

MEMORANDUM

TO: Missouri Public Service Commission Official Case File
Case No. GR-2020-0372, Union Electric Company d/b/a Ameren Missouri

FROM: Kwang Y. Choe, PhD, Economics Analyst - Procurement Analysis
Anne M. Crowe, Senior Utility Regulatory Auditor - Procurement Analysis
Keenan B. Patterson, PE, Senior Professional Engineer - Procurement Analysis

/s/ David M. Sommerer 12/15/21 /s/ Jamie S. Myers 12/15/21
Project Coordinator / Date Staff Counsel's Office / Date

/s/ Keenan Patterson, P.E. 12/15/21
Senior Professional Engineer/ Date

SUBJECT: Staff Recommendation in File No. GR-2020-0372, Union Electric Company
d/b/a Ameren Missouri, 2019-2020 Actual Cost Adjustment Filing

DATE: December 15, 2021

EXECUTIVE SUMMARY

On October 16, 2020, Union Electric Company d/b/a Ameren Missouri ("Ameren Missouri" or "Company") filed its Actual Cost Adjustment ("ACA") for the 2019-2020 period. This filing revised the ACA rates based upon the Company's calculations of the ACA balances.

The Procurement Analysis Department Staff ("Staff") of the Missouri Public Service Commission has reviewed the Company's ACA filing. A comparison of billed revenue recovery with actual gas costs will yield either an over-recovery or under-recovery of the ACA balance.

For this ACA period, for gas cost recovery, Ameren Missouri had a single Purchased Gas Adjustment ("PGA")/ACA rate division. In Ameren Missouri's rate case (Case No. GR-2019-0077), the Rolla PGA/ACA area was combined with the state-wide PGA/ACA rates, effective September 1, 2019.

Staff conducted the following analyses:

- a review of billed revenue compared with actual gas costs,
- a reliability analysis including a review of estimated peak-day requirements and the capacity levels needed to meet these requirements,
- a review of the Company's natural gas supply plans including a review of the Company's gas purchasing practices to evaluate the prudence of the Company's purchasing decisions for this ACA period; and,

APPENDIX A

** Denotes Confidential Information **

- a hedging review to evaluate the reasonableness of the Company's hedging practices for this ACA period.

Staff has no recommended dollar adjustments related to Reliability Analysis and Gas Supply Planning. However, Staff's comments and general recommendations regarding this area are discussed within the Reliability Analysis and Gas Supply Planning section of the memorandum.

Staff has no recommended adjustments related to hedging. However, Staff's comments and general recommendations regarding hedging practices are addressed in the Hedging section of the memorandum.

Staff has proposed no recommended dollar adjustments to the Company's ACA account balances filed on October 16, 2020. Staff recommends the Commission issue an order directing the Company to establish the ACA account balances shown in the table below to reflect the under or (over)-recovery balances as of August 31, 2020.

An over-recovery reflects an amount that is owed to the customer by the Company and is shown as a negative number (in parentheses). An under-recovery is an amount that is owed to the Company by its customers and would be shown in the table below as a positive number:

	Balances per Ameren Missouri Filing	Current Period Staff Adjustments	Staff Recommended Ending Balances 8/31/20
Firm Sales ACA	\$ (8,050,833)	\$ 0	\$ (8,050,833)
Interruptible Sales ACA	\$ (25,557)	\$ 0	\$ (25,557)

Additionally, Staff recommends the Commission order the Company to respond to the Staff Recommendation Memorandum within 30 days.

STAFF'S TECHNICAL DISCUSSION AND ANALYSIS

Staff's discussion of its findings is organized into the following four sections:

- I. Overview
- II. Reliability Analysis and Gas Supply Planning
- III. Billed Revenue and Actual Gas Costs
- IV. Hedging
- V. Recommendations

Each section explains Staff's concerns and recommendations.

I. OVERVIEW

Ameren Missouri's natural gas operations are served by the following interstate pipelines: Panhandle Eastern Pipe Line Company, LP (PEPL), Trunkline (upstream, or prior to, PEPL), Texas Eastern Transmission, LP ("Texas Eastern" or "TETCO"), Natural Gas Pipeline Company of America, LLC ("NGPL"), Southern Star Central Gas Pipeline, Inc. ("SSC") and MoGas Pipeline "MoGas"). PEPL and SSC serve approximately 108,700 customers in the Jefferson City/Columbia area. TETCO serves approximately 18,600 customers in the Cape Girardeau area. NGPL serves approximately 1,600 customers in the Marble Hill area. PEPL and MoGas serve approximately 3,900 customers in the Rolla, Salem, and Owensville area.

II. RELIABILITY ANALYSIS AND GAS SUPPLY PLANNING

Reliability Analysis and Gas Supply Plan Review

As a gas corporation providing natural gas service to Missouri customers, the Company is responsible for conducting reasonable long-range supply planning and the decisions resulting from that planning. One purpose of the ACA process is to examine the reliability of the Local Distribution Company's (LDC) gas supply, transportation, and storage capabilities. For this analysis, Staff reviews the LDC's plans and decisions regarding estimated peak day requirements and the capacity levels to meet those requirements, peak day reserve margin and the rationale for this reserve margin, and natural gas supply plans for various weather conditions.

Staff's review for the Ameren Missouri service areas produced the following comments and concerns:

Reserve Margins – Panhandle – Columbia/Rolla Region

Ameren Missouri's estimated peak day load for the Columbia/Rolla Region during the 2019/2020 winter was 158,989 MMBtu, (161,199 estimated firm load minus estimated interruptible load of 2,210 MMBtu) when considering the Upper 95 Percent Confidence Interval. Ameren Missouri's firm capacity for the Columbia area is 158,650 MMBtu/day. The LNG plant in Wentzville adds an additional 2,140 MMBtu. However, a total of 2,210 MMBtu is released for the Missouri School Aggregation Program. Thus, the available capacity is 160,790 MMBtu.

The reserve margin for the Columbia region for the 2019/2020 ACA period, when considering the confidence interval, is a negative 1.6 percent. Without the consideration of the confidence interval, the reserve margin is a positive 4.4 percent. Staff encourages the Company to evaluate its capacity needs of the Wentzville system. Staff is concerned with the capacity limitations of the various take

points along the Panhandle Eastern Pipeline since Panhandle Eastern laterals can have their own limits that could impact load served off the lateral.

Texas Eastern Transmission Corporation Reserve Margins – Cape Girardeau System

The reserve margin for the Cape Girardeau Region is one area of concern for the Company to monitor. For the Company's 2019 Demand Study, the estimated firm load is based on the highest HDD value in the past 30 years. Based on this, the previous highest HDD value of December 22, 1989 drops off and is replaced by the January 18, 1994 HDD value in the Winter 2020/2021 estimated firm load forecast. During 2019/2020, the reserve margin was positive 8.7 percent and is expected to be at positive 18.5 percent for 2020/2021. When the Upper 95 Percent Confidence Interval is considered, the reserve margin is at positive 6.1 percent for 2019/2020 and is expected to be at positive 11.0 percent for 2020/2021. If this change in peak HDD is truly indicative of an expectation of less very cold days, then it could indicate that less transportation capacity may be needed to meet peak demand, though this could be offset by customer growth or other factors. Staff encourages Ameren Missouri to evaluate its capacity needs for the Cape Girardeau region on an annual basis.

Design Flow Modeling

In light of the steps Ameren Missouri has needed to take to assure supply to Wentzville during especially cold events in recent winters, Staff has had concerns about Ameren Missouri's capacity to receive gas at the city gate serving Wentzville and distribute gas in that system. The Company uses modeling software for flow analysis of each of its systems. This software allows the Company to conduct flow analysis of the distribution system including critical load points and be able to evaluate alternatives to address the system's capacity limitations. The Company is currently utilizing a consulting firm, Total Infrastructure Management Systems, to verify the flow analysis of the Wentzville distribution system. Staff recommends that the Company continue to develop the modeling system for the TETCO, NGPL, and PEPL systems, and that it closely monitor the capacity of city gates and its distribution system in the Wentzville area to assure it can provide adequate gas in very cold conditions.

Ameren Missouri had installed a temporary LNG facility in Wentzville in January 2020 to help with the reliability of the Panhandle system. Staff recommends that the Company continue to evaluate the reliability of the Wentzville system and the need for the LNG facility for the Wentzville system.

III. BILLED REVENUE AND ACTUAL GAS COSTS

During this ACA period Staff performed a review of the Company's actual gas costs and billed revenue. Based on its review, Staff proposes no adjustments to the August 31, 2020 ACA balances.

IV. HEDGING

The Staff reviewed Ameren Missouri's hedging program. The Company's goal is to hedge prices to reduce market price volatility. In particular, Ameren Missouri's stated objective is to create a forward gas supply portfolio and to dollar-cost-average gas supply prices to mitigate price volatility for the PGA sales customers, among other objectives. The current planning horizon for gas supply purchases and price hedging is thirteen seasons or six and one-half years. Gas supply transactions and price hedges for this period are phased in, based on factors including current futures prices, availability of gas supply, as well as general market conditions.

Ameren Missouri receives regular natural gas market reports from energy and financial firms and regular market reports and assessments. The Staff reviewed Ameren Missouri's hedging practices for the winter months, November 2019 through March 2020. Ameren Missouri's hedging implementation plan is to protect approximately ** [REDACTED] ** percent of normal winter demand requirements against market price volatility for the three Ameren Missouri systems, PEPL-UE, TETCO-UE and NGPL-UE. The price protection, including storage, comes from financial natural gas swaps, costless collars and call options for PEPL-UE. Storage and swaps were utilized for TETCO-UE. The financial hedges were placed between mid-October 2017 and mid-October 2019 for the winter heating season of November 2019 through March 2020. These resulted in ** [REDACTED] ** percent hedged overall for Ameren Missouri, based on actual delivered volumes for the winter months, and ** [REDACTED] ** percent based on normal volumes for the winter months.¹

Staff reviews the prudence of a Company's decisions based on what the Company knew, or should have reasonably known, at the time it made its hedging decisions. The Company's hedging planning should be flexible enough to incorporate changing market circumstances. The Company should evaluate its hedging strategy in response to changing market dynamics as to how much the existing hedging strategy actually benefits its customers while balancing market price risk. For example, the Company should continue to evaluate its current strategy of financially hedging summer storage injections regarding appropriate percentage coverage and using more cost-effective financial instruments under the current market where the market prices have become relatively less volatile. Additionally, the Company should carefully plan for the price protected volumes based on the reasonably forecasted normal requirements consistent with its hedging goal.

¹ Although the costs of hedging are spread across the three systems, operational impacts of the hedging may affect each system differently. PEPL-UE and TETCO-UE were ** [REDACTED] ** and ** [REDACTED] ** hedged, respectively, for November 2019 through March 2020 based on actual delivered gas. PEPL-UE and TETCO-UE were ** [REDACTED] ** and ** [REDACTED] ** hedged based on normal volumes. Storage was utilized in the past for NGPL-UE but the storage contract expired in March 2015. Since there is one system-wide PGA rate, the specific regional differences are averaged to all systems.

Staff notes that the Company indicated in recent updates that it has, since Winter Storm Uri in February 2021, implemented a part of hedging strategy to mitigate potential risks from excessive daily price spikes during the heating season. Staff will continue to monitor.

V. RECOMMENDATIONS

Staff recommends the Commission issue an order directing the Company to establish the ACA account balances shown in the table below to reflect the under or (over)-recovery balances as of August 31, 2020.

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1. Staff has no recommended dollar adjustments related to Reliability Analysis and Gas Supply Planning. However, Staff requests the Commission to order Ameren Missouri to respond to Staff's comments and recommendation in the Reliability Analysis and Gas Supply Planning section.
2. Staff has no recommended dollar adjustments related to Hedging. However, Staff requests the Commission to order Ameren Missouri to respond to the comments and recommendations expressed by Staff in the Hedging Section.
3. Staff also requests the Commission to order Ameren Missouri to respond to all of the remaining Staff concerns, comments, and the recommendations contained herein within 30 days.

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Union Electric) **Case No. GR-2020-0372**
Company d/b/a Ameren Missouri's) Tracking No. YG-2021-0098
Purchased Gas Adjustment Tariff)

AFFIDAVIT OF KWANG Y. CHOE, PhD

STATE OF MISSOURI)
)) ss.
COUNTY OF COLE)


COMES NOW Kwang Y. Choe, PhD, and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing *Staff Recommendation in Memorandum form*; and that the same is true and correct according to his best knowledge and belief, under penalty of perjury.

Further the Affiant sayeth not.


_____)
KWANG Y. CHOE, PhD

JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 15th day of December, 2021.


_____)
Notary Public

DIANNA L. VAUGHT
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: July 18, 2023
Commission Number: 15207377

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Union Electric)	<u>Case No. GR-2020-0372</u>
Company d/b/a Ameren Missouri's)	Tracking No. YG-2021-0098
Purchased Gas Adjustment Tariff)	

AFFIDAVIT OF ANNE M. CROWE

STATE OF MISSOURI)	
)	ss.
COUNTY OF COLE)	

COMES NOW Anne M. Crowe, and on her oath declares that she is of sound mind and lawful age; that she contributed to the foregoing *Staff Recommendation in Memorandum form*; and that the same is true and correct according to her best knowledge and belief, under penalty of perjury.

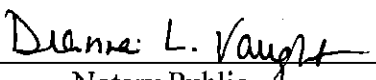
Further the Affiant sayeth not.



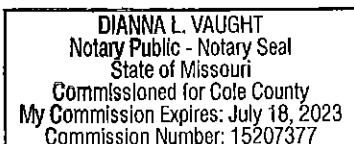
ANNE M. CROWE

JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 15th day of December, 2021.



Notary Public



BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Union Electric)	<u>Case No. GR-2020-0372</u>
Company d/b/a Ameren Missouri's)	Tracking No. YG-2021-0098
Purchased Gas Adjustment Tariff)	

AFFIDAVIT OF JACOB R. ROBINETT

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

COMES NOW Jacob R. Robinett, and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing *Staff Recommendation in Memorandum form*; and that the same is true and correct according to his best knowledge and belief, under penalty of perjury.

Further the Affiant sayeth not.

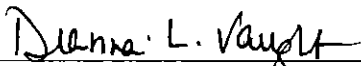


JACOB R. ROBINETT

JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 15th day of December, 2021.

DIANNA L. VAUGHT Notary Public - Notary Seal State of Missouri Commissioned for Cole County My Commission Expires: July 18, 2023 Commission Number: 15207377



Notary Public