MEMORANDUM

TO: Missouri Public Service Commission Official Case File
Case No. GR-2020-0124, The Empire District Gas Company

FROM: David M. Sommerer, Regulatory Compliance Manager – Procurement Analysis
Kwang Y. Choe, PhD, Economics Analyst – Procurement Analysis
Jacob R. Robinett, Associate Engineer – Procurement Analysis

/s/ *David M. Sommerer* / 12-15-20
Project Coordinator / Date

/s/ *Karen Bretz* / 12-15-20
Staff Counsel's Office / Date

/s/ *Keenan B. Patterson, PE* / 12-15-20
Senior Professional Engineer / Date

SUBJECT: Staff Recommendation in Case No. GR-2020-0124,
The Empire District Gas Company 2018-2019 Actual Cost Adjustment Filing

DATE: December 15, 2020

EXECUTIVE SUMMARY

On November 4, 2019, The Empire District Gas Company ("Empire" or "Company") filed its Actual Cost Adjustment (ACA) for the 2018-2019 annual period for rates to become effective December 4, 2019. This filing revised the ACA rates based upon the Company's calculations of the ACA balance for the 2018-2019 period.

The Procurement Analysis Department ("Staff") of the Missouri Public Service Commission 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. An over-recovery, represented by a negative ACA balance, must be returned to the Company's customers; an under-recovery, represented by a positive ACA balance, must be recovered from customers.

Staff conducted the following analyses:

1. A review of billed revenue compared with actual gas costs;

2. A reliability analysis including a review of estimated peak day requirements and the capacity levels needed to meet these requirements;

3. A review of the Company's gas purchasing practices to evaluate the prudence of the Company's purchasing decisions for this ACA period; and

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

APPENDIX A

Based on its review, Staff recommends the following adjustments to the Company's filed ACA balances:

Description + Under-recovery (-) Over-recovery	8-31-19 Ending Balances Per Filing	Staff Adjustments For 2018-2019 ACA	8-31-19 Staff Recommended Ending Balances
South System: **Firm ACA**	($1,052,608)	$0	($1,052,608)
Interruptible ACA	$0	$0	$0
Take-or-Pay (TOP)	$0	$0	$0
Transition Cost (TC)	$0	$0	$0
Refund	$0	$0	$0
North System: **Firm ACA**	($119,501)	$3,000[1]	($116,501)
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**	$102,536	($945)[2]	$101,591
Interruptible ACA	$0	$0	$0
Take-or-Pay (TOP)	$0	$0	$0
Transition Cost (TC)	$0	$0	$0
Refund	$0	$0	$0

Staff discusses its recommended adjustments in greater detail in the sections below. Additionally, Staff makes recommendations which are discussed in the Reliability Analysis and Gas Supply Planning section, and the Hedging section of the memorandum.

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[1] The Commission ordered this adjustment in Case No. GR-2019-0124 (2017-2018 ACA period). The Company included this adjustment in its next ACA, Case No. GR-2021-0121 (2019-2020 ACA period).
[2] The Commission ordered this adjustment in Case No. GR-2019-0124 (2017-2018 ACA period). The Company included this adjustment in its next ACA, Case No. GR-2021-0121 (2019-2020 ACA period).

STAFF'S TECHNICAL DISCUSSION AND ANALYSIS

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

Each section explains Staff's concerns and recommendations.

I. OVERVIEW

Empire separates its gas operations into a South System, a North System, and a Northwest (NW) System.

The larger communities served on the South System include Sedalia, Marshall, Nevada, Clinton, Higginsville, Lexington, and Richmond in southwest and central Missouri and Platte City near Kansas City.

On the North System, the larger communities include Chillicothe, Brookfield, Marceline, and Trenton in north-central Missouri.

The largest community on the NW System is Maryville, in northwestern Missouri.

Southern Star Central Gas Pipeline (SSCGP) serves customers on the South System. Panhandle Eastern Pipe Line Company (PEPL) serves customers on the North System while ANR Pipeline Company (ANR) serves customers on the NW System.

During this ACA period there were an average of 28,191 firm sales customers on the South System, 9,231 on the North System, and 5,577 on the NW System. There were no interruptible sales customers during this ACA period.

II. BILLED REVENUE AND ACTUAL GAS COSTS

Staff reviewed Empire's purchasing practices during this period and recommends the following adjustments based upon that review.

In its "Order Establishing Ending ACA Balances" in Case No. GR-2019-0124 (the 2017-2018 period), the Commission ordered that the Company's account balances be adjusted to reflect Staff's adjustments. This order became effective March 14, 2020. The Company was unable to incorporate these adjustments as part of the balances filed on November 4, 2019 in Case No. GR-2020-0124.

To update the Company's filed balances in this case (No. GR-2020-0124), Staff carried forward the adjustment ordered in the prior case.

Staff found no further compliance or prudence adjustments in this case.

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 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 Empire's service areas produced the following comments and concerns:

Storage Planning

The Company's storage plans do not adequately allow for the flexibility of warmer weather than planned in the fall. For example, the storage plans provided in response to Staff Data Request No. 0085 for the North, Northwest, and South service areas (served by Panhandle Eastern Pipe Line Company, ANR Pipeline Company, and Southern Star Central Gas Pipeline respectively) estimate storage to be at ** ____ ** of capacity at the end of October. For the South region, the storage at the end of October was at ** ______________________________ ; ** however, storage capacity increased on ** __________________________ . ** Therefore the storage capacity on ** _______________ ** for South region was at ** ____ ** of capacity, which allows for some flexibility and is closer to the ** ____ ** target capacity for the end of October. The North region had the storage capacity at ** ____ , ** compared to the planned storage capacity of ** ____ ** However, the storage capacity was reduced from ** ____ . ** The North region storage capacity on ** ____ ________________ ** The Northwest region had the storage capacity at ** ____________ ________ . **

Staff is generally concerned that if warmer weather than planned is experienced in November that the Company may not have the flexibility it needs to put an adequate amount of excess gas into storage. Staff recommends the Company monitor its ending October planned balances to accommodate a potential warmer fall or winter than projected.

<u>Reserve Margins</u>

During the prior 2017-2018 ACA review period, the reserve margin for the Empire North service area was ** ____________ ** for the South service area. These reserve margins were of concern to Staff at the time; however, it was determined after consulting with the Company that the gas supply contracts giving rise to the ** ____ ____ ** for the North and South service areas.

After the expiration of the contracts, the reserve margins for the North and South service areas have changed. The reserve margin for the North service area is ** ____________________________ ** for the South service area. These values are more reasonable than those experienced under the former contracts.

The reserve margin is ** ____ ** for Northwest region in the current ACA period. ** ________ ____________________________ ** a commodity only contract, so the Company is not paying reservation fees on excess capacity, which mitigates Staff's concern.

Staff encourages the Company to continue to monitor its pipeline contracts and maintain an appropriate reserve margin for each service area.

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 ** ________ ** of normal winter requirements, while actual overall coverage was ** ____ ** based on the 2018-2019 normal winter volumes.

For the South System, Empire hedged about ** ____ ** of the normal winter requirements through a combination of ** ____ ________________________________ . **[3]

For the North and Northwest Systems, Empire ** ________________________________ ________ . ** For the North System, Empire hedged ** ____ ** of the normal winter requirements by using storage, while about ** ____ ** of the Northwest System's normal winter requirements came from storage.

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. The company 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, the Company 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. The Company 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 2018-2019 ACA filing to reflect the ending (over)/under recovery balances for the ACA, TOP, TC, and Refund accounts per the following table:

[3] ** ____ **

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Refund	$0	$0	$0

2. Respond to Staff's recommendations in the Billed Revenue and Actual Gas Costs section, the Hedging section, and the Reliability Analysis and Gas Supply section.

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of The Empire District Gas Company's Purchased Adjustment Tariff Filing	))	Case No. GR-2020-0124

AFFIDAVIT OF DAVID M. SOMMERER,
KWANG Y. CHOE, PhD, JACOB R. ROBINETT

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

COMES NOW DAVID M. SOMMERER, KWANG Y. CHOE, PhD, and JACOB R. ROBINETT and on their oath declare that they are of sound mind and lawful age; that they contributed to the foregoing *Staff Recommendation* in Memorandum form; and that the same is true and correct according to their best knowledge and belief.

Further the Affiant sayeth not.

/s/ David M. Sommerer
DAVID M. SOMMERER

/s/ Kwang Y. Choe
KWANG Y. CHOE, PhD

/s/ Jacob R. Robinett
JACOB R. ROBINETT