

MEMORANDUM

TO: Missouri Public Service Commission Official Case File
Case No. GR-2021-0121, The Empire District Gas Company

FROM: Kwang Y. Choe, PhD, Economics Analyst – Procurement Analysis
Jacob R. Robinett, Associate Engineer – Procurement Analysis
Kimberly K. Tones, CPA, Sr. Utility Regulatory Auditor – Procurement Analysis

/s/ David M. Sommerer / 12-15-21 /s/ Karen Bretz / 12-15-21
Project Coordinator / Date Staff Counsel’s Office / Date

/s/ Keenan B. Patterson, PE /12-15-21
Senior Professional Engineer / Date

SUBJECT: Staff Recommendation in Case No. GR-2021-0121,
The Empire District Gas Company 2019-2020 Actual Cost Adjustment Filing

DATE: December 15, 2021

EXECUTIVE SUMMARY

On November 5, 2020, The Empire District Gas Company (“Empire” or “Company”) filed its Actual Cost Adjustment (ACA) for the 2019-2020 annual period for rates to become effective December 5, 2020. This filing revised the ACA rates based upon the Company’s calculations of the ACA balance for the 2019-2020 period.

The Procurement Analysis Department (“Staff”) of the Missouri Public Service Commission reviewed the Company’s ACA filing. Staff’s analysis consisted of:

1. A review and evaluation of the Company’s billed revenues and its natural gas costs for the period of September 1, 2019 to August 31, 2020;
2. A reliability analysis of the Company’s estimated peak day requirements and the capacity levels to meet those requirements;
3. An examination of the Company’s gas purchasing practices to determine the prudence of the Company’s purchasing decisions; and
4. A hedging review to evaluate the reasonableness of the Company’s hedging practices for this ACA period.

Staff recommends no adjustments to Empire’s August 31, 2020, ACA balances. Please see the Recommendations section for Staff’s recommendations.

APPENDIX A

** Denotes Confidential Information **

STAFF’S TECHNICAL DISCUSSION AND ANALYSIS

Staff’s discussion of its findings is organized into the following five sections:

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II.	Billed Revenue and Actual Gas Costs	3
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I. OVERVIEW

Service Area

Empire’s natural gas operations are grouped into three geographic service areas: South, North, and Northwest. A more detailed description, with the associated interstate pipelines serving these service areas follows:

The South Service Area includes the communities of Sedalia, Marshall, Nevada, Clinton, Higginsville, Lexington, and Richmond and is served by the Southern Star Central Gas Pipeline (SSCGP). The South Service Area served an average of 24,662 customers during this ACA period.

The North Service Area includes the communities of Chillicothe, Brookfield, Marceline, and Trenton and is served by Panhandle Eastern Pipe Line Company (PEPL). The North Service Area served an average of 7,762 customers during this ACA period.

The Northwest Service Area serves communities in Andrew, Atchison, Holt, and Nodaway counties, including the city of Maryville. ANR Pipeline Company (ANR) serves customers in the Northwest Service Area. The Northwest Service Area served an average of 4,714 customers during this ACA period.

The total customer count for all service areas is an average of 37,138. There were no interruptible sales customers during this ACA period.

II. BILLED REVENUE AND ACTUAL GAS COSTS

ACA Balances

ACA balances are cumulative such that the ending balance of one period becomes the beginning balance of the next period. The Company's beginning ACA balance for each service area, including adjustments originally ordered in GR-2019-0124 (2017-2018 period), agrees with the Commission's order in GR-2020-0124 (2018-2019 period).

Billed Revenues

For each service area, Staff reviewed a sample of customer bills to ensure the PGA/ACA rates charged for natural gas reflected Commission approved PGA/ACA rates. All rates charged to natural gas consumers agreed with approved rates, without exception. In addition, Staff recalculated monthly billed revenue, applying approved rates to volumes of natural gas consumed with immaterial differences noted. Further, Staff tested the reasonableness of total revenues reported by comparing the total natural gas volumes billed to the sum of natural gas volumes purchased plus/minus changes in inventory and lost and unaccounted natural gas summaries.

Natural Gas Costs

Empire submitted invoices for all natural gas purchases made during the review period. Staff agreed each invoice to Empire's ACA filing, referred to as Schedule/Enclosure 4, Tracker worksheets. Staff reconciled and recalculated storage balances, injections/withdrawals, and weighted average cost of goods (WACOG) to supporting documentation on a test basis. Staff also agreed natural gas pricing to gas supply contracts or other referenced rate sources (First of Month (FOM), pipeline tariff, etc.) on a test basis.

Carrying (Interest) Costs

Pursuant to Empire's PGA Clause, interest is computed based upon the average of the accumulated beginning and ending monthly over/under recoveries. Staff recalculated beginning/ending monthly balances and related carrying costs.

Imbalances/Cash-outs

On a test basis, Staff recalculated and agreed to the imbalance/cash-out calculations in the ACA filing, without exception.

Staff recommends no adjustments to Empire's August 31, 2020, ACA balances.

III. RELIABILITY ANALYSIS AND GAS SUPPLY PLANNING

As a gas corporation providing natural gas service to Missouri customers, the Company is responsible for conducting reasonable long-range supply planning and implementing 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 reviewed 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 Empire's service areas produced the following comments and concerns:

Reserve Margins

The reserve margins for the North Service Area is at ** [REDACTED] **, and the reserve margin is at ** [REDACTED] ** for the South Service Area. The reserve margin is at ** [REDACTED] ** for the Northwest Service Area; however, the contract for this service area is a commodity only contract, so it is not paying reservation fees on excess capacity. Staff encourages the Company to continue to monitor its pipeline contracts and maintain an appropriate reserve margin for each service area.

** [REDACTED]
[REDACTED]
[REDACTED] **

IV. HEDGING

Empire has individual gas supply portfolios for each of its three service areas. Staff's comments are provided for each.

Empire's overall hedging planned target was ** [REDACTED] ** of normal winter requirements, while actual overall coverage was ** [REDACTED] ** based on the 2019-2020 normal winter volumes.

For the South Service Area, Empire hedged about ** [REDACTED] ** of the normal winter requirements through a combination of ** [REDACTED] **
[REDACTED] ** 1

For the North and Northwest Service Areas, Empire ** [REDACTED] **
[REDACTED] **. For the North Service Area, Empire hedged ** [REDACTED] ** of the normal winter requirements by using storage, while about ** [REDACTED] ** of the Northwest Service Area's normal winter requirements came from storage.

1 ** [REDACTED] **

Staff reviews the prudence of a company’s decision-making based on what the company knew, or reasonably could have known, at the time it made its hedging decisions. The company’s hedging planning should be flexible enough to incorporate changing market circumstances. Empire should continue to 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, Empire should evaluate more cost-effective financial instruments under the current market where the market prices have become relatively less volatile.

Recently, Empire started incorporating call options in its hedging program to supplement the use of swap instruments. Financial swaps are a type of financial instrument that allow the conversion of a floating or variable gas price arrangement into a fixed price arrangement. Since many of Empire’s supply contracts are tied to a floating or variable index price, a swap allows Empire to set a known price for a particular quantity of gas. Call options put a ceiling on prices while allowing participation in downward price movements, albeit at a cost premium for the option. For example, out-of-the-money calls may have a strike price that still affords significant protection near current market prices but at a reduced premium cost. Empire should continue to evaluate the appropriate volumes associated with various hedging instruments going forward.

V. RECOMMENDATIONS

Staff recommends that the Commission issue an order requiring Empire to:

1. Adjust the balances in its 2019-2020 ACA filing to reflect the ending (over)/under recovery balances for the ACA, Take-or-Pay, Transition Cost, and Refund accounts per the following table:

Description + Under-recovery (-) Over-recovery	8-31-20 Ending Balances Per Filing	Staff Adjustments For 2019-2020 ACA	8-31-20 Staff Recommended Ending Balances
South System: Firm ACA	(\$911,540)	\$0	(\$911,540)
Interruptible ACA	\$0	\$0	\$0
Take-or-Pay (TOP)	\$0	\$0	\$0
Transition Cost (TC)	\$0	\$0	\$0
Refund	\$0	\$0	\$0

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North System: Firm ACA	(\$343,516)	\$0	(\$343,516)
Interruptible ACA	\$0	\$0	\$0
Take-or-Pay (TOP)	\$0	\$0	\$0
Transition Cost (TC)	\$0	\$0	\$0
Refund	\$0	\$0	\$0
Northwest System: Firm ACA	(\$105,833)	\$0	(\$105,833)
Interruptible ACA	\$0	\$0	\$0
Take-or-Pay (TOP)	\$0	\$0	\$0
Transition Cost (TC)	\$0	\$0	\$0
Refund	\$0	\$0	\$0

2. Respond to Staff's recommendations in the Reliability Analysis and Gas Supply Planning and Hedging Sections within 30 days.

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of the Purchased Gas)
Adjustment Tariff Filing of The Empire)
District Gas Company d/b/a Liberty)
(Empire))
Case No. GR-2021-0121

AFFIDAVIT OF KWANG Y. CHOE, PhD

STATE OF MISSOURI)
)
COUNTY OF COLE) ss.

COME 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.

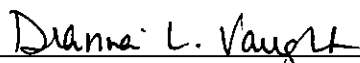


KWANG Y. CHOE, PhD

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.

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

BEFORE THE PUBLIC SERVICE COMMISSION
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In the Matter of the Purchased Gas)
Adjustment Tariff Filing of The Empire)
District Gas Company d/b/a Liberty)
(Empire))
Case No. GR-2021-0121

AFFIDAVIT OF KIMBERLY K. TONES, CPA

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

COME NOW Kimberly K. Tones, CPA, 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.

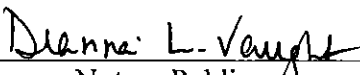


KIMBERLY K. TONES, CPA

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