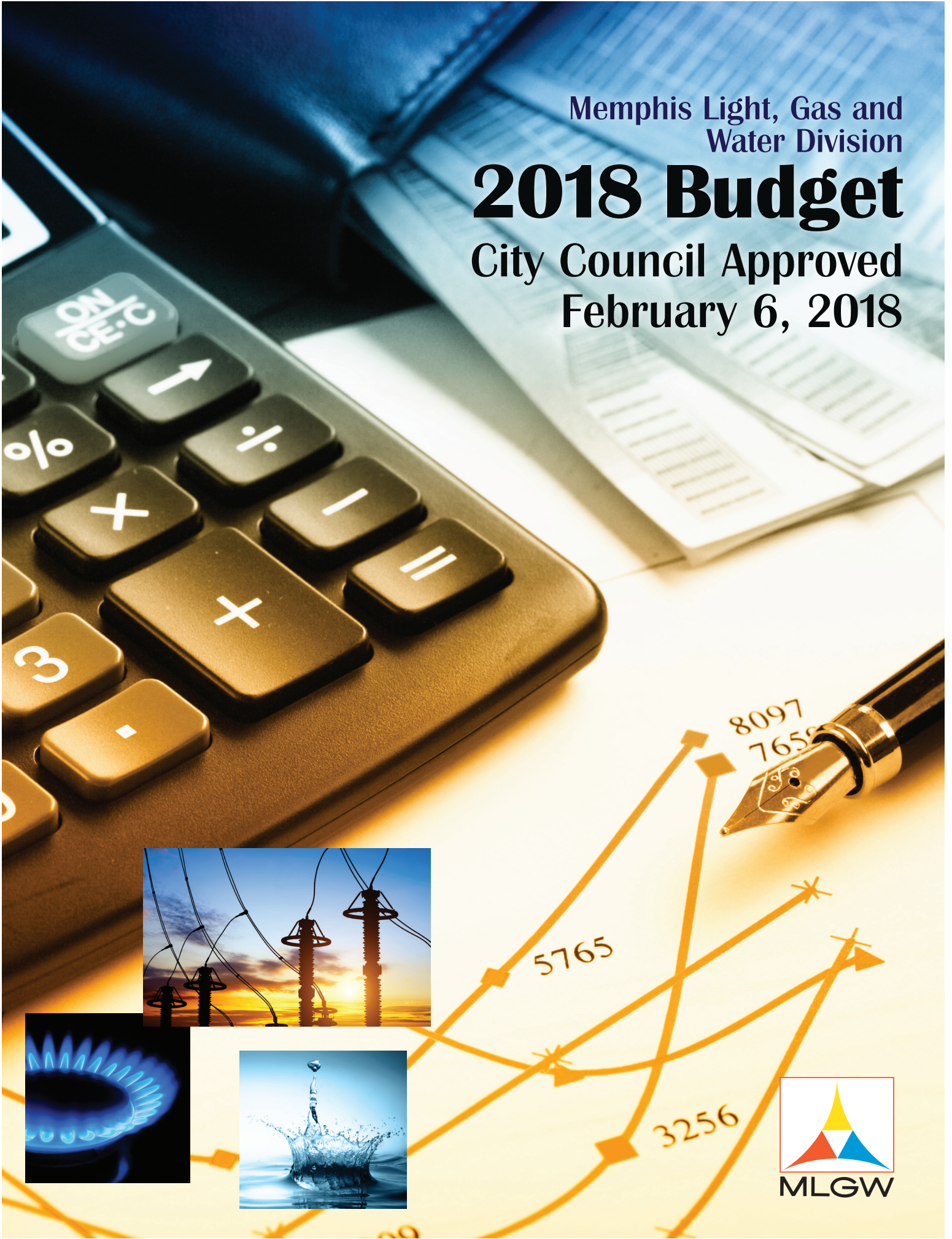


Memphis Light, Gas and
Water Division

2018 Budget

City Council Approved
February 6, 2018



MLGW

The MLGW Board of Commissioners



Chairman Wishnia



Vice Chairman McCullough, Esq



Commissioner Dickson Sr.



Commissioner Graves



Commissioner Sisnett



Steven Wishnia, Chairman * Carlee McCullough, Vice Chairman * Leon Dickson, Sr. * Mitch Graves * Derwin Sisnett
Board of Commissioners

Steve Wishnia
Interim President & CEO

Director, Internal Audit
Lesa Walton

Director, Analysis, Strategy & Performance
Clifford DeBerry

Utility Compliance Manager
Allan Long

Director, Corporate Communications
Gale Jones Carson

CORE BUSINESS

STRATEGIC BUSINESS PARTNERS

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Alonzo Weaver

Vice President,
Customer Care
Christopher Bieber

Vice President,
Construction & Maintenance
Nick Newman

Vice President & CTO
Lashell M. Vaughn

Vice President & General Counsel
Cheryl Patterson

Vice President,
Human Resources
Von Goodloe

Chief Utility Officer
Vice President,
CFO & Secretary-Treasurer
Dana Jeanes

Manager, Water Quality Assurance Lab
Glarretter Carter-Burks

Acting Manager, Customer Relations
Wilbur (Frank) Fletcher

Gas Matrix Manager, Brunswick Service Center
Craig Powers

Manager, IT and Data Security
Albert Brooks

Manager, Legal Services
Charlotte Knight-Griffin

Manager, Corporate Security
Michael Starks

Controller
Roland McElrath

Manager, Water Engineering & Ops.
Odell Johnson

Manager, Customer Metering & Billing
Joseph (Joe) Byrd

Water Matrix Manager, South Service Center
Chandrika Winston

Manager, Information Services
Richard Bowker

Manager, Enterprise Resource Planning
Jon Laman

Manager, MLGW University
Fran Johnson

Manager, Budget, Plant & Rates
Rodney Cleek

Manager, Gas Engineering & Operations
Virgil Deanes

Manager, Residential Contact Centers
Carlotta Burnette

Manager, Central Support Services
Kim Pasley

Data Security Officer
John Daho

Manager, Risk Management, Employee Benefits & Pension
***Charles Perry**

Manager, General Accounting
Chundria McClain

Manager, Systems Operation
Quinton Clark

Manager, Commercial/Industrial Cust. Care
Michael Taylor

Manager, Transportation & Supply Operations
Rhonda Morgan

Manager, Labor & Employee Relations
Angela Hewlett

Acting Manager, Employment Services
Eric Conway

Manager, Treasury Management
Anne Walk

Manager, Commercial & Residential Eng.
Cynthia Inman

Acting Manager, Customer Service Field Operations
Clint Richardson

Electric Matrix Manager, Distribution Support
Reggie Bowlin

Supervisor, Compensation & HRIS
Valerie Whitlow

Acting Manager, Payroll, Cashier & Banking
Wayne Allen

Manager, Procurement and Contracts
Clifton Davis

Manager, Electric Distribution System Engineering
Wayne Jackson

Manager, Smart Meter Project
Eliza King

Manager, Electric Substation Engineering & Operations
Wayne Ellis

Revised 02.08.18

*Reports to CFO for Pension

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How to Read the Budget

INTRODUCTION

We are pleased to submit the 2018 Budget of Memphis Light, Gas and Water Division (MLGW) as required by Memphis City Ordinance #3509. This Budget has been prepared in compliance with this ordinance, which requires conformity to the Federal Energy Regulatory Commission (FERC), the regulations of any other applicable regulatory body, and in accordance with the provisions of the bond resolutions approved by the Memphis City Council.

Memphis Light, Gas and Water Division's accounting and financial practices conform with generally accepted accounting principles (GAAP), under the rules and regulations of the Governmental Accounting Standards Board (GASB) and the Financial Accounting Standards Board (FASB).

Memphis Light, Gas and Water Division was created by an amendment to the City Charter, adopted March 9, 1939. MLGW operates three separate utilities, as divisions, providing electricity and gas in the City and Shelby County. Water service is provided by MLGW in the City and, together with other municipal systems, in Shelby County. Each division operates as a separate entity for accounting and financial purposes pursuant to the City Charter. For economic reasons, activities common to all three divisions are administered jointly and costs are prorated among the divisions. The 2018 operating and capital budgets are developed simultaneously and are presented together in a combined budget. In this manner, MLGW is able to accomplish personnel planning and allocate resources to the achievement of each strategic area of focus.

THE BUDGET PROCESS

Memphis Light, Gas and Water Division develops the operating and capital expenditure budgets annually to coincide with its fiscal year, which extends from January 1 to December 31. The budget process begins early in the year that precedes the fiscal year for which the budget will take effect. The entire process continues for several months until final approval is obtained by the Memphis City Council.

At the onset of the process, a budget schedule is created to establish the critical deadlines for activities necessary in producing the final approved budget document. Some of the budget calendar events include planning meetings, multiple budget training sessions, capital project budget meetings and equipment budget meetings, all of which are completed before the end of June.

During July through August, requests for the upcoming budget year are submitted by area supervisors and departmental managers. The vice presidents are then responsible for reviewing the proposed budget and making necessary adjustments.

How to Read the Budget

The proposed budget goes through several stages of formal review and approval before being finalized. The initial level of approval occurs during September by the members of MLGW's executive staff. A preliminary budget document is subsequently developed and presented to the MLGW Board of Commissioners for review between September and October and approved in October with the final budget approved by the Memphis City Council scheduled in December.

CONTENTS OF THE BUDGET DOCUMENT

This Budget document normally begins with a message from the Chief Utility Officer, Dana Jeanes. The letter illustrates our commitment to our customers and outlines major aspects of this year's Budget. The information provided in the remaining section of the Budget document is detailed below.

ALL DIVISIONS

This section supplies a comparison of the Electric, Gas and Water Division's Income, Expense & Change in Net Position and Capital Expenditures Budget for the 2018 Budget.

ELECTRIC

The first page of this section (Page 4) is the *Income, Expense, and Changes in Net Position Comparison* for the Electric Division. It provides a side-by-side view of the 2016 Actual Expenditures, 2017 Budget, and the 2018 Budget.

The last column contains a Reference Number that can be cross-referenced with the Appendix, which provides a brief explanation or description of that specific line item; for example, Sales Revenue has a reference number of 4-1. The Appendix includes notes for 4-1 on page A2 stating that "this account includes projected revenue from the sale of electricity to the residential, commercial, industrial, outdoor lighting and traffic signal, and interdepartmental customer classes."

The next three pages (4a-4c) provide the detailed account information for each of the line items presented on page 4; for example, the four specific accounts for Non-Sales Revenue are Forfeited Discounts, Miscellaneous Service Revenue, Other Operating Revenue, and Rent from Gas/Water Property. The sum of these four accounts (Total Non-Sales Revenue) is rolled up to page 4. The detail account information provides a comparison of the 2017 Budget, 2018 Budget and the difference between the 2017 Budget and 2018 Budget.

How to Read the Budget

Next is the *Source and Application of Funds*, which includes reference numbers that correlate to the Appendices which provide a description of each line item.

The *Capital Expenditures Comparison* (page 6) gives a comparison of the 2016 Actual, 2017 Budget, and the 2018 Budget. Again, the last column is the Reference Number that can be used to look up explanations of each line item. The next five pages (7-11) provide information by project for each of the major line items on page 6. Each project listed has the total cost estimate of that project, the amount that will be spent prior to the Budget year, the amount that will be spent in the Budget year, as well as the remaining expenditures planned for after the Budget year.

Every project has a reference number that can be used to find a description of the project in the Appendix.

The last page of this section is the *Capital Carryover Summary*. Carryover dollars are funds that were budgeted in the previous year that were not utilized due to delays in projects, shortage of resources, or commodities ordered but not received. These dollars are a component of the 2018 Budget figures.

GAS

The Gas Division section is set up in the same format as the Electric Division: *Income, Expense, and Changes in Net Position Comparison for the Gas Division; Sources and Applications of Funds; Capital Expenditures Comparison; and the Capital Carryover Summary*. Please refer to the Electric description above for information on how to read these sections.

WATER

The Water Division section is set up in the same format as the Electric Division: *Income, Expense, and Changes in Net Position Comparison for the Water Division; Sources and Applications of Funds; Capital Expenditures Comparison; and the Capital Carryover Summary*. Please refer to the Electric description above for information on how to read these sections.

APPENDIX

This section presents a definition and/or explanation of specific line items referenced throughout the Budget document. Each page includes a heading stating what page the information is referring back to; for example, Page A1 has a heading of “Notes for Page 3 – Capital Expenditures Budget”. This means that the notes for Page 3 begin here and each line item on page three is defined.

The Appendix also includes a Glossary that defines acronyms and other terms commonly used throughout this Budget document.



MEMPHIS LIGHT, GAS AND WATER DIVISION

February 6, 2018

To Members of the MLGW Board, Memphis City Council, and Our Valued Customers:

As the Chief Utility Officer, I am honored to present the 2018 Budget for the Memphis Light, Gas and Water Division (MLGW). Though my role as Chief Utility Officer will be short lived, it is my goal to deliver a budget that has significant positive implications for the Division and our customers for 2018.

I am proud of the consistent, measurable progress we have demonstrated over the years; this 2018 Budget will allow us to continue building upon that success. The 2018 Budget includes a 2.0 percent rate increase for both the Electric and Gas Divisions and a 1.05 percent increase for the Water Division. These small rate increases will contribute to maintaining the measurable progress that the Division has demonstrated over the years; however, additional rate increases will be required in the coming years for the Division's financial position to strengthen and remain stable. Future rate increases will be required across all three divisions. The additional revenue generated from these proposed rate increases will be used to fund a portion of our capital program. This will reduce the need to issue long-term debt and incur interest costs to finance that portion of our capital program related to the replacement of existing assets. The new revenue will also aid in balancing the operating budget and will strengthen our financial position across all divisions.

As always, our overarching goal is to provide for the resources needed to deliver reliable, high quality services to our customers while maintaining the lowest combined rates of any utility in the country. The 2018 Budget reflects the continued deployment of the latest technologies. These new technologies will help contain future controllable costs and aid in keeping rates low compared to our peers across the country.

Budget Summary

The Total Operating and Capital Budget for 2018 is \$1.95 billion. Almost \$1.1 billion or approximately 66.2 percent of operating expense is budgeted for purchased power and gas costs. MLGW's operations and maintenance expenses total \$411.8 million, 23.9 percent of the total Operating Budget. MLGW's payment in lieu of taxes to local governments is projected to be \$77.5 million.

Other major highlights of the 2018 Budget are as follows:

- Continued deployment of technology so as to improve electrical reliability and outage restoration
- Construction of Substation No. 89 to serve a growing C&I load in southeastern Shelby County
- Continued capital reinvestment in our infrastructure
- Continued rehabilitation of our water pumping stations
- Major upgrade of security infrastructure to monitor and protect critical system assets

MLGW's capital program of \$225.5 million reflects our commitment toward maintaining the integrity and reliability of our system infrastructure.

In conclusion, the 2018 Budget demonstrates MLGW's continued commitment to provide high quality, reliable service to our customers in a cost-effective and efficient manner.

Respectfully,

A handwritten signature in blue ink that reads "Dana Jeanes". The signature is fluid and cursive, with the first name being the most prominent.

Dana Jeanes
Chief Utility Officer



MEMPHIS LIGHT, GAS AND WATER

2018 Budget Presentation

All dollars in thousands unless otherwise noted

Approved Rate Actions

- Electric and Gas rate increases of 2% to be implemented beginning July 2018
 - Electric rate increase generates additional revenue of \$13.3 million in 2018
 - Gas rate increase generates additional revenue of \$1.7 million in 2018
- Water rate increase of 1.05%
 - Water rate increase generates \$1.0 million
 - Rate increase is for Aquifer research

$$\begin{array}{r} E+2.28 \\ G+0.72 \\ \hline W+0.18 \\ + 3.18/\text{month} \end{array}$$

2018 Budget Details



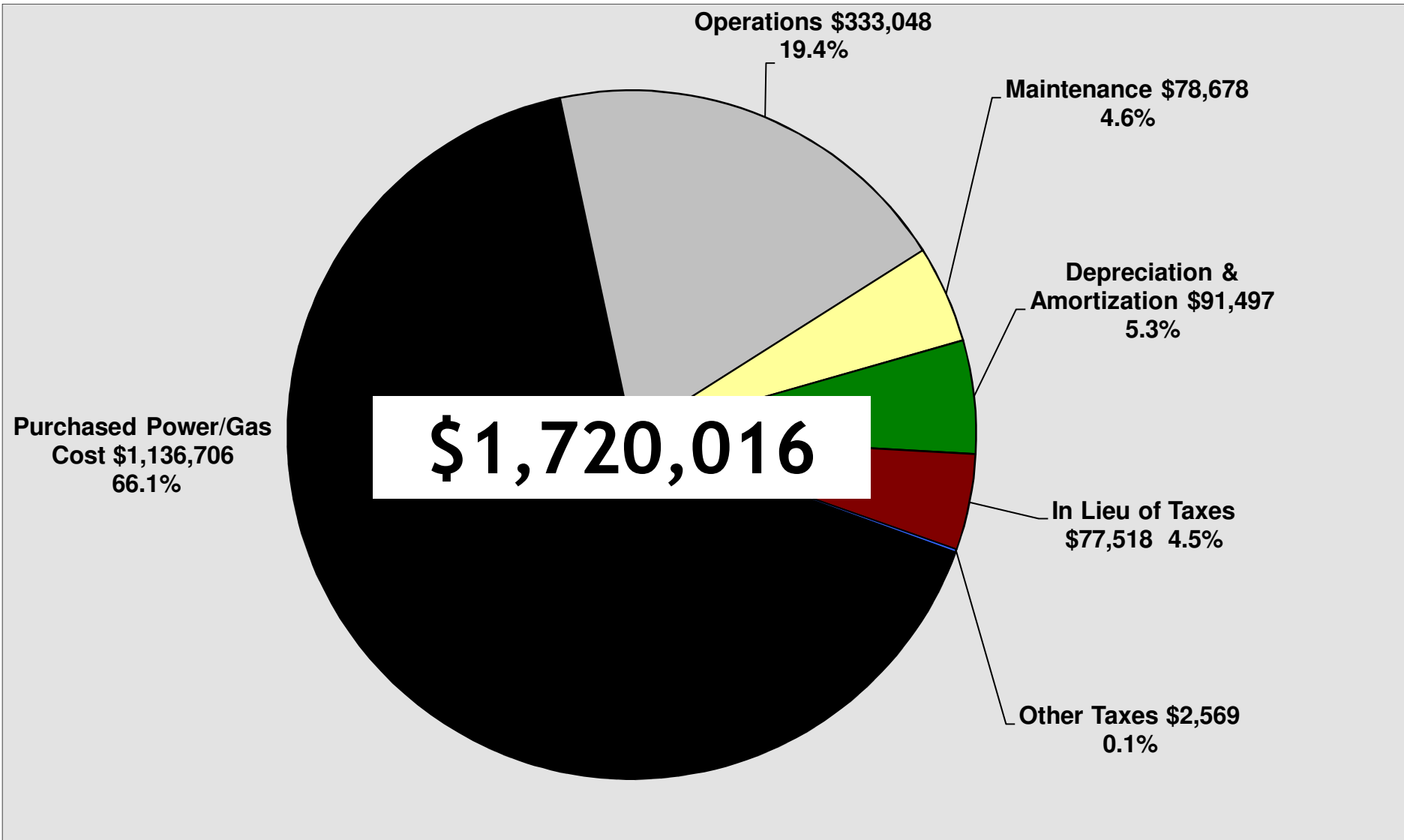
2018 Budget Summary

Dollars in Thousands

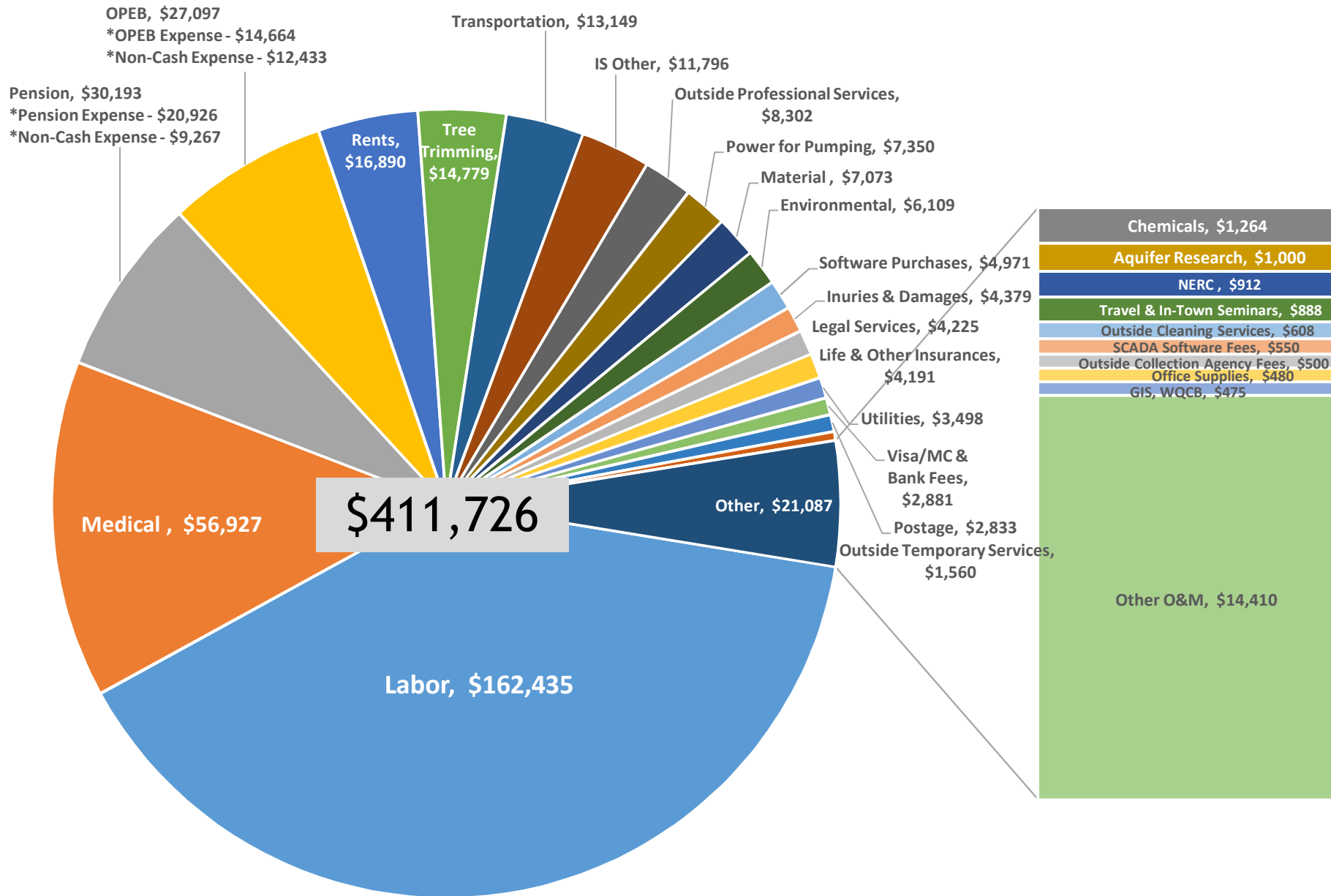
Total Operating Revenue	\$1,263,369	\$254,566	\$99,726	\$1,617,661
O&M Expense	\$213,181	\$104,157	\$94,388	\$411,726
Purchased Power & Gas	\$1,011,293	\$125,413	\$0	\$1,136,706
Depreciation & Amortization Expense	\$60,964	\$19,750	\$10,783	\$91,497
Payments in Lieu of Taxes	\$51,518	\$21,600	\$4,400	\$77,518
Other Taxes	\$1,541	\$591	\$437	\$2,569
Total Operating Expense	\$1,338,497	\$271,511	\$110,008	\$1,720,016
Total Capital Expenditures	\$112,218	\$59,711	\$53,616	\$225,545
Total Operating & Capital Budgets	\$1,450,715	\$331,222	\$163,624	\$1,945,561

Total Operating Expense All Divisions

Dollars in Thousands

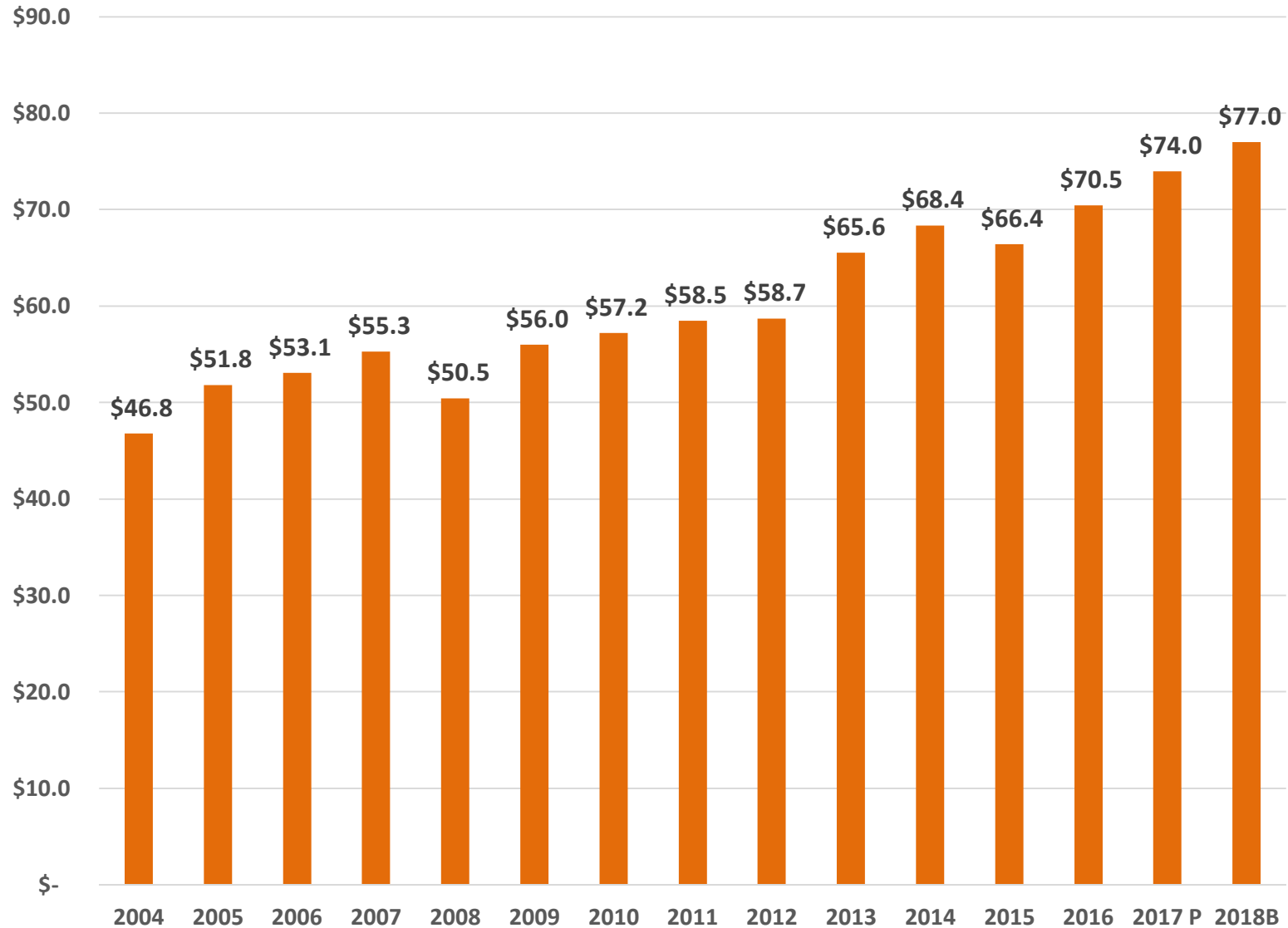


2018 Operations & Maintenance



PILOT Expense

\$ in Millions



- As MLGW adds to net plant, PILOT expenditures have increased.
- The PILOT expenditure budget for 2018 is \$77.0 million.

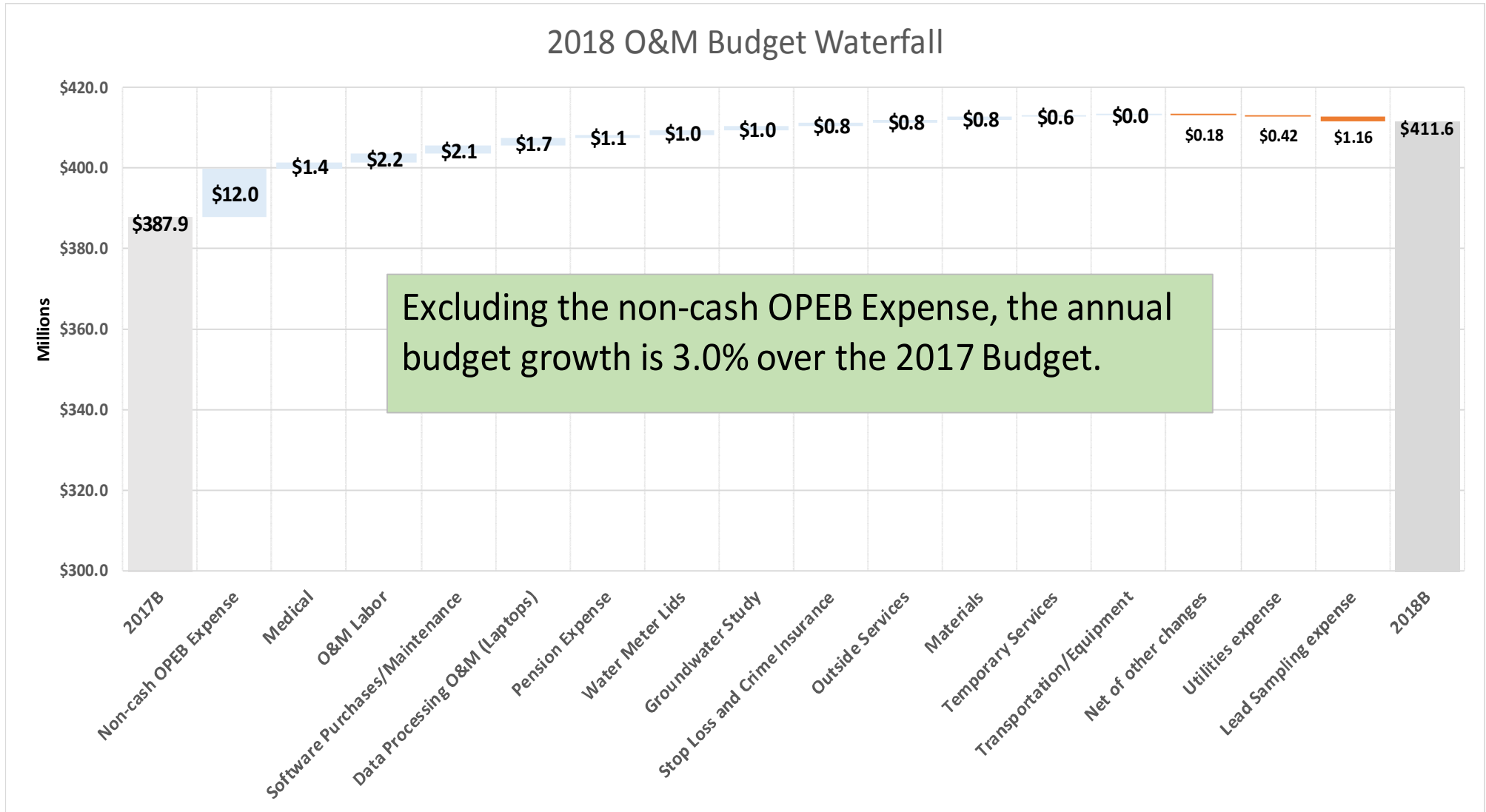


2018 Budget Income Statement Summary

Division/Category	2016 Budget	2016 Actual	2017 Budget	2018 Budget
Electric				
Operating Margin	\$224,918	\$231,378	\$234,301	\$252,076
O&M	\$189,474	\$179,487	\$200,030	\$213,181
Depreciation Expense	\$51,206	\$50,902	\$54,041	\$60,964
PILOT/FICA	\$49,983	\$48,434	\$52,764	\$53,059
Other Income	\$48,757	\$50,222	\$45,228	\$47,955
Debt Expense	\$15,915	\$15,491	\$13,101	\$10,478
Change in Net Position	(\$32,903)	(\$12,714)	(\$40,407)	(\$37,651)
Gas				
Operating Margin	\$127,256	\$113,693	\$127,445	\$129,153
O&M	\$98,644	\$92,478	\$98,974	\$104,157
Depreciation Expense	\$19,393	\$15,251	\$19,617	\$19,750
PILOT/FICA	\$21,071	\$19,750	\$22,887	\$22,191
Other Income	(\$754)	\$98	\$1,284	(\$173)
Debt Expense	\$700	\$379	\$2,136	\$2,387
Change in Net Position	(\$13,306)	(\$14,067)	(\$14,885)	(\$19,505)
Water				
Operating Margin	\$101,002	\$99,847	\$99,408	\$99,726
O&M	\$86,333	\$77,174	\$88,974	\$94,388
Depreciation Expense	\$8,486	\$7,987	\$9,609	\$10,783
PILOT/FICA	\$4,826	\$4,837	\$4,817	\$4,837
Other Income	\$704	\$740	\$576	\$671
Debt Expense	\$972	\$692	\$1,749	\$2,559
Change in Net Position	\$1,089	\$9,897	(\$5,165)	(\$12,170)

Dollars in Thousands

O&M Changes from 2017 Budget

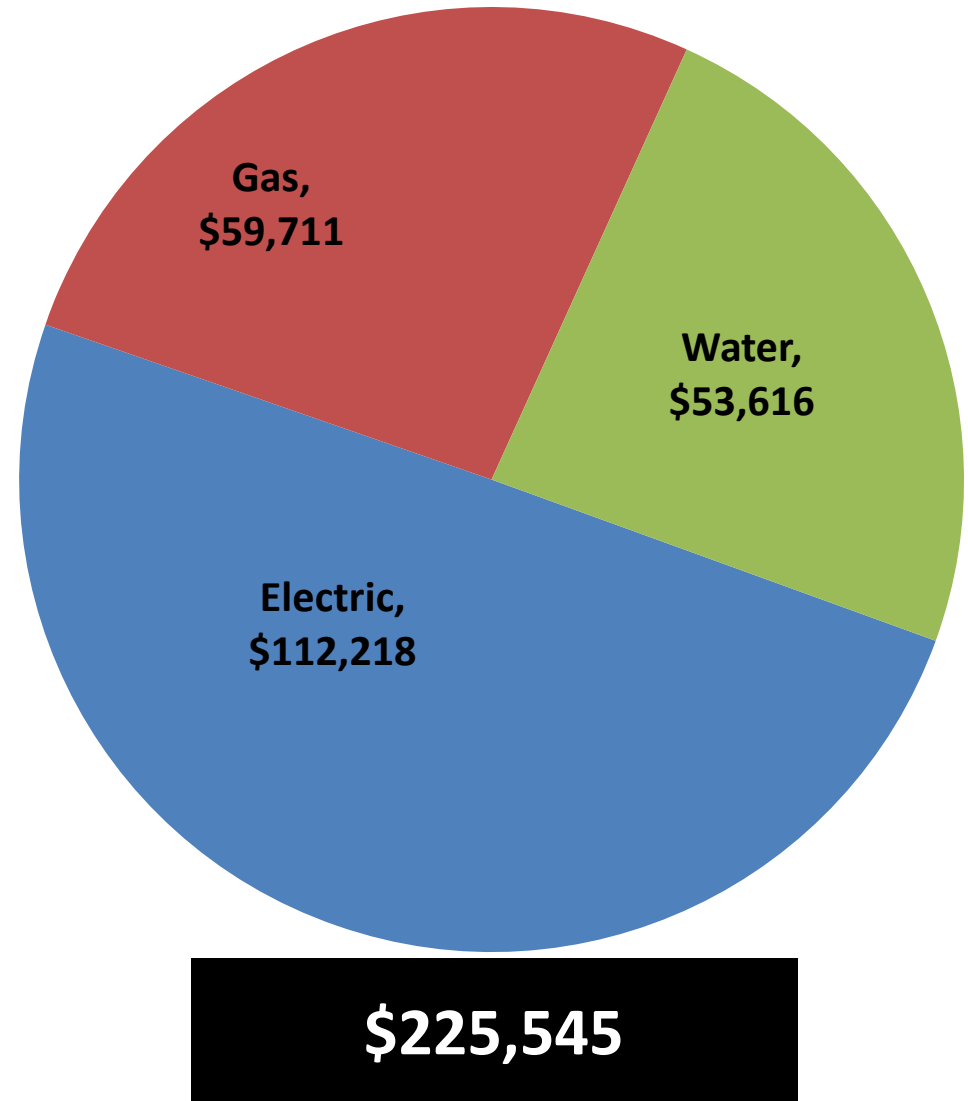


2018 Capital Budget Overview

Dollars in Thousands

CapEx Project Highlights

- Meter build out \$56.3M across all divisions
- Purchase of Transportation & Power Operated Equipment \$19.0M across all divisions
- Various water pumping station upgrades and new water wells, \$15.9M
- Service extensions to new customers , \$14.6M across all divisions
- Pipeline Integrity Management projects in the Gas Division, \$12.4M
- New electric primary distribution circuits from Substation 89, \$9.1M
- Replacement of defective feeder circuit cable, \$9.1M

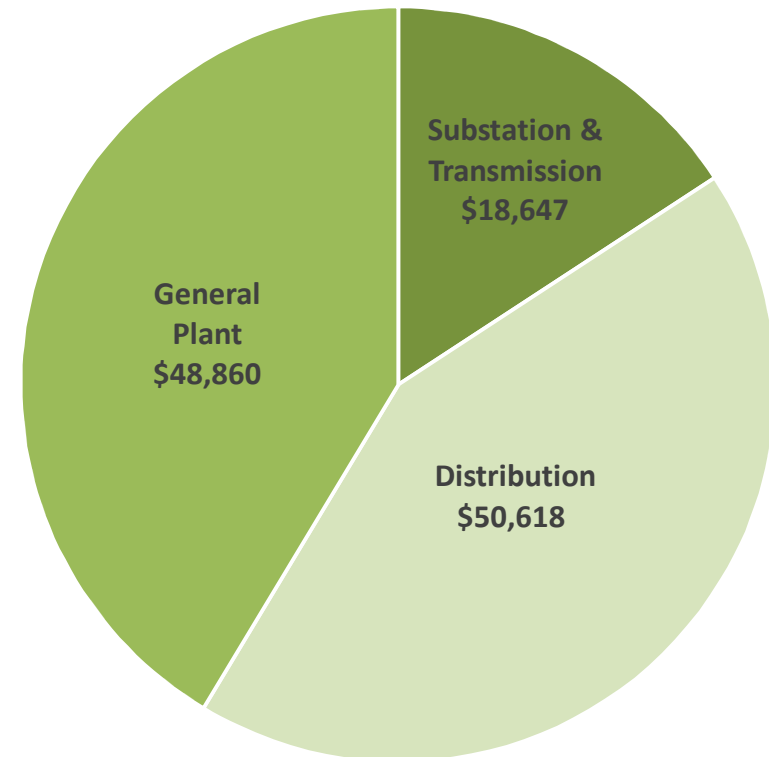


2018 Electric Capital Detail

Dollars in Thousands

Electric Capital Highlights

Purchase of Trans. & Power Operated Equipment	\$11,129
New Electric Circuits	\$9,081
Replacement of Feeder Circuit & Defective Cable	\$9,056
Communication Towers & Telecommunication Network	\$8,867
Electric Meters	\$8,426
Extensions to Serve New Customers - UG Apts. & Commercial	\$7,666
Substations Installations	\$7,149
Replacement of Distribution Transformers	\$6,010
IVR Replacement	\$5,940
Mobile Dispatching System Replacment & Expansion	\$4,000
Replacement of Substation Transformers	\$4,535
Meter Data Management System	\$3,393
Security Automation Video & Alarm System	\$2,673

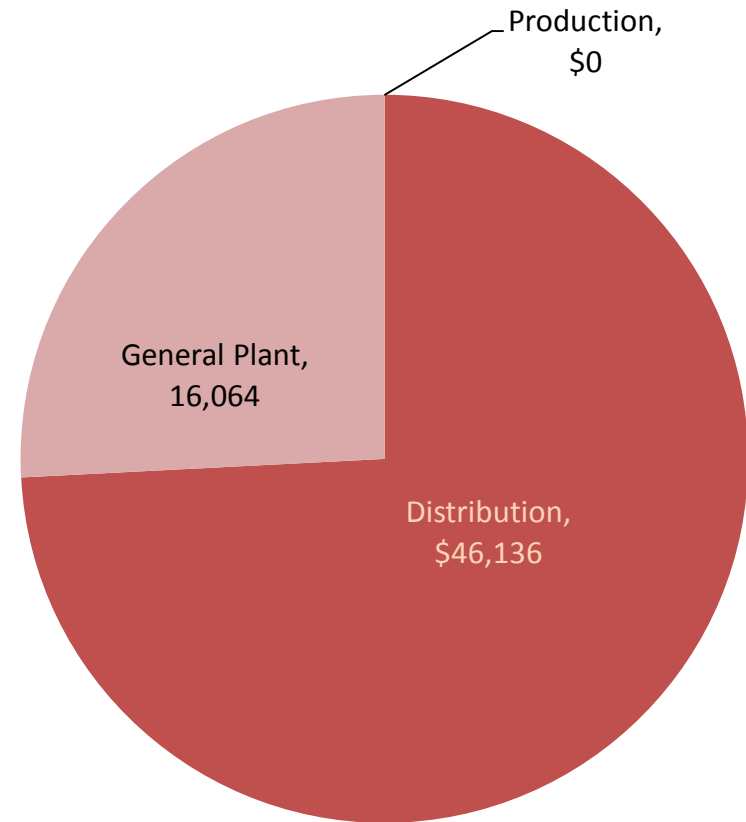


2018 Gas Capital Detail

Dollars in Thousands

Gas Capital Highlights

Purchase of Meters & Metering Equipment	\$28,457
Pipeline Integrity Management	\$12,430
Purch. of Trans. Equip. & Power Operated	\$6,313
Extensions to Serve New Customers	\$3,752
Oracle ULA/1000	\$3,437
Security Automation Video & Alarm System	\$2,565
Relocation of Mains - Street Improvements	\$2,020

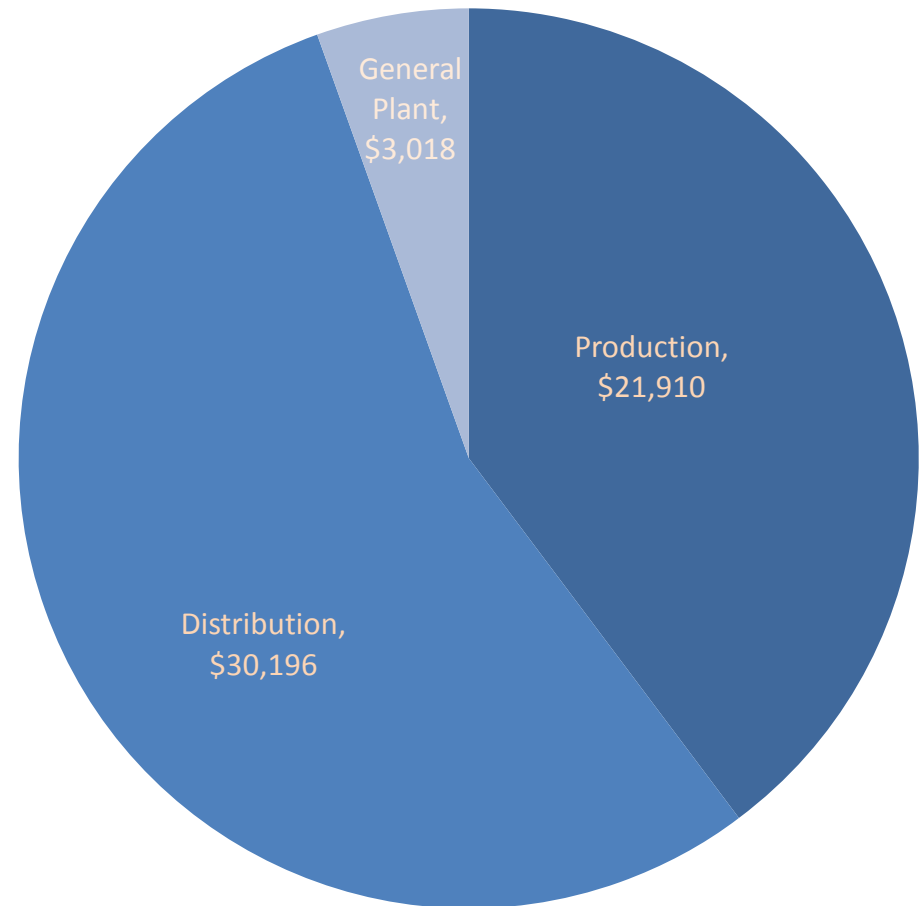


2018 Water Capital Detail

Dollars in Thousands

Water Capital Highlights

Purchase of Meters	\$16,067
New Water Main	\$8,889
Various Pumping Station Upgrades	\$8,035
Various Production Well Upgrades	\$7,867
Purch. of Trans. Equip. & Power Operated	\$1,565
Extensions to Serve New Customers	\$3,136
Relocations of Mains - Street Improvements	\$2,350
Security Automation Video & Alarm System	\$866



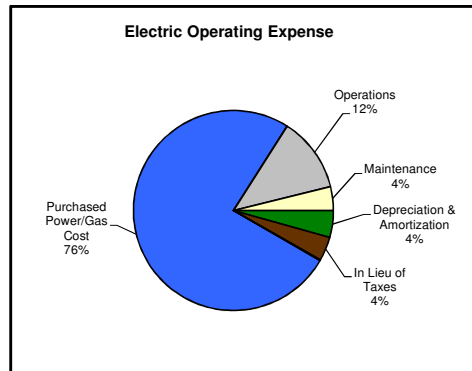


Questions/Comments

**2018 MLGW
BUDGET HIGHLIGHTS**

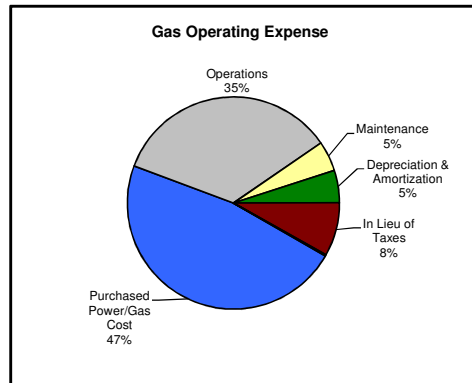
ELECTRIC DIVISION
(In Thousands)

Total Operating Revenue	\$ 1,263,369
Purchased Power	\$ 1,011,293
Total O&M Expense	\$ 213,181
Other Operating Expense	\$ 114,023
Total Operating Expense	\$ 1,338,497
Operating Income (Loss)	\$ (75,128)
Change in Net Position	\$ (37,651)
CAPITAL PROGRAM	\$ 112,218



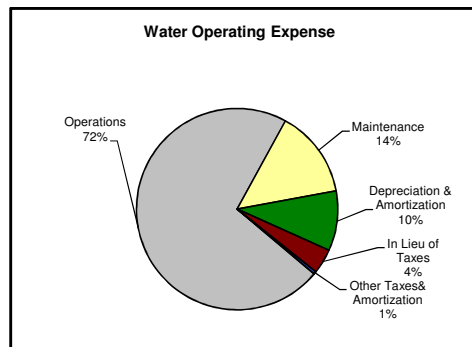
GAS DIVISION
(In Thousands)

Total Operating Revenue	\$ 254,566
Purchased Gas	\$ 125,413
Total O&M Expense	\$ 104,157
Other Operating Expense	\$ 41,941
Total Operating Expense	\$ 271,511
Operating Income (Loss)	\$ (16,945)
Change in Net Position	\$ (19,505)
CAPITAL PROGRAM	\$ 59,711



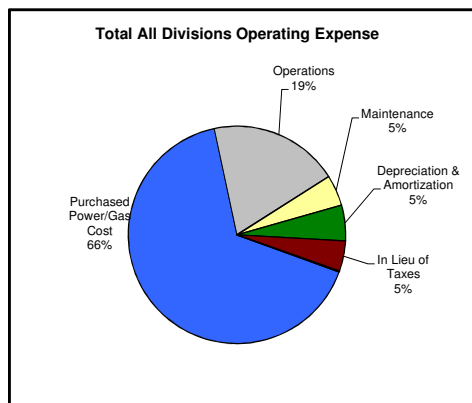
WATER DIVISION
(In Thousands)

Total Operating Revenue	\$ 99,726
Total O&M Expense	\$ 94,388
Other Operating Expense	\$ 15,620
Total Operating Expense	\$ 110,008
Operating Income (Loss)	\$ (10,282)
Change in Net Position	\$ (12,170)
CAPITAL PROGRAM	\$ 53,616



ALL DIVISIONS
(In Thousands)

TOTAL OPERATING REVENUE	\$ 1,617,661
TOTAL PURCHASED POWER & GAS	\$ 1,136,706
TOTAL O&M EXPENSE	\$ 411,726
TOTAL OTHER OPERATING EXPENSE	\$ 171,584
TOTAL OPERATING EXPENSE	\$ 1,720,016
OPERATING INCOME	\$ (102,355)
CHANGE IN NET POSITION	\$ (69,326)
TOTAL CAPITAL PROGRAM	\$ 225,545





ALL DIVISIONS

**MEMPHIS LIGHT, GAS AND WATER DIVISION
INCOME, EXPENSE, AND CHANGES IN NET POSITION COMPARISON
FOR CALENDAR YEAR OF 2018**

ALL DIVISIONS

PAGE 2

DESCRIPTION	THOUSANDS OF DOLLARS			
	ELECTRIC DIVISION	GAS DIVISION	WATER DIVISION	TOTAL
<u>OPERATING REVENUE</u>				
Sales Revenue	1,237,051	225,931	95,758	1,558,740
Revenue Adjustment for Uncollectibles	(6,851)	(1,346)	(945)	(9,142)
Non-Sales Revenue	33,169	29,981	4,913	68,063
OPERATING REVENUE	1,263,369	254,566	99,726	1,617,661
<u>OPERATING EXPENSE</u>				
Purchased Power	1,011,293	-	-	1,011,293
Purchased Gas	-	123,421	-	123,421
Compressed Natural Gas (CNG)	-	24	-	24
Liquefied Natural Gas (LNG)	-	1,968	-	1,968
Production Expense	-	1,681	14,530	16,211
Transmission Expense	7,023	-	-	7,023
Distribution Expense	38,573	28,597	16,288	83,458
Customer Accounts Expense	14,726	9,985	7,120	31,831
Customer Service & Information Expense	1,917	1,514	779	4,210
Sales Expense	860	573	537	1,970
Administrative & General Expense	99,061	49,672	39,612	188,345
OPERATING EXPENSE	1,173,453	217,435	78,866	1,469,754
<u>MAINTENANCE EXPENSE</u>				
Transmission Expense	3,689	-	-	3,689
Production Expense	-	752	3,562	4,314
Distribution Expense	42,806	10,631	10,586	64,023
Administrative & General Expense	4,526	752	1,374	6,652
MAINTENANCE EXPENSE	51,021	12,135	15,522	78,678
<u>OTHER OPERATING EXPENSE</u>				
Depreciation Expense	58,367	13,051	11,450	82,868
Payment in Lieu of Taxes	51,518	21,600	4,400	77,518
F.I.C.A. Taxes	1,541	591	437	2,569
Amortization of Leasehold Improvements	-	38	-	38
Amortization of SCBPU Acquisition Adjustments	-	-	(915)	(915)
Amortization of Legacy Meters	797	1,161	248	2,206
Amortization of Software	1,800	5,500	-	7,300
OTHER OPERATING EXPENSE	114,023	41,941	15,620	171,584
TOTAL OPERATING EXPENSE	1,338,497	271,511	110,008	1,720,016
<u>INCOME</u>				
Operating Income	(75,128)	(16,945)	(10,282)	(102,355)
Other Income	47,955	(173)	671	48,453
Reduction of Plant Cost Recovered through CIAC	(13,020)	(12,698)	(3,390)	(29,108)
NET INCOME BEFORE DEBT EXPENSE	(40,193)	(29,816)	(13,001)	(83,010)
<u>DEBT EXPENSE</u>				
Interest Expense - Long Term Debt	13,595	3,537	2,795	19,927
Interest Expense - Other	-	-	-	-
Amortization of Debt Discount & Expense	(3,117)	(1,150)	(236)	(4,503)
TOTAL DEBT EXPENSE	10,478	2,387	2,559	15,424
	(50,671)	(32,203)	(15,560)	(98,434)
Contributions in Aid of Construction	13,020	12,698	3,390	29,108
CHANGE IN NET POSITION	(37,651)	(19,505)	(12,170)	(69,326)

**MEMPHIS LIGHT, GAS AND WATER DIVISION
INCOME, EXPENSE, AND CHANGES IN NET POSITION COMPARISON
FOR CALENDAR YEAR OF 2018**

ALL DIVISIONS

PAGE 2a

DESCRIPTION	THOUSANDS OF DOLLARS			
	ELECTRIC DIVISION	GAS DIVISION	WATER DIVISION	TOTAL
<u>OPERATING REVENUE</u>				
Sales Revenue	1,237,051	225,931	95,758	1,558,740
Revenue Adjustment for Uncollectibles	(6,851)	(1,346)	(945)	(9,142)
Non-Sales Revenue				
Forfeited Discounts	12,601	3,138	1,412	17,151
Miscellaneous Service Revenue	11,700	2,776	1,595	16,071
Cross Connection Revenue	-	-	1,380	1,380
Other Operating Revenue	1,356	480	360	2,196
Compressed Natural Gas (CNG)	-	84	-	84
Liquefied Natural Gas (LNG)	-	4,488	-	4,488
Rent from Electric/Gas/Water Property	7,512	10,850	166	18,528
Transported Gas	-	8,165	-	8,165
Total Non-Sales Revenue	33,169	29,981	4,913	68,063
OPERATING REVENUE	1,263,369	254,566	99,726	1,617,661
<u>OPERATING EXPENSE</u>				
Purchased Power	1,011,293	-	-	1,011,293
Purchased Gas	-	123,421	-	123,421
Compressed Natural Gas (CNG)	-	24	-	24
Liquified Natural Gas (LNG)	-	1,968	-	1,968
Production Expense				
Chemicals	-	-	1,264	1,264
Fuel Gas	-	355	-	355
Fuel or Power Purchased for Pumping	-	-	7,350	7,350
Miscellaneous Expense	-	-	2,874	2,874
Operation Labor and Expenses	-	1,203	2,566	3,769
Operation Supervision and Engineering	-	123	200	323
Pumping Labor and Expenses	-	-	276	276
Total Production Expense	-	1,681	14,530	16,211
Transmission Expense				
Load Dispatching	969	-	-	969
Miscellaneous Transmission Expenses	1,144	-	-	1,144
Operation Supervision and Engineering	4,238	-	-	4,238
Overhead Transmission Line Expenses	5	-	-	5
Station Expenses	608	-	-	608
Underground Transmission Line Expenses	59	-	-	59
Total Transmission Expense	7,023	-	-	7,023
Distribution Expense				
Customer Installation Expenses	-	5,611	3,831	9,442
Distribution Load Dispatching Expense	968	630	-	1,598
Mains and Services	-	3,685	-	3,685
Measuring and Regulating Expenses	-	507	-	507
Meter and House Regulator Expenses	761	3,638	618	5,017
Miscellaneous Distribution Expenses ⁽¹⁾	19,361	11,263	8,915	39,539
Operation Supervision and Engineering	5,564	3,239	2,035	10,838
Overhead Distribution Line Expense	2,178	-	-	2,178
Rents	-	24	2	26
Services on Customers' Premises	5,904	-	-	5,904
Station Expenses	1,423	-	-	1,423
Storage Facilities	-	-	272	272
Street Lighting and Signal System Expenses	336	-	-	336
Transmission and Distribution Lines	-	-	615	615
	2,078	-	-	2,078
	38,573	28,597	16,288	83,458

⁽¹⁾ Includes, but not limited to, the following items: Accrued vacation, absences such as holiday and sick leave, lost time due to bad weather, stand-by pay, and contract services.

**MEMPHIS LIGHT, GAS AND WATER DIVISION
INCOME, EXPENSE, AND CHANGES IN NET POSITION COMPARISON
FOR CALENDAR YEAR OF 2018**

ALL DIVISIONS

PAGE 2b

DESCRIPTION	THOUSANDS OF DOLLARS			
	ELECTRIC DIVISION	GAS DIVISION	WATER DIVISION	TOTAL
<u>OPERATING EXPENSE (Continued)</u>				
Customer Accounts Expense				
Customer Order, Records and Collection Expenses	13,053	8,386	6,153	27,592
Meter Reading Expenses	1,610	1,552	930	4,092
Supervision-Customer Accounting and Collection	63	47	37	147
Total Customer Accounts Expense	14,726	9,985	7,120	31,831
Customer Service & Information Expense				
Customer Assistance Expenses	1,217	793	576	2,586
Informational and Instructional Advertising Expenses	138	52	110	300
Miscellaneous Customer Service & Informational Expenses	404	552	-	956
Supervision-Customer Service and Information	158	117	93	368
Total Customer Service & Information Expense	1,917	1,514	779	4,210
Sales Expense				
Miscellaneous Sales Expenses	860	573	458	1,891
Sales Expense and Supervision	-	-	79	79
Total Sales Expense	860	573	537	1,970
Administrative & General Expense				
Administrative and General Salaries	13,602	5,498	3,771	22,871
Administration Expenses Transferred to Capital	(5,367)	(1,099)	(894)	(7,360)
Pension Expense	11,463	5,687	3,776	20,926
Pension Non-Cash Expense	5,076	2,518	1,673	9,267
Other Active & Retiree Benefits	25,881	14,949	10,128	50,958
Other Post Employment Benefits Funding	8,033	3,985	2,646	14,664
Other Post Employment Benefits Non-Cash	6,810	3,379	2,244	12,433
Injuries and Damages	3,986	2,241	2,114	8,341
Miscellaneous General Expenses ⁽²⁾	10,303	3,481	3,294	17,078
Office Supplies and Expenses	2,858	1,236	931	5,025
Outside Services Employed	7,674	3,306	4,400	15,380
Property Insurance	912	446	296	1,654
Rents-Miscellaneous	7,830	4,045	5,233	17,108
Total Administrative & General Expense	99,061	49,672	39,612	188,345
OPERATING EXPENSE	1,173,453	217,435	78,866	1,469,754
<u>MAINTENANCE EXPENSE</u>				
Transmission Expense				
Maintenance of Overhead Transmission Lines	1,430	-	-	1,430
Maintenance of Station Equipment	684	-	-	684
Maintenance of Underground Transmission Lines	667	-	-	667
Maintenance Supervision and Engineering	908	-	-	908
Total Transmission Expense	3,689	-	-	3,689
Production Expense				
Maintenance of Holders	-	-	-	-
Maintenance of Other Equipment	-	363	-	363
Maintenance of Pumping Equipment	-	-	2,157	2,157
Maintenance of Structures and Improvements	-	205	-	205
Maintenance of Water Treatment Equipment	-	-	428	428
Maintenance of Wells	-	-	891	891
Maintenance Supervision and Engineering	-	184	86	270
Total Production Expense	-	752	3,562	4,314

⁽²⁾ Includes, but not limited to, the following items: Mail distribution, property appraisals, security and janitorial services, and fuel use by MLGW.

**MEMPHIS LIGHT, GAS AND WATER DIVISION
INCOME, EXPENSE, AND CHANGES IN NET POSITION COMPARISON
FOR CALENDAR YEAR OF 2018**

ALL DIVISIONS

PAGE 2c

DESCRIPTION	THOUSANDS OF DOLLARS			
	ELECTRIC DIVISION	GAS DIVISION	WATER DIVISION	TOTAL
<u>MAINTENANCE EXPENSE (Continued)</u>				
Distribution Expense				
Maintenance of Hydrants	-	-	471	471
Maintenance of Line Transformers	1,860	-	-	1,860
Maintenance of Mains	-	6,909	-	6,909
Maintenance of Meters	2,521	642	4,609	7,772
Maintenance of Miscellaneous Distribution Plant	574	-	8	582
Maintenance of Overhead Distribution Lines	23,335	-	-	23,335
Maintenance of Services	-	1,904	1,209	3,113
Maintenance of Station Equipment	1,157	-	-	1,157
Maintenance of Street Lighting and Signal System	4,322	-	-	4,322
Maintenance of Structures and Improvements	3	1	-	4
Maintenance of Transmission and Distribution Mains	-	-	4,289	4,289
Maintenance of Underground Distribution Lines	6,801	-	-	6,801
Maintenance Supervision and Engineering	2,233	83	-	2,316
Measuring and Regulating Equipment Expenses	-	1,092	-	1,092
Total Distribution Expense	42,806	10,631	10,586	64,023
Administrative & General Expense				
Maintenance of General Plant	4,526	752	1,374	6,652
Total Administrative & General Expense	4,526	752	1,374	6,652
MAINTENANCE EXPENSE	51,021	12,135	15,522	78,678
<u>OTHER OPERATING EXPENSE</u>				
Depreciation Expense	58,367	13,051	11,450	82,868
Payment in Lieu of Taxes	51,518	21,600	4,400	77,518
F.I.C.A. Taxes	1,541	591	437	2,569
Amortization of Leasehold Improvements	-	38	-	38
Amortization of SCBPU Acquisition Adjustments	-	-	(915)	(915)
Amortization of Legacy Meters	797	1,161	248	2,206
Amortization of Software	1,800	5,500	-	7,300
OTHER OPERATING EXPENSE	114,023	41,941	15,620	171,584
TOTAL OPERATING EXPENSE	1,338,497	271,511	110,008	1,720,016
<u>INCOME</u>				
Operating Income	(75,128)	(16,945)	(10,282)	(102,355)
Other Income				
Expenses of Merchandising, Jobbing & Contracts	-	(3,182)	-	(3,182)
Revenues from Merchandising, Jobbing & Contracts	-	1,538	-	1,538
Allowance for Funds Used During Construction	280	-	37	317
Revenues from Non-Utility Property	-	15	-	15
Interest Income - Gas Margins	-	-	-	-
Revenues from Common Transportation Equipment	-	766	-	766
Revenues from Sinking & Other Funds-Interest Income	1,012	443	120	1,575
Medicare Part D Refund	402	179	119	700
Non-Operating Income - Prepay Credit	10,986	-	-	10,986
Non-Operating Income - TVA Transmission Credit	33,900	-	-	33,900
Miscellaneous Non-Operating Income	1,375	68	395	1,838
Total Other Income	47,955	(173)	671	48,453
Contributions in Aid of Construction	(13,020)	(12,698)	(3,390)	(29,108)
NET INCOME BEFORE DEBT EXPENSE	(40,193)	(29,816)	(13,001)	(83,010)

**MEMPHIS LIGHT, GAS AND WATER DIVISION
INCOME, EXPENSE, AND CHANGES IN NET POSITION COMPARISON
FOR CALENDAR YEAR OF 2018**

ALL DIVISIONS

PAGE 2d

DESCRIPTION	THOUSANDS OF DOLLARS			
	ELECTRIC DIVISION	GAS DIVISION	WATER DIVISION	TOTAL
DEBT EXPENSE				
Interest Expense - Long-Term Debt				
Interest on Ltd - Revenue Refunding Bonds 1998	-	-	-	-
Interest on Ltd - Revenue Refunding Bonds 2001	-	-	-	-
Interest on Ltd - Revenue Refunding Bonds 2002	-	-	-	-
Interest on Ltd - Series 2008	2,790	-	-	2,790
Interest on Ltd - Series 2010	2,432	-	-	2,432
Interest on Ltd - Series 2014	2,882	-	480	3,362
Interest on Ltd - Series 2016	1,731	1,731	888	4,350
Interest on Ltd - Series 2017	3,760	1,806	927	6,493
Interest on Ltd - Series 2018	-	-	500	500
Total Interest Expense - Long-Term Debt	13,595	3,537	2,795	19,927
Amortization of Debt Discount & Expense				
Amortization of Debt Disc & Exp - Series 2008	(172)	-	-	(172)
Amortization of Debt Disc & Exp - Series 2010	(1,118)	-	-	(1,118)
Amortization of Debt Disc & Exp - Series 2014	(671)	-	(54)	(725)
Amortization of Debt Disc & Exp - Series 2016	(621)	(620)	(182)	(1,423)
Amortization of Debt Disc & Exp - Series 2017	(535)	(530)	-	(1,065)
Total Amortization of Debt Discount & Expense	(3,117)	(1,150)	(236)	(4,503)
TOTAL DEBT EXPENSE	10,478	2,387	2,559	15,424
NET INCOME AFTER DEBT EXPENSE	(50,671)	(32,203)	(15,560)	(98,434)
Contributions in Aid of Construction	13,020	12,698	3,390	29,108
CHANGE IN NET POSITION	(37,651)	(19,505)	(12,170)	(69,326)

MEMPHIS LIGHT, GAS AND WATER DIVISION
 CAPITAL EXPENDITURES
 FOR CALENDAR YEAR OF 2018

ELECTRIC

PAGE 3

DESCRIPTION	THOUSANDS OF DOLLARS				REF. NO.
	ELECTRIC DIVISION	GAS DIVISION	WATER DIVISION	TOTAL	
Renewal and Replacement Fund	-	-		-	3-1
Current Revenues	112,218	59,711	23,616	195,546	3-2
Debt Issuance	-	-	30,000	30,000	3-3
TOTAL 2018 CAPITAL EXPENDITURES	112,218	59,711	53,616	225,546	

ELECTRIC DIVISION



MEMPHIS LIGHT, GAS AND WATER DIVISION
INCOME, EXPENSE, AND CHANGES IN NET POSITION COMPARISON
2017 THROUGH 2018

ELECTRIC DIVISION

PAGE 4

DESCRIPTION	THOUSANDS OF DOLLARS			REF. NO.
	2016 ACTUAL	2017 BUDGET	2018 BUDGET	
<u>OPERATING REVENUE</u>				
Sales Revenue	1,226,415	1,218,668	1,237,051	4-1
Revenue Adjustment for Uncollectibles	(6,829)	(6,093)	(6,851)	4-2
Non-Sales Revenue	29,949	29,392	33,169	4-3
OPERATING REVENUE	1,249,535	1,241,967	1,263,369	
<u>OPERATING EXPENSE</u>				
Purchased Power	1,018,157	1,007,666	1,011,293	4-4
Transmission Expense	5,798	6,497	7,023	4-5
Distribution Expense	35,597	39,399	38,573	4-6
Customer Accounts Expense	14,556	15,074	14,726	4-7
Customer Service & Information Expense	1,814	1,902	1,917	4-8
Sales Expense	711	858	860	4-9
Administrative & General Expense	76,737	87,691	99,061	4-10
OPERATING EXPENSE	1,153,370	1,159,087	1,173,453	
<u>MAINTENANCE EXPENSE</u>				
Transmission Expense	3,316	3,581	3,689	4-11
Distribution Expense	36,897	40,434	42,806	4-12
Administrative & General Expense	4,061	4,594	4,526	4-13
MAINTENANCE EXPENSE	44,274	48,609	51,021	
<u>OTHER OPERATING EXPENSE</u>				
Depreciation Expense	50,042	54,041	58,367	4-14
Payment in Lieu of Taxes	46,891	51,292	51,518	4-15
F.I.C.A. Taxes	1,543	1,472	1,541	4-16
Amortization of Legacy Meters	-	-	797	4-17
Amortization of Software	860	-	1,800	4-18
OTHER OPERATING EXPENSE	99,336	106,805	114,023	
TOTAL OPERATING EXPENSE	1,296,980	1,314,501	1,338,497	
<u>INCOME</u>				
Operating Income	(47,445)	(72,534)	(75,128)	4-19
Other Income	50,222	45,228	47,955	4-20
Reduction of Plant Cost Recovered through CIAC	(10,444)	(17,963)	(13,020)	4-21
NET INCOME BEFORE DEBT EXPENSE	(7,667)	(45,269)	(40,193)	
<u>DEBT EXPENSE</u>				
Interest Expense - Existing Long-Term Debt	20,246	16,602	13,595	4-22
Amortization of Debt Discount & Expense	(4,755)	(3,501)	(3,117)	4-23
TOTAL DEBT EXPENSE	15,491	13,101	10,478	
NET INCOME AFTER DEBT EXPENSE	(23,158)	(58,370)	(50,671)	
Contributions in Aid of Construction	10,444	17,963	13,020	4-24
CHANGE IN NET POSITION	(12,714)	(40,407)	(37,651)	

**MEMPHIS LIGHT, GAS AND WATER DIVISION
INCOME, EXPENSE, AND CHANGES IN NET POSITION COMPARISON
2017 THROUGH 2018**

ELECTRIC DIVISION

PAGE 4a

DESCRIPTION	THOUSANDS OF DOLLARS		
	2017 BUDGET	2018 BUDGET	DIFFERENCE
<u>OPERATING REVENUE</u>			
Sales Revenue	1,218,668	1,237,051	18,383
Revenue Adjustment for Uncollectibles	(6,093)	(6,851)	(758)
Non-Sales Revenue			
Forfeited Discounts	11,456	12,601	1,145
Miscellaneous Service Revenue	11,004	11,700	696
Other Operating Revenue	1,258	1,356	98
Rent from Gas/Water Property	5,674	7,512	1,838
Total Non-Sales Revenue	29,392	33,169	3,777
OPERATING REVENUE	1,241,967	1,263,369	21,402
<u>OPERATING EXPENSE</u>			
Purchased Power	1,007,666	1,011,293	3,627
Transmission Expense			
Load Dispatching	985	969	(16)
Miscellaneous Transmission Expenses	1,073	1,144	71
Operation Supervision and Engineering	3,891	4,238	347
Overhead Transmission Line Expenses	6	5	(1)
Station Expenses	485	608	123
Underground Transmission Line Expenses	57	59	2
Total Transmission Expense	6,497	7,023	526
Distribution Expense			
Distribution Load Dispatching Expense	985	968	(17)
Meter Expenses	901	761	(140)
Miscellaneous Distribution Expenses ⁽¹⁾	19,535	19,361	(174)
Operation Supervision and Engineering	5,346	5,564	218
Overhead Distribution Line Expense	1,989	2,178	189
Services on Customers' Premises	6,619	5,904	(715)
Station Expenses	1,282	1,423	141
Street Lighting and Signal System Expenses	337	336	(1)
Underground Distribution Line Expenses	2,405	2,078	(327)
Total Distribution Expense	39,399	38,573	(826)
Customer Accounts Expense			
Customer Order, Records and Collection Expenses	13,099	13,053	(46)
Meter Reading Expenses	1,913	1,610	(303)
Supervision-Customer Accounting and Collection	62	63	1
Total Customer Accounts Expense	15,074	14,726	(348)
Customer Service & Information Expense			
Customer Assistance Expenses	1,222	1,217	(5)
Informational and Instructional Advertising Expenses	161	138	(23)
Miscellaneous Customer Service & Information Expense	387	404	17
Supervision-Customer Service and Information	132	158	26
Total Customer Service & Information Expense	1,902	1,917	15
Sales Expense			
Miscellaneous Sales Expenses	858	860	2
Total Sales Expense	858	860	2

⁽¹⁾ Includes, but not limited to, the following items: Accrued vacation, absences such as holiday and sick leave, lost time due to bad weather, stand-by pay, and contract services.

**MEMPHIS LIGHT, GAS AND WATER DIVISION
INCOME, EXPENSE, AND CHANGES IN NET POSITION COMPARISON
2017 THROUGH 2018**

ELECTRIC DIVISION

PAGE 4b

DESCRIPTION	THOUSANDS OF DOLLARS		
	2017 BUDGET	2018 BUDGET	DIFFERENCE
<u>OPERATING EXPENSE (Continued)</u>			
Administrative & General Expense			
Administrative and General Salaries	12,802	13,602	800
Administration Expenses Transferred to Capital	(5,001)	(5,367)	(366)
Pension Expense	11,553	11,463	(90)
Pension Non-Cash Expense	4,391	5,076	685
Other Active & Retiree Benefits	25,158	25,881	723
Other Post Employment Benefits Funding	8,248	8,033	(215)
Other Post Employment Benefits Non-Cash	-	6,810	6,810
Injuries and Damages	3,958	3,986	28
Miscellaneous General Expenses ⁽²⁾	8,734	10,303	1,569
Office Supplies and Expenses	2,619	2,858	239
Outside Services Employed	7,069	7,674	605
Property Insurance	724	912	188
Rents-Miscellaneous	7,436	7,830	394
Total Administrative & General Expense	87,691	99,061	11,370
OPERATING EXPENSE	1,159,087	1,173,453	14,366
<u>MAINTENANCE EXPENSE</u>			
Transmission Expense			
Maintenance of Overhead Transmission Lines	1,195	1,430	235
Maintenance of Station Equipment	720	684	(36)
Maintenance of Underground Transmission Lines	550	667	117
Maintenance Supervision and Engineering	1,116	908	(208)
Total Transmission Expense	3,581	3,689	108
Distribution Expense			
Maintenance of Line Transformers	1,894	1,860	(34)
Maintenance of Meters	2,286	2,521	235
Maintenance of Miscellaneous Distribution Plant	587	574	(13)
Maintenance of Overhead Distribution Lines	22,697	23,335	638
Maintenance of Station Equipment	1,078	1,157	79
Maintenance of Street Lighting and Signal System	3,285	4,322	1,037
Maintenance of Structures and Improvements	4	3	(1)
Maintenance of Underground Distribution Lines	6,354	6,801	447
Maintenance Supervision and Engineering	2,249	2,233	(16)
Total Distribution Expense	40,434	42,806	2,372
Administrative & General Expense			
Maintenance of General Plant	4,594	4,526	(68)
Total Administrative & General Expense	4,594	4,526	(68)
MAINTENANCE EXPENSE	48,609	51,021	2,412

⁽²⁾ Includes, but not limited to, the following items: Mail distribution, property appraisals, security and janitorial services, and fuel use by MLGW.

MEMPHIS LIGHT, GAS AND WATER DIVISION
 INCOME, EXPENSE, AND CHANGES IN NET POSITION COMPARISON
 2017 THROUGH 2018

ELECTRIC DIVISION

PAGE 4c

DESCRIPTION	THOUSANDS OF DOLLARS		
	2017 BUDGET	2018 BUDGET	DIFFERENCE
<u>OTHER OPERATING EXPENSE</u>			
Depreciation Expense	54,041	58,367	4,326
Payment in Lieu of Taxes	51,292	51,518	226
F.I.C.A. Taxes	1,472	1,541	69
Amortization of Legacy Meters	-	797	797
Amortization of Software	-	1,800	1,800
OTHER OPERATING EXPENSE	106,805	114,023	7,218
TOTAL OPERATING EXPENSE	1,314,501	1,338,497	23,996
<u>INCOME</u>			
Operating Income	(72,534)	(75,128)	(2,594)
Other Income			
Revenues from Sinking & Other Funds - Interest Income	1,200	1,012	(188)
Allowance for Funds Used During Construction	242	280	38
Medicare Part D Refund	490	402	(88)
Non-Operating Income - Prepay Credit	8,880	10,986	2,106
Non-Operating Income - TVA Transmission Credit	33,641	33,900	259
Miscellaneous Non-Operating Income	775	1,375	600
Total Other Income	45,228	47,955	2,727
Reduction of Plant Cost Recovered through CIAC	(17,963)	(13,020)	4,943
NET INCOME BEFORE DEBT EXPENSE	(45,269)	(40,193)	5,076
<u>DEBT EXPENSE</u>			
Interest Expense - Long-Term Debt			
Interest on Ltd - Series 2008	4,437	2,790	(1,647)
Interest on Ltd - Series 2010	6,474	2,432	(4,042)
Interest on Ltd - Series 2014	2,983	2,882	(101)
Interest on Ltd - Series 2016	1,770	1,731	(39)
Interest on Ltd - Series 2017	938	3,760	2,822
Total Interest Expense - Long-Term Debt	16,602	13,595	(3,007)
Amortization of Debt Discount & Expense			
Amortization of Debt Disc & Exp - Series 2008	(274)	(172)	102
Amortization of Debt Disc & Exp - Series 2010	(1,886)	(1,118)	768
Amortization of Debt Disc & Exp - Series 2014	(706)	(671)	35
Amortization of Debt Disc & Exp - Series 2016	(635)	(621)	14
Amortization of Debt Disc & Exp - Series 2017	-	(535)	(535)
Total Amortization of Debt Discount & Expense	(3,501)	(3,117)	384
TOTAL DEBT EXPENSE	13,101	10,478	(2,623)
NET INCOME AFTER DEBT EXPENSE	(58,370)	(50,671)	7,699
Contributions in Aid of Construction	17,963	13,020	(4,943)
CHANGE IN NET POSITION	(40,407)	(37,651)	2,756

MEMPHIS LIGHT, GAS AND WATER DIVISION
SOURCE AND APPLICATION OF FUNDS
2018 BUDGET
(THOUSANDS OF DOLLARS)

ELECTRIC DIVISION

PAGE 5

		REF. NO.
<u>SOURCE OF FUNDS:</u>		
FROM OPERATIONS:		
Change in Net Position	(37,651)	5-1
Non-Cash Charges to Income:		
Prepaid Power-Short Term	112,821	5-2
Depreciation Charged to Operating Income	58,367	5-3
Depreciation Charged to Other Accounts	1,392	5-4
GASB 68 Pension Non-Cash Expense	5,076	5-5
GASB 75 Other Post Employment Benefit Non-Cash Expense	6,810	5-6
Amortization of Legacy Meters	797	5-7
Amortization of Software	1,800	5-8
	149,412	
TOTAL FUNDS FROM OPERATIONS	149,412	
Salvage	1,549	5-9
Financing: Debt Issuance	-	
	150,961	
TOTAL FUNDS AVAILABLE	150,961	
<u>APPLICATION OF FUNDS:</u>		
Capital Expenditures	112,218	5-10
Costs of Removal and Other Charges to the Reserve for Depreciation	3,379	5-11
Retirement of Long-Term Debt	126,260	5-12
	241,857	
TOTAL APPLICATION OF FUNDS	241,857	
INCREASE (DECREASE) IN WORKING CAPITAL	(90,896)	

MEMPHIS LIGHT, GAS AND WATER DIVISION
CAPITAL EXPENDITURES COMPARISON
FOR CALENDAR YEAR OF 2018

ELECTRIC DIVISION

PAGE 6

DESCRIPTION	THOUSANDS OF DOLLARS			REF. NO.
	2016 ACTUAL	2017 BUDGET	2018 BUDGET	
<u>SUBSTATION AND TRANSMISSION</u>				
ELEC - SUBSTATION	15,575	19,489	18,318	6-1
ELEC - TRANSMISSION LINES	798	1,017	1,954	6-2
CONTRIBUTION IN AID OF CONSTRUCTION - CIAC	-	(2,033)	(1,625)	6-3
TOTAL - SUBSTATION AND TRANSMISSION	16,373	18,473	18,647	
<u>DISTRIBUTION SYSTEM</u>				
ELEC - RESIDENTIAL SERVICE IN S/D	298	-	208	6-4
ELEC - RESIDENTIAL SERVICE NOT IN S/D	757	809	767	6-5
ELEC - RESIDENTIAL S/D	64	95	55	6-6
ELEC - APARTMENTS	1,120	851	1,040	6-7
ELEC - GENERAL POWER SERVICE	2,971	4,577	3,375	6-8
ELEC - GENERAL POWER S/D	48	24	51	6-9
ELEC - MOBILE HOME PARK	2	-	2	6-10
ELEC - RANCHETTE	-	-	-	6-11
ELEC - TEMPORARY SERVICE	4	312	5	6-12
ELEC - RES SVC IN APT/MOBILE HOME COMM	-	13	-	6-13
ELEC - MULTIPLE-UNIT GENERAL POWER	174	144	190	6-14
ELEC - RELOCATE AT CUSTOMER REQUEST	1,464	5,529	2,226	6-15
ELEC - STREET IMPROVEMENTS	355	1,682	2,007	6-16
ELEC - NEW CIRCUITS	1,446	6,304	9,081	6-17
ELEC - VOLTAGE CONVERSION	-	20	20	6-18
ELEC - RECONSTRUCT TO MULTI-PHASE	3	-	4	6-19
ELEC - LINE RECONSTRUCTION/REMOVE IDLE FACILITIES	2,049	5,015	5,859	6-20
ELEC - DEFECT CABLE/TRANSFORMER REPLACE	2,383	5,244	9,056	6-21
ELEC - STREET LIGHTS INSTALL	2,841	2,430	1,464	6-22
ELEC - PLANNED MAINTENANCE	5,443	10,439	3,829	6-23
ELEC - TREE TRIMMING	4	3	5	6-24
ELEC - LEASED OUTDOOR LIGHTING	1,026	1,115	1,067	6-25
ELEC - STORM RESTORATION	2,110	-	-	6-26
ELEC - EMERGENCY MAINTENANCE	12,757	4,889	5,721	6-27
ELEC - COMMUNICATION TOWERS	4,123	3,690	1,000	6-28
JT - RESIDENTIAL SERVICE IN S/D	1,290	1,036	898	6-29
JT - RESIDENTIAL SERVICE NOT IN S/D	30	68	22	6-30
JT - RESIDENTIAL S/D	1,565	2,167	1,091	6-31
JT - APARTMENTS	227	272	158	6-32
JT - RES SVC IN APT/MOBILE HOME COMM	1	-	1	6-33
PCI - CAPACITOR BANKS	-	100	-	6-34
PCI - Dist Transformers	6,850	4,400	6,010	6-35
ELEC - METERS	21,839	17,152	8,426	6-36
CONTRIBUTION IN AID OF CONSTRUCTION - CIAC	(9,300)	(15,930)	(13,020)	
TOTAL - DISTRIBUTION SYSTEM	63,944	62,451	50,618	
<u>GENERAL PLANT</u>				
ELEC - BUILDINGS & STRUCTURES	557	3,071	1,977	6-37
ELEC - SECURITY AUTOMATION	(26)	2,606	2,673	6-38
ELEC - LAND PURCHASE	689	350	350	6-39
ELEC - FLEET CAPITAL POWER OPERATED EQUIPMENT	3,081	9,140	6,930	6-40
ELEC - TRANSPORTATION EQUIPMENT	1,027	2,618	4,198	6-41
ELEC - TOOLS & EQUIPMENT	72	41	133	6-42
ELEC - LAB & TEST	360	244	311	6-43
ELEC - COMMUNICATION EQUIPMENT	58	114	104	6-44
ELEC - COMMUNICATION TOWERS	1,474	781	6,532	6-45
ELEC - TELECOMMUNICATION NETWORK	-	1,525	1,335	6-46
ELEC - UTILITY MONITORING	186	775	1,225	6-47
ELEC - CIS DEVELOPMENT	4,235	20,455	14,715	6-48
ELEC - BUSINESS CONTINUITY	2,919	5,088	4,258	6-49
ELEC - DATA PROCESSING EQUIPMENT	1,642	3,658	3,919	6-50
ELEC - IS/IT PROJECTS	-	-	-	6-51
ELEC - NERC COMPLIANCE	480	310	-	6-52
ELEC - CONTINGENCY FUND	-	200	200	6-53
TOTAL - GENERAL PLANT	16,754	50,976	48,860	
TOTAL - ELECTRIC DIVISION	97,071	131,900	118,125	
Delayed Cost Allocations	(2,825)	(6,345)	(5,907)	6-54
TOTAL - ELECTRIC DIVISION	94,247	125,555	112,218	

**MEMPHIS LIGHT, GAS AND WATER DIVISION
CAPITAL EXPENDITURES BUDGET
FOR CALENDAR YEAR OF 2018**

ELECTRIC DIVISION

PAGE 7

DESCRIPTION	ESTIMATED COST SCHEDULE				REF. NO.
	TOTAL COST ESTIMATE	PRIOR TO BUDGET YEAR	IN BUDGET YEAR	AFTER BUDGET YEAR	
<u>SUBSTATION & TRANSMISSION MAJOR PROJECTS</u>					
<u>SUBSTATION</u>					
Install Substation 89 161/23KV facilities	15,507,330	11,358,743	4,148,587	-	7-1
Install Substation 84 third 161/23kV transformer	3,000,000	-	3,000,000	-	7-2
Replace breakers various locations	450,000	-	450,000	-	7-3
Replace transformers various locations	5,585,370	1,050,000	4,535,370	-	7-4
Replace RTU's various locations	1,050,000	205,000	845,000	-	7-5
Replace relays various locations	250,000	10,000	240,000	-	7-6
Replace capacitor banks various locations	100,000	-	100,000	-	7-7
Replace / Install Misc (switches, batteries, fiber, etc.)	1,220,000	-	1,220,000	-	7-8
Oil Spill Containment (SPCC)	50,000	-	50,000	-	7-9
Seismic Retrofit of Non-Structural Substation Components	50,000	-	50,000	-	7-10
Animal Mitigation	20,000	-	20,000	-	7-11
TOTAL SUBSTATION	27,282,700	12,623,743	14,658,957	-	
<u>SUBSTATION/TRANSMISSION PROJECTS</u>					
Sub 89 Cut-In	835,100	300,000	535,100	-	7-12
OPGW 34-71-89	521,300	260,650	260,650	-	7-13
OPGW 38 - Structure 1531	188,000	-	188,000	-	7-14
FAA Tower Lights	200,000	-	200,000	-	7-15
Misc projects (OPGW, structure replacements, etc)	1,000,000	-	1,000,000	-	7-16
TOTAL SUBSTATION/TRANSMISSION PROJECTS	2,744,400	560,650	2,183,750	-	
<u>TRANSMISSION - REIMBURSABLE</u>					
TVA CC Plant/Transmission & Substation Improvements	4,000,000	750,000	1,625,000	1,625,000	7-17
TOTAL TRANSMISSION REIMBURSABLE	4,000,000	750,000	1,625,000	1,625,000	
<u>TRANSMISSION - NERC COMPLIANCE</u>					
Change Metering Equip. at Transmission System Subs	475,000	395,000	80,000	-	7-18
Transmission Circuit Breaker Replacements	9,000,000	7,750,000	1,250,000	-	7-19
Install/Upgrade Digital Fault Recorders	1,350,000	170,000	150,000	1,030,000	7-20
Install Substation Smart Locks	225,000	-	225,000	-	7-21
NERC Low Impact Compliance	100,000	-	100,000	-	7-22
TOTAL NERC COMPLIANCE	11,150,000	8,315,000	1,805,000	1,030,000	
Contributions in Aid of Construction	(1,625,000)	-	(1,625,000)	-	7-23
TOTAL - SUBSTATION AND TRANSMISSION	43,552,100	22,249,393	18,647,707	2,655,000	
<u>DISTRIBUTION SYS. - MAJOR PROJECTS</u>					
Sub 89 Cabling	3,500,000	-	3,500,000	-	7-24
Substation 84 MH/DL (3 ckts)	1,500,000	-	1,000,000	500,000	7-25
Substation 46 Cabling	1,000,000	300,000	700,000	-	7-26

MEMPHIS LIGHT, GAS AND WATER DIVISION
CAPITAL EXPENDITURES BUDGET
FOR CALENDAR YEAR OF 2018

ELECTRIC DIVISION

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DESCRIPTION	ESTIMATED COST SCHEDULE				REF. NO.
	TOTAL COST ESTIMATE	PRIOR TO BUDGET YEAR	IN BUDGET YEAR	AFTER BUDGET YEAR	
<u>DISTRIBUTION SYS. - MAJOR PROJECTS (Cont.)</u>					
Reconfigure Circuit 15205	750,000	-	750,000	-	8-1
5492 E. Shelby Drive - Mendenhall to Hickory Hill (Sub 89 Ckt Ties)	1,000,000	800,000	200,000	-	8-2
Shelby Drive - Mendenhall to Hickory Hill and Holmes (Sub 89 Ckt Ties)	850,000	100,000	750,000	-	8-3
Shelby Drive Underbuild - Germantown Rd to Hacks Cross (Sub 28 to Sub 9)	850,000	100,000	750,000	-	8-4
Sub 84 Ckt Ties	3,500,000		500,000	3,000,000	8-5
Sub 46 Ckt Ties	750,000	100,000	650,000	-	8-6
TOTAL MAJOR NEW CIRCUIT PROJECTS	13,700,000	1,400,000	8,800,000	3,500,000	
<u>VOLTAGE CONVERSIONS</u>					
Small voltage conversion projects	20,000	-	20,000	-	8-7
TOTAL VOLTAGE CONVERSIONS	20,000	-	20,000	-	
<u>MISC. PROJECTS - REIMBURSABLE</u>					
Allen Pumping Station Service (Water Reimbursable)	1,700,000	350,000	1,350,000	-	8-8
Pinch District Improvements	6,000,000	-	250,000	5,750,000	8-9
TOTAL MISC. PROJECTS - REIMBURSABLE	7,700,000	350,000	1,600,000	5,750,000	
<u>STREET IMPROVEMENT PROJECTS</u>					
SR-57/Poplar Bridge @Scott Street & SR-23/Walnut Grove (SP 02/12)	1,500,000	-	1,500,000	-	8-10
Old Brownsville Road, Austin Peay to Kirby Whitten - Widening (SP 10/08)	1,000,000	-	430,000	570,000	8-11
TOTAL MAJOR STREET IMPROVEMENT PROJECTS	2,500,000	-	1,930,000	570,000	
TOTAL DISTRIBUTION SYS. - MAJOR PROJECTS	23,920,000	1,750,000	12,350,000	9,820,000	
<u>GENERAL PLANT</u>					
<u>BUILDINGS & STRUCTURES</u>					
<u>SUBSTATIONS</u>					
Replace Roofs - Various Substations	323,449	18,297	245,552	59,600	8-12
<u>ELECTRIC & SYSTEMS OPERATIONS</u>					
Radio Tower Bldg: UPS and Generator	230,700	-	218,400	12,300	8-13
Radio Tower Bldg: Replace 874 sq ft roof	14,000	-	2,000	12,000	8-14
<u>BEALE STREET LANDING GARAGE</u>					
Elevator System Modernization	275,000	-	275,000	-	8-15
<u>NEW BUILDINGS</u>					
Fabrication and Repair Shop Relocation	39,400,000	1,000,000	1,000,000	37,400,000	8-16

**MEMPHIS LIGHT, GAS AND WATER DIVISION
CAPITAL EXPENDITURES BUDGET
FOR CALENDAR YEAR OF 2018**

ELECTRIC DIVISION

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DESCRIPTION	ESTIMATED COST SCHEDULE				REF. NO.
	TOTAL COST ESTIMATE	PRIOR TO BUDGET YEAR	IN BUDGET YEAR	AFTER BUDGET YEAR	
GENERAL PLANT (Continued)					
<u>NETTERS BUSINESS OPERATIONS CENTER</u>					
ADA upgrades (CO)	336,900	101,000	235,900	-	9-1
TOTAL BUILDINGS & STRUCTURES	40,580,049	1,119,297	1,976,852	37,483,900	
ELEC - SECURITY AUTOMATION	5,940,387	100,505	2,673,334	3,166,548	9-2
ELEC - LAND PURCHASE	350,000	-	350,000	-	9-3
ELEC - FLEET CAPITAL POWER OPERATED EQUIPMENT	6,930,213	-	6,930,213	-	9-4
ELEC - TRANSPORTATION EQUIPMENT	4,198,329	-	4,198,329	-	9-5
ELEC - TOOLS & EQUIPMENT	133,254	-	133,254	-	9-6
ELEC - LAB & TEST	310,716	-	310,716	-	9-7
ELEC - COMMUNICATION EQUIPMENT	104,280	-	104,280	-	9-8
<u>COMMUNICATION TOWER PROJECTS</u>					
<u>MICROWAVE/MOBILE RADIO</u>					
Microwave/Mobile Radio	20,092,861	316,043	6,176,818	13,600,000	9-9
Microwave/Mobile Radio (Inspire)	200,000	-	200,000	-	9-10
<u>SCADA & DISTRIBUTION AUTOMATION</u>					
900 MHz radios and DA upgrades	955,218	21,600	155,218	778,400	9-11
TOTAL COMMUNICATION TOWER PROJECTS	21,248,079	337,643	6,532,036	14,378,400	
<u>TELECOMMUNICATION NETWORK PROJECTS</u>					
<u>FIBER OPTIC CABLE & EQUIPMENT</u>					
Fiber optic multiplexers	2,299,194	634,794	464,400	1,200,000	9-12
Fiber optic cable and equipment	2,953,975	537,975	416,000	2,000,000	9-13
<u>VOICE NETWORK</u>					
Voice Network (CO)	2,042,446	701,746	190,700	1,150,000	9-14
Customer Care Center (CCC) Backup (CO)	724,191	676,671	47,520	-	9-15
<u>TELECOM SYSTEM GROWTH</u>	1,698,142	282,142	216,000	1,200,000	9-16
TELECOMMUNICATION NETWORK PROJECTS	9,717,948	2,833,328	1,334,620	5,550,000	

**MEMPHIS LIGHT, GAS AND WATER DIVISION
CAPITAL EXPENDITURES BUDGET
FOR CALENDAR YEAR OF 2018**

ELECTRIC DIVISION

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DESCRIPTION	ESTIMATED COST SCHEDULE				REF. NO.
	TOTAL COST ESTIMATE	PRIOR TO BUDGET YEAR	IN BUDGET YEAR	AFTER BUDGET YEAR	
GENERAL PLANT (Continued)					
<u>UTILITY MONITORING & CONTROL SYSTEMS</u>					
Systems Backup Control & Communication Plan (CO)	5,124,500	500,000	1,224,500	3,400,000	10-1
TOTAL UTILITY MONITORING & CONTROL SYS.	5,124,500	500,000	1,224,500	3,400,000	
<u>CUSTOMER INFO SYSTEM (CIS) DEVELOPMENT</u>					
2018 CIS Upgrade Production HW & SW	703,080	-	703,080		10-2
Mobile Dispatching System Replacement (Carry Over)	6,156,000	-	4,000,000	2,156,000	10-3
IVR Replacement (Carry Over)	5,940,000	-	5,940,000	-	10-4
Customer Single Sign-on Portal (Carryover)	462,132	-	462,132	-	10-5
Meter Data Management System (Carry Over)	8,288,600	495,225	3,393,375	4,400,000	10-6
BillGen Replacement	216,000	-	216,000	-	10-7
TOTAL CUSTOMER INFO. SYS. DEVELOP.	21,765,812	495,225	14,714,587	6,556,000	
<u>BUSINESS CONTINUITY</u>					
2016 Network Enhancements (Carryover)	479,770	-	479,770	-	10-8
2017 Network Enhancements (Carryover)	378,000	-	378,000	-	10-9
2018 Network Enhancements	885,168	-	885,168	-	10-10
2018 Data Center Upgrade Enhancements	667,656	-	667,656	-	10-11
F5 Load Balancers	623,052	-	623,052	-	10-12
2018 Backup Expansion	341,820	-	341,820	-	10-13
Redundant Data Center Internet Cconnectivity (carryover)	540,000	-	540,000	-	10-14
2017 Data Center Internet Connectivity Improvements (Carryover)	270,000	-	270,000	-	10-15
NERC Tracking Software Phase I & Phase 2(CO)	269,500	197,410	72,090	-	10-16
TOTAL BUSINESS CONTINUITY	4,454,966	197,410	4,257,556	-	
<u>PURCHASE OF DATA PROCESSING EQUIPMENT</u>					
PC Equipment	456,236	386,558	24,678	45,000	10-17
New/Replacement Servers (CO)	1,296,000	-	1,296,000	-	10-18
Storage Area Network Expansion (Carryover)	432,000	-	432,000	-	10-19
2018 VDI Storage	167,940	-	167,940	-	10-20
2018 Netters 3PARBC11 Expansion- Add Disks	439,128	-	439,128	-	10-21
Wireless Network Infrastructure	169,128	-	169,128	-	10-22
Work Center Wireless (outdoor)	481,896	-	400,000	81,896	10-23
Business Objects Upgrade	459,000	-	459,000	-	10-24
HR Analytics	531,576	-	531,576	-	10-25
TOTAL PURCHASE OF DATA PROCESSING EQUIPMENT	4,432,904	386,558	3,919,450	126,896	
Contingency Fund - General Plant	200,000	-	200,000	-	10-26
TOTAL GENERAL PLANT	125,491,437	5,969,966	48,859,727	70,661,744	

MEMPHIS LIGHT, GAS AND WATER DIVISION
CAPITAL CARRYOVER SUMMARY*
FOR CALENDAR YEAR OF 2018

ELECTRIC DIVISION

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<u>CAPITAL CARRYOVER CATEGORY</u>	<u>CARRYOVER AMOUNT</u>
Substations, Transmission & Distribution System	15,236,448
Buildings	245,552
Communication Equipment	25,920
Transportation	4,996,980
Security Automation	2,606,250
Utility Monitoring	200,000
NERC	37,090
Telecommunications	1,846,720
CIS Info Systems Development	13,795,507
Purchase of Data Processing Equipment	1,539,000
Business Continuity	1,667,770
TOTAL CAPITAL CARRYOVER SUMMARY	<u>42,197,237</u>

*Carryover items constitute the funding necessary for capital projects or purchases not completed during the prior budget year. This would include projects which may have been delayed, large projects requiring multiple years to complete, or commodities ordered but not received. These items are part of the total 2018 Budget.

GAS DIVISION



MEMPHIS LIGHT, GAS AND WATER DIVISION
INCOME, EXPENSE, AND CHANGES IN NET POSITION COMPARISON
2017 THROUGH 2018

GAS DIVISION

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DESCRIPTION	THOUSANDS OF DOLLARS			REF. NO.
	2016 ACTUAL	2017 BUDGET	2018 BUDGET	
OPERATING REVENUE				
Sales Revenue	186,279	225,744	225,931	13-1
Revenue Adjustment for Uncollectibles	(1,405)	(1,018)	(1,346)	13-2
Non-Sales Revenue	21,002	26,291	29,981	13-3
OPERATING REVENUE	205,876	251,017	254,566	
OPERATING EXPENSE				
Production - LNG Plant	1,939	1,930	1,681	13-4
Purchased Gas	90,786	121,544	123,421	13-5
Compressed Natural Gas (CNG)	77	24	24	13-6
Liquefied Natural Gas (LNG)	1,320	2,004	1,968	13-7
Distribution Expense	27,611	29,189	28,597	13-8
Customer Accounts Expense	9,849	9,813	9,985	13-9
Customer Service & Information Expense	1,324	1,537	1,514	13-10
Sales Expense	458	573	573	13-11
Administrative & General Expense	39,627	43,523	49,672	13-12
OPERATING EXPENSE	172,991	210,137	217,435	
MAINTENANCE EXPENSE				
Production Expense	673	630	752	13-13
Distribution Expense	9,960	10,957	10,631	13-14
Administrative & General Expense	1,037	822	752	13-15
MAINTENANCE EXPENSE	11,670	12,409	12,135	
OTHER OPERATING EXPENSE				
Depreciation Expense	15,251	19,424	13,051	13-16
Payment in Lieu of Taxes	19,158	22,323	21,600	13-17
F.I.C.A. Taxes	592	564	591	13-18
Amortization of Leasehold Improvements	-	193	38	13-19
Amortization of Leagacy Meters	-	-	1,161	13-20
Amortization of Software	-	-	5,500	13-21
OTHER OPERATING EXPENSE	35,001	42,504	41,941	
TOTAL OPERATING EXPENSE	219,662	265,050	271,511	
INCOME				
Operating Income	(13,786)	(14,033)	(16,945)	13-22
Other Income	98	1,284	(173)	13-23
Reduction of Plant Cost Recovered through CIAC	(38,119)	(11,664)	(12,698)	13-24
NET INCOME BEFORE DEBT EXPENSE	(51,807)	(24,413)	(29,816)	
DEBT EXPENSE				
Interest Expense - Long-Term Debt	591	2,770	3,537	13-25
Amortization of Debt Discount & Expense	(212)	(634)	(1,150)	13-26
TOTAL DEBT EXPENSE	379	2,136	2,387	
NET INCOME AFTER DEBT EXPENSE	(52,186)	(26,549)	(32,203)	
Contributions in Aid of Construction	38,119	11,664	12,698	13-27
CHANGE IN NET POSITION	(14,067)	(14,885)	(19,505)	

MEMPHIS LIGHT, GAS AND WATER DIVISION
INCOME, EXPENSE, AND CHANGES IN NET POSITION COMPARISON
2017 THROUGH 2018

GAS DIVISION

PAGE 13a

DESCRIPTION	THOUSANDS OF DOLLARS		
	2017 BUDGET	2018 BUDGET	DIFFERENCE
<u>OPERATING REVENUE</u>			
Sales Revenue	225,744	225,931	187
Revenue Adjustment for Uncollectibles	(1,018)	(1,346)	(328)
Non-Sales Revenue			
Forfeited Discounts	3,228	3,138	(90)
Miscellaneous Service Revenue	2,364	2,776	412
Other Operating Revenue	482	480	(2)
Compressed Natural Gas (CNG)	84	84	-
Liquefied Natural Gas (LNG)	4,776	4,488	(288)
Rent from Electric/Water Property	9,350	10,850	1,500
Transported Gas	6,007	8,165	2,158
Total Non-Sales Revenue	26,291	29,981	3,690
OPERATING REVENUE	251,017	254,566	3,549
<u>OPERATING EXPENSE</u>			
Purchased Gas	121,544	123,421	1,877
Compressed Natural Gas (CNG)	24	24	-
Liquified Natural Gas (LNG)	2,004	1,968	(36)
Production Expense			
Fuel Gas	483	355	(128)
Operation Labor and Expenses	1,330	1,203	(127)
Operation Supervision and Engineering	117	123	6
Total Production Expense	1,930	1,681	(249)
Distribution Expense			
Customer Installation Expenses	6,312	5,611	(701)
Distribution Load Dispatching Expense	581	630	49
Mains and Services	3,486	3,685	199
Measuring and Regulating Expenses	606	507	(99)
Meter and House Regulator Expenses	3,009	3,638	629
Miscellaneous Distribution Expenses ⁽¹⁾	11,866	11,263	(603)
Rents	15	24	9
Operation Supervision and Engineering	3,314	3,239	(75)
Total Distribution Expense	29,189	28,597	(592)
Customer Accounts Expense			
Customer Order, Records and Collection Expenses	8,110	8,386	276
Meter Reading Expenses	1,657	1,552	(105)
Supervision-Customer Accounting and Collection	46	47	1
Total Customer Accounts Expense	9,813	9,985	172
Customer Service & Information Expense			
Customer Assistance Expenses	812	793	(19)
Informational and Instructional Advertising Expenses	61	52	(9)
Miscellaneous Customer Service & Informational Expenses	566	552	(14)
Supervision-Customer Service and Information	98	117	19
Total Customer Service & Information Expense	1,537	1,514	(23)
Total Sales Expense	573	573	-
Demonstrating and Selling Expenses	1	-	(1)
Miscellaneous Sales Expenses	572	573	1

⁽¹⁾ Includes, but not limited to, the following items: Accrued vacation, absences such as holiday and sick leave, lost time due to bad weather, stand-by pay, and contract services.

**MEMPHIS LIGHT, GAS AND WATER DIVISION
INCOME, EXPENSE, AND CHANGES IN NET POSITION COMPARISON
2017 THROUGH 2018**

GAS DIVISION

PAGE 13b

DESCRIPTION	THOUSANDS OF DOLLARS		
	2017 BUDGET	2018 BUDGET	DIFFERENCE
<u>OPERATING EXPENSE (Continued)</u>			
Administrative & General Expense			
Administrative and General Salaries	5,165	5,498	333
Administration Expenses Transferred to Capital	(1,209)	(1,099)	110
Pension Expense	5,731	5,687	(44)
Pension Non-Cash Expense	2,179	2,518	339
Other Active & Retiree Benefits	14,515	14,949	434
Other Post Employment Benefits Funding	4,092	3,985	(107)
Other Post Employment Benefits Non-Cash	-	3,379	3,379
Injuries and Damages	2,262	2,241	(21)
Miscellaneous General Expenses ⁽²⁾	3,159	3,481	322
Office Supplies and Expenses	1,093	1,236	143
Outside Services Employed	2,846	3,306	460
Property Insurance	353	446	93
Rents-Miscellaneous	3,337	4,045	708
Total Administrative & General Expense	43,523	49,672	6,149
OPERATING EXPENSE	210,137	217,435	7,298
<u>MAINTENANCE EXPENSE</u>			
Production Expense			
Maintenance of Holders	25	-	(25)
Maintenance of Other Equipment	174	363	189
Maintenance of Structures and Improvements	256	205	(51)
Maintenance Supervision and Engineering	175	184	9
Total Production Expense	630	752	122
Distribution Expense			
Maintenance of Mains	7,824	6,909	(915)
Maintenance of Meters	376	642	266
Maintenance of Services	1,630	1,904	274
Maintenance of Structures and Improvements	-	1	1
Maintenance Supervision and Engineering	77	83	6
Measuring and Regulating Equipment Expenses	1,050	1,092	42
Total Distribution Expense	10,957	10,631	(326)
Administrative & General Expense			
Maintenance of General Plant	822	752	(70)
Total Administrative & General Expense	822	752	(70)
MAINTENANCE EXPENSE	12,409	12,135	(274)
<u>OTHER OPERATING EXPENSE</u>			
Depreciation Expense	19,424	13,051	(6,373)
Payment in Lieu of Taxes	22,323	21,600	(723)
F.I.C.A. Taxes	564	591	27
Amortization of Leasehold Improvements	193	38	(155)
Amortization of Legacy Meters	-	1,161	1,161
Amortization of Software	-	5,500	5,500
OTHER OPERATING EXPENSE	42,504	41,941	(563)
TOTAL OPERATING EXPENSE	265,050	271,511	6,461

⁽²⁾ Includes, but not limited to, the following items: Mail distribution, property appraisals, security and janitorial services, and fuel use by MLGW.

**MEMPHIS LIGHT, GAS AND WATER DIVISION
INCOME, EXPENSE, AND CHANGES IN NET POSITION COMPARISON
2017 THROUGH 2018**

GAS DIVISION

PAGE 13c

DESCRIPTION	THOUSANDS OF DOLLARS		
	2017 BUDGET	2018 BUDGET	DIFFERENCE
<u>INCOME</u>			
Operating Income	(14,033)	(16,945)	(2,912)
Other Income			
Expenses of Merchandising, Jobbing & Contracts	(2,516)	(3,182)	(666)
Allowance for Funds Used During Construction	15	-	(15)
Revenues from Merchandising, Jobbing & Contracts	1,429	1,538	109
Revenues from Non-Utility Property	679	15	(664)
Interest Income - Gas Margins	-	-	-
Revenues from Common Transportation Equipment	795	766	(29)
Revenues from Sinking & Other Funds-Interest Income	576	443	(133)
Medicare Part D Refund	220	179	(41)
Miscellaneous Non-Operating Income	86	68	(18)
Total Other Income	1,284	(173)	(1,457)
Reduction of Plant Cost Recovered through CIAC	(11,664)	(12,698)	(1,034)
NET INCOME BEFORE DEBT EXPENSE	(24,413)	(29,816)	(5,403)
<u>DEBT EXPENSE</u>			
Interest Expense - Long-Term Debt			
Interest on Ltd - Series 2016	1,770	1,731	(39)
Interest on Ltd - Series 2017	1,000	1,806	806
Total Interest Expense - Long-Term Debt	2,770	3,537	767
Amortization of Debt Discount & Expense			
Amortization of Debt Disc & Exp - Series 2016	(634)	(620)	14
Amortization of Debt Disc & Exp - Series 2017	-	(530)	(530)
Total Amortization of Debt Discount & Expense	(634)	(1,150)	(516)
TOTAL DEBT EXPENSE	2,136	2,387	251
NET INCOME AFTER DEBT EXPENSE	(26,549)	(32,203)	(5,654)
Contributions in Aid of Construction	11,664	12,698	1,034
CHANGE IN NET POSITION	(14,885)	(19,505)	(4,620)

MEMPHIS LIGHT, GAS AND WATER DIVISION
SOURCE AND APPLICATION OF FUNDS
2018 BUDGET
(THOUSANDS OF DOLLARS)

GAS DIVISION

PAGE 14

		REF. NO.
<u>SOURCE OF FUNDS:</u>		
FROM OPERATIONS:		
Change in Net Position	(19,505)	14-1
Non-Cash Charges to Income:		
Depreciation Charged to Operating Income	13,051	14-2
Depreciation Charged to Other Accounts	1,777	14-3
GASB 68 Pension Non-Cash Expense	2,518	14-4
GASB 75 Other Post Employment Benefit Non-Cash Expense	3,379	14-5
Amortization of Legacy Meters	1,161	14-6
Amortization of Software	5,500	14-7
TOTAL FUNDS FROM OPERATIONS	7,881	
Salvage	325	14-8
Financing: Debt Issuance	-	
TOTAL FUNDS AVAILABLE	8,206	
<u>APPLICATION OF FUNDS:</u>		
Capital Expenditures	59,711	14-9
Costs of Removal and Other Charges to the Reserve for Depreciation	103	14-10
Retirement of Long Term Debt	2,565	14-11
TOTAL APPLICATION OF FUNDS	62,379	
INCREASE (DECREASE) IN WORKING CAPITAL	(54,173)	

MEMPHIS LIGHT, GAS AND WATER DIVISION
CAPITAL EXPENDITURES COMPARISON
FOR CALENDAR YEAR OF 2018

GAS DIVISION

PAGE 15

DESCRIPTION	THOUSANDS OF DOLLARS			REF. NO.
	2016 ACTUAL	2017 BUDGET	2018 BUDGET	
PRODUCTION SYSTEM				
GAS - LNG PROCESSING FACILITIES	(41)	250	-	
GAS - CNG STATIONS	-	-	-	
TOTAL PRODUCTION SYSTEM	(41)	250	-	15-1
DISTRIBUTION SYSTEM				
GAS - RESIDENTIAL SERVICE IN S/D	(1)	1	1	15-2
GAS - RESIDENTIAL SERVICE NOT IN S/D	371	207	212	15-3
GAS - RESIDENTIAL S/D	-	6	6	15-4
GAS - LAND PURCHASE	719	2,265	975	15-5
GAS - APARTMENTS	(12)	1	1	15-6
GAS - GENERAL POWER SERVICE	1,024	510	2,020	15-7
GAS - GENERAL POWER S/D	-	9	9	15-8
GAS - MOBILE HOME PARK	-	1	1	15-9
GAS - MULTIPLE-UNIT GENERAL POWER	118	18	18	15-10
GAS - RELOCATE AT CUSTOMER REQUEST	0	27	27	15-11
GAS - PURCHASE OF METERS	19,814	24,150	28,457	15-12
GAS - STREET IMPROVEMENTS	555	2,051	2,861	15-13
GAS - NEW GAS MAIN	1,993	2,839	3,277	15-14
GAS - GAS MAIN/SERVICE REPL (D.O.T.)	4,951	4,850	5,070	15-15
GAS - TRANSMISSION PIPELINES AND FACILITIES	38,106	13,551	12,430	15-16
GAS - REGULATOR STATIONS	-	255	1,455	15-17
JT - RESIDENTIAL SERVICE IN S/D	-	222	226	15-18
JT - RESIDENTIAL SERVICE NOT IN S/D	-	5	5	15-19
JT - RESIDENTIAL S/D	-	217	222	15-20
JT - APARTMENTS	-	55	56	15-21
JT - RELOCATE AT CUSTOMER REQUEST	-	1	1	15-22
MISC . EMERGECENY CONSTRUCTION	986	1,344	1,504	15-23
CONTRIBUTIONS IN AID OF CONSTRUCTION (CIAC)	(38,007)	(11,664)	(12,698)	
TOTAL - DISTRIBUTION SYSTEM	30,616	40,920	46,136	
GENERAL PLANT				
GAS - BUILDINGS & STRUCTURES	515	3,911	2,001	15-24
GAS - SECURITY AUTOMATION	-	2,697	2,828	15-25
GAS - FURNITURE & FIXTURES	98	-	-	15-26
GAS - AUDIO VISUAL	-	-	39	15-27
GAS - IS/IT PROJECTS	7,519	2,430	3,923	15-28
GAS - FLEET CAPITAL COMMON POWER OPERATED EQUIP	611	963	1,328	15-29
GAS - FLEET CAPITAL COMON TRANSPORTATION EQUIP	1,499	1,645	3,255	15-30
GAS - FLEET GAS POWER OPERATED EQUIPMENT	339	840	735	15-31
GAS - FLEET GAS TRANSPORTATION EQUIPMENT	458	1,055	995	15-32
GAS - AUTOMATED FUELING SYSTEM	292	575	575	15-33
GAS - TOOLS & EQUIPMENT	12	53	30	15-34
GAS - COMMON TOOLS & EQUIPMENT	210	60	154	15-35
GAS - ALTERNATIVE FUELING STRUCTURE	662	-	-	15-36
GAS - CONTINGENCY FUNDS	-	200	200	15-37
TOTAL - GENERAL PLANT	12,214	14,431	16,063	
TOTAL GAS DIVISION	42,789	55,601	62,199	
Delayed Cost Allocations	9	(2,780)	(2,488)	15-38
TOTAL - GAS DIVISION	42,798	52,821	59,711	

MEMPHIS LIGHT, GAS AND WATER DIVISION
CAPITAL EXPENDITURES BUDGET
FOR CALENDAR YEAR OF 2018

GAS DIVISION

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DESCRIPTION	ESTIMATED COST SCHEDULE				REF. NO.
	TOTAL COST ESTIMATE	PRIOR TO BUDGET YEAR	IN BUDGET YEAR	AFTER BUDGET YEAR	
<u>DISTRIBUTION SYSTEM - MAJOR PROJECTS</u>					
<u>STREET IMPROVEMENTS</u>					
SR-57/Poplar Bridge @ Scott Street & SR-23/Walnut Grove	200,000	80,000	120,000	-	16-1
SR-4/US-78 from MS State Line to S of Shelby Dr - Eng Svc	70,000	-	70,000	-	16-2
Center Street Development	265,000	-	265,000	-	16-3
Old Brownsville Road, Austin Peay to Kirby Whitten - widening	250,000	-	250,000	-	16-4
SR-14, from SR-204/Singleton Pkwy to Old Covington Pike (Phase 1) TDOT	737,459	228,994	508,465	-	16-5
Elvis Presley Corridor - North Phase 1	250,000	-	250,000	-	16-6
Germantown Rd at Wolf River Blvd.	150,000	-	150,000	-	16-7
SR-14, from Old Covington Pike to Paul Barrett Pkwy(Phase 2) TDOT	100,000	-	100,000	-	16-8
SR-1/US-70 from SR-385 to Airline - Arlington	15,000	-	15,000	-	16-9
New Allen @ Hawkins Mill TDOT	90,000	-	90,000	-	16-10
Engineering Services	300,000	-	300,000	-	16-11
Projections 2018-2022	742,562	-	742,562	-	16-12
TOTAL GAS - STREET IMPROVEMENTS	3,170,021	308,994	2,861,027	-	
<u>TRANSMISSION PIPELINES AND FACILITIES</u>					
Nouritech Project (Atlantis)	10,420,000	420,000	8,080,000	1,920,000	16-13
18" XHP Pipeline Replacements @ Saturn to Mitchell	1,500,000	-	1,500,000	-	16-14
10" XHP Pipeline Replacement @ Poplar & I-240	1,100,000	-	1,100,000	-	16-15
18" XXHP Pipeline Replacement @ Covington Pike & LNRR	500,000	-	500,000	-	16-16
12" XHP Pipeline Replacements - Brooks to McMullen	4,000,000	1,000,000	1,000,000	2,000,000	16-17
Engineering Services	100,000	-	100,000	-	16-18
Risk Analysis Software	150,000	-	150,000	-	16-19
TOTAL TRANSMISSION PIPELINES AND FACILITIES	17,770,000	1,420,000	12,430,000	3,920,000	
TOTAL DISTRIBUTION SYS. - MAJOR PROJECTS	20,940,021	1,728,994	15,291,027	3,920,000	
<u>GENERAL PLANT</u>					
<u>BUILDINGS & STRUCTURES</u>					
Re-Cover/Replace Roofs & Air Conditioning Units- Various Locations	2,799,240	35,000	832,400	1,931,840	16-20
Building Exterior Upgrades - Various Locations	43,000	-	43,000	-	16-21
HVAC & Plumbing Upgrades	256,000	118,000	138,000	-	16-22
<u>NORTH SERVICE CENTER</u>					
Asphalt Paving & Concrete Slabs/ Drives	2,100,000	400,000	600,000	1,100,000	16-23
<u>BRUNSWICK SERVICE CENTER</u>					
Canopy for Transmission Crew Equipment	295,700	-	24,000	271,700	16-24
<u>CHOCTOW SERVICE CENTER</u>					
Virtual Storeroom	715,000	-	28,000	687,000	16-25
Storage Canopy	449,000	-	36,000	413,000	16-26
<u>NEW BUILDINGS</u>					
New North Community Pay Office	3,300,000	-	300,000	3,000,000	16-27
TOTAL BUILDINGS & STRUCTURES	9,957,940	553,000	2,001,400	7,403,540	

DESCRIPTION	ESTIMATED COST SCHEDULE				REF. NO.
	TOTAL COST ESTIMATE	PRIOR TO BUDGET YEAR	IN BUDGET YEAR	AFTER BUDGET YEAR	
GENERAL PLANT (Continued)					
SECURITY AUTOMATION					
Choctaw (Mobile Surveillance Unit)	216,000	108,000	108,000	-	17-1
Millington Community Office	97,916	-	43,916	54,000	17-2
Lamar Community Office	100,202	-	46,202	54,000	17-3
Whitehaven Community Office	119,497	-	65,497	54,000	17-4
Video & Alarm System Head End Equipment and Software	2,564,834	-	2,564,834	-	17-5
TOTAL SECURITY AUTOMATION	3,098,449	108,000	2,828,449	162,000	
PURCHASE OF FURNITURE AND FIXTURES					
Audiovisual	39,037	-	39,000	37	17-6
TOTAL PURCH. OF FURNITURE & FIXTURES	39,037	-	39,000	37	
IS/IT Projects					
Natural Gas Management System (CO)	1,603,800	1,333,800	270,000	-	17-7
Project Inspire (MSS System Replacement) (CO)	52,392,298	52,176,298	216,000	-	17-8
Oracle ULA	3,436,560	-	3,436,560	-	17-9
TOTAL IS/IT PROJECTS	57,432,658	53,510,098	3,922,560	-	
FLEET CAPITAL COMMON POWER OPERATED EQUIP	1,327,735	-	1,327,735	-	17-10
FLEET CAPITAL COMMON TRANSPORTATION EQUIP	3,254,677	-	3,254,677	-	17-11
FLEET GAS POWER OPERATED EQUIPMENT	735,485	-	735,485	-	17-12
FLEET GAS TRANSPORTATION EQUIPMENT	995,217	-	995,217	-	17-13
AUTOMATED FUELING SYSTEM (CO)	931,445	356,921	574,524	-	17-14
PURCHASE OF TOOLS & EQUIPMENT - GAS	29,800	-	29,800	-	17-15
PURCHASE OF TOOLS & EQUIPMENT - COMMON	154,200	-	154,200	-	17-16
Contingency Fund - General Plant	200,000	-	200,000	-	17-17
TOTAL GENERAL PLANT	78,156,643	54,528,019	16,063,047	7,565,577	

MEMPHIS LIGHT, GAS AND WATER DIVISION
CAPITAL CARRYOVER SUMMARY*
FOR CALENDAR YEAR OF 2018

GAS DIVISION

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<u>CAPITAL CARRYOVER CATEGORY</u>	<u>CARRYOVER AMOUNT</u>
Distribution System	11,388,931
Buildings	1,353,200
Purchase of Property	900,000
Security Automation	2,672,834
Transportation	2,081,256
Automated Fueling	574,524
Data Processing	486,000
TOTAL CAPITAL CARRYOVER SUMMARY	<u>19,456,745</u>

*Carryover items constitute the funding necessary for capital projects or purchases not completed during the prior budget year. This would include projects which may have been delayed, large projects requiring multiple years to complete, or commodities ordered but not received. These items are part of the total 2018 Budget.

WATER DIVISION



MEMPHIS LIGHT, GAS AND WATER DIVISION
INCOME, EXPENSE, AND CHANGES IN NET POSITION COMPARISON
2017 THROUGH 2018

WATER DIVISION

PAGE 20

DESCRIPTION	THOUSANDS OF DOLLARS			REF. NO.
	2016 ACTUAL	2017 BUDGET	2018 BUDGET	
OPERATING REVENUE				
Sales Revenue	97,332	96,172	95,758	20-1
Revenue Adjustment for Uncollectibles	(1,096)	(799)	(945)	20-2
Non-Sales Revenue	3,611	4,036	4,913	20-3
OPERATING REVENUE	99,847	99,408	99,726	
OPERATING EXPENSE				
Production Expense	12,491	13,790	14,530	20-4
Distribution Expense	14,285	15,161	16,288	20-5
Customer Accounts Expense	7,246	7,028	7,120	20-6
Customer Service & Information Expense	677	761	779	20-7
Sales Expense	451	547	537	20-8
Administrative & General Expense	28,648	35,590	39,612	20-9
OPERATING EXPENSE	63,798	72,877	78,866	
MAINTENANCE EXPENSE				
Production Expense	3,268	4,790	3,562	20-10
Distribution Expense	8,775	9,890	10,586	20-11
Administrative & General Expense	1,333	1,417	1,374	20-12
MAINTENANCE EXPENSE	13,376	16,097	15,522	
OTHER OPERATING EXPENSE				
Depreciation Expense	8,951	10,524	11,450	20-13
Payment in Lieu of Taxes	4,400	4,400	4,400	20-14
F.I.C.A. Taxes	437	417	437	20-15
Amortization of SCBPU Acquisition Adjustments	(964)	(915)	(915)	20-16
Amortization of Legacy Meters	-	-	248	20-17
OTHER OPERATING EXPENSE	12,824	14,426	15,620	
TOTAL OPERATING EXPENSE	89,998	103,400	110,008	
INCOME				
Operating Income	9,849	(3,992)	(10,282)	20-18
Other Income	740	576	671	20-19
Reduction of Plant Cost Recovered through CIAC	(3,533)	(3,221)	(3,390)	20-20
NET INCOME BEFORE DEBT EXPENSE	7,056	(6,637)	(13,001)	
DEBT EXPENSE				
Interest Expense - Existing Long - Term Debt	811	1,992	2,795	20-21
Amortization of Debt Discount & Expense	(119)	(243)	(236)	20-22
TOTAL DEBT EXPENSE	692	1,749	2,559	
NET INCOME AFTER DEBT EXPENSE	6,364	(8,386)	(15,560)	
Contributions in Aid of Construction	3,533	3,221	3,390	20-23
CHANGE IN NET POSITION	9,897	(5,165)	(12,170)	

**MEMPHIS LIGHT, GAS AND WATER DIVISION
INCOME, EXPENSE, AND CHANGES IN NET POSITION COMPARISON
2017 THROUGH 2018**

WATER DIVISION

PAGE 20a

DESCRIPTION	THOUSANDS OF DOLLARS		
	2017 BUDGET	2018 BUDGET	DIFFERENCE
<u>OPERATING REVENUE</u>			
Sales Revenue	96,172	95,758	(414)
Revenue Adjustment for Uncollectibles	(799)	(945)	(146)
Non-Sales Revenue			
Forfeited Discounts	1,395	1,412	17
Miscellaneous Service Revenue	2,156	1,595	(561)
Cross Connection Revenue	-	1,380	1,380
Other Operating Revenue	356	360	4
Rent from Electric/Gas Property	129	166	37
Total Non-Sales Revenue	4,036	4,913	878
OPERATING REVENUE	99,408	99,726	318
<u>OPERATING EXPENSE</u>			
Production Expense			
Chemicals	1,450	1,264	(186)
Fuel or Power Purchased for Pumping	7,427	7,350	(77)
Miscellaneous Expense	1,978	2,874	896
Operation Labor and Expenses	2,471	2,566	95
Operation Supervision and Engineering	211	200	(11)
Pumping Labor and Expenses	253	276	23
Total Production Expense	13,790	14,530	740
Distribution Expense			
Customer Installation Expenses	4,166	3,831	(335)
Meter Expenses	582	618	36
Miscellaneous Distribution Expenses ⁽¹⁾	7,711	8,915	1,204
Operation Supervision and Engineering	1,874	2,035	161
Storage Facilities	251	272	21
Transmission and Distribution Lines	575	615	40
Rents	2	2	-
Total Distribution Expense	15,161	16,288	1,127
Customer Accounts Expense			
Customer Order, Records and Collection Expenses	5,883	6,153	270
Meter Reading Expenses	1,108	930	(178)
Supervision-Customer Accounting and Collection	37	37	-
Total Customer Accounts Expense	7,028	7,120	92
Customer Service & Information Expense			
Customer Assistance Expenses	590	576	(14)
Informational and Instructional Advertising Expenses	93	110	17
Supervision-Customer Service and Information	78	93	15
Total Customer Service & Information Expense	761	779	18
Sales Expense			
Demonstrating and Selling Expenses	-	-	-
Miscellaneous Sales Expenses	458	458	-
Sales Expense and Supervision	89	79	(10)
Total Sales Expense	547	537	(10)
⁽¹⁾ Includes, but not limited to, the following items: Accrued vacation, absences such as holiday and sick leave, lost time due to bad weather, stand-by pay, and contract services.			

**MEMPHIS LIGHT, GAS AND WATER DIVISION
INCOME, EXPENSE, AND CHANGES IN NET POSITION COMPARISON
2017 THROUGH 2018**

WATER DIVISION

PAGE 20b

DESCRIPTION	THOUSANDS OF DOLLARS		
	2017 BUDGET	2018 BUDGET	DIFFERENCE
<u>OPERATING EXPENSE (Continued)</u>			
Administrative & General Expense			
Administrative and General Salaries	3,507	3,771	264
Administration Expenses Transferred to Capital	(923)	(894)	29
Pension Expense	3,806	3,776	(30)
Pension Non-Cash Expense	1,447	1,673	226
Other Active & Retiree Benefits	9,661	10,128	467
Other Post Employment Benefits	2,717	2,646	(71)
Other Post Employment Benefits Non-Cash	-	2,244	2,244
Injuries and Damages	2,113	2,114	1
Miscellaneous General Expenses ⁽²⁾	3,103	3,294	191
Office Supplies and Expenses	873	931	58
Outside Services Employed	4,470	4,400	(70)
Property Insurance	235	296	61
Rents-Miscellaneous	4,581	5,233	652
Total Administrative & General Expense	35,590	39,612	4,022
OPERATING EXPENSE	72,877	78,866	5,989
<u>MAINTENANCE EXPENSE</u>			
Production Expense			
Maintenance of Pumping Equipment	2,035	2,157	122
Maintenance of Structures and Improvements	1,500	-	(1,500)
Maintenance of Water Treatment Equipment	441	428	(13)
Maintenance of Wells	724	891	167
Maintenance Supervision and Engineering	90	86	(4)
Total Production Expense	4,790	3,562	(1,228)
Distribution Expense			
Maintenance of Hydrants	420	471	51
Maintenance of Meters	4,088	4,609	521
Maintenance of Miscellaneous Distribution Plant	1	8	7
Maintenance of Services	1,039	1,209	170
Maintenance of Transmission and Distribution Mains	4,342	4,289	(53)
Maintenance Supervision and Engineering	-	-	-
Total Distribution Expense	9,890	10,586	696
Administrative & General Expense			
Maintenance of General Plant	1,417	1,374	(43)
Total Administrative & General Expense	1,417	1,374	(43)
MAINTENANCE EXPENSE	16,097	15,522	(575)
<u>OTHER OPERATING EXPENSE</u>			
Depreciation Expense	10,524	11,450	926
Payment in Lieu of Taxes	4,400	4,400	-
F.I.C.A. Taxes	417	437	20
Amortization of SCBPU Acquisition Adjustments	(915)	(915)	-
Amortization of Legacy Meters	-	248	248
OTHER OPERATING EXPENSE	14,426	15,620	1,194
TOTAL OPERATING EXPENSE	103,400	110,008	6,608

⁽²⁾ Includes, but not limited to, the following items: Mail distribution, property appraisals, security and janitorial services, and fuel use by MLGW.

**MEMPHIS LIGHT, GAS AND WATER DIVISION
INCOME, EXPENSE, AND CHANGES IN NET POSITION COMPARISON
2017 THROUGH 2018**

WATER DIVISION

PAGE 20c

DESCRIPTION	THOUSANDS OF DOLLARS		
	2017 BUDGET	2018 BUDGET	DIFFERENCE
INCOME			
Operating Income	(3,992)	(10,282)	(6,290)
Other Income			
Revenues from Sinking & Other Funds-Interest Income	164	120	(44)
Allowance for Funds Used During Construction	13	37	24
Medicare Part D Refund	145	119	(26)
Miscellaneous Non-Operating Income	254	395	141
Total Other Income	576	671	95
Reduction of Plant Cost Recovered through CIAC	(3,221)	(3,390)	(169)
NET INCOME BEFORE DEBT EXPENSE	(6,637)	(13,001)	(6,364)
DEBT EXPENSE			
Interest Expense - Long-Term Debt			
Interest on Ltd - Series 2014	491	480	(11)
Interest on Ltd - Series 2016	921	888	(33)
Interest on Ltd - Series 2017	580	927	347
Interest on Ltd - Series 2018	-	500	500
Total Interest Expense - Long-Term Debt	1,992	2,795	803
Amortization of Debt Discount & Expense			
Amortization of Debt Disc & Exp - Series 2014	(54)	(54)	-
Amortization of Debt Disc & Exp - Series 2016	(189)	(182)	7
Amortization of Debt Disc & Exp - Series 2017	-	-	-
Total Amortization of Debt Discount & Expense	(243)	(236)	7
TOTAL DEBT EXPENSE	1,749	2,559	810
NET INCOME AFTER DEBT EXPENSE	(8,386)	(15,560)	(7,174)
Contributions in Aid of Construction	3,221	3,390	169
CHANGE IN NET POSITION	(5,165)	(12,170)	(7,005)

MEMPHIS LIGHT, GAS AND WATER DIVISION
SOURCE AND APPLICATION OF FUNDS
2018 BUDGET
(THOUSANDS OF DOLLARS)

WATER DIVISION

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		REF. NO.
<u>SOURCE OF FUNDS:</u>		
FROM OPERATIONS:		
Change in Net Position	(12,170)	21-1
Non-Cash Charges to Income:		
Depreciation Charged to Operating Income	11,450	21-2
Depreciation Charged to Other Accounts	310	21-3
GASB 68 Pension Non-Cash Expense	1,673	21-4
GASB 75 Other Post Employe Benefites Non-Cash Expense	2,244	21-5
Amortization of SCBPU Acquisitions Adjustments	(915)	21-6
Amortization of Legacy Meters	248	21-7
TOTAL FUNDS FROM OPERATIONS	2,840	
Salvage	117	21-8
Financing: Debt Issuance	30,000	
TOTAL FUNDS AVAILABLE	32,957	
<u>APPLICATION OF FUNDS:</u>		
Capital Expenditures	53,616	21-9
Costs of Removal and Other Charges to the Reserve for Depreciation	301	21-10
Retirement of Long-Term Debt	2,790	21-11
TOTAL APPLICATION OF FUNDS	56,707	
INCREASE (DECREASE) IN WORKING CAPITAL	(23,750)	

**MEMPHIS LIGHT, GAS AND WATER DIVISION
CAPITAL EXPENDITURES COMPARISON
FOR CALENDAR YEAR OF 2018**

WATER DIVISION

PAGE 22

DESCRIPTION	THOUSANDS OF DOLLARS			REF. NO.
	2016 ACTUAL	2017 BUDGET	2018 BUDGET	
PRODUCTION SYSTEM				
WATER - PUMPING STATIONS	3,439	6,470	8,035	22-1
WATER - OVERHEAD STORAGE TANKS	924	3,340	1,700	22-2
WATER - UNDERGROUND STORAGE RESERVOIRS	129	220	815	22-3
WATER - PRODUCTION WELLS	3,075	4,600	7,867	22-4
WATER - LAND PURCHASE	196	110	95	22-5
Contingency Fund - Production System	-	50	50	22-6
SUBTOTAL - PRODUCTION SYSTEM	7,763	14,790	18,562	
WATER - BUILDINGS & STRUCTURES	2,273	1,672	3,348	22-7
TOTAL PROD. SYSTEM - BLDGS. & STRUCT.	10,036	16,462	21,910	
DISTRIBUTION SYSTEM				
WATER - RESIDENTIAL SERVICE IN S/D	129	94	78	22-8
WATER - RESIDENTIAL SERVICE NOT IN S/D	125	134	168	22-9
WATER - RESIDENTIAL S/D	20	40	215	22-10
WATER - APARTMENTS	(47)	-	-	22-11
WATER - GENERAL POWER SERVICE	1,970	2,100	2,675	22-12
WATER - RELOCATE AT CUSTOMER REQUEST	110	-	13	22-13
WATER - STREET IMPROVEMENTS	864	2,350	2,350	22-14
WATER - NEW WATER MAIN	3,066	7,765	8,889	22-15
WATER - PURCHASE OF LAND	397	-	-	22-16
WATER - PURCHASE OF METERS	13,220	17,977	16,067	22-17
WATER - MISC EMERGENCY CONSTRUCTION	3,747	2,596	3,131	22-18
CONTRIBUTIONS IN AID OF CONSTRUCTION (CIAC)	(3,172)	(3,221)	(3,390)	
TOTAL - DISTRIBUTION SYSTEM	20,429	29,834	30,196	
GENERAL PLANT				
WATER - BUILDINGS & STRUCTURES	602	65	26	22-19
WATER - SECURITY AUTOMATION	-	1,040	1,054	22-20
WATER - FLEET CAPITAL POWER OPERATED EQUIP	81	818	120	22-21
WATER - FLEET CAPITAL WATER TRANSPORTATION EQUIP	927	1,760	1,446	22-22
WATER TOOLS & EQUIPMENT	15	82	42	22-23
WATER - LAB EQUIPMENT	35	-	130	22-24
WATER - CONTINGENCY FUND	-	200	200	22-25
TOTAL - GENERAL PLANT	1,660	3,966	3,018	
TOTAL - WATER DIVISION				
	32,125	50,262	55,124	
Delayed Cost Allocations	(1,086)	(1,508)	(1,508)	22-26
TOTAL - WATER DIVISION				
	31,039	48,754	53,616	

MEMPHIS LIGHT, GAS AND WATER DIVISION
CAPITAL EXPENDITURES BUDGET
FOR CALENDAR YEAR OF 2018

WATER DIVISION

PAGE 23

DESCRIPTION	ESTIMATED COST SCHEDULE				REF. NO.
	TOTAL COST ESTIMATE	PRIOR TO BUDGET YEAR	IN BUDGET YEAR	AFTER BUDGET YEAR	
PRODUCTION SYSTEM					
PUMPING STATIONS					
Allen Pumping Station					
Engineer Distributed Process Control System Replacement	460,000	230,000	190,000	40,000	23-1
Install Distributed Process Control System Replacement	950,000	-	740,000	210,000	23-2
Medium Voltage Breaker & Switchgear Replacements (CO)	2,000,000	-	1,500,000	500,000	23-3
Station Rehabilitation	12,000,000	-	1,270,000	10,730,000	23-4
Total Allen Pumping Station	15,410,000	230,000	3,700,000	11,480,000	
Davis Pumping Station					
Engineer Distributed Process Control System Replacement (CO)	50,000	-	50,000	-	23-5
Install Distributed Process Control System Replacement (CO)	730,000	390,000	340,000	-	23-6
VFD, Motor & Transformer Replacements	1,650,000	-	5,000	1,645,000	23-7
Station Rehabilitation (CO)	5,150,000	-	50,000	5,100,000	23-8
Total Davis Pumping Station	7,580,000	390,000	445,000	6,745,000	
Lichterman Pumping Station					
Engineer Distributed Process Control System Replacement	290,000	-	210,000	80,000	23-9
Station Rehabilitation (CO)	250,000	-	50,000	200,000	23-10
Total Lichterman Pumping Station	540,000	-	260,000	280,000	
Mallory Pumping Station					
Engineer Distributed Process Control System Replacement (CO)	80,000	-	80,000	-	23-11
Install Distributed Process Control System Replacement	960,000	540,000	420,000	-	23-12
VFD, Motor & Transformer Replacements	1,650,000	-	5,000	1,645,000	23-13
Filter Media Replacement (CO)	1,000,000	-	10,000	990,000	23-14
Total Mallory Pumping Station	3,690,000	540,000	515,000	2,635,000	
McCord Pumping Station					
Filter Media Replacement (CO)	500,000	-	250,000	250,000	23-15
Station Rehabilitation (CO)	250,000	-	50,000	200,000	23-16
Total McCord Pumping Station	750,000	-	300,000	450,000	
Morton Pumping Station					
Engineer Distributed Process Control System Replacement	290,000	-	210,000	80,000	23-17
Station Rehabilitation (CO)	250,000	-	50,000	200,000	23-18
Total Morton Pumping Station	540,000	-	260,000	280,000	
Palmer Pumping Station					
Station Rehabilitation (CO)	125,000	-	25,000	100,000	23-19
Total Palmer Pumping Station	125,000	-	25,000	100,000	
Shaw Pumping Station					
Station Rehabilitation (CO)	1,200,000	-	50,000	1,150,000	23-20
Total Shaw Pumping Station	1,200,000	-	50,000	1,150,000	

MEMPHIS LIGHT, GAS AND WATER DIVISION
CAPITAL EXPENDITURES BUDGET
FOR CALENDAR YEAR OF 2018

WATER DIVISION

PAGE 24

DESCRIPTION	ESTIMATED COST SCHEDULE				REF. NO.
	TOTAL COST ESTIMATE	PRIOR TO BUDGET YEAR	IN BUDGET YEAR	AFTER BUDGET YEAR	
<u>PRODUCTION SYSTEM (Continued)</u>					
Sheahan Pumping Station					
Engineer Distributed Process Control System Replacement (CO)	460,000	230,000	190,000	40,000	24-1
Install Distributed Process Control System Replacement	950,000	-	740,000	210,000	24-2
Station Rehabilitation (CO)	250,000	-	50,000	200,000	24-3
Total Sheahan Pumping Station	1,660,000	230,000	980,000	450,000	
Miscellaneous Pumping Facilities					
Engineering Services Contract (CO)	2,750,000	250,000	500,000	2,000,000	24-4
Water Operations Capital Items (CO)	5,150,000	150,000	1,000,000	4,000,000	24-5
Total Miscellaneous Pumping Facilities	7,900,000	400,000	1,500,000	6,000,000	
TOTAL PUMPING STATIONS	39,395,000	1,790,000	8,035,000	29,570,000	
<u>OVERHEAD STORAGE TANKS</u>					
Mallory Pumping Station Station Rehabilitation	8,176,641	6,476,641	1,700,000	-	24-6
TOTAL OVERHEAD STORAGE TANKS	8,176,641	6,476,641	1,700,000	-	
<u>UNDERGROUND STORAGE RESERVOIRS</u>					
Allen Pumping Station Station Rehabilitation	2,470,000	-	730,000	1,740,000	24-7
Total Allen Underground Storage Reservoirs	2,470,000	-	730,000	1,740,000	
Mallory Pumping Station Construct Wash Water Recovery Basin Replacement Flowmeter on WWRB Residual Discharge Pipe	450,000 2,000,000	25,000 -	75,000 10,000	350,000 1,990,000	24-8 24-9
Total Mallory Storage Reservoirs	2,450,000	25,000	85,000	2,340,000	
TOTAL UNDERGROUND STORAGE RESERVOIRS	4,920,000	25,000	815,000	4,080,000	
<u>PRODUCTION WELLS</u>					
Allen Pumping Station - Construct/Replace Well	3,530,000	520,000	1,010,000	2,000,000	24-10
Davis Pumping Station - Construc/Replace Well	3,540,000	100,000	1,440,000	2,000,000	24-11
Lichterman Pumping Station - Construct/Replace Well	6,520,000	510,000	2,010,000	4,000,000	24-12
Mallory Pumping Station - Construct/Replace Well	3,511,831	545,331	6,500	2,960,000	24-13
McCord Pumping Station - Construct/Replace Well	4,000,000	-	1,000,000	3,000,000	24-14
Miscellaneous Pumping Facilities Abandon Wells	3,230,345	43,345	400,000	2,787,000	24-15
Well Failures	10,000,000	-	2,000,000	8,000,000	24-16
TOTAL PRODUCTION WELLS	34,332,176	1,718,676	7,866,500	24,747,000	
LAND PURCHASE	95,000	-	95,000	-	24-17

MEMPHIS LIGHT, GAS AND WATER DIVISION
CAPITAL EXPENDITURES BUDGET
FOR CALENDAR YEAR OF 2018

WATER DIVISION

PAGE 25

DESCRIPTION	ESTIMATED COST SCHEDULE			REF. NO.	
	TOTAL COST ESTIMATE	PRIOR TO BUDGET YEAR	IN BUDGET YEAR		AFTER BUDGET YEAR
<u>BUILDINGS & STRUCTURES</u>					
<u>DAVIS PUMPING STATION</u>					
Aerator Bldg: Replace Roof	136,000	-	6,000	130,000	25-1
<u>ALLEN PUMPING STATION</u>					
Roof Replacements (design and construction); Pump Room - 32,263 sf, Diesel Bldg - 322 sf, Garage-2,730 sf, and Aerator Elevator Modernization	3,020,000	20,000	500,000	2,500,000	25-2
	115,600	-	115,600		25-3
<u>WATER LABORATORY</u>					
Water Lab Upgrade (includes design costs/Construction & loadings)	4,480,000	1,754,000	2,726,000	-	25-4
SUBTOTAL BUILDINGS & STRUCTURES - PRODUCTION	7,751,600	1,774,000	3,347,600	2,630,000	
CONTINGENCY FUND - PRODUCTION SYSTEM	50,000	-	50,000	-	25-5
TOTAL PRODUCTION SYSTEM	94,720,417	11,784,317	21,909,100	61,027,000	
<u>DISTRIBUTION SYSTEM - MAJOR PROJECTS</u>					
<u>NEW WATER MAIN</u>					
Miscellaneous Projects - Reimbursable	1,550,000	-	315,000	1,235,000	25-6
Major Valve Replacements/Additions	1,400,000	400,000	200,000	800,000	25-7
Main Replacement Projects	2,300,000	200,000	250,000	1,850,000	25-8
Collecting Main Installation	7,235,000	1,685,000	1,500,000	4,050,000	25-9
Lead Main/Service Replacements	29,569,119	4,250,000	5,323,870	19,995,249	25-10
Paul Lowry-Shelby Drive Tie (24" Main)	2,500,000	1,500,000	1,000,000	-	25-11
Macon Under I-40	500,000	250,000	250,000	-	25-12
Minor System Improvements	350,000	100,000	50,000	200,000	25-13
TOTAL NEW WATER MAIN	45,404,119	8,385,000	8,888,870	28,130,249	
<u>STREET IMPROVEMENTS</u>					
City of Bartlett Projects	300,000	-	300,000	-	25-14
City of Memphis Projects	475,000	75,000	400,000	-	25-15
Shelby County Projects	350,000	-	350,000	-	25-16
TDOT Projects	2,380,000	1,780,000	400,000	200,000	25-17
Engineering Services Contract	750,000	-	150,000	600,000	25-18
Miscellaneous Projections	9,350,000	-	750,000	8,600,000	25-19
TOTAL STREET IMPROVEMENTS	13,605,000	1,855,000	2,350,000	9,400,000	
TOTAL DISTRIBUTION SYSTEM - MAJOR PROJECTS	59,009,119	10,240,000	11,238,870	37,530,249	
<u>GENERAL PLANT</u>					
BUILDINGS & STRUCTURES - GENERAL PLANT					
Storage Building for Electric Training Trailer	66,000	-	6,000	60,000	25-20
Training Roadway	286,000	-	20,000	266,000	25-21
TOTAL BUILDINGS & STRUCTURES	352,000	-	26,000	326,000	
<u>SECURITY AUTOMATION</u>					
Allen Pumping Sta. Camera Infrastructure	34,560	-	34,560	-	25-22
Davis Pumping Sta. Camera Infrastructure	21,600	-	21,600	-	25-23
Mallory Pumping Sta. Camera Infrastructure	34,560	-	34,560	-	25-24
Shaw Pumping Station	103,680	51,840	51,840	-	25-25
Network Video Recorders	77,015	31,488	45,527	-	25-26
Video & Alarm System Head End Equipment and Software	866,030	-	866,030	-	25-27
TOTAL SECURITY AUTOMATION	1,137,445	83,328	1,054,117	-	

MEMPHIS LIGHT, GAS AND WATER DIVISION
 CAPITAL EXPENDITURES BUDGET
 FOR CALENDAR YEAR OF 2018

WATER DIVISION

PAGE 26

DESCRIPTION	ESTIMATED COST SCHEDULE				REF. NO.
	TOTAL COST ESTIMATE	PRIOR TO BUDGET YEAR	IN BUDGET YEAR	AFTER BUDGET YEAR	
<u>SECURITY AUTOMATION</u>					
WATER - FLEET CAPITAL POWER OPERATED EQUIP	120,000	-	120,000	-	26-1
WATER - FLEET CAPITAL WATER TRANSPORTATION EQUIP	1,446,000	-	1,446,000	-	26-2
PURCHASE OF TOOLS & EQUIPMENT	42,000	-	42,000	-	26-3
WATER LAB EQUIPMENT	130,000	-	130,000	-	26-4
<u>GENERAL PLANT</u>					
Contingency Fund - General Plant	200,000	-	200,000	-	26-5
TOTAL GENERAL PLANT	3,427,445	83,328	3,018,117	326,000	

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NOTES FOR PAGE 3-CAPITAL EXPENDITURES BUDGET

Total Capital Expenditures

3-1	Renewal and Replacement Fund	Fund set up in conjunction with Bond Resolutions. Funds from this account are to be disbursed for the purpose of paying the cost of maintenance or repairs not recurring annually and renewals, replacements, additions, extensions, improvements, and betterments to the electric, gas, and water systems. The Renewal and Replacement Fund is to be funded from operating funds based on a percentage of depreciated plant value.
3-2	Current Revenues	Revenues that will be used to fund the capital expenditures.
3-3	Debt Issuance	Expected debt issuance in the 2018 budget year.

NOTES FOR PAGE 4—INCOME & EXPENSE COMPARISON

Operating Revenue

4-1	Sales Revenue	This account includes projected revenue from the sale of electricity to the residential, commercial, industrial, outdoor lighting and traffic signal, and interdepartmental customer classes.
4-2	Revenue Adjustment for Uncollectibles	Per Governmental Accounting Standards Board (GASB) 34 requirements, bad debt expense must be shown as a reduction of revenue. This is the amount that will not be collected due to customer's inability to pay.
4-3	Non-Sales Revenue	This account includes revenue from forfeited discounts (extra charges for payments received after net due date), plus rent charged for Electric Division property that is used by the Gas and Water Divisions, and other miscellaneous revenue (e.g., fees for connecting service).

Operating Expense

4-4	Purchased Power	This account includes the cost of electricity purchased from TVA for resale to customers.
4-5	Transmission Expense	This account includes the cost of labor and expenses incurred in the supervision and operation of the transmission system. Included are load dispatching operations, transmission substations, switching stations, overhead and underground line expenses, and miscellaneous transmission expenses. Included in this account are inspecting and testing circuit breakers, switches, breakers, load testing of circuits, line patrolling, and routine inspection of manholes, conduit, network and transformer vaults.
4-6	Distribution Expense	This account includes the cost of labor and expenses incurred in the supervision and direct labor of the operation of the distribution system. Included are direct switching, arranging and controlling clearances for construction, maintenance test and emergencies, communication services provided for system control purposes and controlling system voltages. Also included are the expenses for operation of the overhead and underground distribution lines and stations, street lighting, meter expenses, work on customer installations in inspecting premises and in rendering services to customers, miscellaneous expenses and rent.
4-7	Customer Accounts Expense	This account includes the cost of labor, materials and expenses used in work on customer applications, contracts, orders, credit investigations, billing and accounting, collections and complaints. It also includes meter reading expenses.
4-8	Customer Service and Information Expense	This account includes the cost of labor, materials and expenses incurred in providing instructions or assistance to customers, the object of which is to encourage safe, efficient, and economical use of services, and activities which convey information in utilizing electric services to protect health and safety, to encourage environmental protection, to use electrical equipment safely and economically and to conserve electric energy.
4-9	Sales Expense	This account includes the cost of labor, materials and expenses incurred in promotional, demonstrating and selling activities, advertising designed to promote or retain the use of utility services and miscellaneous sales expense. Included are exhibitions, displays, lectures, engineering and technical advice, advertising in newspapers, periodicals, billboards, radio, etc., postage on direct mail advertising, printing booklets, bulletins, etc.
4-10	Administrative and General Expense	This account includes the compensation of board members, executives, and other administrative and general employees of the utility not chargeable directly to a particular operating function. It also includes the cost of insurance to protect the utility against physical plant losses, cost of reserve accruals to protect the utility against injuries and damage claims of employees or others, such as liability, property damage, casualty, and employee liability. Employee pensions and benefits including payments to pension funds, life insurance, group medical expenses, payments for accident, sickness, hospital and death benefits, and expenses in connection with educational and wellness activities are also included in this account. In accordance with GASB 45, <i>Accounting and Financial Reporting by Employers for Postemployment Benefits Other than Pension</i> , MLGW must recognize all post-employment benefits, such as medical insurance and life insurance, when earned, effective budget year 2007.

NOTES FOR PAGE 4—INCOME & EXPENSE COMPARISON (Continued)

Maintenance Expense

4-11	Transmission Expense	This account includes the cost of labor, materials and expenses incurred in the maintenance of the transmission system, of structures, and station equipment. This includes maintenance of overhead lines and underground lines.
4-12	Distribution Expense	This account includes the cost of labor, materials, and expenses incurred in the maintenance of the distribution system, structures, plant, station equipment, overhead lines and underground lines, distribution line transformers, street lighting and signal systems, meters, and other miscellaneous distribution plant.
4-13	Administrative and General Expense	Please see Appendix 4-10.

Other Operating Expense

4-14	Depreciation Expense	The purpose of depreciation is to allocate the original cost of a fixed asset over its estimated useful life. In a utility environment, the annual depreciation rate also takes into account the estimated salvage and cost of removal upon retirement.
4-15	Payment in Lieu of Taxes	Payment in lieu of taxes is the amount paid to the municipalities in which MLGW has plant. The formula for payment in lieu of taxes is based on the Municipal Electric System Tax Equivalent Law of 1987 and the Municipal Gas Equivalent Law which became effective July 1, 1988. The tax formula has two parts--net investment and revenue. The net investment includes plant in service and held for future use (net of depreciation), construction work-in-progress and materials inventory. The net investment is multiplied by an assessment ratio, the property tax rates for each governmental body, and an equalization rate set by the State. The revenue part of the formula is 4% of a three-year average of operating revenue less power cost.
4-16	F.I.C.A. Taxes	This represents the 1.45% Medicare portion of Social Security Tax which is required to be paid on all MLGW employees hired after 03-31-86.
4-17	Amortization of Legacy Meters	This account includes amortization charges related to expenditures on meters.
4-18	Amortization of Software	This account includes amortization charges related to expenditures on software

Income

4-19	Operating Income	Operating income is equal to operating revenue less total operating expense.
4-20	Other Income	This consists primarily of investment income and property rentals and the electric prepayment agreement. It does not include any sales of electricity, gas or water.
4-21	Reduction of Plant Recovered through CIAC	Contributions in aid of construction are the donations or contributions of cash, services, or property from states, municipalities, or other governmental agencies, individuals, and others for construction purposes.

Debt Expense

4-22	Interest Expense - Existing Long-Term Debt	Bond interest payments due 06-01-2018 and 12-01-2018 per the bond debt schedules are funded in equal monthly installments in 2018.
4-23	Amortization of Debt Discount and Expense	This represents the spreading of bond issuance costs over the life span of the bond series rather than recognizing such costs all at the time of sale.
4-24	Contributions in Aid of Construction	Contributions in aid of construction are the donations or contributions of cash, services, or property from states, municipalities, or other governmental agencies, individuals, and others for construction purposes.

NOTES FOR PAGE 5 – SOURCES AND APPLICATION OF FUNDS

Source of Funds

5-1	Change in Net Position	Please see Budget page 4.
5-2	Prepaid Power – Short Term	Amount received from an agreement with TVA to prepay power for a period of 15 years, which will secure a percentage of power at a discounted rate.
5-3	Depreciation Charged to Operating Income	Please see Appendix 4-14.
5-4	Depreciation Charged to Other Accounts	Depreciation charged to other accounts is the annual depreciation for transportation and power operated equipment. Depreciation on these plant items is charged to a clearing account and used in the equipment rate calculations.
5-5	GASB 68 Pension Non-Cash Expense	Non-cash expense related to employee pension expenses above or below actual funding due to change in accounting principles.
5-6	GASB 75 Other Post Employment Benefit Non-Cash Expense	Non-cash expense related to employee other post employment benefit expenses above or below actual funding due to change in accounting principles.
5-7	Amortization of Legacy Meters	Non-cash expense related to amortization charges related to meter expenditures.
5-8	Amortization of Software	Non-cash expense related to amortization charges related to software expenditures.
5-9	Salvage	Salvage is the amount received for property retired from plant in service. The property may be sold for scrap or returned to stores inventory for reuse.

Application of Funds

5-10	Capital Expenditures	Please see Budget page 6.
5-11	Costs of Removal and Other Charges to the Reserve for Depreciation	Cost of removal is the cost associated with demolishing, dismantling, tearing down or otherwise removing utility plant, including the cost of transportation and labor.
5-12	Retirement of Long-Term Debt	Bond principal amounts due 12-01-2018 per the bond debt schedules are funded in equal monthly installments during 2018.

NOTES FOR PAGE 6—CAPITAL EXPENDITURES

Substation and Transmission

6-1	Substation	Please see Appendix 7-1 through 7-11.
6-2	Substation/Transmission Projects	Please see Appendix 7-12 through 7-22.
6-3	Contributions in Aid of Construction	Please see Appendix 7-23.

Distribution System**Major Projects**

6-4	Residential Service in S/D	All subdivisions that are fed internally by overhead electric primary lines.
6-5	Residential Service Not in S/D	Property not in subdivisions fed internally by overhead electric primary lines.
6-6	Residential S/D	Other property not in subdivisions fed internally by overhead electric primary lines.
6-7	Apartments	All apartments and mobile home communities that are fed internally by overhead electric primary lines.
6-8	General Power Service	Commercial properties that are fed internally by overhead or underground electric primary lines
6-9	General Power S/D	Commercial properties in subdivisions that are fed internally by overhead or underground electric primary lines
6-10	Mobile Home Park	All apartments and mobile home communities that are fed internally by overhead electric primary lines.
6-11	Ranchette	All Ranchette style homes that are fed internally by electric primary lines.
6-12	Temporary Service	Services used for temporary construction
6-13	Res Svc In Apt/Mobile Home Comm	All apartments and mobile home communities that are fed internally by underground electric primary lines.
6-14	Multiple Unit General Power	Commercial properties and apartments that are fed internally by overhead or underground electric primary lines
6-15	Relocate At Customer Request	This budget category provides for the expenses incurred at customers request for facilities to be relocated.
6-16	Street Improvements	This budget category provides for the expenses incurred when City, State and Federal Street Improvements dictate that facilities must be relocated. Please see Appendix 8-11 through 8-12.
6-17	New Circuits	Please see Appendix 8-1 through 8-7.
6-18	Voltage Conversion	Please see Appendix 8-8.
6-19	Reconstruct To Multi Phase	This category describes projects whereby existing single phase distribution lines are rebuilt to provide three phase power, typically when an existing overhead single phase line serving mostly residential customers needs to be upgraded to serve new customers requiring three phase power.
6-20	Line Reconstruction/Remove Idle Facilities	This category describes projects whereby existing distribution lines are improved and/or removed. These projects can include instances where existing circuits are rebuilt to create ties to other circuits to improve reliability to customers; conductors are upgraded to increase the current carrying ability of the circuit; devices such as switches, voltage regulators, capacitors, or reclosers are added to a circuit to improve voltage/reliability; or existing idle facilities are removed to decrease losses.
6-21	Defect Cable/Transformer Replace	This category describes the systematic retrofitting of the Division's Underground Residential Distribution system. The cable is replaced as it reaches end-of-life as determined by in service failures. Obsolete transformers and other distribution hardware are also replaced in this category. Cable replacement was initiated in 1982.
6-22	Street Lights Install	The 2018 budget includes work necessary to provide street lighting in new subdivisions, along new roadways, Memphis city annexations, and adjustments to lights in existing developments requested by the cities throughout the year.
6-23	Planned Maintenance	Construction in minor work that arises daily. These are mainly calls that go through the Control Room, to include pole knockdowns, gas, and water leaks, etc.
6-24	Tree Trimming	Trim or remove trees interfering with overhead lines.
6-25	Leased Outdoor Lighting (LOL)	LOL provides area and security lighting for residential, commercial and industrial customers in Memphis and Shelby County. LOL customers pay aid-to-construction for the installation of lighting fixtures and a monthly flat rate energy and facility fee. Services provided through LOL include engineering design of lighting systems to meet customer needs as well as building codes and standards. Installation and maintenance are handled through Distribution Support, using Division personnel and contracted labor.

NOTES FOR PAGE 6–CAPITAL EXPENDITURES (Continued)

Major Projects (Continued)

6-26	Storm Restoration	This category shows actual expenditures for previous years related to storm restoration efforts. MLGW does not budget for unexpected storm related expenses. These storms are generally large enough to cause major damage to our electric distribution system. Funds expensed in this category are reimbursable by the Federal Emergency Management Agency.
6-27	Emergency Maintenance	Emergency maintenance is minor capital unplanned work that arises daily. These are mainly calls that go through the Control Room, such as pole knockdowns, gas or water leaks, etc.
6-28	Communication Towers	This category is for installation of the telecommunication system infrastructure required to support smart meters.
6-29	JT-Residential Service in S/D	All subdivisions that are fed internally by underground electric primary lines and all subdivisions and apartments that are joint trench (underground electric primary and gas in the same trench).
6-30	JT-Residential Service Not in S/D	All subdivisions that are fed internally by underground electric primary lines and all subdivisions and apartments that are joint trench (underground electric primary and gas in the same trench).
6-31	JT-Residential S/D	All subdivisions that are fed internally by underground electric primary lines and all subdivisions and apartments that are joint trench (underground electric primary and gas in the same trench).
6-32	JT-Apartments	All subdivisions that are fed internally by underground electric primary lines and all subdivisions and apartments that are joint trench (underground electric primary and gas in the same trench).
6-33	JT-Res Svc in Apt/Mobile Home Comm	All subdivisions that are fed internally by underground electric primary lines and all subdivisions and apartments that are joint trench (underground electric primary and gas in the same trench).
6-34	PCI-Capacitor Banks	To change out PCB contaminated capacitor banks
6-35	PCI- Dist. Transformers	Purchase, receive, test and stock overhead type transformers for the Overhead Electric Distribution System--inventory levels are closely managed based on growth, new construction, history, voltage conversions and failures.
6-36	Elec Meters	The Electric Meter Area's capital budget for the purchase of electric metering equipment along with installation of revenue metering at the gate stations.
	Contributions in Aid of Construction	Contributions in aid of construction are the donations or contributions of cash, services, or property from states, municipalities, or other governmental agencies, individuals, and others for construction purposes.

General Plant

6-37	Buildings and Structures	Please see Appendix 8-13 through 9-1.
6-38	Security Automation	Please see Appendix 9-2.
6-39	Land Purchase	Please see Appendix 9-3.
6-40	Fleet Capital Power Operated Equipment	Please see Appendix 9-4.
6-41	Transportation Equipment	Please see Appendix 9-5.
6-42	Tools & Equipment	Please see Appendix 9-6.
6-43	Lab & Test	Please see Appendix 9-7.
6-44	Communication Equipment	Please see Appendix 9-8.
6-45	Communication Towers	Please see Appendix 9-9 through 9-11.
6-46	Telecommunication Network	Please see Appendix 9-12 through 9-16.
6-47	Utility Monitoring	Please see Appendix 10-1.
6-48	Customer Information System Development	Please see Appendix 10-2 through 10-7.
6-49	Business Continuity	Please see Appendix 10-8 through 10-16.
6-50	Purchase of Data Processing Equipment	Please see Appendix 10-17 through 10-25.
6-51	IS/IT Projects	No expenditures planned for the 2018 budget year.
6-52	NERC Compliance	No expenditures planned for the 2018 budget year.
6-53	Contingency Fund	Please see Appendix 10-26.
6-54	Delayed Cost Allocations	These are funds budgeted in the current year for items that may arrive late from the previous year's budget.

NOTES FOR PAGE 7-CAPITAL EXPENDITURES BUDGET

Substation & Transmission**Substation**

7-1	Install Substation 89 161/23Kv facilities	Description/Location	Install new substation facilities, #89 Mendenhall Road
		Purpose/Necessity	Mendenhall Road Substation 89 is required to address contingencies at temporary Substation 9 as well as to relieve load in southeast Memphis and provide capacity for the SE Corridor.
7-2	Install Substation 84 third 161/23kV transformer	Description/Location	Install 3rd Transformer Bank @ Sub. 84, 5127 Germantown Road, Bartlett
		Purpose/Necessity	To relieve load in northeast Shelby County
7-3	Replace Breakers (Various Locations)	Description/Location	Various locations
		Purpose/Necessity	To change out aging infrastructure
7-4	Replace Transformers (Various Locations)	Description/Location	Various locations
		Purpose/Necessity	To change out aging infrastructure
7-5	Replace RTU's (Various Locations)	Description/Location	Various locations
		Purpose/Necessity	To change out aging infrastructure
7-6	Replace Relays (Various Locations)	Description/Location	Various locations
		Purpose/Necessity	To change out aging infrastructure
7-7	Replace Capacitor Banks (Various Locations)	Description/Location	Various locations
		Purpose/Necessity	To change out PCB contaminated capacitor banks
7-8	Replace / Install Misc (switches, batteries, Fiber, etc.)	Description/Location	Various locations
		Purpose/Necessity	To change out batteries, switches and install fiber
7-9	Oil Spill Containment (SPCC)	Description/Location	Various locations
		Purpose/Necessity	To install concrete oil spill containment pits
7-10	Seismic Retrofit of Non-Structural Substation Components	Description/Location	Various locations
		Purpose/Necessity	Nonstructural anchorage, bracing or restraints for nonstructural control and metering equipment in substation control and oil buildings and in the electric operations/SCADA building. (2007 Multi-Hazard Risk Assessment)
7-11	Animal Mitigation	Description/Location	Various locations
		Purpose/Necessity	Protect electric equipment from outages due to animals

Substation/Transmission Projects

7-12	Sub 89 Cut-In	Description/Location	Transmission line to feed new substation facilities, #89 Mendenhall
		Purpose/Necessity	Mendenhall Road Substation 89 is required to address contingencies at temporary Substation 9 as well as to relieve load in southeast Memphis and provide capacity for the SE Corridor.
7-13	OPGW 34-71-89	Description/Location	Various Locations
		Purpose/Necessity	Install fiber for substation communications at various locations.
7-14	OPGW 38 -Structure 1531	Description/Location	Various Locations
		Purpose/Necessity	Install fiber for substation communications at various locations.
7-15	FAA Tower Lights	Description/Location	McKellar Lake & Charles Baker Airport
		Purpose/Necessity	Install warning lights on transmission towers to alert aircraft as to tower locations in order to comply with FAA regulations.
7-16	Misc. Projects (OPGW, Structure Replacements, etc.)	Description/Location	Various Locations
		Purpose/Necessity	Small fiber jobs, Structure replacements (aging)

Transmission - Reimbursable

7-17	TVA CC Plant/Transmission & Substation Improvements	Description/Location	Reimbursable improvements to made at various locations as a result of the TVA CC Plant.
		Purpose/Necessity	Reimbursable improvements to made at various locations as a result of the TVA CC Plant.

NOTES FOR PAGE 7—CAPITAL EXPENDITURES BUDGET (Continued)

Transmission - NERC Compliance

7-18	Change Metering Equip. at Transmission System Subs	Description/Location	Change Metering Equip. at Transmission System Subs
		Purpose/Necessity	Needed to monitor VAR power flow, required due to NERC standard TOP-006.
7-19	Transmission Circuit Breaker Replacements	Description/Location	Transmission Circuit Breaker Replacements
		Purpose/Necessity	Replace overstressed circuit breakers, required due to NERC standard TPL-001.
7-20	Install/Upgrade Digital Fault Recorders	Description/Location	Install/Upgrade Digital Fault Recorders
		Purpose/Necessity	Needed for disturbance recording due to NERC standard PRC-002.
7-21	Install Substation Smart Locks	Description/Location	Install/Upgrade Digital Fault Recorders
		Purpose/Necessity	Needed for physical security access documentation for all low-impact assets, required due to NERC standard CIP-002.
7-22	NERC Low Impact Compliance	Description/Location	Various substations.
		Purpose/Necessity	Needed for physical security access documentation for all low-impact assets, required due to NERC standard CIP-002.

Contributions in Aid of Construction

7-23	Contributions in Aid of Construction	Description/Location	Various locations
		Purpose/Necessity	FEMA Reimbursements.

Distribution System - Major Projects

New Circuits Out of Substations

7-24	Sub 89 Cabling	Description/Location	Proposed Substation 89 site
		Purpose/Necessity	To install getaway cables from Substation 89.
7-25	Sub 84 MH/DL (3 ckts)	Description/Location	At existing Substation 84 site-- 5127 Germantown Rd.
		Purpose/Necessity	To relieve load in NE Shelby County
7-26	Sub 46 Cabling	Description/Location	At existing Substation 46 site-- 4440 Millington Rd.
		Purpose/Necessity	To repair collapsed duct line at Substation 46

NOTES FOR PAGE 8-CAPITAL EXPENDITURES BUDGET

Distribution System - Major Projects (Continued)**New Circuits Out of Substations (Continued)**

8-1	Reconfigure Circuit 15205	Description/Location	Near existing Substation 15 site-- 5127 Navy Road
		Purpose/Necessity	To reconfigure circuit 15205 based on Navy Base solar array.
8-2	5492 E. Shelby Dr-Mendenhall to Hickory Hill (Sub 89 ckt ties)	Description/Location	5492 E. Shelby Drive - Mendenhall to Hickory Hill
		Purpose/Necessity	Reliability and switching flexibility
8-3	Shelby Dr-Mendenhall to Hickory Hill and Holmes (Sub 89 ckt ties)	Description/Location	Distribution Drive
		Purpose/Necessity	Reliability and switching flexibility
8-4	Shelby Dr Underbuild-Germantown Rd to Hacks Cross (Sub 28 to Sub 9)	Description/Location	Shelby Dr Underbuild-Germantown Rd to Hacks Cross
		Purpose/Necessity	Reliability and switching flexibility
8-5	Sub 84 ckt ties	Description/Location	At existing Substation 84 site-- 5127 Germantown Rd.
		Purpose/Necessity	To relieve load in NE Shelby County
8-6	Sub 46 ckt ties	Description/Location	Area around Sub. 46 4440 Millington Road
		Purpose/Necessity	Reliability and switching flexibility

Voltage Conversions

8-7	Small Voltage Conversion Projects	Description/Location	Various locations
		Purpose/Necessity	Loss savings and improved reliability

Miscellaneous Reimbursable Projects

8-8	Allen Pumping Station Service (Water Reimbursable)	Description/Location	Allen Pumping Station 709 Dison Avenue
		Purpose/Necessity	These projects are existing customers expanding or new customers over 2000 kVA and will be reimbursed.
8-9	Pinch District Improvements	Description/Location	Downtown area
		Purpose/Necessity	This project will relocate/improve electric facilities in conjunction with the proposed improvements to the Pinch District in downtown Memphis.

Relocation of Lines - Street Improvements

8-10	SR-57/Poplar Bridge @ Scott Street & SR-23/Walnut Grove (SP 02/12)	Description/Location	SR-57/Poplar Bridge @ Scott Street & SR-23/Walnut Grove
		Purpose/Necessity	Relocate utilities for proposed street improvement project by TDOT or municipalities
8-11	Old Brownsville Rd, Austin Peay to Kirby Whitten-widening (SP10/08)	Description/Location	Old Brownsville Rd
		Purpose/Necessity	Relocate utilities for proposed street improvement project by TDOT or municipalities

General Plant**Buildings and Structures (Continued)****Substations**

8-12	Replace Roofs - Various Substations	Description/Location	Various Substations
		Purpose/Necessity	This project was identified in the Master Roof Plan to be replaced at this time due to increased maintenance, potential leaking, and projected life expectancy.

Electrical & Systems Operations

8-13	Radio Tower Bldg.: UPS & Generator	Description/Location	Electric & Systems Operations
		Purpose/Necessity	Building needs a stationary generator. Currently this building shares the generator and UPS with the main building. Need to separate systems in order to ensure redundancy in outage occurrences.

NOTES FOR PAGE 8-CAPITAL EXPENDITURES BUDGET (Continued)

8-14	Radio Tower Bldg.: Replace 874 sq. ft. roof	Description/Location	Electric & Systems Operations
		Purpose/Necessity	This project was identified in the Master Roof Plan to be replaced at this time due to increased maintenance, potential leaking, and projected life expectancy.

Beale Street Landing Garage

8-15	Elevator System Modernization	Description/Location	Beale Street Landing Garage
		Purpose/Necessity	The existing elevator is original to the building and is currently experiencing may maintenance problems.

New Buildings

8-16	Fabrication and Repair Shop Relocation	Description/Location	Transformer/Paint Shop Relocation
		Purpose/Necessity	This building is the first phase of our effort to vacate the Central Shops facility. This shop is the most critical and the existing space is not conducive to a productive and safe working environment.

NOTES FOR PAGE 9-CAPITAL EXPENDITURES BUDGET

General Plant (Continued)**Buildings and Structures****Netters Business Operations Center**

9-1	ADA Upgrades (CO)	Description/Location	ADA Upgrades
		Purpose/Necessity	This project is mandated for all public access buildings

Security Automation

9-2	Security Automation	Description/Location	Various locations
		Purpose/Necessity	Install card readers on control house doors, install a CCTV system, install fence alarms and various security upgrades throughout the division.

Purchase of Property

9-3	Purchase of Property	Description/Location	Property purchase or the acquisition of land rights for distribution and transmission line facilities.
		Purpose/Necessity	To accommodate electric facilities, transmission lines, feeder circuits, etc.

Fleet Capital Power Operated Equipment

9-4	Fleet Capital Power Operated Equipment	Description/Location	Division vehicles/equipment used for work in and around Shelby County.
		Purpose/Necessity	To purchase approved budget items, in order to provide equipment for crews to complete job assignments. Replacements are evaluated based on age, actual operational usage, projected usage, repair cost and frequency, parts availability, and effectiveness to meet areas needs.

Transportation Equipment

9-5	Transportation Equipment	Description/Location	Division equipment used for work in and around Shelby County.
		Purpose/Necessity	To purchase approved budget items, in order to provide equipment for crews to complete job assignments. Replacements are evaluated based on age, actual operational usage, projected usage, repair cost and frequency, parts availability, and effectiveness to meet areas needs. Additions are evaluated based on justification request and proper approval.

Tools and Equipment

9-6	Tools & Equipment	Description/Location	Division tools/equipment used for work in and around Shelby County.
		Purpose/Necessity	To purchase approved budget items, in order to provide equipment for employees to complete job assignments. Tools are considered replacements for the following reasons: i. Damaged beyond repair; ii. Worn from time/age/use, cost does not justify repair; iii. Lost/Stolen report submitted in a timely manner; iv. No longer suited for work being done, replace with a new model; v. Safety hazard; vi. Repair cost is at or above 50% of cost of new tool; vii. High occurrence of maintenance that creates excessive downtime.

Laboratory and Test Equipment

9-7	Lab & Test Equipment	Description/Location	Control Area for Lab & Test Equipment
		Purpose/Necessity	To satisfy the Division needs for Electric Laboratory Equipment for 2018. The replacement policy is broken down into the following categories: 1. Lost or Stolen; 2. Damaged Beyond Repair; 3. Not Repairable/No Abuse; 4. Obsolete

Communication Equipment

9-8	Communication Equipment	Description/Location	Control Area for Communication Equipment
		Purpose/Necessity	To satisfy the Division needs for Electric Communication Equipment common for the 2017 Budget. The replacement policy is broken down into the following categories: 1. Lost or Stolen; 2. Damaged Beyond Repair; 3. Not Repairable/No Abuse; 4. Obsolete

NOTES FOR PAGE 9-CAPITAL EXPENDITURES BUDGET (Continued)

General Plant (continued)Communication Tower ProjectsMicrowave/Mobile Radio

9-9	Microwave/Mobile Radio	Description/Location	Reconfigure microwave loop for Netters radio tower
		Purpose/Necessity	Installation of Netters radio tower requires reconfiguration of microwave loop
9-10	Microwave/Mobile Radio (Inspire)	Description/Location	Reconfigure microwave loop for Netters radio tower
		Purpose/Necessity	Installation of Netters radio tower requires reconfiguration of microwave loop

SCADA & Distribution Automation

9-11	900 MHz Radios and DA Upgrades	Description/Location	Replace obsolete 900 MHz radios
		Purpose/Necessity	Maintain communications for SCADA and Distribution Automation

Telecom Network ProjectsFiber Optic Cable & Equipment

9-12	Fiber Optic Multiplexers	Description/Location	Purchase and install fiber optic end equipment (places light on the optical fibers and "makes them work") at various locations.
		Purpose/Necessity	Enable communications over proposed fiber optic cable.
9-13	Fiber Optic Cable and Equipment	Description/Location	Install fiber optic cable at various locations.
		Purpose/Necessity	Provide fiber optic communications to specified facilities.

Voice Network

9-14	Voice Network (CO)	Description/Location	Replace Administration Building telephone switch
		Purpose/Necessity	Replace obsolete switch; reconfigure voice system to have three "master" switches that provide service to all MLGW facilities instead of separate switches at each location.
9-15	Customer Care Center (CCC) Backup (CO)	Description/Location	CCC
		Purpose/Necessity	OPC PBX Expansion IVR, Cisco Sonet, & Voice Recorder.

Telecommunications System Growth

9-16	Telecommunications System Growth	Description/Location	Telecom systems growth - various locations. This is to cover unplanned and unforeseen Telecom expenditures that typically occur.
		Purpose/Necessity	Previous Telecom budgets had separate line items for systems growth in Mobile Radio, Fiber Optic, Microwave, Voice Recorder, Video Conferencing, Audio Conferencing, Voice System, etc. This item consolidates the separate items.

NOTES FOR PAGE 10-CAPITAL EXPENDITURES BUDGET

General Plant (Continued)**Utility Monitoring & Control Systems**

10-1	System Backup Control & Communication Plan (CO)	Description/Location	SCADA and CARES Systems long-term development
		Purpose/Necessity	Support long-term development of SCADA and CARES systems which involves implementation of backup system, upgrade of SCADA communications systems which includes relocating communication paths from ESO to fiber ring.

Customer Information System Development

10-2	2018 CIS Upgrade Production HW & SW	Description/Location	2018 CIS Upgrade Production HW & SW
		Purpose/Necessity	This will provide an upgrade to the CIS hardware and software (Oracle Database 12c and Linux Operating system). The current hardware and software is over 8 years old.
10-3	Mobile Dispatching System Replacement (CO)	Description/Location	Mobile Dispatching System Replacement & Expansion
		Purpose/Necessity	Replace the mobile dispatch system which is several releases behind and does not allow for MLGW to develop it's own functions within the software. Currently the vendor has to develop all functions.
10-4	IVR Replacement (CO)	Description/Location	The current IVR system does not allow MLGW to make its own changes. The vendor must make the changes to the IVR system. The new system would allow MLGW to make changes as needed to better meet customer needs and improve customer experience.
		Purpose/Necessity	To improve customer ease of use and experience.
10-5	Customer Single Sign-On Portal (CO)	Description/Location	Customer Single Sign-On Portal
		Purpose/Necessity	System will allow customers to use one use rid and password to log into different MLGW applications.

Customer Information System Development (Continued)

10-6	Meter Data Management System (CO)	Description/Location	The Meter Data Management (MDM) system is an application that provides analytical tools, reports, calculates billing reads, and time of use billing and reports.
		Purpose/Necessity	To implement a primary application for meter data management.
10-7	BillGen Replacement	Description/Location	Replace the current BillGen system.
		Purpose/Necessity	GSA-3 customers may become Time Of Use (TOU) customers in October 2018. The current BillGen would not be able to handle these additional customers.

Business Continuity

10-8	2016 Network Enhancements (CO)	Description/Location	Network Enhancements
		Purpose/Necessity	To replace obsolete network devices that will not be covered by the manufacture or other vendors.
10-9	2017 Network Enhancements (CO)	Description/Location	Network Enhancements
		Purpose/Necessity	To replace obsolete network devices that will not be covered by the manufacture or other vendors.
10-10	2018 Network Enhancements	Description/Location	Network Enhancements
		Purpose/Necessity	To replace obsolete network devices that will not be covered by the manufacture or other vendors.
10-11	2018 Data Center Upgrade Enhancements	Description/Location	Data Center Upgrade Enhancements
		Purpose/Necessity	To increase reliability and redundancy/failover of user access, applications and Customer satisfaction by adding additional network switches in the System Operations Data Center.
10-12	F5 Load Balancers	Description/Location	F5 Load Balancers
		Purpose/Necessity	To purchase two (2) new and upgrade two (2) existing Load Balancers to increase reliability and cyber security on the corporate network. This equipment is used to decrypt encrypted data to look for malware, spyware and other such detrimental data.

NOTES FOR PAGE 10—CAPITAL EXPENDITURES BUDGET (Continued)

General Plant (Continued)Business Continuity (Continued)

10-13	2018 Backup Expansion	Description/Location	2018 Backup Expansion
		Purpose/Necessity	Our current backup system will need to be expanded to store additional backup data from the increase in corporate servers.
10-14	Redundant data center internet connectivity (CO)	Description/Location	Redundant data center internet connectivity
		Purpose/Necessity	MLGW will benefit from this acquisition by an increase in reliability and redundancy of user access, applications and customer satisfaction. Having two data centers that can support each other will minimize outages due to natural accidental or equipment failures. Data center redundancy increases employee productivity by providing increased application up time. Customers will benefit from this by providing increased up time for customer facing applications used for bill payment, utility usage, etc. It also provides decreased interruption to customer service.
10-15	2017 Data Center Internet Connectivity Improvements	Description/Location	2017 Data Center Internet Connectivity Improvements
		Purpose/Necessity	Begin the design and build to allow the Netters and Administration buildings. Data centers to provide more redundancy.
10-16	NERC Tracking Software Phase 1 & Phase 2 (CO)	Description/Location	Netters
		Purpose/Necessity	A commercially-supported program is needed to aid in tracking all documents, tasks, mitigation plans, deadlines, and updates associated with applicable NERC standards.

Purchase of Data Processing Equipment

10-17	PC Equipment	Description/Location	PC equipment (above \$5000 unit cost) requested for various reasons
		Purpose/Necessity	PC equipment requested for various reasons including: additional functionality, laptops with docking stations to replace desktop PCs, and laptops needing replacement ahead of schedule due to software requirements.
10-18	New/Replacement Servers (CO)	Description/Location	Server Replacements
		Purpose/Necessity	Replace existing servers which have reached end-of-life and will no longer be supported by the manufacturer.
10-19	Storage Area Network Expansion (CO)	Description/Location	Upgrade the Storage Area Network (SAN) Fabric and EMC SAN
		Purpose/Necessity	The purpose is to upgrade the Storage Area Network (SAN) to allow for failover to the disaster recovery copy of the production virtual server environment. In the event of a disaster this project would allow all existing and future virtual servers located at the Netters Data Center to come online at the Administration building.
10-20	2018 VDI Storage	Description/Location	To acquire additional storage for the Virtual Desktop Infrastructure
		Purpose/Necessity	Additional disk capacity will be needed to support the ever increasing data storage growth required for the Virtual Desktops.
10-21	2018 Netters 3PARBC11 Expansion -Add Disks	Description/Location	2018 Netters 3PARBC11 Expansion -Add Disks
		Purpose/Necessity	To increase storage capacity, performance, and speed for systems such as Smart Meter, HR Payroll, CIS, Inspire, Advantex Mobile Dispatch systems as well as all virtual servers on VMware and Oracle virtual server (OVS).
10-22	Wireless Network Infrastructure	Description/Location	Wireless Network Infrastructure
		Purpose/Necessity	Replace end of life wireless equipment and expand wireless to areas not currently covered.
10-23	Work Center Wireless (outdoor)	Description/Location	Work Center Wireless (outdoor)
		Purpose/Necessity	To expand MLGW's wireless outdoor network at North, South, Hickory Hill and Brunswick service centers.
10-24	Business Objects Upgrade	Description/Location	Business Objects Upgrade
		Purpose/Necessity	Upgrade the existing business objects data warehouse environment which includes the core application, dashboard functionality and data services. The data service component has reached end-of-life.
10-25	HR Analytics	Description/Location	HR Analytics
		Purpose/Necessity	This item provides prebuilt ETL (extract translate load) templates for HR/Payroll data to be used by the Oracle OBIEE analytics and reporting tool.
10-26	Contingency Fund - General Plant	This is an estimated budget amount to cover unforeseen emergency items that may arise in the current year.	

NOTES FOR PAGE 13–INCOME & EXPENSE COMPARISON

Operating Revenue

13-1	Sales Revenue	This account includes projected revenue from the sale of natural gas to the residential, commercial, industrial, and interdepartmental customer classes.
13-2	Revenue Adjustment for Uncollectibles	Per Governmental Accounting Standards Board (GASB) 34 requirements, bad debt expense must be shown as a reduction of revenue. This is the amount that will not be collected due to customers inability to pay.
13-3	Non-Sales Revenue	This account includes revenue from forfeited discounts (extra charges for payments received after net due date), plus rent charged for Gas Division property that is used by the Electric and Water Divisions, other miscellaneous revenue (e.g., fees for connecting/disconnecting service), and charges for transporting gas, CNG and LNG within the MLGW system for those industrial customers who arrange for purchase of their gas from suppliers other than MLGW.

Operating Expense

13-4	Production – LNG Plant	This account includes the cost of expenses incurred in the cost of fuel used in extracting salable products from natural gas and of operation of storage facilities and equipment.
13-5	Purchased Gas	This account includes the cost of natural gas and transportation of this gas to be used for injection into the system for resale.
13-6	Compressed Natural Gas (CNG)	This account includes the cost of compressed natural gas and transportation of this gas to be used for injection into the system for resale.
13-7	Liquefied Natural Gas (LNG)	This account includes the cost of liquefied natural gas and transportation of this gas to be used for injection into the system for resale.
13-8	Distribution Expense	This account includes the cost of labor and expenses incurred in the operation of the distribution system. Included are costs incurred in dispatching and controlling the supply and flow of the gas through the distribution system, in operating system mains and services, in operating general distribution measuring and regulating stations, and in removing, resetting, changing, testing, and servicing customer meters and house regulators. Also included in this account are the expenses incurred in work on customer premises, rents and other expenses.
13-9	Customer Accounts Expense	This account includes the cost of labor, materials and expenses used in work on customer applications, contracts, orders, credit investigations, billing and accounting, collections and complaints. It also includes meter reading expenses.
13-10	Customer Service and Information Expense	This account includes the cost of labor, materials and expenses incurred in providing instructions or assistance to customers, the object of which is to encourage safe, efficient, and economical use of services, and activities which convey information in utilizing services to protect health and safety, to encourage environmental protection, to use electrical equipment safely and economically and to conserve energy.
13-11	Sales Expense	This account includes the cost of labor, materials and expenses incurred in promotional, demonstrating and selling activities, advertising designed to promote or retain the use of utility services and miscellaneous sales expense. Included are exhibitions, displays, lectures, engineering and technical advice, advertising in newspapers, periodicals, billboards, radio, etc., postage on direct mail advertising, printing booklets, bulletins, etc.
13-12	Administrative and General Expense	This account includes the compensation of board members, executives, and other administrative and general employees of the utility not chargeable directly to a particular operating function. It also includes the cost of insurance to protect the utility against physical plant losses, cost of reserve accruals to protect the utility against injuries and damage claims of employees or others, such as liability, property damage, casualty, and employee liability. Employee pensions and benefits including payments to pension funds, life insurance, group medical expenses, payments for accident, sickness, hospital and death benefits, and expenses in connection with educational and wellness activities are also included in this account. In accordance with GASB 45, Accounting and Financial Reporting by Employers for Postemployment Benefits Other than Pension, MLGW must recognize all post-employment benefits, such as medical insurance and life insurance, when earned, effective budget year 2007.

Maintenance Expense

13-13	Production Expense	This account includes the cost of labor, materials and expenses incurred in the maintenance of liquefaction equipment, of measuring and regulating equipment, structures, station equipment and other equipment.
13-14	Distribution Expense	This account includes the cost of labor, materials and expenses incurred in the maintenance of distribution facilities, of structures, of distribution mains, of measuring and regulating equipment, of services, and of meters and house regulators.
13-15	Administrative and General Expense	Please see Appendix 13-12.

NOTES FOR PAGE 13—INCOME & EXPENSE COMPARISON (Continued)

Other Operating Expense

13-16	Depreciation Expense	The purpose of depreciation is to allocate the original cost of a fixed asset over its estimated useful life. In a utility environment, the annual depreciation rate also takes into account the estimated salvage and cost of removal upon retirement.
13-17	Payment in Lieu of Taxes	Payment in lieu of taxes is the amount paid to the municipalities in which MLGW has plant. The formula for payment in lieu of taxes is based on the Municipal Electric System Tax Equivalent Law of 1987 and the Municipal Gas Equivalent Law which became effective July 1, 1988. The tax formula has two parts -- net investment and revenue. The net investment includes plant in service and held for future use (net of depreciation), construction work in progress and materials inventory. The net investment is multiplied by an assessment ratio, the property tax rates for each governmental body, and an equalization rate set by the State. The revenue part of the formula is 4% of a three year average of operating revenue less gas cost.
13-18	F.I.C.A. Taxes	This represents the 1.45% Medicare portion of Social Security Tax that is required to be paid on all MLGW employees hired after 03-31-1986.
13-19	Amortization of Leasehold Improvements	This account includes amortization charges related to expenditures on leased property where the service life of the improvements are terminable by action of the lease.
13-20	Amortization of Legacy Meters	This account includes amortization charges related to expenditures on meters.
13-21	Amortization of Software	This account includes amortization charges related to expenditures on software.

Income

13-22	Operating Income	Operating income is equal to operating revenue less total operating expense.
13-23	Other Income	This consists primarily of investment income and property rentals. It does not include any sales of electricity, gas or water.
13-24	Reduction of Plant Recovered through CIAC	Contributions in aid of construction are the donations or contributions of cash, services, or property from states, municipalities, or other governmental agencies, individuals, and others for construction purposes.

Debt Expense

13-25	Interest Expense -Long Term Debt	Anticipated bond interest payments per the bond debt schedules.
13-26	Amortization of Debt Discount & Expense	This represents the spreading of bond issuance costs over the life span of the bond series rather than recognizing such costs all at the time of sale.
13-27	Contributions in Aid of Construction	Contributions in aid of construction are the donations or contributions of cash, services, or property from states, municipalities, or other governmental agencies, individuals, and others for construction purposes.

NOTES FOR PAGE 14—SOURCES AND APPLICATION OF FUNDS

Source of Funds

14-1	Change in Net Position	Please see Budget page 13.
14-2	Depreciation Charged to Operating Income	Please see Appendix 13-16.
14-3	Depreciation Charged to Other Accounts	Depreciation charged to other accounts is the annual depreciation for transportation and power operated equipment. Depreciation on these plant items is charged to a clearing account and used in the equipment rate calculations.
14-4	GASB 68 Pension Non-Cash Expense	Non-cash expense related to employee pension expenses above or below actual funding due to change in accounting principles.
14-5	GASB 75 Other Post Employment Benefit Non-	Non-cash expense related to employee other post employment benefit expenses above or below actual funding due to change in accounting principles.
14-6	Amortization of Legacy Meters	Non-cash expense related to amortization charges related to meter expenditures.
14-7	Amortization of Software	Non-cash expense related to amortization charges related to software expenditures.
14-8	Salvage	Salvage is the amount received for property retired from plant in service. The property may be sold for scrap or returned to stores inventory for reuse.

Applications of Funds

14-9	Capital Expenditures	Please see Budget page 15.
14-10	Costs of Removal and Other Charges to the Reserve for Depreciation	Cost of removal is the cost associated with demolishing, dismantling, tearing down or otherwise removing utility plant, including the cost of transportation and labor.
14-11	Retirement of Long-Term Debt	Bond principal amounts due 01-01-2018 per the bond debt schedules are funded in equal monthly installments during 2018.

GAS DIVISION

NOTES FOR PAGE 15–CAPITAL EXPENDITURES BUDGET

Production System

15-1	Production System	No expenditures planned for the 2018 budget year.
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Distribution System

15-2	Residential Service in S/D	This budget category provides for the expenses incurred by the Gas Division for customer requests for service located in a subdivision.
15-3	Residential Service Not in S/D	This budget category provides for the expenses incurred by the Gas Division for customer requests for service not located in a subdivision.
15-4	Residential S/D	This budget category provides for the expenses incurred by the Gas Division for developer requests for gas facilities located in a subdivision.
15-5	Land Purchase	This budget category provides for the purchase of land rights that will be needed for Capital Budget Projects.
15-6	Apartments	This budget category provides for the expenses incurred by the Gas Division for developer requests for gas facilities for new apartment developments.
15-7	General Power Service	This budget category provides for the expenses incurred by the Gas Division for customer requests for new General Power Service.
15-8	General Power S/D	This budget category provides for the expenses incurred by the Gas Division for customer requests for new General Power Service located in a subdivision.
15-9	Mobile Home Park	This budget category provides for the expenses incurred by the Gas Division for developer requests for gas facilities located mobile home development.
15-10	Multiple-Unit General Power	This budget category provides for the expenses incurred by the Gas Division for customer requests for multiple units of new General Power Service by the same customer and general location.
15-11	Relocate At Customer Request	This budget category provides for the expenses incurred by the Gas Division for customer requests to relocate existing gas facilities.
15-12	Purchase of Meters	This budget category provides for the expenses incurred from buying new gas meters and reconditioning existing gas meters.
15-13	Street Improvements	This budget category provides for the expenses incurred when City, State and Federal Street Improvements dictate that facilities must be relocated. Please see Appendix 16-1 through 16-12.
15-14	New Gas Main	This budget category provides for the expenses incurred for the installation of miscellaneous new gas mains and facilities.
15-15	Gas Main/Service Repl (D.O.T.)	This budget category provides for replacement of old cast iron main that requires excessive maintenance and that has a history of leaking. This is a 30 year project that began in 1991 and was requested by the TN Regulatory Authority to replace 330 miles. This budget category also provides for replacement of steel taps and associated services, if needed, that have a history of leaking. This is a program initiated by DIMP findings.
15-16	Transmission Pipelines and Facilities	This budget category provides for the expenses incurred for maintenance of cased gas transmission crossings required by regulatory changes, minor repair of transmission pipelines from scheduled inspections, and minor transmission improvements.
15-17	Regulator Stations	This budget category provides for the expenses incurred for minor upgrades to existing regulator stations.
15-18	JT-Residential Service in S/D	This budget category provides for the expenses incurred by the Gas Division for customer requests for service located in a joint trench subdivision.
15-19	JT-Residential Service not in S/D	This budget category provides for the expenses incurred by the Gas Division for customer requests for service located in a joint trench location not in a subdivision.
15-20	JT-Residential S/D	This budget category provides for the expenses incurred by the Gas Division for developer requests for gas facilities in a joint trench subdivision.
15-21	JT-Apartments	This budget category provides for the expenses incurred by the Gas Division for developer requests for gas facilities in a joint trench apartment development.
15-22	JT-Relocate at Customer Request	This budget category provides for the expenses incurred by the Gas Division for customer requests to relocate existing gas facilities for a joint trench installation.
15-23	Miscellaneous Emergency Construction	This budget line item provides for emergency repair work when leaks and cut facilities require immediate repair.
	Contributions in Aid of Construction	This budget line item provides for the payment that was predicted to be received from the developer and/or customer for the requested gas facilities to serve their development, businesses and/or new homes.

NOTES FOR PAGE 15-CAPITAL EXPENDITURES BUDGET (Continued)

General Plant

15-24	Buildings and Structures	Please see Appendix 16-20 through 16-27.
15-25	Security Automation	Please see Appendix 17-1 through 17-5.
15-26	Purchase of Furniture & Fixtures	No capital purchases of furniture and fixtures in the 2018 budget year.
15-27	Audiovisual	Please see Appendix 17-6.
15-28	IS/IT Projects	Please see Appendix 17-7 through 17-9.
15-29	Fleet Capital Common Power Operated Equip	Please see Appendix 17-10
15-30	Fleet Capital Common Transportation Equip	Please see Appendix 17-11.
15-31	Fleet Gas Power Operated Equipment	Please see Appendix 17-12.
15-32	Fleet Gas Transportation Equipment	Please see Appendix 17-13.
15-33	Automated Fueling System	Please see Appendix 17-14.
15-34	Tools & Equipment	Please see Appendix 17-15.
15-35	Common Tools & Equipment	Please see Appendix 17-16.
15-36	Alternative Fueling Infrastructure	No expenditures planned for the 2018 budget year.
15-37	Contingency Fund - General Plant	Please see Appendix 17-17
15-38	Delayed Cost Allocations	These are funds budgeted in the current year for items that may arrive late from the previous year's budget.

NOTES FOR PAGE 16–CAPITAL EXPENDITURES BUDGET

Distribution System- Major Projects

Street Improvements

16-1	SR-57/Poplar Bridge @ Scott Street & SR-23/Walnut Grove	Description/Location	SR-57/Poplar Bridge @ Scott Street & SR-23/Walnut Grove
		Purpose/Necessity	Expenses incurred when City, State and Federal Street Improvements dictate that facilities must be relocated for the drainage, elevation changes and/or new sewer facilities.
16-2	SR-4/US-78 from MS State Line to S of Shelby Dr- Eng. Svc	Description/Location	SR-4/US-78 from MS State Line to S of Shelby Dr- Eng. Svc
		Purpose/Necessity	Expenses incurred when City, State and Federal Street Improvements dictate that facilities must be relocated for the drainage, elevation changes and/or new sewer facilities.
16-3	Center Street Development	Description/Location	Offset mains for drainage & grade changes/Collierville
		Purpose/Necessity	Expenses incurred when City, State and Federal Street Improvements dictate that facilities must be relocated for the drainage, elevation changes and/or new sewer facilities.
16-4	Old Brownsville Road, Austin Peay to Kirby Whitten - widening	Description/Location	Street widening impact to gas mains
		Purpose/Necessity	Expenses incurred when City, State and Federal Street Improvements dictate that facilities must be relocated for the drainage, elevation changes and/or new sewer facilities.
16-5	SR-14, from SR-204/Singleton Pkwy to Old Covington Pike (Phase 1)	Description/Location	SR-14, from SR-204/Singleton Pkwy to Old Covington Pike (Phase 1)
		Purpose/Necessity	Expenses incurred when City, State and Federal Street Improvements dictate that facilities must be relocated for the drainage, elevation changes and/or new sewer facilities.
16-6	Elvis Presley Corridor - North Phase 1	Description/Location	Elvis Presley Corridor - North Phase 1
		Purpose/Necessity	Expenses incurred when City, State and Federal Street Improvements dictate that facilities must be relocated for the drainage, elevation changes and/or new sewer facilities.
16-7	Germantown Rd @ Wolf River Blvd	Description/Location	Germantown Rd @ Wolf River Blvd
		Purpose/Necessity	Expenses incurred when City, State and Federal Street Improvements dictate that facilities must be relocated for the drainage, elevation changes and/or new sewer facilities.
16-8	SR-14, from Old Covington Pike to Paul Barrett Pkwy (Phase 2) TDOT	Description/Location	Austin Peay Hwy widening
		Purpose/Necessity	Expenses incurred when City, State and Federal Street Improvements dictate that facilities must be relocated for the drainage, elevation changes and/or new sewer facilities.
16-9	SR-1/US-70 from SR-385 to Airline-Arlington	Description/Location	SR-1/US-70 from SR-385 to Airline-Arlington
		Purpose/Necessity	Expenses incurred when City, State and Federal Street Improvements dictate that facilities must be relocated for the drainage, elevation changes and/or new sewer facilities.
16-10	New Allen @ Hawkins Mill TDOT	Description/Location	New Allen @ Hawkins Mill TDOT
		Purpose/Necessity	Expenses incurred when City, State and Federal Street Improvements dictate that facilities must be relocated for the drainage, elevation changes and/or new sewer facilities.
16-11	Engineering Services	Description/Location	Engineering Services
		Purpose/Necessity	Engineering consulting services on an as-needed basis for unplanned projects.

NOTES FOR PAGE 16-CAPITAL EXPENDITURES BUDGET (Continued)

16-12	Projections 2018-2022	Description/Location	Location(s) vary due to Development and/or Street Improvements.
		Purpose/Necessity	Expenses incurred when City, State and Federal Street Improvements dictate that facilities must be relocated for the drainage, elevation changes and/or new sewer facilities.

Transmission Pipelines and Facilities

16-13	Nouritech Project (Atlantis)	Description/Location	Provide unodorized XHP natural gas supply/Presidents Island
		Purpose/Necessity	Large reimbursable project that requires additional gas pipelines for Customer project
16-14	18" XHP Pipeline Replacements @ Saturn to Mitchell	Description/Location	18" XHP Pipeline Replacements @ Saturn to Mitchell
		Purpose/Necessity	This budget line item provides for the expenses related to gas piping systems that are discovered to be unsafe due to corrosion defects, aged facilities, third party damages, or necessary relocations due to erosion problems for transmission as well as distribution.
16-15	10" XHP Pipeline Replacement @ Poplar & I-240	Description/Location	10" XHP Pipeline Replacement @ Poplar & I-240
		Purpose/Necessity	This budget line item provides for the expenses related to gas piping systems that are discovered to be unsafe due to corrosion defects, aged facilities, third party damages, or necessary relocations due to erosion problems for transmission as well as distribution.
16-16	18" XXHP Pipeline Replacement @ Covington Pike & LNRR	Description/Location	18" XXHP Pipeline Replacement @ Covington Pike & LNRR
		Purpose/Necessity	This budget line item provides for the expenses related to gas piping systems that are discovered to be unsafe due to corrosion defects, aged facilities, third party damages, or necessary relocations due to erosion problems for transmission as well as distribution.
16-17	12" XHP Pipeline Replacements - Brooks to McMullen	Description/Location	Pipeline Replacements
		Purpose/Necessity	This budget line item provides for the expenses related to gas piping systems that are discovered to be unsafe due to corrosion defects, aged facilities, third party damages, or necessary relocations due to erosion problems for transmission as well as distribution.
16-18	Engineering Services	Description/Location	Engineering Services
		Purpose/Necessity	Engineering consulting services on an as-needed basis for unplanned projects.
16-19	Risk Analysis Software	Description/Location	Risk Analysis Software
		Purpose/Necessity	Gas System Integrity is responsible for two key sections of the Code of Federal Regulations, Transmission Integrity Management and Distribution Integrity Management. Both sections require an Operator to perform risk analysis on their existing infrastructure and respond accordingly. Risk is commonly defined as a product of Frequency and Consequence. Software tools are available that can help calculate the frequency of various issues, predict the consequence of the various issues, and run the full set of risk algorithms. As technology and data improve, these tools also improve and MLGW needs to continuously work towards enhancing risk analysis in order to most effectively meet the regulatory requirements.

NOTES FOR PAGE 16-CAPITAL EXPENDITURES BUDGET (Continued)

General Plant

Buildings and Structures

16-20	Re-Cover/Replace Roofs & Air Conditioning Units - Various Locations	Description/Location	NSC Bldgs. 2,3,5,6, South Service Center, Hickory Hill Service Center. Trane Chiller @ Administration bldg.
		Purpose/Necessity	This project was identified in the Master Roof Plan to be replaced at this time due to increased maintenance and potential leaking. Replace poorly functioning air conditioning units.
16-21	Building Interior Finish Upgrades - Various Locations	Description/Location	Building Interior Finish Upgrades
		Purpose/Necessity	ADA Upgrades, new wall partitions, and carpet replacements,etc.
16-22	HVAC & Plumbing Upgrades	Description/Location	HVAC & Plumbing Upgrades
		Purpose/Necessity	HVAC and plumbing upgrades at various facilities.

North Service Center

16-23	Asphalt Paving & Concrete Slabs/Drives (continued)	Description/Location	North Service Center
		Purpose/Necessity	This project was identified in the Master Plan. All asphalt drives, parking areas are in very bad shape. Also, there is a need to pave areas for safe movement of material.

Brunswick Service Center

16-24	Canopy for Transmission Crew Equipment	Description/Location	Brunswick Service Center
		Purpose/Necessity	This is an area request so they could work on larger trucks outside under cover.

Choctaw Service Center

16-25	Virtual Storeroom	Description/Location	Choctaw Service Center
		Purpose/Necessity	To securely house inventory related to future and specific jobs as well as inventory needed in the event of an emergency and storms.
16-26	Storage Canopy	Description/Location	Choctaw Service Center
		Purpose/Necessity	To store network transformers, protectors, and switches

New Buildings

16-27	New North Community Pay Office	Description/Location	North Memphis Area
		Purpose/Necessity	This is a request from the Executive Staff and Customer Service management.

NOTES FOR PAGE 17-CAPITAL EXPENDITURES BUDGET

General Plant (continued)

Security Automation

17-1	Choctaw (Mobile Surveillance Unit)	Description/Location	Choctaw
		Purpose/Necessity	Skycop mobile camera system to add temporary security to MLGW sites.
17-2	Millington Community Office	Description/Location	Millington Community Office
		Purpose/Necessity	Installation of Camera System
17-3	Lamar Community Office	Description/Location	Lamar Community Office
		Purpose/Necessity	Installation of Camera System
17-4	Whitehaven Community Office	Description/Location	Whitehaven Community Office
		Purpose/Necessity	Installation of Camera System
17-5	Video & Alarm System Head End Equipment & Software	Description/Location	Various locations
		Purpose/Necessity	Security Enhancement Infrastructure
17-6	Audiovisual	Description/Location	Audiovisual Equipment Control Area for Entire Division
		Purpose/Necessity	To provide standardized audiovisual equipment for the Division, including the purchase of additions and replacements of cameras, data/video projectors, recorders, camcorders, color monitors, editing systems and other items to meet the Division's needs.

IS/IT Projects

17-7	Natural Gas Management System (CO)	Description/Location	Replace the Allegro Gas Management system with a new system.
		Purpose/Necessity	This system is needed for accurate and timely information of natural gas and derivatives, supplier and pipeline invoice reconciliation.
17-8	Project Inspire (MSS System Replacement) (CO)	Description/Location	To replace MSS System
		Purpose/Necessity	The purpose of the MSS Replacement Project is to replace our current 27 year old legacy MSS System with an Industry Standard "Best Practice" Enterprise Resource Planning System. The scope of the MSS Replacement Project includes our Finance, Work Management, Materials and Equipment Systems. The MSS Replacement Project scope does not include the Banner CIS System or the Oracle EBS HR Payroll Application.
17-9	Oracle ULA	Description/Location	Oracle ULA
		Purpose/Necessity	This will allow MLGW to download and install Oracle Technical products in unlimited fashion for a 3 year period. These products will be used for DR replication, mobile dispatch deployment, enhancements to Oracle EBS and several other projects.

Fleet Capital Common Power Operated Equip

17-10	Fleet Capital Common Power Operated Equip	Description/Location	Division vehicles/equipment used for work in and around Shelby County.
		Purpose/Necessity	To purchase approved budget items in order to provide equipment for crews to complete job assignments. Replacements are evaluated based on age, actual operational usage, projected usage, repair cost and frequency, parts availability, and effectiveness to meet areas' needs.

Fleet Capital Common Transportation Equip

17-11	Fleet Capital Common Transportation Equip	Description/Location	Division vehicles/equipment used for work in and around Shelby County.
		Purpose/Necessity	To purchase approved budget items in order to provide equipment for crews to complete job assignments. Replacements are evaluated based on age, actual operational usage, projected usage, repair cost and frequency, parts availability, and effectiveness to meet areas' needs.

NOTES FOR PAGE 17–CAPITAL EXPENDITURES BUDGET (Continued)

Fleet Gas Power Operated Equipment

17-12	Fleet Gas Power Operated Equipment	Description/Location	Division vehicles/equipment used for work in and around Shelby County.
		Purpose/Necessity	To purchase approved budget items in order to provide equipment for

Fleet Gas Transportation Equipment

17-13	Fleet Gas Transportation Equipment	Description/Location	Division vehicles/equipment used for work in and around Shelby County.
		Purpose/Necessity	To purchase approved budget items in order to provide equipment for

Automated Fueling System

17-14	Automated Fueling System (CO)	Description/Location	Automated Fuel Management System for entire Division.
		Purpose/Necessity	The Automated Fuel Management System will have the capability of collecting data from vehicles and equipment, such as fuel consumption, miles, engine hours, idle time, etc., as well as aid the Transportation Department in managing the fleet Preventative Maintenance Program and vehicle life cycle more effectively.

Tools & Equipment - Gas

17-15	Tools & Equipment - Gas	Description/Location	Division tools/equipment used for work in and around Shelby County.
		Purpose/Necessity	To purchase approved budget items, in order to provide equipment for employees to complete job assignments. Tools are considered replacements for the following reasons: i. Damaged beyond repair; ii. Worn from time/age/use, cost does not justify repair; iii. Lost/Stolen report submitted in a timely manner; iv. No longer suited for work being done, replace with a new model; v. Safety hazard; vi. Repair cost is at or above 50% of cost of new tool; vii. High occurrence of maintenance that creates excessive downtime.

Common Tools & Equipment

17-16	Tools & Equipment - Common	Description/Location	Division tools/equipment used for work in and around Shelby County.
		Purpose/Necessity	To purchase approved budget items, in order to provide equipment for employees to complete job assignments. Tools are considered replacements for the following reasons: i. Damaged beyond repair; ii. Worn from time/age/use, cost does not justify repair; iii. Lost/Stolen report submitted in a timely manner; iv. No longer suited for work being done, replace with a new model; v. Safety hazard; vi. Repair cost is at or above 50% of cost of new tool; vii. High occurrence of maintenance that creates excessive downtime.

17-7	Contingency Fund - General Plant	This is an estimated budget amount to cover unforeseen emergency items that may arise in the current year.
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NOTES FOR PAGE 20—INCOME & EXPENSE COMPARISON

Operating Revenue

20-1	Sales Revenue	This account includes projected revenue from the sale of water to the residential, commercial, resale, and interdepartmental customer classes, as well as revenue from fire protection services.
20-2	Revenue Adjustment for Uncollectibles	Per Governmental Accounting Standards Board (WaterB) 34 requirements, bad debt expense must be shown as a reduction of revenue. This is the amount that will not be collected due to customers inability to pay.
20-3	Non-Sales Revenue	This account includes revenue from forfeited discounts (charges for payments received after net due date), plus rent charged for Water Division property that is used by the Electric and Water Divisions, and other miscellaneous revenue (e.g., fees for connecting/disconnecting service).

Operating Expense

20-4	Production Expense	This account includes the cost of labor and expenses incurred in the general supervision and operation of the water source of supply facilities, the power production and pumping facilities, and the water treatment expenses. Also included is the fuel used in the production of power to operate the pumps, all chemicals used in the treatment of water and miscellaneous expenses including general clerical labor, building services, general operating supplies and care of grounds.
20-5	Distribution Expense	This account includes the cost of labor and expenses incurred in the operation of distribution reservoirs and tanks, meter expenses, customer installation expenses and miscellaneous expenses including preparing maps and prints, general clerical support, operating records, service interruption, trouble records, and other miscellaneous labor.
20-6	Customer Accounts Expense	This account includes the cost of labor and expenses incurred in the reading of customer meters, in customer applications, orders, contracts, credit investigations, billing and accounting, collections and complaints.
20-7	Customer Service and Information Expense	This account includes the cost of labor and expenses incurred in customer service and informational activities, the purpose of which is to encourage safe and efficient use of the utility's services, to promote the conservation of the utility's services and to assist customers in answering specific inquiries as to the proper and economic use of the utility's services.
20-8	Sales Expense	This account includes the cost of labor, materials and expenses incurred in promotional, demonstrating and selling activities, advertising designed to promote or retain the use of utility services and miscellaneous sales expense. Included are exhibitions, displays, lectures, engineering and technical advice, advertising in newspapers, periodicals, billboards, radio, etc., postage on direct mail advertising, printing booklets, bulletins, etc.
20-9	Administrative and General Expense	This account includes the compensation of board members, executives, and other administrative and general employees of the utility not chargeable directly to a particular operating function. It also includes the cost of insurance to protect the utility against physical plant losses, cost of reserve accruals to protect the utility against injuries and damage claims of employees or others, such as liability, property damage, casualty, and employee liability. Employee pensions and benefits including payments to pension funds, life insurance, group medical expenses, payments for accident, sickness, hospital and death benefits, and expenses in connection with educational and wellness activities are also included in this account. In accordance with WaterB 45, Accounting and Financial Reporting by Employers for Postemployment Benefits Other than Pension, MLGW must recognize all postemployment benefits, such as medical insurance and life insurance, when earned, effective budget year 2007.

Maintenance Expense

20-10	Production Expense	This account includes the labor and expenses incurred in the maintenance of structures and improvements, collecting and impounding reservoirs, maintenance of wells, the maintenance of observation wells, the maintenance of structures and improvements used in connection with pumping, maintenance of power production equipment used directly in pumping operations, the maintenance of pumping equipment, maintenance of structures and improvements to the water treatment plant, and water treatment plant equipment.
20-11	Distribution Expense	This account includes the labor and expenses incurred in the maintenance of the distribution system including structures and improvements, mains, services, meters, meter testing equipment, fire hydrants, and miscellaneous plant.
20-12	Administrative & General Expense	Please see Appendix 20-9.

WATER DIVISION

NOTES FOR PAGE 20—INCOME & EXPENSE COMPARISON (Continued)

Other Operating Expense

20-13	Depreciation Expense	The purpose of depreciation is to allocate the original cost of a fixed asset over its estimated useful life. In a utility environment, the annual depreciation rate also takes into account the estimated salvage and cost of removal upon retirement.
20-14	Payment In Lieu of Taxes	MLGW and the City of Memphis have agreed on a P.I.L.O.T. in the amount of \$2,500,000 to be made on an annual basis to the City from the revenues of the Water Division through fiscal years 2028.
20-15	F.I.C.A. Taxes	This represents the 1.45% Medicare portion of Social Security Tax that is required to be paid on all MLGW employees hired after 03-31-1986.
20-16	Amortization of SCBPU Acquisition Adjustments	The amortization of SCBPU Acquisition Adjustment is the allocation over a twenty year period of the difference in the purchase price and the estimated original cost less depreciation of Shelby County Board of Public Utilities which was purchased by MLGW in July, 1999.
20-17	Amortization of Legacy Meters	This account includes amortization charges related to expenditures on meters.

Income

20-18	Operating Income	Operating income is equal to operating revenue less total operating expense.
20-19	Other Income	This consists primarily of interest and investment income. It does not include any sales of electricity, Water or water.
20-20	Reduction of Plant Recovered through CIAC	Contributions-in-aid-of-construction are the donations or contributions of cash, services, or property from states, municipalities, or other governmental agencies, individuals, and others for construction purposes.

Debt Expense

20-21	Interest Expense – Existing Long-Term Debt	Bond interest payments due 06-01-2018 and 12-01-2018 per the bond debt schedules are funded in equal monthly installments in 2018.
20-22	Amortization of Debt Discount & Expense	This represents the spreading of bond issuance costs over the life span of the bond series rather than recognizing such costs all at the time of sale.
20-23	Contributions in Aid of Construction	Please see Appendix 20-20.

NOTES FOR PAGE 21—INCOME & EXPENSE COMPARISON

Source of Funds

21-1	Change in Net Position	Please see Budget page 20.
21-2	Depreciation Charged to Operating Income	Please see Appendix 20-13.
21-3	Depreciation Charged to Other Accounts	Depreciation charged to other accounts is the annual depreciation for transportation and power operated equipment. Depreciation on these plant items is charged to a clearing account and used in the equipment rate calculations.
21-4	WaterB 68 Pension Non-Cash Expense	Non-cash expense related to employee pension expenses above or below actual funding due to change in accounting principles.
21-5	WaterB 75 Other Post Employment Benefit Non-Cash Expense	Non-cash expense related to employee other post employment benefit expenses above or below actual funding due to change in accounting principles.
21-6	Amortization of SCBPU Acquisitions Adjustments	Please see Appendix 20-16.
21-7	Amortization of Legacy Meters	Non-cash expense related to amortization charges related to meter expenditures.
21-8	Salvage	Salvage is the amount received for property retired from plant in service. The property may be sold for scrap or returned to stores inventory for reuse.

Application of Funds

21-9	Capital Expenditures	Please see Budget page 22.
21-10	Costs of Removal and Other Charges to the Reserve for Depreciation	Cost of removal is the cost associated with demolishing, dismantling, tearing down or otherwise removing utility plant, including the cost of transportation and labor.
21-11	Retirement of Long-Term Debt	Bond principal amounts due 01-01-2018 per the bond debt schedules are funded in equal monthly installments during 2018.

NOTES FOR PAGE 22-CAPITAL EXPENDITURES BUDGET

Production System

22-1	Pumping Stations	Please see Appendix 23-1 through 24-5.
22-2	Overhead Storage Tanks	Please see Appendix 24-6.
22-3	Underground Storage Reservoirs	Please see Appendix 24-7 through 24-9.
22-4	Production Wells	Please see Appendix 24-10 through 24-16.
22-5	Land Purchase	Please see Appendix 24-17.
22-6	Buildings and Structures - Production System	Please see Appendix 25-1 through 25-4.
22-7	Contingency Fund - Production System	Please see Appendix 25-5.

Distribution System

22-8	Residential Service in S/D	This budget category provides for the expenses incurred by the Water Division for customer requests for service located in a subdivision.
22-9	Residential Service not in S/D	This budget category provides for the expenses incurred by the Water Division for customer requests for service not located in a subdivision.
22-10	Residential S/D	This budget category provides for the expenses incurred by the Water Division for developer requests for Water facilities located in a subdivision.
22-11	Apartments	This budget category provides for the expenses incurred by the Water Division for developer requests for Water facilities for new apartment developments.
22-12	General Power Service	This budget category provides for the expenses incurred by the Water Division for customer requests for new General Power Service.
22-13	Relocate at Customer Request	This budget category provides for the expenses incurred by the Water Division for customer requests to relocate existing Water facilities.
22-14	Street Improvements	This budget category provides for the expenses incurred when City, State and Federal Street Improvements dictate that facilities must be relocated. Please see Appendix 25-9 through 25-14.
22-15	New Water Main	This budget category provides for the expenses incurred for the installation of miscellaneous new water mains and facilities.
22-16	Purchase of Land	This budget category provides for the purchase of land rights that will be needed for Capital Budget Projects.
22-17	Purchase of Meters	The number of meters purchased is based on projections for the coming year. These meters include meters that will be paid for by customer contributions relating to new residential and commercial development and replacement of existing meters.
22-18	Miscellaneous Emergency Construction	This budget line item provides for emergency repair work when leaks and cut facilities require immediate repair.
	Contributions in Aid of Construction	Contributions in aid of construction are the donations or contributions of cash, services, or property from states, municipalities, or other governmental agencies, individuals, and others for construction purposes.

General Plant

22-19	Buildings and Structures	Please see Appendix 25-20 through 25-21.
22-20	Security Automation	Please see Appendix 25-22 through 25-27.
22-21	Fleet Capital Power Operated Equip	Please see Appendix 26-1.
22-22	Fleet Capital Water Transportation Equip	Please see Appendix 26-2.
22-23	Tools & Equipment	Please see Appendix 26-3.
22-24	Lab Equipment	Please see Appendix 26-4.
22-25	Contingency Fund-General Plant	Please see Appendix 26-5.
22-26	Delayed Cost Allocations	These are funds budgeted in the current year for items that may arrive late from the previous year's budget.

NOTES FOR PAGE 23—CAPITAL EXPENDITURES BUDGET

Production System

Pumping Stations

Allen Pumping Station

23-1	Engineer Distributed Process Control System	Description/Location	Design, Construction Administration and Integration needed to replace the existing distributed process control system. Allen Pumping Station
		Purpose/Necessity	The existing DPC system is outdated and parts can no longer be obtained for the existing controller. This is needed for regulatory compliance with Tennessee Department of Environment and Conservation standards.
23-2	Install Distributed Process Control System Replacement	Description/Location	Install Distributed Process Control System Replacement
		Purpose/Necessity	The existing DPC system is outdated and parts can no longer be obtained for the existing controller. This is needed for regulatory compliance with Tennessee Department of Environment and Conservation standards.
23-3	Medium Voltage Breaker Replacement (CO)	Description/Location	Design, purchase and installation of the 12kV and 5 kV circuit breakers. Allen Pumping Station
		Purpose/Necessity	Parts for the existing 12kV and 5 kV Circuit Breakers are unavailable and there are safety concerns related to the existing breakers
23-4	Station Rehabilitation	Description/Location	The purchase and installation of replacement valves, piping, hardware, meters, actuators, etc.... Rehabilitation of concrete structural components. Allen Pumping Station
		Purpose/Necessity	The existing infrastructure can no longer be operated safely or reliably.

Davis Pumping Station

23-5	Engineer Distributed Process Control System	Description/Location	Design, Construction Administration and Integration needed to replace the existing distributed process control system. Davis Pumping Station
		Purpose/Necessity	The existing DPC system is outdated and parts can no longer be obtained for the existing controller. This is needed for regulatory compliance with Tennessee Department of Environment and Conservation standards.
23-6	Install Distributed Process Control System Replacement	Description/Location	Install Distributed Process Control System Replacement
		Purpose/Necessity	The existing DPC system is outdated and parts can no longer be obtained for the existing controller. This is needed for regulatory compliance with Tennessee Department of Environment and Conservation standards.
23-7	VFD Motor & Transformer Replacements	Description/Location	Purchase and installation of replacement variable frequency drives on multiple high service pumps.
		Purpose/Necessity	The existing VFDs chronically overheat and replacement parts are unavailable when the VFDs fail.
23-8	Station Rehabilitation	Description/Location	The purchase and installation of replacement valves, piping, hardware, meters, actuators, etc.... Rehabilitation of concrete structural components. Davis Pumping Station
		Purpose/Necessity	The existing infrastructure can no longer be operated safely or reliably.

NOTES FOR PAGE 23—CAPITAL EXPENDITURES BUDGET (Continued)

Production System (Continued)

Pumping Stations (Continued)

Lichterman Pumping Station

23-9	Engineer Distributed Process Control System	Description/Location	Design, Construction Administration and Integration needed to replace the existing distributed process control system.
		Purpose/Necessity	The existing DPC system is outdated and parts can no longer be obtained for the existing controller. This is needed for regulatory compliance with Tennessee Department of Environment and Conservation standards.
23-10	Station Rehabilitation (CO)	Description/Location	The purchase and installation of replacement valves, piping, hardware, meters, actuators, etc.... Rehabilitation of concrete structural components. Lichterman Pumping Station
		Purpose/Necessity	The existing infrastructure can no longer be operated safely or reliably.

Mallory Pumping Station

23-11	Engineer Distributed Process Control System	Description/Location	Design, Construction Administration and Integration needed to replace the existing distributed process control system. Mallory Pumping Station
		Purpose/Necessity	The existing DPC system is outdated and parts can no longer be obtained for the existing controller. This is needed for regulatory compliance with Tennessee Department of Environment and Conservation standards.
23-12	Install Distributed Process Control System Replacement	Description/Location	Install Distributed Process Control System Replacement
		Purpose/Necessity	The existing DPC system is outdated and parts can no longer be obtained for the existing controller. This is needed for regulatory compliance with Tennessee Department of Environment and Conservation standards.
23-13	VFD Motor & Transformer Replacements	Description/Location	Purchase and installation of replacement variable frequency drives on multiple high service pumps.
		Purpose/Necessity	The existing VFDs chronically overheat and replacement parts are unavailable when the VFDs fail.
23-14	Filter Media Replacement (CO)	Description/Location	Purchase and installation of the filter media. Mallory Pumping Station
		Purpose/Necessity	The existing filter media no longer meets the specifications and is less efficient in removing solids (Iron, Manganese, etc.) from the treated water.

McCord Pumping Station

23-15	Filter Media Replacement (CO)	Description/Location	Purchase and installation of the filter media. McCord Pumping Station
		Purpose/Necessity	The existing filter media no longer meets the specifications and is less efficient in removing solids (Iron, Manganese, etc.) from the treated water.
23-16	Station Rehabilitation	Description/Location	The purchase and installation of replacement valves, piping, hardware, meters, actuators, etc.... Rehabilitation of concrete structural components. McCord Pumping Station
		Purpose/Necessity	The existing infrastructure can no longer be operated safely or reliably.

NOTES FOR PAGE 23—CAPITAL EXPENDITURES BUDGET (Continued)

Production System (Continued)

Pumping Stations (Continued)

Morton Pumping Station

23-17	Engineer Distributed Process Control System	Description/Location	Design, Construction Administration and Integration needed to replace the existing distributed process control system. Morton Pumping Station
		Purpose/Necessity	The existing DPC system is outdated and parts can no longer be obtained for the existing controller. This is needed for regulatory compliance with Tennessee Department of Environment and Conservation standards.
23-18	Station Rehabilitation (CO)	Description/Location	The purchase and installation of replacement valves, piping, hardware, meters, actuators, etc.... Rehabilitation of concrete structural components. Morton Pumping Station
		Purpose/Necessity	The existing infrastructure can no longer be operated safely or reliably.

Palmer Pumping Station

23-19	Station Rehabilitation (CO)	Description/Location	The purchase and installation of replacement valves, piping, hardware, meters, actuators, etc.... Rehabilitation of concrete structural components. Palmer Pumping Station
		Purpose/Necessity	The existing infrastructure can no longer be operated safely or reliably.

Shaw Pumping Station

23-20	Station Rehabilitation (CO)	Description/Location	The purchase and installation of replacement valves, piping, hardware, meters, actuators, etc.... Rehabilitation of concrete structural components. Shaw Pumping Station
		Purpose/Necessity	The existing infrastructure can no longer be operated safely or reliably.

NOTES FOR PAGE 24—CAPITAL EXPENDITURES BUDGET

Production System (Continued)

Pumping Stations (Continued)

Sheahan Pumping Station

24-1	Engineer Distributed Process Control System (CO)	Description/Location	Design, Construction Administration and Integration needed to replace the existing distributed process control system. Sheahan Pumping Station
		Purpose/Necessity	The existing DPC system is outdated and parts can no longer be obtained for the existing controller. This is needed for regulatory compliance with Tennessee Department of Environment and Conservation standards.
24-2	Install Distributed Process Control System Replacement	Description/Location	Install Distributed Process Control System Replacement
		Purpose/Necessity	The existing DPC system is outdated and parts can no longer be obtained for the existing controller. This is needed for regulatory compliance with Tennessee Department of Environment and Conservation standards.
24-3	Station Rehabilitation (CO)	Description/Location	The purchase and installation of replacement valves, piping, hardware, meters, actuators, etc.... Rehabilitation of concrete structural components. Sheahan Pumping Station
		Purpose/Necessity	The existing infrastructure can no longer be operated safely or reliably.

Miscellaneous Pumping Facilities

24-4	Engineering Services Contract (CO)	Description/Location	Engineering Consultants on an "as-needed" basis. / As-needed.
		Purpose/Necessity	Water E&O has a need to retain Engineering Consultants on an "as-needed" basis. / Water Engineering does not have the expertise to perform certain engineering functions.
24-5	Water Operations Capital Items (CO)	Description/Location	This item is to account for unplanned Capital Items. / As-needed
		Purpose/Necessity	This is a projected budget amount to cover unforeseen Capital Items in the current year due to mechanical/electrical/etc. failure. / When equipment breaks, it must be fixed.

Overhead Storage Tanks

Mallory Pumping Station

24-6	Station Rehabilitation	Description/Location	The purchase and installation of replacement valves, piping, hardware, meters, actuators, etc.... Rehabilitation of concrete structural components.
		Purpose/Necessity	The existing infrastructure can no longer be operated safely or reliably.

NOTES FOR PAGE 24—CAPITAL EXPENDITURES BUDGET (Continued)

Underground Storage Reservoirs

Allen Pumping Station

24-7	Station Rehabilitation	Description/Location	The purchase and installation of replacement valves, piping, hardware, meters, actuators, etc.... Rehabilitation of concrete structural components.
		Purpose/Necessity	The existing infrastructure can no longer be operated safely or reliably.

Mallory Pumping Station

24-8	Construct Wash Water Recovery Basin Replacement	Description/Location	Construction of WWRB at Mallory Pumping Station
		Purpose/Necessity	The existing WWRB is the retrofitted Equalizing Basin. The operational performance of the existing WWRB is very poor. There are regulatory issues with the existing WWRB.
24-9	Flowmeter on WWRB Residual Discharge Pipe	Description/Location	Installation of flow meter w/appurtenances to measure and record discharge rates, volumes and time of occurrences from plant wash water recovery basin into the City of Memphis sanitary sewer system. Mallory Pumping Station
		Purpose/Necessity	Regulatory Compliance

Production Wells

Allen Pumping Station

24-10	Construct/Replace Well	Description/Location	Construction of a large water production well. Allen Pumping Station
		Purpose/Necessity	A number of the Allen wells need to be replaced. This well field does not meet the capacity plus 2 MGD requirement

Davis Pumping Station

24-11	Construct/Replace Well	Description/Location	Construction of a large water production well. Davis Pumping Station
		Purpose/Necessity	A number of the Davis wells need to be replaced. This well field does not meet the capacity plus 2 MGD requirement

Lichterman Pumping Station

24-12	Construct/Replace Well	Description/Location	Construction of a large water production well. Lichterman Pumping Station
		Purpose/Necessity	A number of the Lichterman wells need to be replaced. This well field does not meet the capacity plus 2 MGD requirement

Mallory Pumping Station

24-13	Construct/Replace Well	Description/Location	Construction of a large water production well. Mallory Pumping Station
		Purpose/Necessity	A number of the Mallory wells need to be replaced. This well field does not meet the capacity plus 2 MGD requirement

McCord Pumping Station

24-14	Construct/Replace Well	Description/Location	Construction of a large water production well. McCord Pumping Station
		Purpose/Necessity	A number of the McCord wells need to be replaced. This well field does not meet the capacity plus 2 MGD requirement

Miscellaneous Pumping Facilities

24-15	Abandon Wells	Description/Location	Wells will be abandoned as needed. The Rules and Regulations of the Shelby County Ground Water Quality Control Board require that water production wells be properly abandoned at the end of their service life. / Wells that are either out of service or failing.
		Purpose/Necessity	Wells will be abandoned in accordance with the procedure of the Memphis and Shelby County Ground Water Control Board to protect the Memphis Aquifer. / Protection of the Memphis aquifer and the Fort Pillow aquifer from which Memphis Light, Water and Water withdraws water.
24-16	Well Failures	Description/Location	Construction of a large water production well. Various Pumping Station
		Purpose/Necessity	Water production wells fail unexpectedly and need to be replaced.

NOTES FOR PAGE 24-CAPITAL EXPENDITURE BUDGET (Continued)

Purchase Property and R.O.W.

24-17	Land Purchase (Var. Pump. Sta. Well Lots)	Description/Location	Purchase water production well lots/Various locations.
		Purpose/Necessity	Well lots are needed to install new/replacement water production wells to provide an adequate source water supply for customers.

NOTES FOR PAGE 25-CAPITAL EXPENDITURE BUDGET

Building & Structures - Production

Davis Pumping Station

25-1	Aerator Building: Replace Roof	Description/Location	Davis Pumping Station
		Purpose/Necessity	Aerator Building: Roof Replacement This project was recommended by Building Construction & Maintenance. The roof has deteriorated significantly and has surpassed its service life.

Allen Pumping Station

25-2	Allen Pumping station Roof Replacements- (Pump Bldg. - 32,263 sf, Diesel Bldg. -322 sf, Garage 2,730 sf, and Aerator)	Description/Location	Allen Pumping Station
		Purpose/Necessity	Allen Pumping station Roof Replacements- (Pump Bldg. -32,263 sf, Diesel Bldg. -322 sf, Garage 2,730 sf, and Aerator) This project was identified in the Master Roof Plan to be replaced based on the projected life expectancy. Also, increased maintenance and increased leaks leaking are pushing this project.
25-3	Elevator Modernization	Description/Location	Allen Pumping Station
		Purpose/Necessity	The existing elevator is original to the building and is currently experiencing many maintenance problems. Estimate based on past Upgrades with adjustments for inflation.

Water Lab

25-4	Renovations to Water Lab	Description/Location	Sheahan Pumping Station
		Purpose/Necessity	This project will upgrade the existing building to include the roof, HVAC systems, Structural upgrade and mold mitigation. An addition is planned for the building for space needs and for phasing of the construction work keeping the employees in the building during the work phases.

Distribution System - Major Projects

New Water Main

25-6	Miscellaneous Reimbursable Projects	Description/Location	The project will be on N. Parkway, from Bellevue to Claybrook, in order to replace the existing lead main feeding that side of the street.
		Purpose/Necessity	Remove lead main from water system.
25-7	Major Valve Replacements and Additions	Description/Location	The project will involve the replacement and additions of 12" and larger valves
		Purpose/Necessity	Replacement of non functioning and key valves and adding strategically place valves on primary and secondary feeders to optimize the ability to isolate large mains while minimizing the number of cut off customers
25-8	Main Replacement Projects	Description/Location	Older cast iron mains in older parts of town sometimes break several times and it is more feasible to replace the main than to continue to repair them.
		Purpose/Necessity	Old cast iron mains that have many breaks that occur on a section are candidates to be totally replaced.
25-9	Collecting Main Installation	Description/Location	This line item covers tying in new wells that are drilled at various locations.
		Purpose/Necessity	The ties bring water from the aquifer to the plant.
25-10	Lead Main/Service Replacements	Description/Location	Replace lead services with copper at known locations throughout Shelby County.
		Purpose/Necessity	Remove known lead services from water system
25-11	Paul Lowry-Shelby Drive Tie (24" Main)	Description/Location	The project will be between the south end of Paul Lowry and Davis Pumping Station involving the installation of 24" main between the two points.
		Purpose/Necessity	Provide increased flow to Pidgeon Industrial Park.

NOTES FOR PAGE 25-CAPITAL EXPENDITURE BUDGET (Continued)

Distribution System - Major Projects (Continued)

New Water Main (Continued)

25-12	Macon Under I-40	Description/Location	The project will be on Macon Road, under I-40, in order to replace broken main.
		Purpose/Necessity	Replace broken main under I-40.
25-13	Minor System Improvements	Description/Location	These are improvements needed to maintain water quality and quantity to our customers. The jobs are fairly minor in nature but deemed critical to maintaining our water system.
		Purpose/Necessity	To maintain water quality and quantity to our customers

Street Improvements

New Water Main

25-14	City of Bartlett Projects	Description/Location	These are street improvement projects done by the City of Bartlett requiring the relocation of MLGW water mains.
		Purpose/Necessity	MLGW will meet the utility relocation needs of the City, County, and State for their street improvement projects
25-15	City of Memphis Projects	Description/Location	These are street improvement projects done by the City of Memphis requiring the relocation of MLGW water mains.
		Purpose/Necessity	MLGW will meet the utility relocation needs of the City, County, and State for their street improvement projects
25-16	Shelby County Projects	Description/Location	These are street improvement projects done by Shelby County requiring the relocation of MLGW water mains.
		Purpose/Necessity	MLGW will meet the utility relocation needs of the City, County, and State for their street improvement projects
25-17	TDPT Projects	Description/Location	These are street improvement projects done by the TDOT requiring the relocation of MLGW water mains.
		Purpose/Necessity	MLGW will meet the utility relocation needs of the City, County, and State for their street improvement projects
25-18	Engineering Services Contract	Description/Location	Engineering services contract for designing in state contract, Chapter 86 moves.
		Purpose/Necessity	To design in state contract, Chapter 86 jobs to TDOT specifications.
25-19	Miscellaneous Projections	Description/Location	Miscellaneous Projections
		Purpose/Necessity	Miscellaneous Projections

General Plant

Buildings and Structures

25-20	Storage Building for Electric Training Trailer	Description/Location	Storage Building for Electric Training Trailer to be located at the Memphis Light Water and Water University.
		Purpose/Necessity	Design cost related a new storage building.
25-21	Training Roadway	Description/Location	Training roadway to be located at the Memphis Light Water and Water University.
		Purpose/Necessity	The roadway will help reduce accident/incident rates by providing a training ground with equipment.

Security Automation

25-22	Allen Pumping Station Camera Infrastructure (CO)	Description/Location	Allen Pumping Station
		Purpose/Necessity	Camera Infrastructure Installation
25-23	Davis Pumping Station Camera Infrastructure (CO)	Description/Location	Davis Pumping Station
		Purpose/Necessity	Camera Infrastructure Installation
25-24	Mallory Pumping Station Camera Infrastructure (CO)	Description/Location	Mallory Pumping Station
		Purpose/Necessity	Camera Infrastructure Installation
25-25	Shaw Pumping Station Camera Infrastructure (CO)	Description/Location	Shaw Pumping Station
		Purpose/Necessity	Camera Infrastructure Installation
25-26	Network Video Recorders	Description/Location	Various Water Locations to be determined by necessity
		Purpose/Necessity	To replace failing or upgrade existing systems.
25-27	Video & Alarm System Head End Equipment & Software	Description/Location	Various Water Locations to be determined by necessity
		Purpose/Necessity	Security Enhancement Infrastructure

NOTES FOR PAGE 26–CAPITAL EXPENDITURES BUDGET

Purchase of Fleet Capital Transportation and Power Operated Equipment

26-1	Fleet Capital Power Operated Equipment	Description/Location	Division vehicles/equipment used for work in and around Shelby County.
		Purpose/Necessity	To purchase approved budget items, in order to provide equipment for crews to complete job assignments. Replacements are evaluated based on age, actual operational usage, projected usage, repair cost and frequency, parts availability, and effectiveness to meet area's needs. Additions are evaluated based on justification request and proper approval.

Purchase of Fleet Capital Transportation and Power Operated Equipment

26-2	Fleet Capital Transportation Equipment	Description/Location	Division vehicles/equipment used for work in and around Shelby County.
		Purpose/Necessity	To purchase approved budget items, in order to provide equipment for crews to complete job assignments. Replacements are evaluated based on age, actual operational usage, projected usage, repair cost and frequency, parts availability, and effectiveness to meet area's needs. Additions are evaluated based on justification request and proper approval.

Purchase of Tools and Equipment

26-3	Purchase of Tools & Equipment	Description/Location	Division tools/equipment used for work in and around Shelby County.
		Purpose/Necessity	To purchase approved budget items, in order to provide equipment for employees to complete job assignments. Tools are considered replacements for the following reasons: i. Damaged beyond repair; ii. Worn from time/age/use, cost does not justify repair; iii. Lost/Stolen report submitted in a timely manner; iv. No longer suited for work being done, replace with a new model; v. Safety hazard; vi. Repair cost is at or above 50% of cost of new tool; vii. High occurrence of maintenance that creates excessive down time.
26-4	Water Lab Equipment	Description/Location	Auto Titrator and Analyzer and an Automatic Absorption Spectrometer to be located at the Water Lab.
		Purpose/Necessity	To ensure that MLGW is in compliance with Tennessee Department of Environment and Conservation Rules and Regulations for quality drinking water.

26-5	Contingency Fund – General Plant	Description/Location	This is an estimated budget amount to cover unforeseen emergency items that may arise in the current year.
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GLOSSARY

ACD: Automatic Call Distributor.

ACSR: Aluminum, Cable Steel Reinforced cable.

ADA: Americans with Disabilities Act.

BNSF: Burlington Northern Santé Fe Railway Company.

BTU: British Thermal Unit.

Capital Budget: Fixed assets and capital projects to be acquired or contracted during the budget period.

Capital Expenditure: Expenditures that result in the acquisition of, or addition to, fixed assets including land, buildings, improvements, machinery, and equipment.

CA: Cab to Axle.

CARES: Computer Assisted Restoration of the Electric System.

CCTV: Closed-circuit television.

C&C: Cab and Chassis.

CC&C: Crew Cab & Chassis.

CKT: Circuit.

CN: Canadian National Railway.

CNG: Compressed Natural Gas.

CO: Carryover.

CPU: Central Processing Unit.

CSX: CSX Transportation.

CSX/RR: CSX Transportation Railroad.

DA: Distribution Automation.

DASD: Direct Access Storage Device.

DB: Decibel.

DDC: Direct Digital Controller.

Debt Service: Principal and interest payments on outstanding bonds.

DIMP: Distribution Integrity Management Program.

DOT: Department of Transportation.

GLOSSARY

ERC: Emergency Response Center.

ESO: Electric Systems Operations.

Expenditure: The outflow of funds paid or to be paid for an asset obtained or goods and services obtained regardless of when the expense is actually paid.

FC: Suffix for connector type.

FCI: Failed Circuit Indicators.

FEMA: Federal Emergency Management Agency.

FIS: Facility Information System.

Fixed Assets: Assets that are used in a productive capacity, have physical substance, are relatively long-lived, and provide future benefit, which is readily measurable, such as land, buildings, machinery, furniture, vehicles, other equipment and capital projects. Those assets that are capitalized and depreciated over a period of time.

GAAP: Generally Accepted Accounting Principals. Uniform minimum standards and guidelines for disclosing, recording and reporting financial transactions and entries.

GASB: Governmental Accounting Standards Board.

GIS: Geographic Information System.

GPS: Global Positioning System.

HHSC: Hickory Hill Service Center.

HMI: Human Machine Interface.

HP: High Pressure.

HSP: High Service Pump.

HVAC: Heating, Ventilation, and Air Conditioning.

IC RR: Illinois Central Railroad.

IDS: Intrusion Detection System.

IR: Infrared.

kV: Kilo Volts, a unit of potential equal to a thousand volts.

KVA: Kilo Volt-Ampere, one thousand volt-amps.

KW: Kilowatt.

GLOSSARY

LC: Suffix for connector type.

LNG: Liquefied Natural Gas.

LOL: Leased Outdoor Lighting.

LWB: Long Wheel Base pickup.

MAOP: Maximum allowable operating pressure.

MDMS: Meter Data Management System.

MG: Millions of gallons.

MGD: Million gallons per day.

MH/DL: Manhole/Ductline.

MHz: Megahertz.

MSS: Management Support System.

NERC: North American Electric Reliability Corporation.

Net Assets: The difference between assets and liabilities for a period of time.

O&M: Operations and Maintenance.

OH: Overhead.

OPEB: Other Post Employment Benefits.

Operating Budget: The portion of the budget that pertains to daily operations that provide basic services. The operating budget contains approved expenditures.

OPGW: Optical Ground Wire.

OTL: Oracle Time and Labor.

OTDR: Optical Time Domain Reflectometer.

Pad: Pad-mounted transformer.

PCB: Polychlorinated Bithenyls.

PSI: Pound per Square Inch.

PTAC: Packaged terminal air conditioning.

PTO: Power Take Off.

PV: Photo-Voltaic or solar cells.

GLOSSARY

ROW: Right of Way.

RR: Railroad.

RTU: Remote Terminal Unit.

SAN: Storage Area Network.

SC: Suffix for connector type.

SCADA: Supervisory Control and Data Acquisition, used to monitor and control the electric system. SCADA gathers information and transfers the information to a central site.

SCBPU: Shelby County Board of Public Utilities.

SPCC: Spill Prevention, Control and Countermeasure.

T-line: Transmission line.

TDOT: Tennessee Department of Transportation.

TEMA: Tennessee Emergency Management Agency.

TIMP: Transmission Integrity Management Program

TOU: Time of Use.

UG: Underground.

UPS: Uninterruptible Power Source.

URD: Underground Residential Development.

USPS: United States Postal Service.

VAV: Variable Air Volume.

VFD: Variable Frequency Drive.

WAQL: Water Assurance Quality Lab.

WWRB: Wash water Recovery Basin.

XFMR: Symbol used to denote transformer.

XHP: Extra High Pressure.

XXHP: Extra, Extra High Pressure.