MEMORANDUM

TO: Missouri Public Service Commission Official Case File
File No. GR-2021-0291, Union Electric Company d/b/a Ameren Missouri

FROM: Anne Crowe, Lead Senior Utility Regulatory Auditor – Procurement Analysis
Kwang Choe, Ph.D., Regulatory Economist – Procurement Analysis
Jacob Robinett, Associate Engineer – Procurement Analysis

/s/ David M. Sommerer 12/14/22
Project Coordinator / Date

/s/ Jamie S. Myers 12/14/22
Staff Counsel's Office / Date

/s/ David Buttig, P.E. 12/14/22
Senior Professional Engineer/ Date

SUBJECT: Staff Recommendation in File No. GR-2021-0291, Union Electric Company d/b/a Ameren Missouri, 2020-2021 Actual Cost Adjustment Filing

DATE: December 14, 2022

EXECUTIVE SUMMARY

On September 28, 2021, Union Electric Company d/b/a Ameren Missouri ("Ameren" or "Company") filed its Actual Cost Adjustment ("ACA") for the 2020-2021 period for rates to become effective on November 1, 2021. This filing revises the ACA rates based upon the Company's calculations of the ACA balances.

Ameren's ACA filing was accompanied by an application to extend the recovery of the gas costs incurred during this period to 36 months due to the extraordinary costs incurred during February 2021's Winter Storm Uri. Accordingly, the filed ACA rates are based upon one-third of the ACA balances stated in the recommendation section.

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.

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,

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

Staff proposes one adjustment in the amount of $(2,282) due to errors in the monthly cash out amounts billed to or collected from school transportation customers as explained in the Billed Revenue and Actual Gas Cost Section of this recommendation.

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, 2021.

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, of which is shown in the table below as a positive number.

	Balance per Ameren Filing	**Current Period Staff Adjustments**	**Staff Recommended Ending Balances 8/31/21**
Firm Sales ACA	$ 49,755,586	$ (2,282)	$ 49,753,304
Interruptible Sales ACA	$ 525,623	$ 0	$ 525,623

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. Winter Storm Uri
V. Hedging
VI. Recommendations

Each section explains Staff's concerns and recommendations.

I. OVERVIEW

Ameren's natural gas operations are served by the following interstate pipelines: Panhandle Eastern Pipe Line Company, LP ("PEPL"), Trunkline Gas Company (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 an average of 114,064 customers in the Jefferson City/Columbia area. TETCO serves an average of 18,657 customers in the Cape Girardeau area. NGPL serves an average of 1,537 customers in the Marble Hill area. MoGas serves approximately 3,915 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 LDCs 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 service areas produced the following comments and concerns:

MoGas Pipeline Reserve Margins – Rolla Region

** [redacted] **

Staff does have concern about this capacity, however Ameren has since obtained additional capacity on MoGas Pipeline for an additional 1,000 Dth/Day that started on November 1, 2021. Staff will review this capacity change as part of the review for the 2021/2022 Winter.

Panhandle Eastern Pipeline Company Reserve Margins – Columbia System

When reviewing the Columbia Region system on PEPL, ** [redacted]

[redacted] ** Staff encourages Ameren to evaluate its capacity needs for the Columbia region on an annual basis.

Winter Storm URI

Under normal circumstances, Ameren has a daily target withdrawal. ** [redacted]

**

For the four-day, President's Day Weekend of February 13th – 16th, the planning was done on Friday, February 12th. The previous days, the Company had been monitoring the cold weather event in Oklahoma and Texas and learning of its impacts to the gas markets. As the cold weather event began to move eastward into the Company's service territory, there was a loss of supply in the Permian and Midcontinent basins. The Company recognized the supply risks due to the extreme cold weather event. There was risk to the traditional baseload and callable gas supply due to well freeze-offs and loss of electric supply to critical gas processing infrastructure in the Panhandle Eastern Pipe Line and Southern Star receipt zones. For all weekend days, callable supply has contractually ratable volumes, therefore the called supply was fixed for the long President's Day weekend. The Company analyzed the forecasted load for the two coldest days for the weekend, Sunday the 14th and Monday the 15th. The Company then planned for 25,000 Dth per day from Panhandle flexible storage. This then left 10,000 Dth per day of flexibility to manage supply losses, potential load exceeding forecast, colder than forecast temperatures, and transport customer supply failures. The load forecasts were near the peak design day, so the weekend required all callable gas supplies to be exercised. Storage withdrawals on the gas days of the 13th and 16th would not approach the highest planned storage volume over the period, because any weekend plan will always have reduced planned storage volumes on any day with a load forecast lower than the coldest day of the weekend. ** [redacted] ** The Company's portfolio of baseload and callable gas suppliers performed well during the extreme cold weekend and the transport customer suppliers delivered nearly all of the scheduled gas.

** [redacted] ** Actual withdrawals deviated from the planned volumes for the same reasons that PEPL deviated from planned withdrawals.

As a result from Winter Storm Uri, Ameren has made changes to its gas portfolio. ** [redacted] **

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. As part of that review, Staff selected two test months, January and February 2021, to test cash out[1] calculations related to transportation customer imbalances with several discrepancies noted. The discrepancies Staff identified appeared to be related to the classification/participation of a school transportation customer's participation in the Missouri School Boards' Association (MSBA) Pilot Program (MSBA Pilot Program) and schools that are not included in the MSBA's Pilot Program (Tariff Sheet No. 16). With regards to school transportation customers, testing was

[1] Cash Out is a procedure that reconciles a transportation customer's monthly imbalance through cash payments. Cash out amounts impact the ACA balance by either increasing or decreasing gas costs. If a transporter uses less gas than it put into Ameren's system, Ameren purchases this gas through a credit on the customer's bill. Conversely if the transporter used more gas than it put into Ameren's system, then the transporter pays Ameren for the additional supplies used.

expanded to ensure the cash out provisions of the tariff were appropriately applied to all school transportation customers. As a result of testing and the recalculation of school cash outs Staff proposes to decrease natural gas costs by $(2,282). Further, Staff recommends Ameren review all school transportation accounts to ensure each is properly identified by program participation (MSBA Pilot Program or Non-MSBA Pilot Program) and imbalances are appropriately cashed out in accordance with the terms of the tariff under the program selected.

During this ACA period, cash out payments (credits) to transportation customers increased overall gas costs with the majority occurring in February 2021. The Company reviewed transportation customers' gas supply nominations as compared to their estimated usage and found them to be reasonable during Winter Storm Uri.[2] Staff will continue to monitor cash out amounts of transportation customers.

IV. WINTER STORM URI

Beginning on or around February 6, 2021, an Arctic air mass enveloped much of the continental United States with temperatures experienced throughout the Midwest well below normal between February 8 and February 18, 2021. Based on information taken from various data request and Staff observations, the following is a summary of key actions taken by Ameren.

Ameren started to review the 10 day forecast on February 8, 2021. On February 9th, Ameren received the weather alert from MoGas, and reviewed the peak load regressions and updated the regressions for MoGas. During the day of February 10th, Ameren began monitoring the Midcontinent prices, and also began to monitor the trading activity and settlement prices for the Midcontinent. On February 11th, Ameren received the weather alert from TETCO, while also receiving an Operational Flow Order (OFO) from Southern Star.

On February 12th, several steps were taken to help the planning for the cold weather. With the long President's Day weekend, Ameren planned for the long weekend. Ameren staff analyzed the options to reduce Midcontinent supply. Ameren decided to not call an OFO as transportation supply was still adequate at the time. Ameren sent communication to customers regarding the weather event via a press release. Ameren received a force majeure notice from ETC Marketing that started on February 12th and ended on February 23rd. Spire Marketing also sent notice to Ameren of a force majeure event beginning February 12th and the force majeure event ending on February 22nd. On February 13th, Ameren reviewed the forecast, and experienced the highest loads on Sunday and Monday. On February 14th, Ameren reviewed the forecast and previous day load results to maintain there was adequate supply. Ameren resolved cut notifications with suppliers

[2] Data Request No. 0038.4

while managing cuts and operational notices. On February 15th, Ameren reviewed the forecast, while also completing a rate impact analysis. Alternatives for the PEPL field zone were reviewed with PEPL and Trunkline. Hourly rates were reviewed on both NGPL and TETCO, and Ameren purchased spot gas supply on both systems. A notice of force majeure notice was received from ConocoPhillips informing Ameren of the force majeure event affecting the deliveries to PEPL.

On February 16th, Ameren reduced the Southern Star daily priced supply to adjusted minimum, as well as turned off the PEPL FZ daily priced supply to lower load. On February 17th, Ameren had conversations with PEPL and Trunkline to talk about pipeline status, and found out that firm service was holding up well. The load on PEPL and NGPL was strong, however additional spot gas was purchased. The flows from the weekend were analyzed as well as the assessed penalty risk, and began an impact review of the transportation cash outs. Ameren began to see the prices begin to normalize.

On February 18th, Ameren consulted with the market participants on the Texas Governor closing off the gas exports from the state of Texas. Ameren received notice that a force majeure event had occurred from Total Gas & Power North America, Inc. Ameren noticed that the severe pricing was over. On February 19th, Ameren planned for the upcoming weekend system load, and saw the operations and supply were back to normal conditions.

Ameren received communication of force majeure from Shell Energy trading, and there was no curtailments to any customers during this time period.

The Staff evaluates prudence based on whether a reasonable person would find the utility's actions were reasonable based upon the circumstances and information that was known or should have been known at that time the decision was made, without the benefit of hindsight. Imprudence alone is not treated as a basis for a disallowance. However, when imprudence is coupled with harm to a utility's ratepayers, then a prudence disallowance is appropriate.

Based on its review, Staff proposes no additional adjustments to Ameren's ACA balances.

V. HEDGING

The Staff reviewed Ameren's hedging program. The Company's goal is to hedge prices to reduce market price volatility. In particular, Ameren'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 receives regular natural gas market reports from energy and financial firms and regular market reports and assessments. The Staff reviewed Ameren's hedging practices for the winter months, November 2020 through March 2021. Ameren's hedging implementation plan is to protect approximately ** [redacted] ** percent of normal winter demand requirements against market price volatility for the three Ameren systems, PEPL-UE, TETCO-UE and NGPL-UE. The price protection, including storage, comes from financial natural gas swaps for PEPL-UE. Storage and swaps were utilized for TETCO-UE. The financial hedges were placed between late-January 2017 and mid-August 2020 for the winter heating season of November 2020 through March 2021. These resulted in ** [redacted] ** percent hedged overall for Ameren, based on actual delivered volumes for the winter months, and ** [redacted] ** percent based on normal volumes for the winter months.[3]

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 when the market prices 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.

** [redacted] ** Staff will continue to monitor.

[3] 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 2020 through March 2021 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.

VI. 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, 2021.

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Interruptible Sales ACA	$ 525,623	$ 0	$ 525,623

Staff also requests the Commission to order Ameren to respond to all of the 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 Company d/b/a Ameren Missouri's Purchased Gas Adjustment Tariff Filing	)))	File No. GR-2021-0291

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.

Further the Affiant sayeth not.

Anne M. Crowe

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 13th day of December 2022.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: April 04, 2025
Commission Number: 12412070

D Suzie Mankin

Notary Public

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Union Electric Company d/b/a Ameren Missouri's Purchased Gas Adjustment Tariff Filing	)))	File No. GR-2021-0291

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.

Further the Affiant sayeth not.

Kwang Y. Choe

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 13th day of December 2022.

D. SUZIE MANKIN
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My Commission Expires: April 04, 2025
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Notary Public

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Union Electric Company d/b/a Ameren Missouri's Purchased Gas Adjustment Tariff Filing	)))	File No. GR-2021-0291

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.

Further the Affiant sayeth not.

Jacob R. Robinett

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 13th day of December 2022.

D. Suzie Mankin

Notary Public

D. SUZIE MANKIN
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