M E M O R A N D U M

TO: Missouri Public Service Commission Official Case,
Case No.GR-2021-0101, Liberty Utilities (Midstates Natural Gas) Corp.

FROM: Kwang Y. Choe, PhD, Regulatory Economist, Procurement Analysis
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Kimberly Tones, CPA, Senior Utility Regulatory Auditor, Procurement Analysis

/s/ David M. Sommerer 12/15/2021 — Project Coordinator / Date

/s/ Karen Bretz 12/15/2021 — Staff Counsel's Office / Date

SUBJECT: Staff Recommendation in Case GR-2021-0101, Liberty Utilities (Midstates Natural Gas) Corp. 2019-2020 Actual Cost Adjustment Filing

DATE: December 15, 2021

EXECUTIVE SUMMARY

On November 6, 2020, Liberty Utilities (Midstates Natural Gas) Corp., d/b/a Liberty Utilities' ("Liberty" or "Company") filed its Actual Cost Adjustment (ACA) for the 2019-2020 annual period for rates to become effective on December 6, 2020. Thereafter, Liberty filed three substitute tariff sheets, the last one bearing an effective date of December 13, 2020. This filing revised the ACA rates based upon the Company's calculations of the ACA balance for the 2019-2020 period. The Commission approved those rates on an interim subject to refund basis, with an effective date of December 13, 2020.

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 natural 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.

** Denotes Confidential Information **

Appendix A

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 adjusted ACA balances and Staff's recommendations.

STAFF'S TECHNICAL DISCUSSION AND ANALYSIS

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

I. Overview

Service Area

Liberty's systems in Missouri are grouped into three geographic areas: Northeast, Southeast and West. For gas cost recovery, there are four PGA/ACA rate service areas: the three geographic divisions, and a fourth PGA division, Kirksville, that is separate from the Northeast Service Area. A more detailed description, with the associated interstate pipelines serving these areas, follows:

The Northeast Service Area (NEMO) includes Hannibal-Canton, Bowling Green, and Palmyra and is served by PEPL under an Asset Management Agreement (AMA) with * *[redacted] .** The NEMO area serves an average of 13,401 sales customers.

The Southeast Service Area (SEMO) includes Jackson, with gas transportation provided by Natural Gas Pipeline Co. of America (NGPL) and is served under an AMA agreement with ** [redacted] ** and ** [redacted] **; Piedmont and Arcadia, served by Mississippi River Transmission Corp. (MRT) under an AMA agreement with ** [redacted] **; and the Southeast Missouri Integrated system, served by Texas Eastern

Transmission, LP (TETCO) and Ozark Gas Transmission, LLC, under an AMA agreement with ** [redacted] .** The Southeast Service Area also includes the former Neelyville/Qulin Service Area. Cumulatively, SEMO serves an average of 32,004 sales customers.

The West Service Area (WEMO) includes the city of Butler, served by Panhandle Eastern Pipe Line Company (PEPL) under a supply agreement with ** [redacted] **, and Stateline, also known as Rich-Hill/Hume, served by Southern Star Central Gas Pipeline, Inc. (SSCGP) under a transportation agreement with Atmos Energy Corporation and a supply agreement with ** [redacted] **. WEMO serves an average of 3,895 sales customers.

The Kirksville Service Area is served under an AMA agreement with ** [redacted] ** with natural gas transportation provided by ANR Pipeline Company (ANR). Kirksville serves an average of 5,356 sales customers.

The total customer count for all service areas is an average of 54,655 sales customers.

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 agreed to the Commission's Order in Case No. GR-2020-0126. However, the 2020-2021 calculated ACA factors for the Kirksville Service Area did not agree to the approved applicable rate in tariff sheet 44, effective December 13, 2020. The rates charged to customers for the 2020-2021 period could lead to an increased balance owed to Kirksville Service Area customers, assuming all else equal; i.e. estimated sales are materially correct. Staff recommends no adjustment to the ending ACA balance since any under/over collection will be captured in the next ACA filing:

Liberty Utilities (Midstates Natural Gas) Corp. d/b/a Liberty Utilities
Northeast Missouri (Kirksville Only) Service Area
Calculation of Actual Cost Adjustment Factors
Based on Activity from 12 Months ended August 31, 2020
To Be Billed December 2020 thru November 2021

Description	ACA Exhibit II, As reported	27th Revised Tariff Sheet 44	Difference
Firm ACA per Ccf	$ (0.15983)	$ (0.16072)	($0.00089)
Interruptible ACA per Ccf	$ (0.23612)	$ (0.23967)	($0.00355)

Further, Staff noted relatively large and increasing ending ACA balances in the SEMO, NEMO, and Kirksville Service Areas from the prior year. Material variation of actual purchases, sales, and/or natural gas costs from estimates can result in significant over and under customer collections. Staff acknowledges Liberty's efforts to identify causes of material variations from estimates and its plans to develop PGA models that may more accurately estimate or track actual gas costs, and address both the early detection of material variances as well as facilitate the ability of Liberty to file Optional PGA's. Staff recommends Liberty continue its efforts to develop a PGA model for both monitoring ACA balances and possibly increasing the accuracy of gas cost estimates. It is also recommended that the Company develop a policy that addresses criteria that trigger an Optional PGA filing. When those criteria are met, Liberty should timely file an Optional PGA.

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 in rate transition months. 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. As a result of testing and revenue reconciliation, Staff proposes the following adjustments to the billed revenues reported for the following service areas:

Northeast – Liberty excluded from recovery calculations billed consumption volumes for June 2020 in customer classes General Industrial Large Firm (GILF), General Industrial Medium Firm (GIMF), and General Residential Firm (GRF), resulting in an overstatement in Demand recoveries of $13,145, with a corresponding understatement in Commodity recoveries.

SEMO – Liberty omitted May 2020 aggregation revenues of $81 from total revenues, resulting in an understatement of Commodity recoveries reported.

Kirksville – Discrepancies in billed consumption volumes for March 2020 in GIMF and GRF customer classes resulted in Liberty overstating Commodity recoveries by $8,078, with a corresponding understatement in Demand recoveries reported. In addition, Liberty omitted May 2020 aggregation revenues of $41 from total revenues reported, resulting in an understatement of Commodity recoveries reported.

The following table is a summary of the effects on billed revenues by service area:

Revenue Adjustments by Service Area			
			(Under)/
SEMO	Reported	Corrected	Overstated
Demand	($3,297,612)	($3,297,612)	$0
Commodity	($6,807,385)	($6,807,466)	($81)
Kirksville			
Demand	($755,252)	($747,174)	$8,078
Commodity	($1,592,083)	($1,600,202)	($8,119)
NEMO			
Demand	($1,383,336)	($1,396,481)	($13,145)
Commodity	($3,831,121)	($3,817,976)	$13,145

Natural Gas Costs

Liberty submitted invoices for all natural gas purchases made during the review period. Staff agreed each natural gas invoice to Liberty's ACA filing by service area. Staff also reconciled and recalculated storage balances, injections/withdrawals and weighted average cost of gas (WACOG) to supporting documentation on a test basis. On a test basis, Staff also agreed invoiced natural gas rates to gas supply contracts or other referenced rate sources, such as First of Month (FOM) index pricing, pipeline tariff, etc. Based on this testing, Liberty incorrectly recorded one invoice in the SEMO service area, resulting in an overstatement of natural gas costs of $32, and several invoices were reclassified between the NEMO and WEMO Service Areas. The table below summarizes the reclassifications between the NEMO and WEMO Service Areas.

Reclassification between Service Areas		**West**	**Northeast**
Invoice/Contract Reference	**Delivery Period**	**Amount ($)**	**Amount ($)**
781062	June 2020	$ (14,780.88)	$ 14,780.88
21079454	June 2020	49,170.00	(49,170.00)
2006P0008/11474	June 2020	(4,718.39)	4,718.39
2006P0008/11794	June 2020	(2,734.76)	2,734.76
2006P0008/11861	June 2020	10,535.87	(10,535.87)
2006P0008/11867	June 2020	23,582.21	(23,582.21)
Net Change Due to Reclassification		$ 61,054.05	$ (61,054.05)
	Demand	$ 7,712.52	$ (7,712.52)
	Commodity	53,341.53	(53,341.53)
		$ 61,054.05	$ (61,054.05)

Carrying (Interest) Cost

Pursuant to Liberty's PGA Clause, interest is computed based upon the average of the accumulated beginning and ending monthly over/under recoveries; therefore, any changes to either billed revenues or natural gas cost will impact monthly over/under recovery balances. The beginning/ending over/under recoveries, incorporating the corrections noted above, resulted in adjustments to reported carrying costs, summarized in the table below:

Carrying Cost Adjustments by Service Area			
SEMO	Reported	Corrected	(Under)/ Overstated
Demand	$16,452	$16,452	$0
Commodity	($88,094)	($88,095)	($1)
Kirksville			
Demand	$1,359	$1,411	$52
Commodity	($32,559)	($32,610)	($51)
WEMO			
Demand	($169)	($149)	$20
Commodity	$3,990	$4,129	$139
NEMO			
Demand	($10,125)	($10,179)	($54)
Commodity	($27,111)	($27,216)	($105)

Imbalances/Cash-outs

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

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 Liberty, 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 Liberty'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.

Staff has no proposed financial adjustments for the 2019-2020 ACA period related to reliability analysis and gas supply planning. Staff's other comments and recommendations are discussed in this section.

Reserve Margins

In its prior ACA case recommendations, Staff noted issues related to reserve margin in certain service areas (Case Nos. GR-2020-0123, GR-2019-0123, GR-2018-0077 and GR-2017-0089). ** [redacted] .** Staff recommends that Liberty continue to monitor and address transportation needs for its various service areas.

Transportation Customers and School Aggregation

Staff compared the monthly imbalances of school aggregation pools to other transportation customers. ** [redacted] .** School pools tend to be less in balance than firm transportation pools. Staff recommends that Liberty review its school aggregation provisions to assure that they properly incentivize school aggregation pool operators to balance use and deliveries:

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[redacted]

**

IV. HEDGING

A few definitions that may assist the hedging discussion are as follows. A "swap" is an instrument that fixes the price of gas for a certain volume of gas. Therefore, the price is no longer "variable" as with an index-based contract, but is fixed. A "call option" is a financial instrument that gives the buyer the right but not the obligation to buy gas at a certain preset fixed price. That fixed price is often higher than the current market, and essentially provides a cap on the gas price, albeit at the price of paying a premium. A "physical hedge" is a feature of using an actual gas supply contract to limit exposure to price increases rather than using financial instruments (swaps, futures, calls) that offset the price risk independently and separately from the gas supply itself.

** [redacted]

[redacted] . **

Staff reviews the prudence of a company's hedging decision-making based on what the company reasonably knew, or reasonably could have known, at the time it made its hedging decisions. Part of a company's hedging planning should be flexible, in part, to incorporate changing market circumstances in order to balance the cost of hedging against the goal of price stabilization, and thus to achieve a cost effective hedging outcome. For example, a company should continue to evaluate whether utilization of swaps and the volumes associated with them are appropriate under current market conditions where the market prices have become less volatile. Staff noted that Liberty has improved its hedge planning practices with its consideration of additional financial instruments in addition to swaps.[2]

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[1] Liberty received hedging advice for its financial hedging transactions from a consulting firm during this ACA period.

[2] ** [redacted] **

Staff recommends the Company continually monitor and be aware of any significant changes in natural gas supply and demand fundamentals over time.

Staff also recommends the Company continue to assess and document the effectiveness of its hedges for the 2020-2021 ACA and beyond. The analysis should include, but not be limited to, whether the hedging implementation was consistent with the hedging plan, identifying the benefits/costs based on the outcomes from the hedging strategy, and evaluating any potential improvements on the future hedging plan and its implementation. Additionally, Staff recommends the Company evaluate whether the hedging plan for each of the four systems has operational implications for warm and cold weather conditions. Finally, Staff recommends the Company continue to monitor the market movements diligently, employ *disciplined* (triggered primarily by the passage of time) as well as *discretionary* (hedge decisions influenced by the Company's view of favorable pricing environments) approaches in its hedging practices, and look into the possibility of expanding its gas portfolio to include physical as well as financial hedges, in addition to storage, that more closely track physical price risk.

An example of a physical hedge would be a fixed price gas supply contract.

The following table provides a summary, by service area, of how much gas was hedged as a percentage of normal required winter volumes:

**

	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	

**

There is no financial adjustment related to hedging.

V. RECOMMENDATIONS

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

1. Incorporate the (over)/under-recovered ending ACA balances in Staff's Proposed Balances 8/31/20 column of the following table:

All Areas:	Company Filed Balance 8/31/20	Staff Adjustments	Staff Proposed Balances 8/31/20
SEMO Area			
Demand ACA	$ 1,899,814	$ 0	$ 1,899,814
Commodity ACA	$ (5,322,799)	$ (113)	$ (5,322,912)
Kirksville Area			
Demand ACA	$ 511,325	$ 8,130	$ 519,456
Commodity ACA	$ (1,741,283)	$ (8,171)	$ (1,749,454)
WEMO Area			
Demand ACA	$ (522)	$ 7,733	$ 7,211
Commodity ACA	$ 100,704	$ 53,481	$ 154,184
NEMO Area			
Demand ACA	$ (35,082)	$ (20,912)	$ (55,993)
Commodity ACA	$ (2,169,783)	$ (40,302)	$ (2,210,084)

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 Liberty Utilities (Midstates Natural Gas) Corp. d/b/a Liberty (MNG) Purchased Gas Adjustment Tariff Filing	))))	Case No. GR-2021-0101

AFFIDAVIT OF KWANG Y. CHOE, PhD

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

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 Affiants 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 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

Dianna L. Vaught

Notary Public

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Liberty Utilities (Midstates Natural Gas) Corp. d/b/a Liberty (MNG) Purchased Gas Adjustment Tariff Filing	))))	Case No. GR-2021-0101

AFFIDAVIT OF KEENAN B. PATTERSON, PE

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

COME NOW Keenan B. Patterson, 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 Affiants sayeth not.

Keenan B. Patterson

KEENAN B. PATTERSON, 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 15th day of December, 2021.

Dianna L. Vaught

Notary Public

DIANNA L. VAUGHT
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: July 18, 2023
Commission Number: 15207377

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Liberty Utilities (Midstates Natural Gas) Corp. d/b/a Liberty (MNG) Purchased Gas Adjustment Tariff Filing	))))	Case No. GR-2021-0101

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 Affiants sayeth not.

Kimberly K. Tones

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

DIANNA L. VAUGHT
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: July 18, 2023
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