MEMORANDUM

TO: Missouri Public Service Commission Official Case File
Case No. GR-2025-0137, The Empire District Gas Company

FROM: Kwang Y. Choe, PhD, Economics Analyst – Procurement Analysis
David T. Buttig, PE, Senior Professional Engineer – Procurement Analysis
Lisa Schlup, Lead Sr. Utility Regulatory Auditor – Procurement Analysis

/s/ *David M. Sommerer* / 11-24-25
Project Coordinator / Date

/s/ *David T. Buttig, PE* / 11-24-25
Senior Professional Engineer / Date

SUBJECT: Staff Recommendation in Case No. GR-2025-0137,
The Empire District Gas Company 2023-2024 Actual Cost Adjustment Filing

DATE: November 24, 2025

EXECUTIVE SUMMARY

On November 4, 2024, The Empire District Gas Company ("Empire" or "Company") filed its Actual Cost Adjustment ("ACA") for the 2023-2024 annual period for rates to become effective December 1, 2024. This filing revised the ACA rates based upon the Company's calculations of the ACA balances for the 2023-2024 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, 2023 to August 31, 2024;

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 and 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:

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 28,375 sales 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 9,371 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 5,627 sales customers during this ACA period.

The total sales customer count for all service areas is an average of 43,374. 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 beginning ACA balance reported for each service area did not include adjustments ordered or recommended in GR-2024-0150 (2022-2023) ACA periods. The proposed adjustment, as reflected in the table below, is the result of reclassifications between the South and North service areas

	Cummulative ACA Ending Balance Adjustments		
System	**Reclassified Transportation**	**Recalculated Interest**	**Total Adjustments**
South	$ (77,105.94)	$ 2,239.03	$ (74,866.91)
North	$ 77,105.94	$ (2,458.34)	$ 74,647.60
Northwest	$ -		$ -

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. Based on testing, no differences were discovered.

Natural Gas Costs

Empire submitted invoices for all natural gas purchases made during the review period. Staff reconciled invoices to Empire's ACA filing, referred to as Schedule/Enclosure 4-5, 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. Testing concluded balancing fees were counted twice allowing adjustments for all three service areas that are reflected in the table below.

Gas Costs						
System		**Reported**		**Corrected**		**Adjustment**
South	$	11,988,539.72	$	11,890,531.00	$	(98,008.72)
North	$	2,115,243.86	$	2,088,796.04	$	(26,447.82)
Northwest	$	2,126,498.50	$	2,119,876.80	$	(6,621.70)

Imbalances/Cash-outs

On a test basis, imbalances were recalculated consistent with Commission approved policies with credits/debits appropriately reflected in the ACA calculations. Staff recalculated and reconciled transportation customer imbalances to the cash-out totals included in the ACA filing. Testing concluded that there were immaterial differences due to rounding and or billing adjustments. Company provided detailed documentation for the billing adjustments differences in question. No adjustments to the ACA balance for imbalances/cashouts are recommended for this ACA period.

Carrying (Interest) Costs

On September 16, 2021, Empire submitted revised tariff sheets designed to narrowly amend the Company's PGA rider to allow under recoveries, with Commission approval, for an extended period not to exceed five years (Commission Case No. GT-2022-0080, Tracking No. JG-2022-0059) effective October 22, 2021. Further, the revised tariff allows Empire to propose a carrying cost, subject to review, appropriate for the length of the extended period. The proposed adjustment, as reflected in the table below, reflects changes in calculated carrying costs between the service areas.

Carrying Costs						
System		**Reported**		**Corrected**		**Adjustment**
South	$	678,351.81	$	672,923.51	$	(5,428.30)
North	$	(70,856.36)	$	(66,478.92)	$	4,377.44
Northwest	$	(136,913.47)	$	(136,995.83)	$	(82.36)

III. RELIABILITY ANALYSIS AND GAS SUPPLY PLANNING

As a regulated gas corporation providing natural gas services to Missouri customers, a local distribution company ("LDC"), such as Empire, is responsible for conducting reasonable long-range supply planning and implementing the decisions resulting from that planning. A purpose of the ACA process is to review whether the LDC's planning for gas supply, transportation, and storage meets its customers' needs. For this analysis, Staff reviewed Empire'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 margin, and natural gas plans for various conditions.

Reserve Margin

When reviewing the reserve margins for Empire, Staff compared the contracted capacity to the Upper 95% Confidence Interval peak day for each service area. Reserve margin is calculated by subtracting the supply demand from the contracted supply capacity, and then dividing that value by the supply demand.

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 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.

Staff has no proposed financial adjustments for the 2023-2024 ACA period related to reliability analysis and gas supply planning.

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 2023-2024 normal winter volumes.

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

For the North and Northwest Service Areas, Empire ** [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 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. RECOMMENDATIONS

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

1. Adjust the balances in its 2023-2024 ACA filing to reflect the ending (over)/under recovery balances for the Firm ACA customer accounts per the following table:

			Ending ACA Balances			
System		**As Reported 8.31.2024**		**Adjustments**		**Corrected 8.31.2024**
South	$	8,757,382.22	$	(178,303.93)	$	8,579,078.29
North	$	(1,814,570.17)	$	52,577.22	$	(1,761,992.95)
Northwest	$	(2,229,204.39)	$	(6,704.06)	$	(2,235,908.45)

Note that the Take-or-Pay, Transition Cost, and Refund accounts report zero balances.

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, 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's d/b/a Liberty's (Empire) Purchased Gas Adjustment Tariff Filing	)))	**Case No. GR-2025-0137**

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
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 17th day of November 2025.

Dianna L. Vaught
Notary Public

DIANNA L. VAUGHT
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: July 18, 2027
Commission Number: 15207377

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of The Empire District Gas Company's d/b/a Liberty's (Empire) Purchased Gas Adjustment Tariff Filing	)))	**Case No. GR-2025-0137**

AFFIDAVIT OF DAVID T. BUTTIG, PE

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

COMES NOW DAVID T. BUTTIG, PE, 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.

David Buttig

DAVID T. BUTTIG, PE

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 20th day of November 2025.

Dianna L. Vaught

Notary Public

DIANNA L. VAUGHT
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: July 18, 2027
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In the Matter of The Empire District Gas Company's d/b/a Liberty's (Empire) Purchased Gas Adjustment Tariff Filing	)))	**Case No. GR-2025-0137**

AFFIDAVIT OF LISA SCHLUP

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

COMES NOW LISA SCHLUP, 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.

Lisa Schlup
LISA SCHLUP

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 _______ day of November 2025.

DIANNA L. VAUGHT
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: July 18, 2027
Commission Number: 15207377

Dianna L. Vaught
Notary Public