

## MEMORANDUM

**TO:** Missouri Public Service Commission Official Case File  
Case No. GR-2022-0127, 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, CIA, Lead Sr. Utility Regulatory Auditor – Procurement Analysis

/s/ David M. Sommerer 12/12/22                      /s/ Jamie S. Myers 12/12/22  
Project Coordinator / Date                                      Staff Counsel's Office / Date

/s/ David T. Buttig, PE 12/12/22  
Senior Professional Engineer / Date

**SUBJECT:** Staff Recommendation in Case No. GR-2022-0127,  
The Empire District Gas Company 2020-2021 Actual Cost Adjustment Filing

**DATE:** December 12, 2022

### EXECUTIVE SUMMARY

On November 4, 2021, The Empire District Gas Company (“Empire” or “Company”) filed its Actual Cost Adjustment (ACA) for the 2020-2021 annual period for rates to become effective December 1, 2021. Thereafter, Empire filed substitute tariff sheets on November 10, 2021, to become effective December 1, 2021. This filing revised the ACA rates based upon the Company’s calculations of the ACA balance for the 2020-2021 period. The Commission approved those rates on an interim subject to refund basis, with an effective date of December 1, 2021.

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, 2020 to August 31, 2021;
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.

Based on Staff's review, adjustments to the Company's filed ACA balances have been recommended to reflect the actual billed revenues less natural gas costs for the period under review. Please see the Recommendations section for Staff's recommendations.

### **STAFF'S TECHNICAL DISCUSSION AND ANALYSIS**

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

Section No.	Topic	Page
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II.	Billed Revenue and Actual Gas Costs	3
III.	Reliability Analysis and Gas Supply Planning	5
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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 27,829 sales customers during this ACA period.

The North Service Area includes the communities of Chillicothe, Brookfield, Marcelline, and Trenton and is served by Panhandle Eastern Pipe Line Company (PEPL). The North Service Area served an average of 9,112 sales 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 5,521 sales customers during this ACA period.

The total sales customer count for all service areas is an average of 42,461. 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. In this period, the Company's beginning ACA balance for each service area agrees with the Commission's Order in Case No. GR-2021-0121.

### **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 any differences noted attributable to adjustments made to correct for meter issues. 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 reconciled 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 verified natural gas pricing to gas supply contracts or other referenced rate sources (First of Month (FOM), pipeline tariff, etc.) on a test basis. Based on testing, it was noted that natural gas costs

included the cost of consulting services related to Empire’s hedging activities. The table below summarizes the adjustments made to exclude consulting fees from natural gas costs.

<b>Natural Gas Costs</b>			
<b>System</b>	<b>Reported</b>	<b>Corrected</b>	<b>Adjustment</b>
South	\$ 35,475,233.22	\$ 35,462,696.80	\$ (12,536.42)
North	\$ 6,873,858.81	\$ 6,873,850.02	\$ (8.79)
Northwest	\$ 4,282,304.90	\$ 4,282,298.18	\$ (6.72)

**Imbalances/Cash-outs**

On a test basis, Staff recalculated and reconciled transportation customer imbalances to the cash-out totals included in the ACA filing. One customer account was incorrectly included in the South Service Area and should have been included in the North Service Area requiring reclassification between the two service areas (see table below). The cash out calculations were based on the costs associated with the correct service area and it appears that the error was the service area classification within the Company’s accounting system. Other variances noted during testing were primarily related to billing adjustments to correct meter readings.

<b>Transportation Revenues</b>			
<b>System</b>	<b>Reported</b>	<b>Corrected</b>	<b>Adjustment</b>
South	\$ (9,432,273.54)	\$ (9,239,191.74)	\$ 193,081.80
North	\$ (2,982,070.23)	\$ (3,175,152.03)	\$ (193,081.80)

**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, restating revenues and natural gas costs for adjustments noted within this report. The table below summarizes the impact on calculated carrying costs.

<b>Carrying Costs</b>			
<b>System</b>	<b>Reported</b>	<b>Corrected</b>	<b>Adjustment</b>
South	\$ (155,932.37)	\$ (156,026.72)	\$ 94.35
North	\$ (21,233.49)	\$ (21,210.05)	\$ (23.44)

**Other Matters**

***Audit (Internal and Independent Audits)***

Empire submitted a copy of its annual audit report, prepared on a stand-alone basis, performed by Ernst & Young LLP (E&Y) in response to Staff Data Request (DR) No. 12 (“DR12”). Staff DR No. 9 (“DR9”) requests the provision of or access to the E&Y’s audit work papers. In response to DR9, Empire stated those documents would be made available to Staff upon request. Staff worked with Empire and scheduled a review date in early April 2022. Shortly prior to that review, Empire’s auditors, E&Y, requested Staff execute a work paper access agreement that included various provisions, including but not limited to, indemnification and hold harmless provisions, and provisions that appear to bind the Commission itself to various obligations that were unacceptable. Staff recommends that Empire ensure its auditors provide Staff access to its work papers without creating unreasonable barriers to such access. Staff recommends Empire’s legal counsel should ensure all work paper access agreements are appropriate and reasonable and allow for Staff’s review.

***Board of Directors Minutes***

Meeting materials for the 2<sup>nd</sup> Quarter Regional Quarterly Board Meeting reviewed by Staff included a presentation identifying a number of observations that could be assessed as deficiencies for the 2020 period, including four (4) such observations for Empire. Staff requested more information regarding the deficiencies observed and the current status of any corrective actions taken. Empire’s response stated that they were generally not aware of any deficiencies and would research the issue and provide additional information at a later date. No additional information has been received as of this date. Staff recommends Empire complete its research and provide an update on the status/resolution of the deficiencies referred to in its quarterly board meeting.

**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 Staff calculated reserve margins for the North service area is at \*\* [REDACTED] \*\*, and the reserve margin is at \*\* [REDACTED] \*\* for the South service area when considering the Upper 95% Confidence Interval. The reserve margin is at \*\* [REDACTED] \*\* for Northwest region when considering the Upper 95% Confidence Interval; however, the contract for this service area is a commodity only contract, so Empire 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.

## **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 2020-2021 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.

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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 when the market prices 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. 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 requests and Staff observations, the following is a summary of key actions taken by Empire.

Planning for the February 2021 Cold Weather Event known as Winter Storm Uri, began Friday, February 5, 2021 with Empire initiating additional purchases in anticipation of higher demand to prevent storage from becoming fully depleted. While Empire had intended to use storage to supplement baseload and daily purchase volumes, as the weather turned dramatically colder, Empire had exceed its budgeted February demand by February 15<sup>th</sup>. Complicating the situation further, Empire received numerous supply cut notices for 50 of its large volume transportation customers, as well as for itself. At the conclusion of the extreme weather event, Empire made

additional storage purchases to recover storage depletions.

**Prudence Standard**

Under this standard, natural gas utilities' actions and decisions are evaluated based on whether each action or decision was reasonable at the time, under all the circumstances, and based on the information that was or should have been known at that time; it is not an evaluation of those actions and decisions using 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.

Staff reviewed Empires' actions and decisions as it related to Winter Storm Uri, February 5<sup>th</sup> through February 20<sup>th</sup>, including review of natural gas purchases, storage utilization, and hedging. Empire does not have any interruptible service agreements. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]



[REDACTED]

[REDACTED]

[REDACTED] \*\*

Based on Staff's review, no additional adjustments to Empire's ending ACA balances have been recommended.

**VI. RECOMMENDATIONS**

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

1. Adjust the balances in its 2020-2021 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:

<b>Description + Under-recovery (-) Over-recovery</b>	<b>8-31-21 Ending Balances Per Filing</b>	<b>Staff Adjustments For 2020-2021 ACA</b>	<b>8-31-21 Staff Recommended Ending Balances</b>
<b>South System: Firm ACA</b>	\$23,845,513.86	\$180,639.73	\$24,026,153.59
<b>Interruptible ACA</b>	\$0	\$0	\$0
<b>Take-or-Pay (TOP)</b>	\$0	\$0	\$0
<b>Transition Cost (TC)</b>	\$0	\$0	\$0
<b>Refund</b>	\$0	\$0	\$0
<b>North System: Firm ACA</b>	\$3,550,661.81	\$(193,114.03)	\$3,357,547.78
<b>Interruptible ACA</b>	\$0	\$0	\$0
<b>Take-or-Pay (TOP)</b>	\$0	\$0	\$0
<b>Transition Cost (TC)</b>	\$0	\$0	\$0
<b>Refund</b>	\$0	\$0	\$0
<b>Northwest System: Firm ACA</b>	\$2,184,527.02	\$(6.72)	\$2,184,520.30
<b>Interruptible ACA</b>	\$0	\$0	\$0
<b>Take-or-Pay (TOP)</b>	\$0	\$0	\$0
<b>Transition Cost (TC)</b>	\$0	\$0	\$0
<b>Refund</b>	\$0	\$0	\$0

A positive ACA balance indicates an under-collection that must be recovered from customers.

A negative ACA balance indicates an over-recovery that must be returned to customers.

2. Respond to all Staff recommendations in Section II, Billed Revenue and Actual Gas Costs; Section III, Reliability Analysis and Gas Supply Planning; and Section IV, Hedging within 30 days.

**BEFORE THE PUBLIC SERVICE COMMISSION**

**OF THE STATE OF MISSOURI**


In the Matter of The Empire District Gas )  
Company d/b/a Liberty (Empire) Tariff ) **Case No. GR-2022-0127**  
Filing of the Purchased Gas Adjustment (PGA) )

**AFFIDAVIT OF KIMBERLY K. TONES, CIA, CPA**

STATE OF MISSOURI )  
 ) ss.  
COUNTY OF COLE )

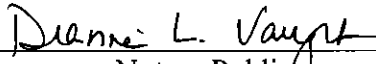
**COMES NOW** Kimberly K. Tones, CIA, CPA, and on her oath declares that she is of sound mind and lawful age; that she contributed to the foregoing *Staff Recommendation*; and that the same is true and correct according to her best knowledge and belief, under penalty of perjury.

Further the Affiant sayeth not.

  
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KIMBERLY K. TONES, CIA, 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 12<sup>th</sup> day of December, 2022.

  
\_\_\_\_\_  
Notary Public

DIANNA L VAUGHT  
Notary Public - Notary Seal  
STATE OF MISSOURI  
Cole County  
My Commission Expires: July 18, 2023  
Commission #: 15207377



