



Doug McGowen
President and CEO

July 27, 2026

Jason Mumpower
Tennessee Comptroller of the Treasury
The Capital Building
Nashville, Tennessee 37243

Greg Moody
Chairman of the Tennessee Board of Utility Regulation (TBOUR)
425 Rep. John Lewis Way N.
Nashville, Tennessee 37243

Dear Comptroller Mumpower and Chairman Moody,

Per TCA § 7-82-703(a-b), utilities with 2 successive years of negative net position are deemed to be financially distressed and are required to submit a plan for remedy to the Comptroller of the State and TBOUR. Per the letter attached, I forecast in 2023 that we would arrive at this position in 2026, disagree that MLGW is financially distressed from the principles of prudent financial management but understand that we meet the definition under the statute. We have arrived at this position deliberately through prudence, pragmatism, and fiscal discipline.

We have determined that as forecasted, the time is right, and we intend to seek approval for three successive years of gas rate increases of 11.0%, 10.0% and 5.0% to meet the operating, capital and debt service obligations necessary to operate a modern utility.

You will find appended our cost-of-service study upon which we have based our proposed rate actions, as well as our financial cash flow model forecast that shows our ability to meet the provisions outlined in the statute with positive change of net position in 2028.

Having submitted this letter along with the course of action necessary to remedy the conditions in the statute, we have fulfilled our requirements under the statute but stand ready to answer questions or meet with TBOUR or the Comptroller's office as desired.

Respectfully,

D. A. McGowen
220 South Main St
Memphis, Tennessee 38103

Enclosures



Memphis Light, Gas and Water Division Gas Cost of Service and Financial Projection Study

June 2026



Corporate location:

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Submitted Respectfully by:

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June 2026

Brian Walters, PE
Supervisor Rates & Regulatory Affairs
Memphis Light, Gas and Water Division
Memphis, TN

Dear Mr. Walters:

We are pleased to present this report for the gas cost of service study and financial projection for Memphis Light, Gas and Water Division (MLGW). This report was prepared to provide the MLGW with a comprehensive examination of its existing rate structure by an outside party.

The specific purposes of this rate study are:

- Determine gas utility's revenue requirements for fiscal year 2026
- Identify cross-subsidies that may exist between rate classes
- Propose rate adjustments needed to meet targeted revenue requirements
- Identify the appropriate monthly customer charge for each customer class

This report includes results of the gas cost of service study and financial projection and recommendations on future rate designs.

This report is intended for information and use by the utility and management for the purposes stated above and is not intended to be used by anyone except the specified parties.

Sincerely,

A handwritten signature in black ink, appearing to read "Mark Beauchamp", is written over a horizontal line.

Utility Financial Solutions, LLC
Mark Beauchamp
CPA, MBA, CMA
185 Sun Meadow Ct
Holland, MI 49424

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1. Introduction

This report was prepared to provide the Memphis Light, Gas and Water Division (MLGW) with a gas cost of service study and financial projection, and a comprehensive examination of its existing rate structure by an outside party.

The specific purposes of the study are identified below:

- 1) ***Determine gas utility's revenue requirements for fiscal year 2026.*** The MLGW's revenue requirements were projected for the period from 2026 – 2030 and included adjustments for the following:
 - a. Projected gas costs
 - b. Projected inflationary cost increases
 - c. Capital improvement programs projected over next five years
- 2) ***Identify cross-subsidies that may exist between rate classes.*** Cross-subsidies exist when certain customer classes subsidize the gas costs of other customers. The rate study identifies if cross-subsidies exist and practical ways to reduce the subsidies. The cost of service study was completed using 2026 projected revenues and expenses. The financial projections are for the period from 2026 - 2030.
- 3) ***Identify cost-based gas supply and distribution rates.*** The cost of providing gas to customers consists of several components, including gas supply, distribution, customer services, transmission, and transfers to the general fund. Gas unbundling identifies the cost of each component to assist the utility in understanding its cost structure.
- 4) ***Identify the appropriate monthly customer charge for each customer class.*** The monthly customer charge consists of fixed costs to service customers that do not vary based on the amount of gas used.
- 5) ***Recommend rate adjustments needed to meet targeted revenue requirements.*** The primary purpose of this study is to identify appropriate revenue requirements, and the rate adjustments needed to meet targeted revenue requirements. The report includes a long-term rate track for the MLGW to help ensure the financial stability of the utility in future years.

2. Cost of Service Summary

Utility Rate Process

MLGW retained Utility Financial Solutions, LLC to review utility rates and cost of service and make recommendations on the appropriate course of action. This report includes results of the gas cost of service and unbundling study and suggestions on future rate designs.

Utility Revenue Requirements

To determine revenue requirements, the revenues and expenses for fiscal years 2023, 2024, 2025 and 2026 budget were analyzed with adjustments made to reflect projected operating characteristics. ***The projected financial statements are for cost of service purposes only.***

Table 1 is the projected financial statement for the gas utility from 2026-2030.

The following pages review cash flow, debt coverage ratio, and rate of return which are important indicators of financial health.

(see table on next page)

Table 1 – Financial Statements (without rate adjustments*)

Description	Projected 2026	Projected 2027	Projected 2028	Projected 2029	Projected 2030
Operating Revenues:					
Gas Sales					
Sales and service revenue	\$ 267,802,000	\$ 269,141,010	\$ 270,486,715	\$ 271,839,149	\$ 273,198,344
Revenue Adjustment for Uncollectibles	(2,484,000)	(2,496,420)	(2,508,902)	(2,521,447)	(2,534,054)
Transported gas revenues	10,765,000	10,818,825	10,872,919	10,927,284	10,981,920
Industrial Sales	26,845,000	26,979,225	27,114,121	27,249,692	27,385,940
Other revenues	18,595,000	18,687,975	18,781,415	18,875,322	18,969,699
Additional PGA Revenues (Δgrowth & Δcost)	-	2,721,072	5,483,097	8,286,690	11,132,477
Total Operating Revenue	\$ 321,523,000	\$ 325,851,687	\$ 330,229,365	\$ 334,656,690	\$ 339,134,327
Operating Expenses:					
Purchases					
Purchased Gas (Cost of Sales and Service)	\$ 150,070,000	\$ 152,328,554	\$ 154,621,098	\$ 156,948,146	\$ 159,310,215
Compressed Natural Gas (CNG)	456,000	462,863	469,829	476,900	484,077
Liquefied Natural Gas (LNG)	2,388,000	2,423,939	2,460,420	2,497,449	2,535,036
Industrial Gas	25,830,000	26,218,742	26,613,334	27,013,864	27,420,423
Production - LNG Plant	2,058,157	2,089,132	2,120,574	2,152,488	2,184,883
Distribution					
Distribution Operation	\$ 116,597,238	\$ 120,678,141	\$ 124,901,876	\$ 129,273,442	\$ 133,798,012
Distribution Maintenance	13,098,520	13,556,968	14,031,462	14,522,563	15,030,853
Payment in lieu of taxes	21,200,000	21,942,000	22,709,970	23,504,819	24,327,488
Depreciation Expense	32,765,966	33,647,507	35,013,220	35,900,781	36,703,013
Depreciation Expense Contributions	(136,301)	(231,933)	(319,509)	(409,713)	(502,623)
Total Operating Expenses	\$ 364,327,579	\$ 373,115,913	\$ 382,622,273	\$ 391,880,739	\$ 401,291,377
Operating Income[1]	\$ (42,804,579)	\$ (47,264,225)	\$ (52,392,908)	\$ (57,224,050)	\$ (62,157,050)
Other Income/(Expense)					
Contributions In Aid of Construction	4,497,933	3,155,850	2,890,026	2,976,726	3,066,028
Reduction of Plant Costs	(4,497,933)	(3,155,850)	(2,890,026)	(2,976,726)	(3,066,028)
Interest and Other Income	968,170	182,011	258,432	-	-
Interest Expense	(4,692,650)	(4,441,650)	(9,178,150)	(8,826,143)	(8,456,873)
Non Operating Income/(Expense)	\$ (3,724,480)	\$ (4,259,639)	\$ (8,919,718)	\$ (8,826,143)	\$ (8,456,873)
Net Income	\$ (46,529,059)	\$ (51,523,864)	\$ (61,312,626)	\$ (66,050,192)	\$ (70,613,923)

Note [1]: Operating income includes transfer to City of Memphis

Projected Cash Flow

Table 2 is the projected cash flow for 2026-2030, including projections of capital improvements as provided by MLGW and a debt issue of \$100M in 2027. Changes in the capital improvement plan and proposed debt issue can greatly affect the cash balance and proposed minimum cash reserve target. The cash balance for 2026 is projected at \$36.4M and \$-156M in 2030. The recommended minimum cash reserve level for 2026 is \$103.4M and \$116.6M for 2030.

Table 2 – Projected Cash Flows (without rate adjustments*)

Description	Projected 2026	Projected 2027	Projected 2028	Projected 2029	Projected 2030
Projected Cash Flows					
Net Income	\$ (46,529,059)	\$ (51,523,864)	\$ (61,312,626)	\$ (66,050,192)	\$ (70,613,923)
Depreciation Expense/Amortization	32,629,665	33,415,574	34,693,711	35,491,068	36,200,390
Subtract Debt Principal	(5,020,000)	(5,270,000)	(7,040,144)	(7,385,401)	(7,759,421)
Add Bond Sale Proceeds	-	100,000,000	-	-	-
Cash Available from Operations	\$ (18,919,395)	\$ 76,621,710	\$ (33,659,058)	\$ (37,944,525)	\$ (42,172,954)
Estimated Annual Capital Additions	34,743,761	58,181,701	31,955,377	26,623,670	26,323,601
Capital Contributions	4,497,933	3,155,850	2,890,026	2,976,726	3,066,028
Net Cash From Operations	\$ (58,161,089)	\$ 15,284,159	\$ (68,504,461)	\$ (67,544,921)	\$ (71,562,583)
Beginning Cash Balance	\$ 94,563,325	\$ 36,402,236	\$ 51,686,395	\$ (16,818,067)	\$ (84,362,987)
Ending Cash Balance	\$ 36,402,236	\$ 51,686,395	\$ (16,818,067)	\$ (84,362,987)	\$ (155,925,570)
Total Unrestricted Cash Available	\$ 36,402,236	\$ 51,686,395	\$ (16,818,067)	\$ (84,362,987)	\$ (155,925,570)
Recommended Minimum	\$ 103,397,151	\$ 110,691,847	\$ 112,705,357	\$ 114,655,747	\$ 116,632,740

Cash balances are below recommended minimum and decreasing.

Minimum Cash Reserve

Table 3 details the minimum level of cash reserves required to help ensure timely replacement of assets and to provide financial stability of the utility. The methodology used to establish this target is based on an assessment of working capital needs to fund operating expenses, capital improvements, annual debt service payments, and utility's exposure to risks related to catastrophic events, exposure to market risks, changes in gas costs, loss of major customers, and utility's ability to timely recover changes in gas supply expenses. Based on these assumptions, the MLGW should maintain a minimum of \$103.4M in cash reserves for 2026 and \$116.6M in 2030.

Table 3 – Minimum Cash Reserves (without rate adjustments*)

Description	Projected 2026	Projected 2027	Projected 2028	Projected 2029	Projected 2030
Minimum Cash Reserve Levels Determinants					
Annual O&M (Less Depreciation & Gas Expense)	\$ 152,953,915	\$ 158,266,241	\$ 163,763,882	\$ 169,453,312	\$ 175,341,236
Annual Purchased Gas Expense	178,744,000	181,434,097	184,164,680	186,936,359	189,749,751
Historical Investment in System	985,021,298	1,046,358,849	1,081,204,252	1,110,804,648	1,140,194,277
Annual Payment: Debt / Loans / Borrowing	9,711,650	16,218,294	16,211,544	16,216,294	16,216,294
Five Year Capital Improvements - Net of bond proceeds	77,828,110	77,828,110	77,828,110	77,828,110	77,828,110
Minimum Cash Reserve Allocation					
O&M (45-day Working Capital Allocation)	12.3%	12.3%	12.3%	12.3%	12.3%
Gas Supply (Max Monthly bill to Annual Gas Expense)	24%	24%	24%	24%	24%
Emergency Fund Allocation	2%	2%	2%	2%	2%
Largest Debt P&I Payment Due (Working Capital)	73%	73%	73%	73%	73%
Average Annual Allocation to Capital Program	20%	20%	20%	20%	20%
% Plant Depreciated	52%	52%	54%	56%	57%
Calculated Minimum Cash Level					
O&M (45-day Working Capital Reserve)	\$ 18,857,332	\$ 19,512,276	\$ 20,190,068	\$ 20,891,504	\$ 21,617,413
Gas Supply (Working Capital Reserve)	42,141,091	42,775,314	43,419,083	44,072,540	44,735,832
Emergency Fund Reserve	19,700,426	20,927,177	21,624,085	22,216,093	22,803,886
Debt Payment (Working Capital Reserve)	7,132,680	11,911,457	11,906,500	11,909,988	11,909,988
Capital Improvement Program (Working Capital Reserve)	15,565,622	15,565,622	15,565,622	15,565,622	15,565,622
Minimum Cash Reserve Levels	\$ 103,397,151	\$ 110,691,847	\$ 112,705,357	\$ 114,655,747	\$ 116,632,740
Projected Cash Reserves	\$ 36,402,236	\$ 51,686,395	\$ (16,818,067)	\$ (84,362,987)	\$ (155,925,570)

Projected cash balances fall below the recommended minimums during the projection period.

Debt Coverage Ratio

Table 4 is the projected debt coverage ratios with capital additions as provided by MLGW. Debt coverage ratio is a measurement of debt affordability and measures the cash flow from operations in that fiscal year. A ratio of 1, indicates there was enough cash flow from operations to pay the debt payment one time. The minimum recommended debt coverage ratio for prudent financial planning purposes is 1.40.

Maintaining a 1.40 debt coverage ratio is good business practice and helps to achieve the following:

- Helps to ensure debt coverage ratios are met in years when sales are low due to cold or wet summers or loss of a major customer(s).
- When debt coverage ratios are consistently met, it may help obtain a higher bond rating if revenue bonds are sold in the future, to lower interest cost.

Table 4 – Projected Debt Coverage Ratios (without rate adjustments)

Description	Projected 2026	Projected 2027	Projected 2028	Projected 2029	Projected 2030
Debt Coverage Ratio					
Net Income	\$ (46,529,059)	\$ (51,523,864)	\$ (61,312,626)	\$ (66,050,192)	\$ (70,613,923)
Add Depreciation/Amortization Expense	32,629,665	33,415,574	34,693,711	35,491,068	36,200,390
Add Interest Expense	4,692,650	4,441,650	9,178,150	8,826,143	8,456,873
Cash Generated from Operations	\$ (9,206,745)	\$ (13,666,640)	\$ (17,440,765)	\$ (21,732,981)	\$ (25,956,660)
Debt Principal and Interest	\$ 9,712,650	\$ 9,711,650	\$ 16,218,294	\$ 16,211,544	\$ 16,216,294
Projected Debt Coverage Ratio (Covenants)	(0.95)	(1.41)	(1.08)	(1.34)	(1.60)
Minimum Debt Coverage Ratio	1.4	1.4	1.4	1.4	1.4

Debt coverage is below the minimum debt coverage ratio throughout the projection period.

Rate of Return

The optimal target for setting rates is the establishment of a target operating income to help ensure the following:

- A. Funding of interest expense on the outstanding principal on debt. Interest expense is below the operating income line and needs to be recouped through the operating income balance.
- B. Funding of the inflationary increase on the assets invested in the system. The inflation on the replacement of assets invested in the utility should be recouped through the Operating Income.
- C. Funding of depreciation expense.
- D. Adequate rate of return on investment to help ensure current customers are paying their fair share of the use of the infrastructure and not deferring the charge to future generations.
- E. The rate of return identifies the target operating income and is used to identify the appropriate funding for replacement of existing infrastructure to recover in rates charged to customers.

As improvements are made to the system, the optimal operating income target will increase unless annual depreciation expense is greater than yearly capital improvements. The revenue requirements for the study are set on the utility basis. Table 5 identifies the utility basis target established for 2026 is \$40.9M and increases to \$42.6M in 2030.

Table 5 – Rate of Return Calculation (without rate adjustments)

Description	Projected 2026	Projected 2027	Projected 2028	Projected 2029	Projected 2030
Optimal Operating Income Determinants					
Net Book Value/Working Capital	\$ 470,057,781	\$ 497,979,758	\$ 498,131,451	\$ 492,240,779	\$ 485,430,018
Outstanding Principal on Debt	106,950,000	201,680,000	194,639,856	187,254,456	179,495,035
System Equity	\$ 363,107,781	\$ 296,299,758	\$ 303,491,594	\$ 304,986,323	\$ 305,934,983
Debt:Equity Ratio	23%	40%	39%	38%	37%
Optimal Operating Income Allocation					
Average Interest on Debt	4.39%	4.72%	4.72%	4.71%	4.71%
System Equity	9.96%	9.99%	10.32%	10.73%	11.17%
Optimal Operating Income					
Interest on Debt Recovery	\$ 4,692,650	\$ 4,441,650	\$ 9,178,150	\$ 8,826,143	\$ 8,456,873
System Equity	\$ 36,177,578	\$ 29,601,234	\$ 31,319,874	\$ 32,722,767	\$ 34,165,747
Optimal Operating Income	\$ 40,870,228	\$ 34,042,884	\$ 40,498,024	\$ 41,548,910	\$ 42,622,620
Projected Operating Income	\$ (42,804,579)	\$ (47,264,225)	\$ (52,392,908)	\$ (57,224,050)	\$ (62,157,050)
Rate of Return in %	8.7%	6.8%	8.1%	8.4%	8.8%

Projected operating income is projected to fall below optimal operating income for each year.

Projected Rate Track

Adjusting system revenue requires balancing the financial health of the utility with the financial impact on customers and cost of service results. Table 6 is a summary of the financial projection without any rate changes. Cash balances, operating income and the debt coverage ratio fall to critical levels.

Table 6 – Summary of Financials without Rate Adjustments

Fiscal Year	Proposed Revenue Adjustments	Total Utility Funded Capital	Debt Coverage Ratio	Projected Operating Income	Optimal Operating Income	Projected Cash Balances	Recommended Minimum Cash Reserve	Bond Issues 30Yr @ 5%
2026	0.00%	\$ 39,241,694	(0.95)	\$(42,804,579)	\$ 40,870,228	\$ 36,402,236	\$ 103,397,151	\$ -
2027	0.00%	61,337,551	(1.41)	(47,264,225)	34,042,884	51,686,395	110,691,847	100,000,000
2028	0.00%	34,845,403	(1.08)	(52,392,908)	40,498,024	(16,818,067)	112,705,357	-
2029	0.00%	29,600,396	(1.34)	(57,224,050)	41,548,910	(84,362,987)	114,655,747	-
2030	0.00%	29,389,629	(1.60)	(62,157,050)	42,622,620	(155,925,570)	116,632,740	-

The study identifies increasing current revenues to maintain financial targets. Table 7 is a summary of the financial results detailing the projected revenue adjustments.

Table 7 – Projected Revenue Adjustments

Fiscal Year	Proposed Revenue Adjustments	Total Utility Funded Capital	Debt Coverage Ratio	Projected Operating Income	Optimal Operating Income	Projected Cash Balances	Recommended Minimum Cash Reserve	Bond Issues 30Yr @ 5%
2026	0.00%	\$ 39,241,694	(0.95)	\$(42,804,579)	\$ 40,870,228	\$ 36,402,236	\$ 103,397,151	\$ -
2027	11.00%	61,337,551	2.25	(11,719,857)	34,042,884	87,230,763	110,691,847	100,000,000
2028	10.00%	34,845,403	3.36	19,376,018	40,498,024	90,672,948	112,705,357	-
2029	5.00%	29,600,396	4.37	34,828,609	41,548,910	115,634,050	114,655,747	-
2030	0.00%	29,389,629	4.14	30,355,872	42,622,620	137,162,560	116,632,740	-

This rate track ensures operating income and projected cash balances continuously increase through 2029 towards financial targets. Due to cost changes, inflationary factors, and growth, financial projections should be reviewed on an annual basis. Depending on the system improvement timetable, additional changes may be needed throughout the projection period.

Debt to Equity Ratio

Debt to equity identifies the amount of existing infrastructure financed through debt and is used to determine the amount the system is leveraged in debt. For distribution systems, the debt to equity ratio is normally between 30% and 35%. Table 8 details MLGW's debt/equity ratio.

Table 8 – Debt/Equity Ratio

Description	Projected 2026	Projected 2027	Projected 2028	Projected 2029	Projected 2030
Net Book Value/Working Capital	\$ 470,057,781	\$ 497,979,758	\$ 498,131,451	\$ 492,240,779	\$ 485,430,018
Outstanding Principal on Debt	106,950,000	201,680,000	194,639,856	187,254,456	179,495,035
Debt:Equity Ratio	23%	40%	39%	38%	37%

Age of Infrastructure

MLGW is currently 52% depreciated. Average infrastructure is approximately 50% to 55% depreciated, indicating MLGW has funded replacement of infrastructure. Replacement of infrastructure tends to indicate the utility's ability to consistently provide a reliable system to customers, its ability to withstand catastrophic weather events, and unexpected replacement of system infrastructure. MLGW's system age indicates it will remain in the average ranges of infrastructure age. Table 9 identifies the depreciated plant.

Table 9 – Age of Infrastructure

Description	Projected 2026	Projected 2027	Projected 2028	Projected 2029	Projected 2030
Asset Investment	\$ 985,021,298	\$ 1,046,358,849	\$ 1,081,204,252	\$ 1,110,804,648	\$ 1,140,194,277
Net Book Value	470,057,781	497,979,758	498,131,451	492,240,779	485,430,018
% Plant Depreciated	52%	52%	54%	56%	57%

Cost of Service Summary Results

A cost of service study was completed to determine the cost of providing service to each class of customers and to assist in designing gas rates for customers. A cost of service study consists of the following general steps:

1. Determine utility revenue requirement for test year 2026.
2. Classify utility expenses into common cost pools.
3. Allocate costs to customer classes based on the classes' contribution to utility expenses.
4. Compare revenues received from each class to the cost of service.

The cost of service summary is included as Table 10 which compares the projected cost to serve each class with the revenue received from each class. The "% change" column is the revenue adjustment necessary to meet projected cost of service requirements. The cost of service summary uses the current rates, including any adjustment factors.

No utility charges 100% cost of service-based rates because retail rates are based on customers usage patterns that are largely driven by variations in weather. Due to these variations it is recommended that rates move toward cost of service slowly with a general tolerance of a 10% variation between projected revenue and cost of service. The cost of service summary "% change" column indicates the Large General Service rate class falls just outside this range.

Table 10 – Cost of Service Summary

Revenue Class	Cost of Service	Projected Revenues	% Change
Residential Service (G-1) (G-3)	\$ 231,927,685	\$ 170,978,841	35.6%
General Service - Small (G-7)	75,071,110	60,049,284	25.0%
General Service - Medium (G-8) (G-9)	26,570,852	22,432,912	18.4%
General Service - Large (G10)	17,907,160	14,340,963	24.9%
Total	\$ 351,476,807	\$ 267,802,000	31.2%

Cost of Service Results

Table 11 shows the average cost of service per Ccf and compares the cost to current average charges per Ccf for each customer class. This table is for information purposes only and is not used in the setting of rates. Average cost per Ccf varies due to fixed cost recoveries such as meter costs and infrastructure needs of the customer. In general, customer classes that use gas consistently have a lower average cost to serve compared with customer classes that use gas only part of the day or year.

Table 11 – Average Cost per Ccf vs. Average Revenue per Ccf

Customer Class	Cost of Service \$/Ccf	Projected Revenues \$/Ccf
Residential Service (G-1) (G-3)	\$ 1.2335	\$ 0.9093
General Service - Small (G-7)	1.0522	0.8417
General Service - Medium (G-8) (G-9)	0.8632	0.7288
General Service - Large (G10)	0.7207	0.5772

Cost differences result from usage patterns of customers and how efficiently each class of customer use facilities based on billing data provided by the MLGW.

Distribution Costs

Separation of distribution cost helps identify distribution charges for each customer class and the fixed monthly customer charge.

Distribution rates include separation of the following costs:

- Operation and maintenance of distribution & transmission system
- Contributions to general fund
- Customer service
- Customer accounting
- Meter reading
- Billing
- Meter operation & maintenance
- Administrative expenses

The distribution rates consist of two components:

- Monthly customer charge to recover the costs of meter reading, billing, customer service, and a portion of maintenance and operations of the distribution system.
- Distribution rate based on billing parameter (Ccf), to recover the cost to operate and maintain the distribution system. Table 12 identifies the cost-based distribution rates for customer classes.

Table 12 – Distribution Costs by Customer Class (COS)

Customer Class	Monthly Customer Charge	Distribution Rate	Billing Basis	PILOT (Ccf)[1]	Billing Basis
Residential (Inside City) G-1	\$ 19.80	\$ 0.2354	Ccf	\$ 0.0733	Ccf
Residential (Outside City) G-3	22.99	0.2286	Ccf	0.0699	Ccf
Small General Service G-7	83.70	0.2064	Ccf	0.0666	Ccf
Large General Service G-8	844.07	1.07	Max Daily Ccf	0.0637	Ccf
Large General Service G-9	1,021.32	1.36	Max Daily Ccf	0.0574	Ccf
Large General Service - Interruptible G-10	1,832.47	0.20	Max Daily Ccf	0.0416	Ccf

Note [1]: PILOT to City is determined based on a percent of revenue recovered

The cost of service based monthly customer charge for residential customers recovers 56% of the fixed cost. UFS averages across the United States show 40% to 60% fixed cost recovery in the residential customer charge.

Gas Supply Costs

Table 13 identifies the average cost of providing gas supply to customers of MLGW.

Table 13 – Gas Supply Costs by Customer Class

Customer Class	Demand	Billing Basis	Commodity	Billing Basis
Residential (Inside City) G-1	\$ 0.1336	Ccf	\$ 0.4049	Ccf
Residential (Outside City) G-3	0.1306	Ccf	0.4055	Ccf
Small General Service G-7	0.1017	Ccf	0.3931	Ccf
Large General Service G-8	0.3457	Ccf	0.3732	Ccf
Large General Service G-9	0.6255	Ccf	0.3874	Ccf
Large General Service - Interruptible G-10	0.0408	Ccf	0.3608	Ccf

Combined Cost Summary

Table 14 identifies the cost components for each customer class. Charging these cost components as rates would directly match the cost of providing service to customers identified in this study.

Table 14 – Total Costs by Customer Class

Customer Class	Current Customer Charge	COS Customer Charge	Distribution Demand	Commodity
Residential (Inside City) G-1	\$ 10.42	\$ 19.80	\$ -	\$ 0.8471
Residential (Outside City) G-3	10.42	22.99	-	0.8346
Small General Service G-7	52.95	83.70	-	0.5615
Large General Service G-8	-	844.07	1.07	0.4370
Large General Service G-9	-	1,021.32	1.36	0.4448
Large General Service - Interruptible G-10	520.59	1,832.47	0.24	0.4023

Residential Customer Charge

Customer Charge Breakdown

The customer charge consists of expenses related to, 1) providing a minimum amount of gas to the residential customer, and 2) servicing a meter on the customer's premises. Together they reflect the cost for availability of service.

The customer charge includes two types of charges called minimum system charges and direct charges.

Minimum System Charges:

The cost to provide the minimum level of service based on the potential capacity of the customer's meter. MLGW provides gas lines to connect to the gas transmission system. These gas lines are required to provide even the minimal amount of service to a customer. For cost of service purposes, the total cost of the gas distribution infrastructure is broken into two components:

1. The minimum system costs, in effect provide a customer with the minimum capacity and should be recovered through the customer charge.
2. Demand-related costs are additional infrastructure costs of providing customers with capacity in the gas system for usage greater than the minimum amounts and should be recovered through the usage component.

The distribution system is sized to handle the customers' peak usage and the cost above the minimum sizing is recovered through the usage component (for residential customers this is included in the commodity charge).

Direct Charges:

Costs related to maintaining a customer's account. These costs include the cost to operate and maintain the meter, including meter installation, meter repair and replacement costs, the cost to read the meter, billings and collections, and customer service personnel to assist with questions and maintain the account. These costs are direct costs of serving a residential account.

The cost-based rate breakdown for the customer charge is listed in Table 15 .

Table 15 – Customer Charge Breakdown

Customer Breakdown	Residential (Inside City) G-1	Residential (Outside City) G-3	Small General Service G-7	Large General Service G-8	Large General Service G-9	Large General Service - Interruptible Market G-10	Large General Service - Interruptible G-10
Distribution Facilities	\$ 9.02	\$ 9.87	\$ 40.63	\$ 375.01	\$ 525.57	\$ 846.15	\$ 846.15
Meter O&M	5.23	7.04	18.05	238.24	172.26	465.52	465.52
Meter Reading	0.95	1.04	4.29	39.61	55.51	89.37	89.37
Billing	2.75	3.01	12.39	114.39	160.32	258.11	258.11
Services	1.28	1.40	5.76	53.20	74.56	120.03	120.03
Customer Service	0.57	0.62	2.56	23.62	33.10	53.29	53.29
Customer Charge \$/Meter	\$ 19.80	\$ 22.99	\$ 83.70	\$ 844.07	\$ 1,021.32	\$ 1,832.47	\$ 1,832.47

Customer Charge Allocations

Distribution Facilities	Installation and maintenance cost of distribution system
Meters O&M	Installation, operation, and maintenance costs of meter
Meter Reading	Personnel and equipment costs to reading meters
Billing	Billing and collection costs
Services	Installation, operation, and maintenance cost of service lines
Customer Service	Personnel cost to service accounts

3. Functionalization of Costs

Delivery of gas consists of many components that are necessary to move gas from a supply source to the community and eventually into a customer's facility. This system consists of four major components: transportation, distribution, customer-related services, and administration. Below are general descriptions of each of these facilities and the sub-breakdowns within each category.

Transportation

The transportation system is comprised of backbone and inter-tie facilities that a utility's major gas supply is acquired. Operation of the transportation system consists of providing certain services that ensure a stable supply of gas.

Distribution

Distribution facilities connect each customer with the transportation grid to provide access to gas that has been produced. The distribution plant can include a city gate, storage facilities, regulators, and distribution lines that are jointly used and in the public right-of-way.

City Gate Station interconnects the long-distance interstate pipeline with the Utility. City gate stations are composed of a complex array of valves, pipes, and pressure reduction devices designed to meter the gas and reduce its pressure so that it can be delivered safely to customers.

Regulators work to maintain gas at a safe, efficient, and constant pressure per customer requirements.

Distribution lines or "mains" move gas from the city gate to each customer. They range in size and operate at various pressure levels to optimize efficiency and sufficient flow rates to the customer equipment or appliances being used.

Customer-Related Services

Certain administrative-type services are necessary to ensure customers are provided service connections and disconnections in a timely manner and the facilities are in place to read meters and bill for customer usages. These services typically consist of the following components:

- **Customer Services** – The cost of providing personnel to assist customers with questions and dispatch personnel to connect and disconnect meters.
- **Billing and Collections** – The cost of billing and collections personnel, postage, and supplies.
- **Meter Reading** – The cost of reading customers' meters.
- **Meter Operation and Maintenance** – The cost of installing and maintaining customer meters.

Administrative Services

These costs are sometimes referred to as overhead costs and relate to functions that cannot be directly attributed to any service. These costs are spread to the other services through an allocator such as labor, expenses, or total rate base. These costs may consist of City Commission expenses, property insurance, and wages for higher level management of the utility.

4. Unbundling Process

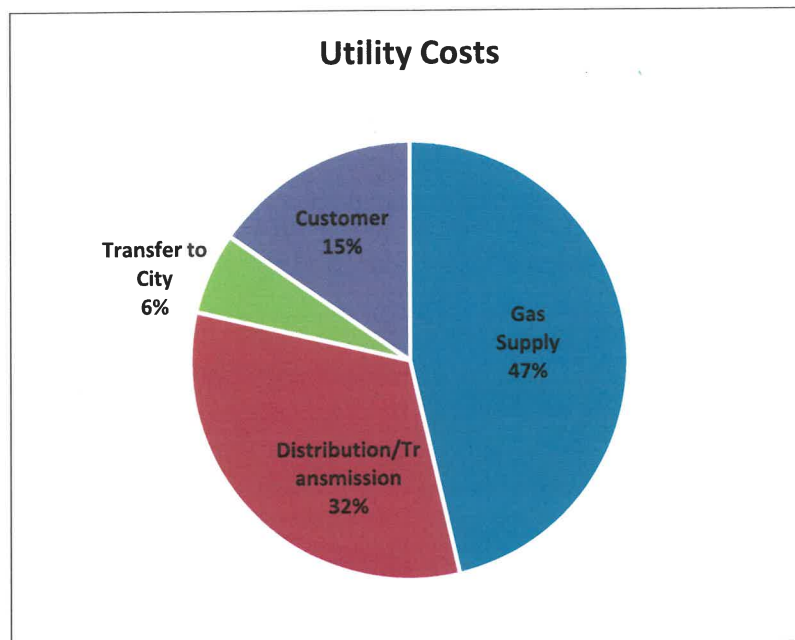
The cost of gas supply, distribution, and customer services are identified as part of the unbundling process and are the first step in determining unbundled charges to customers. The total revenue requirements of \$351.5M are separated into four categories identified in Table 16.

Table 16 – Breakdown of MLGW Cost Structure

Expense Type	Amount	Percentage
Gas Supply	\$ 162,899,088	46%
Distribution/Transmissic	113,594,725	32%
Transfer to City	21,200,000	6%
Customer	53,782,995	15%
	\$ 351,476,807	100%

MLGW is projected to expend 47% of its total costs toward gas supply. Distribution/transmission-related costs are 32%; transfers to the city represent 6% and customer service 15%.

Figure 1 – Breakdown of Distribution Costs



5. Significant Assumptions

This section outlines the procedures used to develop the cost of service and unbundling study for MLGW and the related significant assumptions.

Forecasted Operating Expenses

Forecasted expenses were based on 2023, 2024, 2025 and 2026 budget adjusted for gas supply costs and inflation. The table below is a summary of the expenses used in the analysis.

Table 17 – Projected Operating Expenses for 2026–2030

Description	Projected 2026	Projected 2027	Projected 2028	Projected 2029	Projected 2030
Operating Expenses:					
Purchases					
Purchased Gas (Cost of Sales and Servi	\$ 150,070,000	\$ 152,328,554	\$ 154,621,098	\$ 156,948,146	\$ 159,310,215
Compressed Natural Gas (CNG)	456,000	462,863	469,829	476,900	484,077
Liquefied Natural Gas (LNG)	2,388,000	2,423,939	2,460,420	2,497,449	2,535,036
Industrial Gas	25,830,000	26,218,742	26,613,334	27,013,864	27,420,423
Production - LNG Plant	2,058,157	2,089,132	2,120,574	2,152,488	2,184,883
Distribution					
Distribution Operation	\$ 116,597,238	\$ 120,678,141	\$ 124,901,876	\$ 129,273,442	\$ 133,798,012
Distribution Maintenance	13,098,520	13,556,968	14,031,462	14,522,563	15,030,853
Payment in lieu of taxes	21,200,000	21,942,000	22,709,970	23,504,819	24,327,488
Depreciation Expense	32,765,966	33,647,507	35,013,220	35,900,781	36,703,013
Depreciation Expense Contributions	(136,301)	(231,933)	(319,509)	(409,713)	(502,623)
Total Operating Expenses	\$ 364,327,579	\$ 373,115,913	\$ 382,622,273	\$ 391,880,739	\$ 401,291,377

Gas supply costs from 2026 – 2030 are based on the MLGW's budgets, and assumptions.

Load Data

Load data is one of the most critical components of a cost-of-service study. Information from the billing statistics were used to determine the usage patterns of each customer class after reconciling revenues with financial statements to ensure a good basis for development of the study.

Annual Projection Assumptions

The gas sales forecast is based on Projected 2026 actual adjusted for growth. Table 18 details growth, inflation of expenses, changes in purchased gas costs, capital improvements, and interest earned on investments.

Table 18 – Projection Annual Escalation Factors 2026-2030

Fiscal Year	Inflation	Growth	Purchased Gas Change	Investment Income
2026	3.5%			0.5%
2027	3.5%	0.5%	1.0%	0.5%
2028	3.5%	0.5%	1.0%	0.5%
2029	3.5%	0.5%	1.0%	0.5%
2030	3.5%	0.5%	1.0%	0.5%

Fiscal Year	CIP Production	CIP Distribution	CIP Distribution (Contributed AID)	CIP General Plant	CIP General Plant (Delayed Allocations)	Total Utility Funded Capital	Bond Issues 30Yr @ 5%
2026	\$ 1,106,300	\$ 38,998,165	\$ (4,497,933)	\$ 18,664,476	\$(15,029,314)	\$ 39,241,694	\$ -
2027	8,500,000	37,373,467	(3,155,850)	39,381,968	(20,762,034)	61,337,551	100,000,000
2028	6,500,000	29,941,874	(2,890,026)	15,649,658	(14,356,103)	34,845,403	-
2029	1,000,000	32,341,011	(2,976,726)	12,506,752	(13,270,641)	29,600,396	-
2030	1,000,000	33,189,813	(3,066,028)	11,718,615	(13,452,771)	29,389,629	-

6. Considerations and Additional Information

MLGW Financial Considerations

1. The MLGW is projected to require increases in rates charged to customers to meet financial targets over the projection period.

Fiscal Year	Proposed Revenue Adjustments	Total Utility Funded Capital	Debt Coverage Ratio	Projected Operating Income	Optimal Operating Income	Projected Cash Balances	Recommended Minimum Cash Reserve
2026	0.00%	\$ 39,241,694	(0.95)	\$(42,804,579)	\$ 40,870,228	\$ 36,402,236	\$ 103,397,151
2027	11.00%	61,337,551	2.25	(11,719,857)	34,042,884	87,230,763	110,691,847
2028	10.00%	34,845,403	3.36	19,376,018	40,498,024	90,672,948	112,705,357
2029	5.00%	29,600,396	4.37	34,828,609	41,548,910	115,634,050	114,655,747
2030	0.00%	29,389,629	4.14	30,355,872	42,622,620	137,162,560	116,632,740

2. Proposed rate changes are expected to maintain positive cash balances throughout the projection period, with balances exceeding recommended minimum targets beginning in 2029.
3. Proposed rate changes include a debt issue of \$100M in 2027 to support projected capital plans.
4. Proposed rate changes are expected to improve debt coverage ratios to levels above recommended minimum targets by 2027, with those levels maintained throughout the projection period.
5. Proposed rate adjustments are projected to eliminate operating losses by 2028 and generate an increasing operating income position through 2030. Reaching the optimal operating income level demonstrates that rates are adequately funding both current operating needs and the long-term replacement of system infrastructure.

Rate-Related Considerations

1. Current customer charges do not fully recover customer-related costs, resulting in an over-reliance on energy charges for most customer classes. Aligning customer charges more closely with cost-of-service levels would lessen future commodity rate increases and provide more stable utility revenues despite fluctuations in weather and usage patterns.

Customer Class	Meter Size	Current Customer Charge	COS Customer Charge
Residential Service (G-1) (G-3)	All	\$ 10.42	\$ 19.80
General Service - Small (G-7)	<425 Cfh	\$ 31.24	\$ 23.55
General Service - Small (G-7)	426 to 1,400 Cfh	\$ 57.26	\$ 101.17
General Service - Small (G-7)	> 1,401 Cfh	\$ 104.12	\$ 221.63
General Service - Medium (G-8) (G-9)		\$ -	\$ 1,013.86
General Service - Large (G10)		\$ 520.59	\$ 1,832.47

2. MLGW may consider movements toward cost of service. The cost of service study indicates a variance exists between revenues and costs for certain rate classes. The study results are listed below:

Revenue Class	Cost of Service	Projected	% Change
		Revenues	
Residential Service (G-1) (G-3)	\$ 231,927,685	\$ 170,978,841	35.6%
General Service - Small (G-7)	75,071,110	60,049,284	25.0%
General Service - Medium (G-8) (G-9)	26,570,852	22,432,912	18.4%
General Service - Large (G10)	17,907,160	14,340,963	24.9%
Total	\$ 351,476,807	\$ 267,802,000	31.2%

3. MLGW's projected margins are forecasted to remain below the margin levels indicated by the cost-of-service analysis. For purposes of this analysis, margins are calculated as total revenues less power supply costs and represent the amount available to recover non-power supply operating and capital-related costs.

Revenue Class	COS Margin	Current
	(%)	Margin (%)
Residential Service (G-1) (G-3)	56%	49%
General Service - Small (G-7)	53%	48%
General Service - Medium (G-8) (G-9)	45%	39%
General Service - Large (G10)	33%	17%



December 8, 2023

Jason Mumpower
Tennessee Comptroller of the Treasury
The Capitol Building
Nashville, Tennessee 37243

Dear Comptroller Mumpower,

I am writing to advise you that in the recently approved MLGW 2024 budget I have deliberately planned for the MLGW Gas Division to experience three successive years of negative net position at the end of years 2024, 2025, and 2026.

Because of successful hedging strategies and profitable liquid natural gas sales to commercial customers, and despite aggressive spending on capital improvements to the system, MLGW has accumulated 263 days of operating expense in cash on hand, significantly more than the GFOA recommendation of 90-days. It is our intent, as expressed by the approval of MLGW's Board of Commissioners and Memphis City Council, to keep base gas rates flat for our customers over the next three years while simultaneously maintaining the financial health of the utility. We will do this by balancing revenue from gas sales with a deliberate operations and capital spending plan to defer and avoid rate increases for our customers, but to land with 170+ days balance of cash on hand at the end of the period, when we will reassess whether a rate action is then necessary. We believe this to be much preferable than the alternatives: reducing operating and capital expenditures to yield a positive net position; using cash on hand to temporarily lower rates for a year but then raise rates back up in the next year; or to simply impose an unnecessary rate increase solely for the purpose of yielding a positive net position.

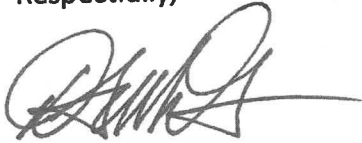
You can find a high-level summary of our proposed budget for 2024 that forecasts our projected change in net assets immediately below:

Gas Division - Budget 2024	2022	2023	2024	2025	2026
Ending Cash & Investments	157,664	184,728	171,509	144,983	131,634
Days Cash of OpExp	183	263	235	194	171
Debt Service Coverage	5.15	7.89	4.84	4.56	4.00
Change in Net Assets (Net Income)*	3,907	1,218	(19,698)	(24,106)	(31,543)
Capital Expenditures	\$17,999	\$48,400	\$33,911	\$43,679	\$24,177
O&M Expenditures	\$96,993	\$103,817	\$130,597	\$135,844	\$142,488
Rate Increase %	2.0%				
Rate Increase Revenue	\$4,354				
Debt Issuance					
Average Residential Bill Impact	\$0.74				

The plan we are advancing in the 2024 budget and the forecast budget for the next two years carefully balances affordability for our customers, many of whom have a high energy burden despite our lowest in the nation combined utility bill, with the financial position of the Utility. We assert that though our action will result in successive years of negative net position, MLGW will remain compliant with accepted industry and general accounting principles, if not the underlying intent of the law. In fact, the plan demonstrates exactly the kind of fiscal discipline and customer service that customers/ratepayers should expect from a high performing utility.

We will present our audited financials in accordance with the statute, and while this year's report will not show any successive years of negative net position, I wanted to share this plan with you so that there are no surprises in the coming years, and to make the Tennessee Board of Utility Regulation aware of this before they feel compelled to take any action. Although technically meeting the definition of "financial distress" under the statute, we believe this deliberate plan is prudent and fiscally responsible. I look forward to discussing this with you and your team at the next opportunity.

Respectfully,

A handwritten signature in dark ink, appearing to read 'D. McGowen', with a long horizontal flourish extending to the right.

D. A. McGowen
220 S. Main St
Memphis, TN 38103