh the results of multiplying the current cost of the typical metering arrangement, determined for each customer class, by the number of meters used in serving that class. Distribution Account 383, House Regulators, was allocated to each of the customer classes using allocation factors that weigh the results of multiplying the current cost of a typical regulator, determined for each customer class, by the number of regulators used in serving that class. Distribution Account 385, Industrial Regulators, was allocated to the Large Volume Transportation and Interruptible classes based on the number of customers in each class. All distribution plant not located on the customer's property was classified as demand-related and allocated on a demand basis. Land and Land Rights (Account 374), Structures and Improvements (Account 375), Mains (Account 376), and Measuring and Regulating Equipment – General and City (Accounts 378 and 379) were all allocated based on the Average and Excess Demand Method.

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

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

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

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

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

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

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

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

Q. How did you allocate the Missouri jurisdictional test year natural gas operating and maintenance expenses, as developed by Ameren Missouri witness Benjamin Hasse, to the various customer classes?

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

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

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

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

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

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

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

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

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

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

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

Q. What are the functionalized cost categories used in unbundling?

A. The costs from the Company's class revenue requirements were divided into 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.

Q. Why is a breakdown of such costs necessary?

A. This breakdown is required for use in the development of proposed rates in this case. The unbundling informs how much of the revenues from each customer class should be derived from the fixed customer charge and how much should be recovered through the volumetric energy charge, if cost causation was strictly followed.

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

A. This unbundling process entailed an even more detailed analysis of the various components of the equalized customer class rates of return study. The Company's various components of cost are allocated to customer classes on either a customer, energy, or demand-related basis. These various components of cost are then summarized into the functional cost categories indicated earlier (customer, production-demand, production-energy, transmission-demand, and distribution-demand).

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

A. The cost for each functionalized category allows us to determine a target customer charge and delivery charge for each customer class. The customer charges are developed by dividing the total functionalized cost attributable to customers (as identified through unbundling) by the total number of annual bills. The remaining cost amounts are

added together and divided by the volume of sales in Ccf from the test year to calculate an appropriate delivery charge for each customer class (demand and energy-related costs for this example are both reflected in the delivery per Ccf charge). These figures are used in the adjustment of class rate components being proposed in this case.

Q. If the Company moved each class to the Equal Returns CCOSS recommendation along with the proposed increase in this case, what would the impact to each class look like?

A. The following tables shows our current revenue and the Equal returns CCOSS revenue along with the proposed increase.

Table 3

Equal Returns CCOSS Results w/ Proposed Increase

Customer Class	Current Revenue	Equal ROR Revenue	$ Change	% Change
Residential	$47,453,803	$67,993,829	$20,540,027	43.3%
General Service	$16,888,672	$24,904,626	$8,015,954	47.5%
Interruptible	$437,094	$845,225	$408,132	93.4%
Standard Trans.	$8,726,956	$10,582,665	$1,855,709	21.3%
Large Trans.	$4,328,192	$13,156,196	$8,828,003	204.0%
Subtotal	$77,834,717	$117,482,542	$39,647,825	50.9%
Special Contract	$376,214	$376,214	$0	0.0%
Total	$78,210,931	$117,858,756	$39,647,825	50.7%

Q. What is the revenue allocation, including the proposed increase, the Company is proposing in this case and what does the impact to each class look like?

A. The following shows the Company's currently proposed revenue requirement for each class along with the revenue and percentage change.

Table 4

Proposed CCOSS Results

Customer Class	Current Revenue	Proposed Revenue	$ Change	% Change
Residential	$47,453,803	$71,623,587	$24,169,785	50.9%
General Service	$16,888,672	$25,491,321	$8,602,649	50.9%
Interruptible	$437,094	$659,664	$222,571	50.9%
Standard Trans.	$8,726,956	$12,924,168	$4,197,212	48.1%
Large Trans.	$4,328,192	$6,797,174	$2,468,981	57.0%
Subtotal	$ 77,834,717	$ 117,495,914	$ 39,661,197	51.0%
Special Contract	$ 376,214	$ 376,214	$ -	0.0%
Total	$ 78,210,931	$ 117,872,128	$ 39,661,197	50.7%

Q. Is this the percentage increase that customers in each class will experience on their bill?

A. No, the revenue requirement in this case does not include the energy, transportation, and storage cost to serve customers. These cost are all included in the PGA rate. In order to get a typical customer bill impact you would need to include all of these energy costs.

Q. Factoring in the PGA, what is the percentage change that each class will experience?

A. Utilizing the current PGA of .6046 for Residential and General Service, and .4646 for Interupptible and the Transporation classes we see the following percentage increases across the classes with the Company's proposed revenue requirement increase:

Table 5

	Normal w/ PGA	Tgt w/ PGA	
RES	$90,604,581	$114,776,829	26.7%
GS	$40,086,925	$48,689,759	21.5%
INT	$1,456,378	$1,679,027	15.3%
STDTRN	$25,562,847	$29,744,780	16.4%
LVTRN	$15,187,651	$17,655,813	16.3%
SC	$376,214	$376,214	0.0%
	$173,274,597	$212,922,423	22.9%

Q. What did the results of the CCOSS imply for the Customer Charge for each class and how does this compare to the currently effective and proposed customer charges?

A. The following table shows the CCOSS unbundled component allocations for the Customer related charges allocated to each class:

Table 6

Customer Charge Compare

Customer Class	Current Effective	CCOSS	Proposed
Residential	$15.00	$23.08	$22.64
General Service	$30.33	$50.74	$45.78
Interruptible	$281.87	$465.05	$425.45
Standard Trans.	$30.23	$123.67	$45.78
Large Trans.	$1,527.31	$646.87	$1,527.31

Q. Why not lower the customer charge for the Large Volume Transportation class as the Class Cost of Service implies?

A. The Company is proposing to keep the Large Volume Transportation customer charge constant in this case but is not recommendating a decrease given the Large Volume Transportation class as a whole requires the largest revenue neutral class increase. Reducing the customer charge would only shift these revenues into the Large Volume

delivery charge which is already experiencing an approximately 15% greater increase to its Ccf volumetric charge than other classes due to the revenue neutral shift to bring this class towards the CCOSS equal returns results. Said another way, lowering the Large Volume customer charge would only exacerbate the revenue shortfall of the Large Volume Transporation class in its contribution to equal rate of return class cost of service.

VII. BILLING UNIT ADJUSTMENTS

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

A. A billing unit is a quantity of customers (customer count), and gas usage (Ccf) data to which filed rates are applied in determining customers' bills and total revenues at current and proposed rates.

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

A. Yes. I conducted a billing unit analysis using the proposed test year for this case, twelve months ending March 31, 2024, as the study period.

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

A. The analysis provides the normalized billing units to be used to develop proposed rates. The analysis shows that the test year retail revenues should be increased by $4,418,197 to reflect normalized conditions. The resulting normalized retail revenues were utilized by Mr. Hasse in his determination of the sufficiency of present rates to cover the annual revenue requirement he calculated, and are summarized in the table below:

Table 7 – Normalized Billing Units

Class	Actual REVENUES	Normalized REVENUES	Adjustment
RES	$44,036,336	$47,453,803	$3,417,467
GS	$16,299,283	$16,888,672	$589,390
Int	$343,479	$437,094	$93,615
SV	$8,449,689	$8,726,956	$277,267
LV	$4,287,733	$4,328,192	$40,459
Special Contract	$376,214	$376,214	$0
Total	$73,792,734	$78,210,931	$4,418,197

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

A. There are three primary adjustments:

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

(2) Customer Growth adjustment for the Residential and General Service classes to capture the expected customer growth through December 2024 and

(3) Days and Leap Year adjustment to adjust for the extra day in February of the test year and adjust the energy used within the calendar days of each month.

Table 8 – Billing Unit Adjustment Summary

Customer Rate Class	**Weather 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	$111,721	$(300,403)	$959,305
Interruptible Service	$19,031	-	$(41,645)	$17,550
Standard Transport Service	$155,231	-	$(32,095)	$382,116
Large Transport Service	$31,081	-	$(18,628)	$78,0049
Special Contract	-	-	-	-
Total	$2,731,573	$585,148	$(150,913)	$3,855,076

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

A. I utilized Company reports containing aggregate Ccf sales, revenues, and customer counts on a monthly basis for the Residential Service, General Service,

Interruptible Service, Standard and Large Transport Service, and Special Contract rate classes to develop a detailed monthly report providing the billing units that are applied to the Company's filed rates for calculated billed revenues.

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

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

Q. Please explain the process of weather normalization for billing units and its importance in rate design.

A. Weather normalization is a critical component in the development of billing units and normalized revenue. It allows us to adjust our billing units to reflect normal weather conditions, which is essential for accurately projecting revenues and designing rates to be applied in the future based on an assumption of normal weather, rather than to the level of sales associated with the actual weather experienced within the historical test year. The process involves several interconnected steps.

We begin by calculating weather adjustment ratios for each billing month. These ratios are the quotients of the normal Ccf gas usage divided by the actual Ccf usage in each respective test year month. To determine the normal Ccf gas usage for each class, we use a regression model that relates gas usage to Heating Degree Days ("HDD"). This model is based on over three years of daily metered usage data and corresponding HDD data ending

in March 2024. We then apply these class-specific coefficients to the difference between the test year's actual HDD and the 30-year normal HDD. This calculation gives us the Ccf usage adjustment needed to normalize the actual usage.

Finally, we apply these adjustment ratios to the monthly reported sales of each customer rate class. This process allows us to normalize for any abnormal weather conditions that occurred during the test year. The resulting normalized billing units and revenues serve as the basis for calculating the required change to the revenue requirement and for applying this change across the various classes and individual class components.

Q. How does weather normalization impact the Class Cost of Service Study(CCOSS) and rate design?

A. While we do normalize CP and NCP class peaks for the CCOSS, the primary focus of weather normalization is on its application to billing units for revenue projection and rate design purposes. The normalized billing units provide a more accurate basis for projecting expected revenues under normal weather conditions and calculating the revenue deficiency or surplus that informs our rate change proposal.

Furthermore, these normalized units are crucial in designing rates that will recover the target revenue requirement under normal weather conditions. They also play a key role in allocating the revenue requirement changes across customer classes and rate components.

By using normalized billing units, we can design rates that are more likely to recover the intended revenue over time, reducing the impact of year-to-year weather variations on the Company's financial results and customer bills. This approach enhances the stability and predictability of both our revenue streams and customer rates, contributing

to more effective long-term financial planning for the Company and more consistent bills for our customers.

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

A. Customer Growth adjustment is an important factor in projecting accurate billing units for rate design. We apply this adjustment to our normalized billing units for the Residential and General Service customer classes, as these classes typically experience the most significant growth. Our process begins by analyzing the customer growth trends over the past five years for each of these classes. From this historical data, we calculate an average annual growth rate. For the Residential class, this rate is 0.73%, while for the General Service class, it's 0.66%.

We then use these growth rates to project customer counts forward to December 2024 which aligns with our proposed true-up period for this case. This projection allows us to capture the customer growth that we anticipate will occur between the end of the test year and the implementation of new rates.

The rationale behind this adjustment is straightforward: during the test year and beyond, we typically see net customer growth as new customer connections outpace disconnections from our system. By incorporating this growth into our billing unit projections, we can more accurately forecast the number of customers and associated usage that our new rates will apply to.

This Customer Growth adjustment is crucial for ensuring that our rate design reflects not just current conditions, but also the conditions we expect to exist when the new rates take effect. It helps us avoid underestimating our customer base and potential revenues, which could lead to over-recovery of our costs.

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

A. The Company makes two important adjustments to billing units to ensure accuracy: a Days adjustment and a Leap Year adjustment.

The Days adjustment is necessary because our billing cycles don't align perfectly with calendar months. Due to the staggered reading of meter groups, a customer's billing month rarely corresponds exactly to a calendar month. This misalignment can lead to two issues:

First, customers whose billing cycle spans two calendar months will have their usage assigned to a single billing month in our system, even though the usage actually occurred across two calendar months.

Second, depending on their specific billing cycle, some customers may have a billing year that is slightly longer or shorter than the standard 365-day calendar year.

To address these discrepancies, we perform a Days adjustment. This process shifts billing units across adjacent months as needed and ensures that the total billing units reflect a standard 365-day year. This adjustment provides a more accurate representation of usage patterns and allows for better comparison across different time periods.

The Leap Year adjustment is a separate but related process. In years with 366 days, we need to account for the extra day of usage in February. We calculate this adjustment by determining the average daily usage for February based on normalized data. We then subtract one day's worth of this average usage from the total February usage. This ensures that our billing units consistently reflect a standard year, even when a leap year occurs.

These adjustments, while technical in nature, are crucial for maintaining the accuracy and consistency of our billing data. They allow us to make fair comparisons

across different time periods and ensure that our rate design is based on standardized usage patterns.

Q. Beyond the adjustments we've discussed, were any other modifications made to the class-level loads?

A. Yes, we made additional adjustments to the General Service and Transportation accounts to account for two specific scenarios: rate switchers and customers leaving and entering our system during the test year.

For rate switchers, we reviewed the accounts and made adjustments to shift usage between the respective classes based on each customer's most recent class selection in the test year. This ensures that our projections reflect the current classification of these customers.

For accounts identified as leaving our system during the test year (excluding rate switchers), we removed their usage for the full year. This adjustment reflects the change in usage we expect from these customers no longer being part of our system.

These additional adjustments are crucial in our effort to reflect, as accurately as possible, the expected normalized revenues from each class based on the current status of customer accounts.

Q. As this rate case progresses, does the Company plan to update its billing units and associated test year revenue?

A. Yes, we do. While our current analysis is based on data for the 12 months ending March 31, 2024, we anticipate using a more current period as the case progresses. This approach allows us to incorporate the most up-to-date usage information available

when setting rates in this case. By using the most recent data possible, we can ensure our rate design reflects current usage patterns and customer behaviors.

Q. How are the final normalized billing unit numbers utilized in your rate design process?

A. The final normalized billing unit numbers serve two critical functions in our rate design process:

1. Current Normalized Revenues: We use these normalized billing units to calculate current normalized revenues. This gives us a clear picture of what our revenue would be under normal conditions with our current rates in place.
2. New Rate Development: These normalized billing units form the foundation for developing our proposed new rates. By applying our proposed rates to these normalized units, we can project the revenue we expect to collect under normal conditions if our rate proposal is approved.

This dual use of the normalized billing units ensures consistency throughout our rate design process. It allows us to accurately assess the impact of our proposed changes and design rates that will recover our allowed revenue requirement under normal operating conditions.

VIII. MISCELLANEOUS TARIFF REVISIONS

Q. What are the non-rate tariff revisions proposed by the Company?

A. Redlines of the proposed language changes have been provided in Schedule MWH-D3 attached to my testimony as a descriptive reference to the explanations below. I summarize the modified sheets by section, list the sheet numbers, and explain the reason for each change below:

Natural Gas Transportation Sevice

Sheet 10 – Section 1

In the Availability section, language has been added to clarify that the Company has sole discretion in designating city gate locations for gas delivery. Specifically, the phrase "at the Company's sole discretion" has been inserted after mentioning the delivery of natural gas to the Company's designated city gate. This change provides the Company with explicit flexibility in managing its gas supply and distribution system, allowing for more efficient operations and potentially better service to all customers.

Sheet 12

A provision has been added requiring customers to notify the Company by July 1st for transportation service to begin November 1st. This change is intended to allow for better planning and management of gas transportation services. The proposed July 1st notification deadline aligns with the Company's planning cycle for the upcoming winter season, which typically begins November 1st. This advance notice period is expected to serve several important purposes for the Company's operations. It should allow the Company time to plan for capacity requirements and make necessary arrangements with pipeline suppliers. The additional lead time may help ensure a smoother transition for customers moving to transportation service, potentially reducing administrative burdens. Furthermore, it should provide the Company with a more accurate forecast of transportation versus sales customers for the upcoming winter season, which aids in more efficient resource allocation and system planning.

Sheet 13

The requirement for a "commercial telephone line" has been updated to specify a "dedicated analog telephone line." Additionally, language has been added regarding the consequences of failing to maintain this line. These changes ensure more reliable communication for meter reading and clarify the process if a customer fails to maintain the required connection.

Sheet 13.2

The calculation method for daily negative imbalances greater than 5% has been modified to use 110% of the daily midpoint indexed commodity price. This change better aligns the imbalance charges with actual costs incurred by the Company.

Sheet 14

We are proposing to remove language referring to contracts existing before February 18, 1998. This outdated provision is no longer necessary as all current contracts are governed by the current tariff terms.

Sheet 16

The Missouri School Boards' Association ("MSBA") Pilot Program provisions found in Section 10 will be removed from the tariff. This removal is in accordance with the existing tariff language on Sheet 16, Section 10, which states that "The Pilot Program will terminate on conclusion of the Company's next general rate case." This language was approved by the Missouri Public Service Commission in our last rate case. As the current case represents the next general rate case since that Commission-approved provision was added, we are following through on the predetermined termination of this specific pilot program. It's important to note that this change does not impact the previous MSBA

provisions permitted by statute in Section 393.310 RSMo. The removal only applies to the temporary pilot program outlined in Section 10, while the statutory MSBA provisions will remain in effect. This change implements the already-approved and Commission-sanctioned plan to conclude this particular MSBA Pilot Program at the end of this rate case, as specified in the current tariff, while preserving the broader MSBA-related provisions.

Sheet 16.2

References to "fax" as a form of communication for Critical Day Notifications have been removed to reflect current communication practices.

Riders

Sheet 28 – Purchased Gas Adjustment Clause

We propose to remove section 10(e) which required documentation to support the impact of discontinuing the transition mechanism. This requirement is no longer relevant to current operations.

These changes are designed to update our tariffs to reflect current operational practices, improve clarity for customers, and remove outdated provisions. They will enhance our ability to manage our gas transportation services efficiently while maintaining fair practices for our customers.

Sheet 31-31.2 – DCA

We are proposing to delete these sheets entirely from our tariffs. It's important to note that the DCA mechanism itself was terminated on October 31, 2022, as specified in the previous tariff. All remaining balances have been addressed and transferred to the WNA as previously approved by the Commission.

By removing the DCA and updating the WNA, we are streamlining our tariff structure while maintaining appropriate mechanisms to address usage variations. These changes reflect our commitment to maintaining a clear, efficient, and effective rate structure that accurately reflects our costs and usage patterns while simplifying our regulatory framework.

Sheet 32-32.1 – Weather Normalization Adjustment Rider

The changes to the WNA tariff are designed to ensure that this mechanism remains current and accurately reflects the relationship between weather variations and our revenue collection. First, we are removing transitional language that was temporarily included to account for the transfer of balances from the DCA Rider. This language is no longer necessary as the transition has been completed as described in the previous section.

We are also updating the β coefficient used in the WNA calculation from 0.10918 to 0.09639. This coefficient is derived from our analysis of the relationship between weather and usage in this case, and the update ensures that our weather normalization remains accurate based on current usage patterns. Additionally, we are updating the Residential Distribution Delivery Rate used in the WNA calculation from $0.3536 per Ccf to $0.5337 per Ccf. This change aligns the WNA calculation with the new delivery charge proposed in this case.

For both the coefficient and rate changes, we've included language in the tariff specifying that the old values are applicable through the effective date of the new tariff sheet, and the new values are applicable after that date. This ensures a clear transition from the old values to the new ones.

Q. Does Ameren Missouri propose any changes to its Infrastructure System Replacement Surcharge ("ISRS") in this rate case?

A. No. Section 393.1015.6(1), RSMo. states, in part, that "[a] gas corporation that has implemented an ISRS pursuant to the provisions of sections 393.1009 to 393.1015 shall file revised rate schedules to reset the ISRS to zero when new base rates and charges become effective for the gas corporation following a commission order establishing rates in a general rate proceeding…" The Company currently has a Rider ISRS tariff on file, and the ISRS is already set to zero. Thus, a revised tariff is not needed, and has not been included with this filing. Ameren Missouri plans to reactivate its ISRS following the conclusion of this rate case. Plant-in-service additions for inclusion in a future ISRS would be limited to additions subsequent to the last day of the true-up period in this rate case.

Q. Does this conclude your direct testimony?

A. Yes, it does.

Ameren Missouri - Gas
12 Months Ended 03-31-2024

Current Revenue	$78,210,931
Change	$39,647,825
Target	$117,858,756
Special Contracts	$376,214
Target less Special Contracts	$117,482,542
Current less Special Contracts	$77,834,717
	1.5094

Class Revenue Allocation

	Normal	RN Shift	Current Revenue Adj.	Target Revenue	Increase	
RES	$47,453,803		$47,453,803	$71,626,051	$24,172,248	1.5094
GS	$16,888,672		$16,888,672	$25,491,506	$8,602,834	1.5094
INT	$437,094		$437,094	$659,743	$222,649	1.5094
STDTRN	$8,726,956	-$174,539	$8,552,416	$12,908,888	$4,181,932	1.4792
LVTRN	$4,328,192	$174,539	$4,502,731	$6,796,355	$2,468,162	1.5703
	$77,834,717	$0	$77,834,717	$117,482,542	$39,647,825	1.5094

Rate Component Allocation

		Present Rates		Proposed Rates	Proposed	
Residential						
Customer	1,481,139	$15.00	$22,217,092	$22.64	$33,532,998	50.9%
Ccf	71,370,788	$0.3536	$25,236,711	$0.5337	$38,090,590	50.9%
	71,370,788		$47,453,803		$71,623,587	50.9%
General Service						
Customer Bills	161,600	$30.33	$4,901,339	$45.78	$7,398,064	50.9%
0-7,000 Ccf	34,032,516	$0.3251	$11,063,971	$0.4907	$16,699,756	50.9%
Over 7,000 Ccf	4,337,073	$0.2129	$923,363	$0.3213	$1,393,501	50.9%
	38,369,588		$16,888,672		$25,491,321	50.9%
Interruptible Service						
Customer Bills	48	$281.87	$13,530	$425.45	$20,422	50.9%
0-7,000 Ccf	266,606	$0.3251	$86,674	$0.4907	$130,824	50.9%
Over 7,000 Ccf	1,927,290	$0.1748	$336,890	$0.2638	$508,419	50.9%
Total	2,193,897					
Assurance Gas						
First 250 per day	0	$0.0118	$0	$0.0178	$0	
Over 250 per day	0	$0.0164	$0	$0.0248	$0	
			$437,094	Total	$659,664	50.9%

Standard Transportation						
Customer Bills	7,147	$30.23	$216,054	$45.78	$327,190	51.4%
Admin. Charge	2,658	$45.73	$121,550	$45.73	$121,550	0.0%
0-7,000 Ccf	12,509,564	$0.3251	$4,066,859	$0.4907	$6,138,443	50.9%
Over 7,000 Ccf	23,727,827	$0.1815	$4,306,601	$0.2664	$6,321,093	46.8%
Total Ccf	36,237,391		$8,711,064		$12,908,276	
School Entities (volumes)						
0-7,000 Ccf	3,439,901	$0.0044	$15,136	$0.0044	$15,136	0.0%
Over 7,000 Ccf	171,809	$0.0044	$756	$0.0044	$756	0.0%
			$15,892		$15,892	
			$8,726,956	Total	$12,924,168	48.1%
Large Volume Transportation						
Customer Bills	252	$1,527.31	$384,882	$1,527.31	$384,882	0.0%
Admin. Charge	252	$45.73	$11,524	$45.73	$11,524	0.0%
0-7,000 Ccf	1,675,379	$0.3251	$544,666	$0.4907	$822,108	50.9%
Over 7,000 Ccf	21,698,402	$0.1561	$3,387,121	$0.2571	$5,578,659	64.7%
Total Ccf	23,373,781		$4,328,192		$6,797,174	57.0%
		Base Rate Revenue	$77,834,717		$117,495,914	50.96%
		Special Contracts	$376,214		$376,214	
			$78,210,931		$117,872,128	50.71%
				Over/Under	$13,372	

Ameren Missouri Gas Operations

12 Months Ending Mar 2024

Equal Returns CCOSS Results w/ Proposed Increase

Customer Class	Current Revenue	Equal ROR Revenue	$ Change	% Change
Residential	$47,453,803	$67,993,829	$20,540,027	43.3%
General Service	$16,888,672	$24,904,626	$8,015,954	47.5%
Interruptible	$437,094	$845,225	$408,132	93.4%
Standard Trans.	$8,726,956	$10,582,665	$1,855,709	21.3%
Large Trans.	$4,328,192	$13,156,196	$8,828,003	204.0%
Subtotal	$77,834,717	$117,482,542	$39,647,825	50.9%
Special Contract	$376,214	$376,214	$0	0.0%
Total	$78,210,931	$117,858,756	$39,647,825	50.7%

Proposed Allocations

Customer Class	Current Revenue	Proposed Revenue	$ Change	% Change
Residential	$47,453,803	$71,623,587	$24,169,785	50.9%
General Service	$16,888,672	$25,491,321	$8,602,649	50.9%
Interruptible	$437,094	$659,664	$222,571	50.9%
Standard Trans.	$8,726,956	$12,924,168	$4,197,212	48.1%
Large Trans.	$4,328,192	$6,797,174	$2,468,981	57.0%
Subtotal	$ 77,834,717	$ 117,495,914	$ 39,661,197	51.0%
Special Contract	$ 376,214	$ 376,214	$ -	0.0%
Total	$ 78,210,931	$ 117,872,128	$ 39,661,197	50.7%

Current Normal Revenue CCOSS Implied Revenue Neutral(RN) Shifts for Equal ROR

Customer Class	Total % NOI	Class % NOI	RN % Shifts	RN $ Shifts
Residential	$5,751,270	$6,734,355	($983,085)	-2.1%
General Service	$2,357,518	$3,136,290	($778,773)	-4.6%
Interruptible	$87,403	$3,769	$83,633	19.1%
Standard Trans.	$1,079,712	$3,235,210	($2,155,498)	-24.7%
Large Trans.	$1,344,601	($2,489,121)	$3,833,722	88.6%

CCOSS Unbundled Component Allocations

Customer Class	Customer	Delivery
Residential	$23.08	0.5430
General Service	$50.74	0.4544
Interruptible	$465.05	0.4815
Standard Trans.	$123.67	0.2766
Large Trans.	$646.87	0.5508

Customer Charge Compare

Customer Class	Current Effective	CCOSS	Proposed
Residential	$15.00	$23.08	$22.64
General Service	$30.33	$50.74	$45.78
Interruptible	$281.87	$465.05	$425.45
Standard Trans.	$30.23	$123.67	$45.78
Large Trans.	$1,527.31	$646.87	$1,527.31

P.S.C. Mo. No. 2 — 12~~1~~th Revised SHEET No. 10

Cancelling P.S.C. Mo. No. 2 — 11~~0~~th Revised SHEET No. 10

UNION ELECTRIC COMPANY
GAS SERVICE

Applying to MISSOURI SERVICE AREA

*NATURAL GAS TRANSPORTATION SERVICE

1. Availability.

This service schedule is available: 1) to all non-residential customers on a per meter basis and 2) to the premises of "Eligible School Entities," which are the eligible school entities as defined in Section 393.310 RSMo, 3) to the premises of eligible school entities as defined in Section 393.310 RSMo which were on sales service during the immediately preceding twelve (12) months ("New Eligible School Entities"). Such service is applicable to individual customers that can individually secure and arrange for the delivery of sufficient supplies of natural gas to the Company's designated city gate at the Company's sole discretion and to the Eligible School Entities and New Eligible School Entities that can do so through aggregate contracts negotiated by and through a not-for-profit school association. The Company will not provide this service to any customer who uses such gas primarily to heat premises that provides temporary or permanent living quarters for individuals, unless the customer demonstrates to the Company that it has contracted for primary firm capacity with the upstream supplying intrastate and/or interstate pipelines to meet the customer's peak needs, or unless the customer demonstrates to the Company that the customer has adequate and usable alternative fuel facilities to meet the customer's energy needs.

The "transportation customer" shall be responsible for the purchase and transportation of its gas needs to the Company's designated city gate which serves such customer.

The Company shall not sell gas to any of its transportation customers except as specifically provided for in this service classification.

2. Monthly Customer, EGM and Volumetric Meter Reading Rates

	Standard Transportation(1)	Large Volume Transportation(2)
Customer Charge:	$45.75~~30.23~~	$1,527.31 per month
Electronic Gas Meter (EGM) Charges(3):		
Administrative Charge:	$45.73	$45.73 per month
Meter Equipment Charge:	Section G. Miscellaneous Charges Sheet No. 20, as applicable.	
Transportation Charge:		
First 7,000 Ccf	49.04~~32.51~~¢ per Ccf	49.04~~32.51~~¢ per Ccf
All Over 7,000 Ccf	26.62~~18.15~~¢ per Ccf	25.69~~15.61~~¢ per Ccf

(1) A customer, at the date of its contract, whose annual transportation requirements are expected to be 600,000 Ccf or less.

(2) A customer, at the date of its contract, whose annual transportation requirements are expected to be greater than 600,000 Ccf.

(3) Not applicable, to the individual meters of Eligible School Entities, and New Eligible School Entities as defined in paragraph 1. above, using one hundred thousand Ccfs or less annually, and customers with advanced metering installed.

DATE OF ISSUE September 30, 2024~~January 28, 2022~~ **DATE EFFECTIVE** October 30,

ISSUED BY Mark C. Birk (Name of Officer) Chairman & President (Title) St. Louis, Missouri (Address)

UNION ELECTRIC COMPANY
GAS SERVICE

Applying to MISSOURI SERVICE AREA

NATURAL GAS TRANSPORTATION SERVICE

3. Minimum Monthly Charge.

The Customer Charge, EGM Administrative Charge and, as applicable, the EGM Meter Equipment Charge.

4. Purchased Gas Adjustment.

All customers receiving transportation service will be subject to the provisions of the Company's PGA clause, Rider A. The ACA component of the Company's PGA clause shall be applicable to New Eligible School Entities for the first twelve (12) months of their participation in the gas aggregation program.

5. Payments.

Bills are due and payable within twenty-one (21) days from date of bill and become delinquent thereafter. Pursuant to Section VIII.F. of Company's Rules and Regulations, any portion of any bill, other than deposit arrears, remaining unpaid after the delinquent date will have a late payment charge added thereto.

* 6. Term of Contract.

Service hereunder shall be for a minimum period of one (1) year. Customers must notify the Company by July 1st for transportation service to begin November 1st.

7. Tax Adjustment.

Any license, franchise, gross receipts, occupation or similar charge or tax levied by any taxing authority on the amounts billed hereunder will be so designated and added as a separate item to bills rendered to the customers under the jurisdiction of the taxing authority.

8. Terms and Conditions.

A. Transportation service under this schedule will be made available to customers upon request when the Company has sufficient distribution capacity to supply such service. If the Company determines that it does not have sufficient distribution capacity to provide the requested service it will, within 30 days of receiving a request for transportation service, provide to the customer requesting said service a written explanation of its capacity determination including a preliminary indication of changes to facilities necessary to effectuate such service, approximate cost to customer and time required to provide the requested service.

B. Service under this schedule shall require execution of a Gas Transportation Service Contract ("Contract") between the Company and the customer requesting transportation service in a form similar to that contained in Section 11 below.

C. Service will be provided only after requisite contracts and authority have been obtained by the customer to transport gas to the Company's facilities.

* Indicates Change.

P.S.C. Mo. No. 2 9~~8~~th Revised SHEET No. 13

Cancelling P.S.C. Mo. No. 2 8~~7~~th Revised SHEET No. 13

UNION ELECTRIC COMPANY
GAS SERVICE

Applying to MISSOURI SERVICE AREA

*NATURAL GAS TRANSPORTATION SERVICE

~~C.~~D. All volumes of gas transported hereunder shall be of compatible pipeline quality.

~~D.~~E. Gas delivered under this schedule shall not be resold by the customer.

~~E.~~F. Except as otherwise provided herein, gas transported for all current and future customers hereunder shall be metered by an electronic recording device with remote monitoring features for the recording of the customer's daily gas usage and real time flow data. The Company will install and the customer will pay for said meter at the monthly charge indicated in Section ~~F.~~G. Miscellaneous Charges, Sheet No. 20.1. In addition, the customer shall arrange and pay for the installation and monthly costs of a dedicated analog~~commercial~~ telephone line and 120 volt AC electrical power source, at a location designated by the Company. If the customer cannot consistently maintain the dedicated analog telephone line for any 90-day period, then the customer may be notified of removal from transportation service and remain on general service for 1 year and must also notify the Company of the intent to return to transportation service by July 1.~~, to facilitate the remote interrogation of the electronic recording meter by the Company except that customers do not need to install or maintain a commercial telephone line after Company has installed an advanced meter device on the service and notified the Customer the phone line is no longer being utilized.~~

G. In addition to collection of the rates and charges provided for in Section 2. above, the Company shall retain two percent (2%) of the quantities of natural gas received from the customer for reimbursement in kind from the customer for shrinkage or line losses.

H. Nominations:

The following provisions shall be utilized by customers for nomination of customer owned gas:

(a) Customer's deliveries for any day shall not exceed one hundred fifty percent (150%) of customer's peak daily usage in the past 12 months, except when approved by the Company.

(b) Customer may appoint a nominating agent, but customer retains responsibility for nominations as described herein.

(c) Nomination Deadlines

1. Month Ahead: The customer or their designee shall enter each month's nomination in the Company's gas transportation system by no later than 11:30 a.m. CCT on the first business day prior to the first day of the calendar month for which gas is being nominated.

2. Day Ahead: The customer or their designee shall enter changes to nominations in the Company's gas transportation system by no later than 11:30 a.m. on the business day prior to the effective date of any subsequent change in the nomination. Such change in nomination shall be subject to approval by the Company.

* Indicates Change.

DATE OF ISSUE September 30, 2024~~October 18, 2023~~ **DATE EFFECTIVE** October 30,

ISSUED BY Mark C. Birk (Name of Officer) Chairman & President (Title) St. Louis, Missouri (Address)

UNION ELECTRIC COMPANY
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The Customer Group will be considered as one customer for purposes of calculating the daily balancing and cash-out provisions of this Section I. The Group Manager will be billed and is responsible for any such imbalance, Unauthorized Use Charges, and all intrastate and/or interstate pipeline penalties and other charges incurred by the Company which are attributable to a Customer Group's unauthorized use. All other transportation service tariff charges will be billed to the individual customer accounts, including but not limited to Customer Charges, Transportation Charges, Administrative Charges, and where applicable, Meter Equipment Charges and Transportation Charge Adder.

A negative imbalance is created when the customer's gas nominated to the Company as adjusted by the loss factor is less than the quantities of gas used by the customer. A negative imbalance during periods of a Company Critical Day Notification will be considered unauthorized use and billed at the Unauthorized Gas Use Charge set forth in Section 2. herein.

A negative imbalance during other times will be considered balancing use and will be billed at the following tiers and referred to as the "Balancing Gas Use Charge":

*Daily negative imbalances of 5% or less of nominations as adjusted by the loss factor will be billed at the greater of the applicable service area's firm sales service PGA factor or at the daily midpoint indexed commodity price as quoted in the publication "Platt's Gas Daily" for that date plus a transportation charge of $0.150 per Ccf. Daily negative imbalances greater than 5% of nominations as adjusted by the loss factor will be billed at the greater of the applicable service area's firm sales service PGA factor plus 10% or 110% of~~at~~ the daily midpoint indexed commodity price as quoted in the publication "Platt's Gas Daily" for that date plus a transportation charge of $0.150 per Ccf.

A positive imbalance is created when the customer's gas nominated to the Company as adjusted by the loss factor exceeds the quantities of gas used by the customer. The Company will purchase positive imbalances at the following tiers:

Daily positive imbalances of 5% or less of nominations as adjusted by the loss factor will be purchased at the daily midpoint index commodity price as quoted in the publication "Platt's Gas Daily" for that date. Daily positive imbalances greater than 5% of nominations as adjusted by the loss factor will be purchased at ninety percent (90%) of the daily midpoint indexed commodity price as quoted in the publication "Platt's Gas Daily" for that date.

The index to be used will be specific for each transportation customer account as follows:
"Panhandle Eastern Pipe Line Co. – Panhandle, Tx.-Okla."
"Texas Eastern Transmission Corp. – Texas Eastern, ELA"
"Natural Gas Pipeline Co. of America – NGPL, Texok Zone"

* Indicates Change.

UNION ELECTRIC COMPANY
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*NATURAL GAS TRANSPORTATION SERVICE

In the absence of such published "Platt's Gas Daily" index, the Company will determine, subject to Commission's review in Company's Actual Cost Adjustment (ACA) filing, a suitable replacement source for such daily market price information.

The daily negative and positive imbalance billings so calculated will be applied to the customer's monthly bill. Net payments to customer will be included in the Company's PGA Clause ACA computation as purchased gas costs and net payments to Company will be included as revenue recovery.

J. Except as specifically provided for herein, all of the Company's Rules and Regulations for natural gas service which are not in conflict herewith shall apply to service rendered hereunder.

~~K. A contract existing between the Company and a customer on February 18, 1998 may continue in effect as an executed transportation contract, to the extent its provisions are not superseded by or in conflict with the provisions of this tariff, until such contract expires by its terms or is replaced by an executed transportation contract. Such existing contracts will be assigned to the Standard Transportation Rate if deliveries to the customer during the preceding calendar year totaled 600,000 Ccf or less and to the Large Volume Transportation Rate if deliveries during such period totaled in excess of 600,000 Ccf. For customers who do not have gas usage history for the preceding calendar year, such existing contracts will be assigned the applicable transportation rate based on estimated or projected deliveries.~~

~~L.~~K. The Company shall have the right to interrupt, curtail or discontinue transportation service, in whole or in part at any time for reasons of force majeure or when in the Company's sole judgment, capacity or operating conditions so require, or it is desirable or necessary to make modifications, repairs or operating changes to its system. The Company shall provide customer such notice of the interruption, curtailment or discontinuance of service as is reasonable under the circumstances. The Company shall not discriminate between transportation and sales customers for purposes of determining the order and priority of interruption. The Company shall not be liable for and the customer shall indemnify the Company against and hold the Company harmless from any and all damages, claims, suits, actions or proceedings whatsoever threatened or initiated as a result of any interruption, curtailment or discontinuance of transportation service invoked by the Company.

L. All transportation service is firm in nature. If the Company's local distribution system capacity is inadequate to meet all of its demands for service, the services supplied under this schedule will be curtailed in accordance with the Curtailment of Service Schedule contained in the Company's Rules and Regulations.

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Eligible School Entities or New Eligible School Entities, using one hundred thousand Ccfs or less annually are not subject to the Electronic Gas Meter (EGM) Charges or installation of a communications line or 120 Volt power source; and positive and negative imbalances will be netted and cashed-out under Group Balancing on a monthly basis in accordance with the appropriate pricing provision under Section 8.I., with the monthly PGA and the monthly average of the daily midpoint prices being used as the base for the determination of the cash-out charge.

Tax Adjustment:
For New Eligible School Entities participating in aggregate purchasing contracts, all applicable taxes shall be computed based on billed revenues determined under paragraph 2. above. Additional applicable taxes shall also be levied and computed based upon the total actual Company-supplied Authorized Gas and Company-released capacity costs incurred on behalf of each of the accounts within the group of individual New Eligible School Entities. Such additional taxes applicable to the latter accounts will be paid each month directly to the appropriate taxing authority by each school or by the school's agent.

~~10. MISSOURI SCHOOL BOARDS' ASSOCIATION(MSBA) PILOT PROGRAM PROVISIONS:~~

~~The general purpose of this Pilot Program is to collect relevant information regarding the cost of providing monthly cash-out to Eligible School Entities and New Eligible School Entities. Per the Non-unanimous Stipulation (Stipulation) and Agreement in File No. GR-2019-0077 and modified by the Stipulation and Agreement in File No. GR-2021-0241 concerning MSBA issues, the following temporary imbalance provisions will apply with the first November billing month following the effective date of rates in the GR-2021-0241 case to Eligible School Entities represented by the Missouri School Board Association. The Pilot Program will terminate on conclusion of the Company's next general rate case.~~

~~1) Negative imbalances greater than 5% of nominations as adjusted by the loss factor will be billed at 110% of the monthly average of daily midpoint indexed commodity prices as quoted in Platt's Gas Daily for the respective pipeline. The transportation charge of $0.150 per Ccf will not apply.~~
~~2) Positive imbalances greater than 5% of nominations as adjusted by the loss factor will be purchased at 90% of the monthly average of daily midpoint indexed commodity prices as quoted in Platts Gas Daily for the respective pipeline.~~
~~3) Imbalances less than 5% of nominations as adjusted by the loss factor will be billed at 100% of the monthly average of daily midpoint indexed commodity prices as quoted in Platt's Gas Daily for the respective pipeline. The transportation charge of $.150 per Ccf will not apply.~~

~~All other rates and provisions under this tariff shall continue to apply to the Eligible School Entities represented by the Missouri School Board Association unless specifically stated otherwise. Any conflicts between this Section 10 and other provisions under this tariff shall be resolved in favor of this Section 10.~~

10. Rules and Regulations. Service will be rendered in accordance with the Company's Rules and Regulations for Gas Service on file with the Missouri Public Service

Commission.

* Indicates Change.

UNION ELECTRIC COMPANY
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~~11. Rules and Regulations. Service will be rendered in accordance with the Company's Rules and Regulations for Gas Service on file with the Missouri Public Service Commission.~~

* THIS SHEET IS RESERVED FOR FUTURE USE

UNION ELECTRIC COMPANY
GAS SERVICE

Applying to MISSOURI SERVICE AREA

RIDER A
*PURCHASED GAS ADJUSTMENT CLAUSE

10. The Company concurrently with its annual ACA filing, shall:

(a) Provide all documentation necessary to reconcile the Company's actual gas costs with its billed revenue. Provide all documentation of all natural gas purchases (commodity, demand or reservation charges or other charges) to support that the claimed costs are properly attributed to the ACA period and that the pipelines, natural gas suppliers, and any other vendors have charged or invoiced the Company for the volumes nominated and received at the proper rates.

(b) Provide all documentation to support decisions made at the time of the Company's natural gas supply planning, capacity planning, purchasing practices, and operating decisions for the ACA period.

(c) Provide documentation of the financial impact on customers of the Company's decisions regarding its gas supply, transportation and storage contracts.

~~(d)~~ Provide copies of all contracts in effect at any time during the ACA period. Include copies of all contracts related to the procurement of natural gas including but not limited to transportation, storage, and supply contracts and all schedules and exhibits and letter agreements related to gas procurement, gas costs and/or gas constraints.

~~(e)~~

~~(f)~~(d) ~~Provide all documentation to support the impact of discontinuing the transition mechanism.~~

(e) The documentation provided shall include fully functioning electronic spreadsheets. The term "document(s)" includes publication of any format, workpapers, letters, memoranda, notes, reports, analyses, computer analyses, test results, studies or data, recordings, transcriptions and printed, typed electronic or written materials of every kind in Company's possession, custody or control or within Company's knowledge.

* Indicates Change.

UNION ELECTRIC COMPANY
GAS SERVICE

Applying to MISSOURI SERVICE AREA

Delivery Charge Adjustment (DCA) Rider

APPLICABILITY

The DCA[1] Rider is applicable to all Customers taking service under the Residential or General Service rate schedules. The Rider will be applied as a separate line item on a customer's bill to all Ccf of gas usage.

FILING

The DCA rider

(1) **After October 31, 2022, the DCA will terminate and be replaced by the Weather Normalization Adjustment Rider(WNAR). Any remaining over/under balance accumulated under the DCA for the Residential class through February 28, 2022, and any Reconciliation Adjustment amounts through October 31, 2022, will transfer to the WNAR.**

(2) Adjustment Period (AP): The DCA AP will begin on the ninth billing month of a given year, and continue through the eighth billing month of the subsequent year. The initial AP under this rider shall begin on September 1, 2019. Actual Block Usage for the final billing month of an AP may be projected for purposes of a DCA rate calculation included in a filing under this Rider if necessary. Prior to the end of the subsequent twelve (12) month AP, the difference between the ABU previously projected and the observed ABU for that month, multiplied by the Rate that was in effect during that month, will be added to or subtracted from the calculation of the over- or under-billing of the DCA during the RP as appropriate.

(3) Recovery Period (RP): An annual period during which a DCA rate is in effect, beginning with the eleventh calendar month of a given year, and continuing through the tenth calendar month of the subsequent year. The RP shall be calculated based on nine (9) months actual sales, including estimated unbilled sales for the ninth month, and three (3) months projected sales. The 3 months projected sales associated with each RP shall be trued up with actuals upon calculation of the subsequent RA.

RATE ADJUSTMENT CALCULATION

The DCA applicable to each rate schedule subject to this Rider and calculated separately for Residential customers and General Service customers, shall be revised annually to reflect (1) the difference between the normalized annual natural gas usage in Block 2 for Residential customers and Block 1b for General Service customers authorized in the Company's last general rate case and the actual usage billed in those blocks for the applicable AP; (2) to reconcile the over- or under-recovery from the previous DCA rate adjustment; and (3) any adjustments ordered by the Commission.

[1] Based on the Volume Indifference Reconciliation to Normal (VIRN) initially proposed by Staff and as modified by the Stipulation and Agreement in GR-2019-0077

DATE OF ISSUE SeptemberJanuary 3028, 20242
OctoberFebruary 3028, 20242 **DATE EFFECTIVE**

ISSUED BY Mark C. Birk (Name of Officer) Chairman & President (Title) St. Louis, Missouri (Address)

P.S.C. Mo. No. 2 — 1098th Revised SHEET No. 31

Cancelling P.S.C. Mo. No. 2 — 1087th Revised SHEET No. 31

UNION ELECTRIC COMPANY
GAS SERVICE

Applying to MISSOURI SERVICE AREA

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UNION ELECTRIC COMPANY
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$$DCA = \left[\frac{(RCBU - ABU) \times Rate}{RCU} + \frac{(OA + RA)}{RCU}\right]$$

Where:

DCA = "Delivery Charge Adjustment Rate" to be calculated independently for each of the Company's applicable service classes and applied to all Ccf of the applicable service class during the RP.

RCBU = "Rate Case Block Usage" will be the normalized annual natural gas usage in Block 2 for Residential customers and Block 1b for General Service customers established in the most recent general rate case.

RCU = "Rate Case Usage" will be the estimated total usage in Ccf for the applicable class established in the most recent general rate case.

ABU = "Actual Block Usage" is that usage which occurred during the Adjustment Period (AP) for the class's adjustable Ccf usage range

Rate = The currently effective class rate for usage in Block 2 for Residential customers and Block 1b for General Service customers.

OA = "Ordered Adjustment" is the amount of any adjustment to the DCA ordered by the Commission as a result of corrections under this Rider. Such amounts shall include monthly interest equal to the reconciliation adjustment interest rate.

RA = "Reconciliation Adjustment" is the amount due to the Company (+RA) or Customers (-RA) arising from adjustments under this Rider that were under- or over-billed in the prior 12 month RP

In the event that there is more than one set of non-gas base rates in effect during the AP the rates and rate case block usage will be prorated accordingly.

Reconciliation Adjustment Interest Rate

Each month, carrying costs, at a simple rate of interest equal to the prime bank lending rate (as published in The Wall Street Journal on the first business day of such month), minus two percentage points, shall be applied to the Company's ending monthly DCA balance. In no event shall the carrying cost rate be less than 0%. Corresponding interest income and expense amounts shall be recorded in account 419 and 431 on a net cumulative basis for the DCA deferral period.

Rate Case Information

From GR-2019-0077, the normalized annual natural gas usage in Block 2 (greater than 30 ccf) for Residential customers is 44,385,230 Ccf and Block 1b (between 101 and 400 ccf) for General Service customers is 10,215,167 Ccf. The Block 2 rate for the Residential Class is $0.3136 and the rate for Block 1b for the General Service Class is $0.3048.

RCU: Total Residential Usage is 74,556,650; total General Service Usage 36,738,143.

DATE OF ISSUE September~~January~~ 30~~28~~, 2024~~2~~ October~~February~~ 30~~28~~, 2024~~2~~ **DATE EFFECTIVE**

ISSUED BY Mark C. Birk (Name of Officer) Chairman & President (Title) St. Louis, Missouri (Address)

P.S.C. Mo. No. 2 | 1st Revised~~Original~~ SHEET No. 31.1

Cancelling P.S.C. Mo. No. 2 | Original SHEET No. 31.1

UNION ELECTRIC COMPANY
GAS SERVICE

Applying to MISSOURI SERVICE AREA

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DATE OF ISSUE September~~January~~ 30~~28~~, 2024~~2~~
October~~February~~ 30~~28~~, 2024~~2~~

DATE EFFECTIVE

ISSUED BY Mark C. Birk (Name of Officer) Chairman & President (Title) St. Louis, Missouri (Address)

P.S.C. Mo. No. 2 | 2nd ~~1st~~ Revision | SHEET No. 31.2

Cancelling P.S.C. Mo. No. 2 | 1st Revision ~~Original~~ | SHEET No. 31.2

UNION ELECTRIC COMPANY
GAS SERVICE

Applying to MISSOURI SERVICE AREA

~~Delivery Charge Adjustment (DCA) Rider~~

~~Customer Class~~	~~First Effective Date~~	~~Last Effective Date~~	~~DCA~~
~~Residential~~	~~Effective Date of This Tariff Sheet~~	~~10/31/2021~~	~~0.0158~~
~~General Service~~	~~Effective Date of This Tariff Sheet~~	~~10/31/2021~~	~~0.0036~~

(blank)

~~The DCA (in $/Ccf) to be applied for service on or after the first effective date and terminating on the last effective date to the Company's Residential and General Service rate schedules, as applicable, for gas sold or delivered to customers in the Company's service area.~~

DATE OF ISSUE September~~January~~ 30~~28~~, 2024~~2~~ October~~February~~ 30~~28~~, 2024~~2~~ **DATE EFFECTIVE**

ISSUED BY Mark C. Birk (Name of Officer) Chairman & President (Title) St. Louis, Missouri (Address)

P.S.C. Mo. No. 2 | 1032~~rdnd~~ Revised | SHEET No. 32

Cancelling P.S.C. Mo. No. 2 | 1021~~ndst~~ Revised | SHEET No. 32

UNION ELECTRIC COMPANY
GAS SERVICE

Applying to MISSOURI SERVICE AREA

WEATHER NORMALIZATION ADJUSTMENT RIDER (WNAR)

APPLICABILITY

The Weather Normalization Adjustment Rider (WNAR) is applicable to all Ccf of gas delivered to all customers served under Company's Residential service classification. The Rider will be applied as a separate line item on the customer's bill.

FILING

The Company shall make a WNAR filing each calendar year to be effective for the November billing month at least sixty (60) days prior to the effective date. ~~The final over/under balance of the DCA Rider accumulated through February 2022 will transfer to the WNAR for inclusion in the November 1, 2022 filing. The remaining Reconciliation Adjustment from the Residential DCA as of October 31, 2022, will transfer to the Residential WNAR.~~

WEATHER NORMALIZATION ADJUSTMENT RATE

$$WA = \frac{TWA + OA}{\text{Expected recovery period Residential sales}}$$

Where:

WA = Weather adjustment amount to be collected from the Residential service class

TWA = Total Weather Adjustment equaling the sum of the effective AWNA and AR from the Weather Adjustment Calculation

OA = Ordered Adjustment is the amount of any adjustment to the WNA ordered by the Commission as a result of corrections under this Rider. Such amounts shall include monthly interest at the Company's monthly short-term borrowing rate.

WEATHER ADJUSTMENT CALCULATION

$$TWA = AWNA + AR$$

Where:

Annual WNA ("AWNA") = the sum of the Monthly WNA for the billing months in the twelve month period ended each July. ~~The initial AWNA will be calculated with less than twelve months of information, including the Monthly WNA for March through July 2022, but will include the balance transferred from the DCA Rider for the remaining months of the annual period.~~

Annual Reconciliation ("AR") = Prior to the end of the twelve months of billing of each AWNA, the over- or under-billing of the AWNA shall be calculated based on twelve months of actual sales, consisting of the last three months of the recovery period related to the prior AWNA and the first nine months of the recovery period related to the currently effective AWNA.

UNION ELECTRIC COMPANY
GAS SERVICE

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WEATHER NORMALIZATION ADJUSTMENT RIDER (WNAR)

The WNA Factor will be calculated for each billing month as follows:

$$\text{WNA}_i = \sum_{j=1}^{21} \left((NDD_{ij} - ADD_{ij}) * \beta \right) * C_{ij}$$

Where:

WNA_i = Weather Normalization Adjustment

i = the applicable billing month

j = billing cycle

β = ~~applicable~~ coefficient of 0.10918 as established in Case No. GR-2021-0241 applicable through the effective date of this tariff sheet.
coefficient of 0.09639 as established in Case No. GR-2024-0369 applicable after the effective date of this tariff sheet.

C_{ij} = the total number of customer charges charged in billing cycle j and billing month i.

NDD_{ij} = the total normal heating degree days for the days in the applicable billing month and billing cycle. The normal degree days are calculated as the weighted average of 87.0% of heating degree days observed at the Columbia, MO Airport weather station and 13.0% of the heating degree days observed at the Cape Girardeau, MO Airport weather station.

ADD_{ij} = the total actual heating degree days for the days in the applicable billing month and billing cycle. A weighted average will be calculated based on 87.0% of heating degree days observed at the Columbia, MO Airport weather station and 13.0% of the heating degree days observed at the Cape Girardeau, MO Airport weather station.

$$\text{Monthly WNA}_i = \text{WNA}_i * \text{Weighted Volumetric Rate ("WVR")}$$

Where:

WVR = the Residential Distribution Delivery Rate of:

- ~~–~~$0.3536 per Ccf as established in Case No. GR-2021-0241 applicable through the effective date of this tariff sheet.
- $0.5337 per Ccf as established in Case No. GR-2024-0369 applicable after the effective date of this tariff sheet.~~–~~

There shall be a limit of $0.05 per Ccf on upward adjustments for the WA, and no limit on downward adjustments. Any WA adjustment amounts in excess of $0.05 per Ccf will be deferred for recovery from customers in the next WA adjustment.

Each month, monthly interest at the Company's monthly short-term borrowing rate shall be applied to the Company's average beginning and ending monthly

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 Its Revenues for Natural Gas Service.	)))	File No.: GR-2024-0369

AFFIDAVIT OF MICHAEL W. HARDING

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

Michael W. Harding, being first duly sworn on his oath, states:

My name is Michael W. Harding, and hereby declare on oath that I am of sound mind and lawful age; that I have 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/Michael W. Harding
Michael W. Harding

Sworn to me this 30th day of September 2024.