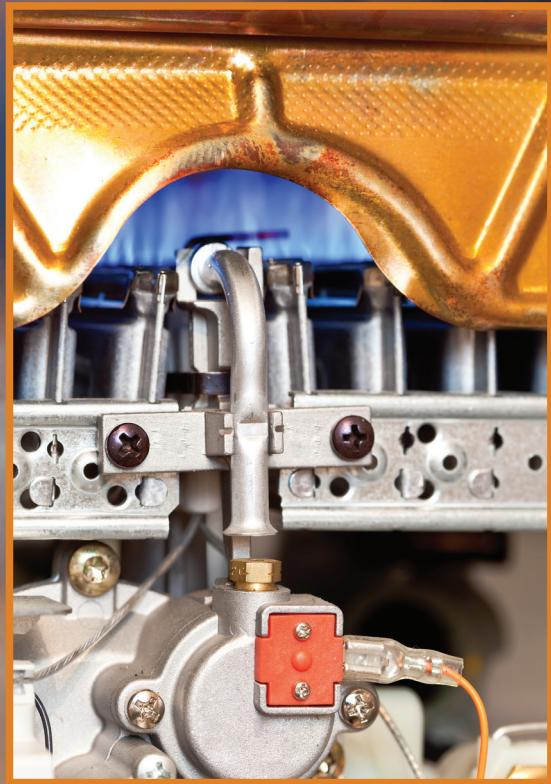


# Memphis Light, Gas and Water Division 2019 Budget

City Council Approved  
February 19, 2019



**Customer Value,  
Reliability,  
Modernization,  
& Quality**

# The MLGW Board of Commissioners & Advisory Board Members



**Chairman McCullough, Esq**



**Vice-Chairman Graves**



**Commissioner Wishnia**



**Commissioner Dickson Sr.**



**Commissioner Pohlman**



**Advisory Board Member Young**



**Advisory Board Member Kicklighter**

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# **How to Read the Budget**

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## **INTRODUCTION**

We are pleased to submit the 2019 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 2019 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 ensure 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.

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

# How to Read the Budget

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MLGW Board of Commissioners for review in September and approval in October with the final budget approved by the Memphis City Council scheduled in November or December.

## **CONTENTS OF THE BUDGET DOCUMENT**

This Budget document begins with the Budget Highlights which offers of a summary of Total Operating Revenue, Total Operating Expense, Operating Income (Loss), Change in Net Position, and the Capital Program for each Division. The information provided in the remaining sections 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 2019 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 2017 Actual Expenditures, 2018 Budget, and the 2019 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 2018 Budget, 2019 Budget and the difference between the 2018 Budget and 2019 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 2017 Actual, 2018 Budget, and the 2019 Budget. Again, the last column is the Reference Number that can be used to look up explanations of each line item. The next three pages (7-9) 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.

# How to Read the Budget

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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 2019 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.

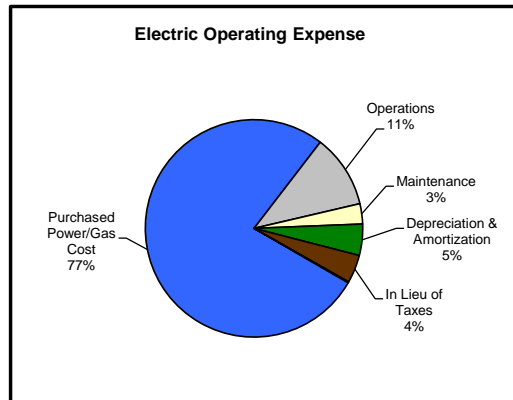
The Appendix also includes a Glossary that defines acronyms and other terms commonly used throughout this Budget document.

## 2019 MLGW BUDGET HIGHLIGHTS

### ELECTRIC DIVISION

(In Thousands)

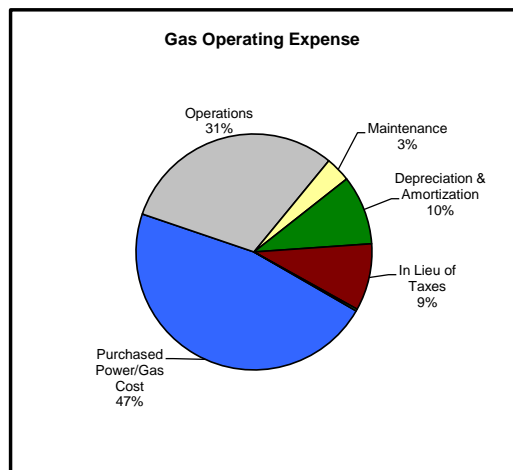
<b>Total Operating Revenue</b>	<b>\$ 1,281,926</b>
<b>Purchased Power</b>	<b>\$ 1,013,472</b>
<b>Total O&amp;M Expense</b>	<b>\$ 183,190</b>
<b>Other Operating Expense</b>	<b>\$ 117,905</b>
<b>Total Operating Expense</b>	<b>\$ 1,314,567</b>
<b>Operating Income (Loss)</b>	<b>\$ (32,641)</b>
<b>Change in Net Position</b>	<b>\$ -</b>
<b>CAPITAL PROGRAM</b>	<b>\$ 60,000</b>



### GAS DIVISION

(In Thousands)

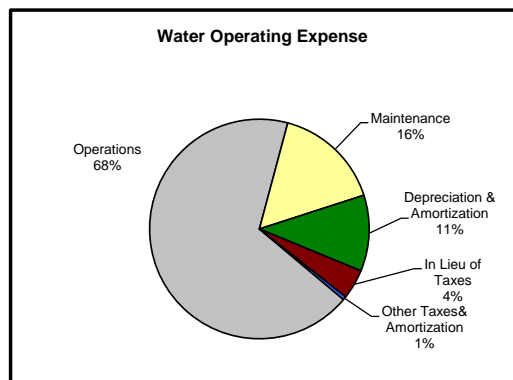
<b>Total Operating Revenue</b>	<b>\$ 249,312</b>
<b>Purchased Gas</b>	<b>\$ 115,786</b>
<b>Total O&amp;M Expense</b>	<b>\$ 84,378</b>
<b>Other Operating Expense</b>	<b>\$ 46,807</b>
<b>Total Operating Expense</b>	<b>\$ 246,971</b>
<b>Operating Income (Loss)</b>	<b>\$ 2,341</b>
<b>Change in Net Position</b>	<b>\$ -</b>
<b>CAPITAL PROGRAM</b>	<b>\$ 26,000</b>



### WATER DIVISION

(In Thousands)

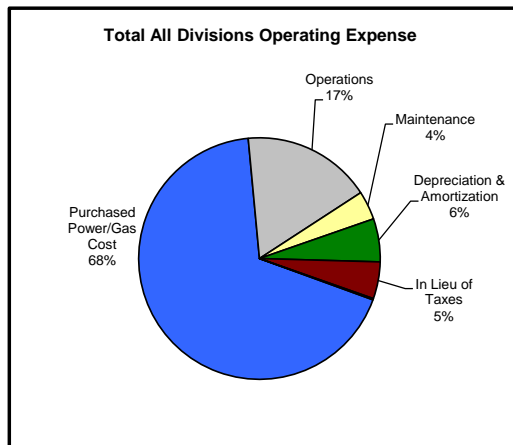
<b>Total Operating Revenue</b>	<b>\$ 101,666</b>
<b>Total O&amp;M Expense</b>	<b>\$ 84,085</b>
<b>Other Operating Expense</b>	<b>\$ 16,119</b>
<b>Total Operating Expense</b>	<b>\$ 100,204</b>
<b>Operating Income (Loss)</b>	<b>\$ 1,462</b>
<b>Change in Net Position</b>	<b>\$ -</b>
<b>CAPITAL PROGRAM</b>	<b>\$ 15,000</b>



### ALL DIVISIONS

(In Thousands)

<b>TOTAL OPERATING REVENUE</b>	<b>\$ 1,632,904</b>
<b>TOTAL PURCHASED POWER &amp; GAS</b>	<b>\$ 1,129,258</b>
<b>TOTAL O&amp;M EXPENSE</b>	<b>\$ 351,653</b>
<b>TOTAL OTHER OPERATING EXPENSE</b>	<b>\$ 180,831</b>
<b>TOTAL OPERATING EXPENSE</b>	<b>\$ 1,661,742</b>
<b>OPERATING INCOME</b>	<b>\$ (28,838)</b>
<b>CHANGE IN NET POSITION</b>	<b>\$ -</b>
<b>TOTAL CAPITAL PROGRAM</b>	<b>\$ 101,000</b>





**ALL DIVISIONS**



MEMPHIS LIGHT, GAS AND WATER DIVISION  
INCOME, EXPENSE, AND CHANGES IN NET POSITION COMPARISON  
FOR CALENDAR YEAR OF 2019

ALL DIVISIONS

PAGE 2

DESCRIPTION	THOUSANDS OF DOLLARS			
	ELECTRIC DIVISION	GAS DIVISION	WATER DIVISION	TOTAL
<b><u>OPERATING REVENUE</u></b>				
Sales Revenue	1,256,692	218,539	97,389	1,572,620
Revenue Adjustment for Uncollectibles	(5,588)	(1,529)	(1,015)	(8,132)
Non-Sales Revenue	30,822	32,302	5,292	68,416
<b>OPERATING REVENUE</b>	<b>1,281,926</b>	<b>249,312</b>	<b>101,666</b>	<b>1,632,904</b>
<b><u>OPERATING EXPENSE</u></b>				
Purchased Power	1,013,472	-	-	1,013,472
Purchased Gas	-	114,586	-	114,586
Compressed Natural Gas (CNG)	-	120	-	120
Liquefied Natural Gas (LNG)	-	1,080	-	1,080
Production Expense	-	1,131	13,325	14,456
Transmission Expense	7,727	-	-	7,727
Distribution Expense	37,470	23,975	12,213	73,658
Customer Accounts Expense	15,956	9,560	7,070	32,586
Customer Service & Information Expense	1,857	1,240	809	3,906
Sales Expense	822	478	477	1,777
Administrative & General Expense	79,714	39,490	34,297	153,501
<b>OPERATING EXPENSE</b>	<b>1,157,018</b>	<b>191,660</b>	<b>68,191</b>	<b>1,416,869</b>
<b><u>MAINTENANCE EXPENSE</u></b>				
Transmission Expense	2,634	-	-	2,634
Production Expense	-	470	3,512	3,982
Distribution Expense	33,425	7,404	9,758	50,587
Administrative & General Expense	3,585	630	2,624	6,839
<b>MAINTENANCE EXPENSE</b>	<b>39,644</b>	<b>8,504</b>	<b>15,894</b>	<b>64,042</b>
<b><u>OTHER OPERATING EXPENSE</u></b>				
Depreciation Expense	58,442	18,316	11,253	88,011
Payment in Lieu of Taxes	54,979	22,651	4,400	82,030
F.I.C.A. Taxes	1,728	663	489	2,880
Amortization of Leasehold Improvements	-	-	-	-
Amortization of SCBPU Acquisition Adjustments	-	-	(482)	(482)
Amortization of Legacy Meters	870	1,377	459	2,706
Amortization of Software	1,886	3,800	-	5,686
<b>OTHER OPERATING EXPENSE</b>	<b>117,905</b>	<b>46,807</b>	<b>16,119</b>	<b>180,831</b>
<b>TOTAL OPERATING EXPENSE</b>	<b>1,314,567</b>	<b>246,971</b>	<b>100,204</b>	<b>1,661,742</b>
<b><u>INCOME</u></b>				
Operating Income	(32,641)	2,341	1,462	(28,838)
Other Income	38,600	-	900	39,500
Reduction of Plant Cost Recovered through CIAC	14,000	(4,304)	(4,005)	5,691
<b>NET INCOME BEFORE DEBT EXPENSE</b>	<b>19,959</b>	<b>(1,963)</b>	<b>(1,643)</b>	<b>16,353</b>
<b><u>DEBT EXPENSE</u></b>				
Interest Expense - Long Term Debt	8,165	3,461	2,591	14,217
Amortization of Debt Discount & Expense	(2,206)	(1,120)	(229)	(3,555)
<b>TOTAL DEBT EXPENSE</b>	<b>5,959</b>	<b>2,341</b>	<b>2,362</b>	<b>10,662</b>
<b>NET INCOME AFTER DEBT EXPENSE</b>	<b>14,000</b>	<b>(4,304)</b>	<b>(4,005)</b>	<b>5,691</b>
Contributions in Aid of Construction	(14,000)	4,304	4,005	(5,691)
<b>CHANGE IN NET POSITION</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>

**MEMPHIS LIGHT, GAS AND WATER DIVISION  
INCOME, EXPENSE, AND CHANGES IN NET POSITION COMPARISON  
FOR CALENDAR YEAR OF 2019**

ALL DIVISIONS

PAGE 2a

DESCRIPTION	THOUSANDS OF DOLLARS			
	ELECTRIC DIVISION	GAS DIVISION	WATER DIVISION	TOTAL
<b><u>OPERATING REVENUE</u></b>				
Sales Revenue	1,256,692	218,539	97,389	1,572,620
Revenue Adjustment for Uncollectibles	(5,588)	(1,529)	(1,015)	(8,132)
<b>Non-Sales Revenue</b>				
Forfeited Discounts	11,922	2,841	1,452	16,215
Miscellaneous Service Revenue	10,236	2,776	1,884	14,896
Cross Connection Revenue	-	-	1,380	1,380
Other Operating Revenue	1,320	504	360	2,184
Compressed Natural Gas (CNG)	-	180	-	180
Liquefied Natural Gas (LNG)	-	4,464	-	4,464
Rent from Electric/Gas/Water Property	7,344	11,136	216	18,696
Transported Gas	-	10,401	-	10,401
<b>Total Non-Sales Revenue</b>	<b>30,822</b>	<b>32,302</b>	<b>5,292</b>	<b>68,416</b>
<b>OPERATING REVENUE</b>	<b>1,281,926</b>	<b>249,312</b>	<b>101,666</b>	<b>1,632,904</b>
<b><u>OPERATING EXPENSE</u></b>				
Purchased Power	1,013,472	-	-	1,013,472
Purchased Gas	-	114,586	-	114,586
Compressed Natural Gas (CNG)	-	120	-	120
Liquified Natural Gas (LNG)	-	1,080	-	1,080
<b>Production Expense</b>				
Chemicals	-	-	1,189	1,189
Fuel or Power Purchased for Pumping	-	-	7,707	7,707
Miscellaneous Expense	-	-	1,948	1,948
Operatons Production Water Treatment	-	-	68	68
Operation Labor and Expenses	-	999	1,868	2,867
Operation Supervision and Engineering	-	132	262	394
Pumping Labor and Expenses	-	-	283	283
<b>Total Production Expense</b>	<b>-</b>	<b>1,131</b>	<b>13,325</b>	<b>14,456</b>
<b>Transmission Expense</b>				
Load Dispatching	1,107	-	-	1,107
Miscellaneous Transmission Expenses	1,139	-	-	1,139
Operation Supervision and Engineering	5,071	-	-	5,071
Station Expenses	410	-	-	410
Underground Transmission Line Expenses	-	-	-	-
<b>Total Transmission Expense</b>	<b>7,727</b>	<b>-</b>	<b>-</b>	<b>7,727</b>
<b>Distribution Expense</b>				
Customer Installation Expenses	-	4,961	2,988	7,949
Distribution Load Dispatching Expense	1,107	722	-	1,829
Mains and Services	-	2,749	-	2,749
Measuring and Regulating Expenses	-	131	-	131
Meter and House Regulator Expenses	784	3,220	725	4,729
Miscellaneous Distribution Expenses <sup>(1)</sup>	19,923	9,247	5,777	34,947
Operation Supervision and Engineering	3,438	2,921	2,032	8,391
Overhead Distribution Line Expense	3,284	-	-	3,284
Rents	-	24	2	26
Services on Customers' Premises	5,283	-	-	5,283
Station Expenses	1,436	-	-	1,436
Storage Facilities	-	-	59	59
Street Lighting and Signal System Expenses	253	-	-	253
Transmission and Distribution Lines	-	-	630	630
	1,962	-	-	1,962
	<b>37,470</b>	<b>23,975</b>	<b>12,213</b>	<b>73,658</b>

<sup>(1)</sup> 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 2019**

ALL DIVISIONS

PAGE 2b

DESCRIPTION	THOUSANDS OF DOLLARS			
	ELECTRIC DIVISION	GAS DIVISION	WATER DIVISION	TOTAL
<b><u>OPERATING EXPENSE (Continued)</u></b>				
<b>Customer Accounts Expense</b>				
Customer Order, Records and Collection Expenses	13,841	8,054	5,910	27,805
Meter Reading Expenses	2,032	1,462	1,126	4,620
Supervision-Customer Accounting and Collection	83	44	34	161
<b>Total Customer Accounts Expense</b>	<b>15,956</b>	<b>9,560</b>	<b>7,070</b>	<b>32,586</b>
<b>Customer Service &amp; Information Expense</b>				
Customer Assistance Expenses	1,329	798	652	2,779
Informational and Instructional Advertising Expenses	137	43	30	210
Miscellaneous Customer Service & Informational Expenses	207	271	-	478
Supervision-Customer Service and Information	184	128	127	439
<b>Total Customer Service &amp; Information Expense</b>	<b>1,857</b>	<b>1,240</b>	<b>809</b>	<b>3,906</b>
<b>Sales Expense</b>				
Miscellaneous Sales Expenses	822	478	394	1,694
<b>Total Sales Expense</b>	<b>822</b>	<b>478</b>	<b>477</b>	<b>1,777</b>
<b>Administrative &amp; General Expense</b>				
Administrative and General Salaries	15,268	5,747	4,149	25,164
Administration Expenses Transferred to Capital	(8,023)	(2,922)	(1,751)	(12,696)
Pension Expense	11,224	5,612	3,670	20,506
Other Active & Retiree Benefits	26,030	14,724	9,770	50,524
Other Post Employment Benefits Funding	1,248	624	408	2,280
Injuries and Damages	2,593	1,547	1,603	5,743
Miscellaneous General Expenses <sup>(2)</sup>	9,115	3,664	3,122	15,901
Office Supplies and Expenses	5,666	1,824	1,611	9,101
Outside Services Employed	7,238	3,962	5,885	17,085
Property Insurance	1,053	457	310	1,820
Rents-Miscellaneous	8,302	4,251	5,520	18,073
<b>Total Administrative &amp; General Expense</b>	<b>79,714</b>	<b>39,490</b>	<b>34,297</b>	<b>153,501</b>
<b>OPERATING EXPENSE</b>	<b>1,157,018</b>	<b>191,660</b>	<b>68,191</b>	<b>1,416,869</b>
<b><u>MAINTENANCE EXPENSE</u></b>				
<b>Transmission Expense</b>				
Maintenance of Overhead Transmission Lines	10	-	-	10
Maintenance of Station Equipment	1,217	-	-	1,217
Maintenance of Underground Transmission Lines	477	-	-	477
Maintenance Supervision and Engineering	930	-	-	930
<b>Total Transmission Expense</b>	<b>2,634</b>	<b>-</b>	<b>-</b>	<b>2,634</b>
<b>Production Expense</b>				
Maintenance of Other Equipment	-	147	-	147
Maintenance of Pumping Equipment	-	-	2,516	2,516
Maintenance of Structures and Improvements	-	114	-	114
Maintenance of Water Treatment Equipment	-	-	291	291
Maintenance of Wells	-	-	568	568
Maintenance Supervision and Engineering	-	209	137	346
<b>Total Production Expense</b>	<b>-</b>	<b>470</b>	<b>3,512</b>	<b>3,982</b>

<sup>(2)</sup> 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 2019**

ALL DIVISIONS

PAGE 2c

DESCRIPTION	THOUSANDS OF DOLLARS			
	ELECTRIC DIVISION	GAS DIVISION	WATER DIVISION	TOTAL
<b><u>MAINTENANCE EXPENSE (Continued)</u></b>				
<b>Distribution Expense</b>				
Maintenance of Hydrants	-	-	189	189
Maintenance of Line Transformers	2,752	-	-	2,752
Maintenance of Mains	-	5,534	-	5,534
Maintenance of Meters	2,111	292	4,165	6,568
Maintenance of Miscellaneous Distribution Plant	774	-	32	806
Maintenance of Overhead Distribution Lines	16,171	-	-	16,171
Maintenance of Services	-	606	420	1,026
Maintenance of Station Equipment	2,023	-	-	2,023
Maintenance of Street Lighting and Signal System	2,937	-	-	2,937
Maintenance of Gas Distribution Facilities	-	-	-	-
Maintenance of Structures and Improvements	-	1	-	1
Maintenance of Transmission and Distribution Mains	-	-	4,952	4,952
Maintenance of Underground Distribution Lines	4,293	-	-	4,293
Maintenance Supervision and Engineering	2,364	62	-	2,426
Measuring and Regulating Equipment Expenses	-	909	-	909
<b>Total Distribution Expense</b>	<b>33,425</b>	<b>7,404</b>	<b>9,758</b>	<b>50,587</b>
<b>Administrative &amp; General Expense</b>				
Maintenance of General Plant	3,105	564	2,624	6,293
Facilities Maintenance Expense	480	66	-	546
<b>Total Administrative &amp; General Expense</b>	<b>3,585</b>	<b>630</b>	<b>2,624</b>	<b>6,839</b>
<b>MAINTENANCE EXPENSE</b>	<b>39,644</b>	<b>8,504</b>	<b>15,894</b>	<b>64,042</b>
<b><u>OTHER OPERATING EXPENSE</u></b>				
Depreciation Expense	58,442	18,316	11,253	88,011
Payment in Lieu of Taxes	54,979	22,651	4,400	82,030
F.I.C.A. Taxes	1,728	663	489	2,880
Amortization of SCBPU Acquisition Adjustments	-	-	(482)	(482)
Amortization of Legacy Meters	870	1,377	459	2,706
Amortization of Software	1,886	3,800	-	5,686
<b>OTHER OPERATING EXPENSE</b>	<b>117,905</b>	<b>46,807</b>	<b>16,119</b>	<b>180,831</b>
<b>TOTAL OPERATING EXPENSE</b>	<b>1,314,567</b>	<b>246,971</b>	<b>100,204</b>	<b>1,661,742</b>
<b><u>INCOME</u></b>				
Operating Income	(32,641)	2,341	1,462	(28,838)
<b>Other Income</b>				
Expenses of Merchandising, Jobbing & Contracts	-	(3,335)	-	(3,335)
Revenues from Merchandising, Jobbing & Contracts	-	1,600	-	1,600
Revenues from Non-Utility Property	-	14	-	14
Revenues from Common Transportation Equipment	-	630	-	630
Revenues from Sinking & Other Funds-Interest Income	2,100	900	300	3,300
Medicare Part D Refund	353	135	100	588
Non-Operating Income - TVA Transmission Credit	33,947	-	-	33,947
Miscellaneous Non-Operating Income	2,200	56	500	2,756
<b>Total Other Income</b>	<b>38,600</b>	<b>-</b>	<b>900</b>	<b>39,500</b>
<b>Contributions in Aid of Construction</b>	<b>14,000</b>	<b>(4,304)</b>	<b>(4,005)</b>	<b>5,691</b>
<b>NET INCOME BEFORE DEBT EXPENSE</b>	<b>19,959</b>	<b>(1,963)</b>	<b>(1,643)</b>	<b>16,353</b>

**MEMPHIS LIGHT, GAS AND WATER DIVISION  
INCOME, EXPENSE, AND CHANGES IN NET POSITION COMPARISON  
FOR CALENDAR YEAR OF 2019**

ALL DIVISIONS

PAGE 2d

DESCRIPTION	THOUSANDS OF DOLLARS			
	ELECTRIC DIVISION	GAS DIVISION	WATER DIVISION	TOTAL
<b>DEBT EXPENSE</b>				
<b>Interest Expense - Long-Term Debt</b>				
Interest on Ltd - Series 2014	2,779	-	467	3,246
Interest on Ltd - Series 2016	1,678	1,678	864	4,220
Interest on Ltd - Series 2017	3,708	1,783	910	6,401
Interest on Ltd - Series 2019	-	-	350	350
<b>Total Interest Expense - Long-Term Debt</b>	<b>8,165</b>	<b>3,461</b>	<b>2,591</b>	<b>14,217</b>
<b>Amortization of Debt Discount &amp; Expense</b>				
Amortization of Debt Disc & Exp - Series 2014	(647)	-	(52)	(699)
Amortization of Debt Disc & Exp - Series 2016	(602)	(600)	(177)	(1,379)
Amortization of Debt Disc & Exp - Series 2017	(957)	(520)	-	(1,477)
<b>Total Amortization of Debt Discount &amp; Expense</b>	<b>(2,206)</b>	<b>(1,120)</b>	<b>(229)</b>	<b>(3,555)</b>
<b>TOTAL DEBT EXPENSE</b>	<b>5,959</b>	<b>2,341</b>	<b>2,362</b>	<b>10,662</b>
<b>NET INCOME AFTER DEBT EXPENSE</b>	<b>14,000</b>	<b>(4,304)</b>	<b>(4,005)</b>	<b>5,691</b>
Contributions in Aid of Construction	(14,000)	4,304	4,005	(5,691)
<b>CHANGE IN NET POSITION</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>

MEMPHIS LIGHT, GAS AND WATER DIVISION  
 CAPITAL EXPENDITURES  
 FOR CALENDAR YEAR OF 2019

ALL DIVISIONS

PAGE 3

DESCRIPTION	THOUSANDS OF DOLLARS				REF. NO.
	ELECTRIC DIVISION	GAS DIVISION	WATER DIVISION	TOTAL	
TOTAL 2019 CAPITAL EXPENDITURES	60,000	26,000	15,000	101,000	3-1

# ELECTRIC DIVISION



**MEMPHIS LIGHT, GAS AND WATER DIVISION**  
**INCOME, EXPENSE, AND CHANGES IN NET POSITION COMPARISON**  
**2018 THROUGH 2019**

ELECTRIC DIVISION

PAGE 4

DESCRIPTION	THOUSANDS OF DOLLARS			REF. NO.
	2017 ACTUAL	2018 BUDGET	2019 BUDGET	
<b>OPERATING REVENUE</b>				
Sales Revenue	1,210,567	1,237,051	1,256,692	4-1
Revenue Adjustment for Uncollectibles	(5,549)	(6,851)	(5,588)	4-2
Non-Sales Revenue	29,056	33,169	30,822	4-3
<b>OPERATING REVENUE</b>	<b>1,234,074</b>	<b>1,263,369</b>	<b>1,281,926</b>	
<b>OPERATING EXPENSE</b>				
Purchased Power	991,526	1,011,293	1,013,472	4-4
Transmission Expense	6,391	7,023	7,727	4-5
Distribution Expense	36,730	38,573	37,470	4-6
Customer Accounts Expense	15,200	14,726	15,956	4-7
Customer Service & Information Expense	1,717	1,917	1,857	4-8
Sales Expense	874	860	822	4-9
Administrative & General Expense	76,001	87,175	79,714	4-10
<b>OPERATING EXPENSE</b>	<b>1,128,439</b>	<b>1,161,567</b>	<b>1,157,018</b>	
<b>MAINTENANCE EXPENSE</b>				
Transmission Expense	2,955	3,689	2,634	4-11
Distribution Expense	38,812	42,806	33,425	4-12
Administrative & General Expense	4,404	4,526	3,585	4-13
<b>MAINTENANCE EXPENSE</b>	<b>46,171</b>	<b>51,021</b>	<b>39,644</b>	
<b>OTHER OPERATING EXPENSE</b>				
Depreciation Expense	52,416	58,367	58,442	4-14
Payment in Lieu of Taxes	48,104	51,518	54,979	4-15
F.I.C.A. Taxes	1,628	1,541	1,728	4-16
Amortization of Legacy Meters	524	797	870	4-17
Amortization of Software	1,208	1,800	1,886	4-18
<b>OTHER OPERATING EXPENSE</b>	<b>103,880</b>	<b>114,023</b>	<b>117,905</b>	
<b>TOTAL OPERATING EXPENSE</b>	<b>1,278,490</b>	<b>1,326,611</b>	<b>1,314,567</b>	
<b>INCOME</b>				
Operating Income	(44,416)	(63,242)	(32,641)	4-19
Other Income	47,353	47,955	38,600	4-20
Reduction of Plant Cost Recovered through CIAC	(27,553)	(13,020)	14,000	4-21
<b>NET INCOME BEFORE DEBT EXPENSE</b>	<b>(24,616)</b>	<b>(28,307)</b>	<b>19,959</b>	
<b>DEBT EXPENSE</b>				
Interest Expense - Existing Long-Term Debt	16,647	13,595	8,165	4-22
Amortization of Debt Discount & Expense	(3,615)	(3,117)	(2,206)	4-23
<b>TOTAL DEBT EXPENSE</b>	<b>13,032</b>	<b>10,478</b>	<b>5,959</b>	
<b>NET INCOME AFTER DEBT EXPENSE</b>	<b>(37,648)</b>	<b>(38,785)</b>	<b>14,000</b>	
Contributions in Aid of Construction	27,553	13,020	(14,000)	4-24
<b>CHANGE IN NET POSITION</b>	<b>(10,095)</b>	<b>(25,765)</b>	<b>-</b>	



**MEMPHIS LIGHT, GAS AND WATER DIVISION**  
**INCOME, EXPENSE, AND CHANGES IN NET POSITION COMPARISON**  
**2018 THROUGH 2019**

ELECTRIC DIVISION

PAGE 4a

DESCRIPTION	THOUSANDS OF DOLLARS		
	2018 BUDGET	2019 BUDGET	DIFFERENCE
<b>OPERATING REVENUE</b>			
<b>Sales Revenue</b>	1,237,051	1,256,692	19,641
<b>Revenue Adjustment for Uncollectibles</b>	(6,851)	(5,588)	1,263
<b>Non-Sales Revenue</b>			
Forfeited Discounts	12,601	11,922	(679)
Miscellaneous Service Revenue	11,700	10,236	(1,464)
Other Operating Revenue	1,356	1,320	(36)
Rent from Gas/Water Property	7,512	7,344	(168)
<b>Total Non-Sales Revenue</b>	33,169	30,822	(2,347)
<b>OPERATING REVENUE</b>	1,263,369	1,281,926	18,557
<b>OPERATING EXPENSE</b>			
<b>Purchased Power</b>	1,011,293	1,013,472	2,179
<b>Transmission Expense</b>			
Load Dispatching	969	1,107	138
Miscellaneous Transmission Expenses	1,144	1,139	(5)
Operation Supervision and Engineering	4,238	5,071	833
Overhead Transmission Line Expenses	5	-	(5)
Station Expenses	608	410	(198)
Underground Transmission Line Expenses	59	-	(59)
<b>Total Transmission Expense</b>	7,023	7,727	704
<b>Distribution Expense</b>			
Distribution Load Dispatching Expense	968	1,107	139
Meter Expenses	761	784	23
Miscellaneous Distribution Expenses <sup>(1)</sup>	19,361	19,923	562
Operation Supervision and Engineering	5,564	3,438	(2,126)
Overhead Distribution Line Expense	2,178	3,284	1,106
Services on Customers' Premises	5,904	5,283	(621)
Station Expenses	1,423	1,436	13
Street Lighting and Signal System Expenses	336	253	(83)
Underground Distribution Line Expenses	2,078	1,962	(116)
<b>Total Distribution Expense</b>	38,573	37,470	(1,103)
<b>Customer Accounts Expense</b>			
Customer Order, Records and Collection Expenses	13,053	13,841	788
Meter Reading Expenses	1,610	2,032	422
Supervision-Customer Accounting and Collection	63	83	20
<b>Total Customer Accounts Expense</b>	14,726	15,956	1,230
<b>Customer Service &amp; Information Expense</b>			
Customer Assistance Expenses	1,217	1,329	112
Informational and Instructional Advertising Expenses	138	137	(1)
Miscellaneous Customer Service & Informational Expense	404	207	(197)
Supervision-Customer Service and Information	158	184	26
<b>Total Customer Service &amp; Information Expense</b>	1,917	1,857	(60)
<b>Sales Expense</b>			
Miscellaneous Sales Expenses	860	822	(38)
<b>Total Sales Expense</b>	860	822	(38)

<sup>(1)</sup> 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**  
**2018 THROUGH 2019**

**ELECTRIC DIVISION**

PAGE 4b

DESCRIPTION	THOUSANDS OF DOLLARS		
	2018 BUDGET	2019 BUDGET	DIFFERENCE
<b><u>OPERATING EXPENSE (Continued)</u></b>			
<b>Administrative &amp; General Expense</b>			
Administrative and General Salaries	13,602	15,268	1,666
Administration Expenses Transferred to Capital	(5,367)	(8,023)	(2,656)
Pension Expense	11,463	11,224	(239)
Other Active & Retiree Benefits	25,881	26,030	149
Other Post Employment Benefits Funding	8,033	1,248	(6,785)
Injuries and Damages	3,986	2,593	(1,393)
Miscellaneous General Expenses <sup>(2)</sup>	10,303	9,115	(1,188)
Office Supplies and Expenses	2,858	5,666	2,808
Outside Services Employed	7,674	7,238	(436)
Property Insurance	912	1,053	141
Rents-Miscellaneous	7,830	8,302	472
<b>Total Administrative &amp; General Expense</b>	<b>87,175</b>	<b>79,714</b>	<b>(7,461)</b>
<b>OPERATING EXPENSE</b>	<b>1,161,567</b>	<b>1,157,018</b>	<b>(4,549)</b>
<b><u>MAINTENANCE EXPENSE</u></b>			
<b>Transmission Expense</b>			
Maintenance of Overhead Transmission Lines	1,430	10	(1,420)
Maintenance of Station Equipment	684	1,217	533
Maintenance of Underground Transmission Lines	667	477	(190)
Maintenance Supervision and Engineering	908	930	22
<b>Total Transmission Expense</b>	<b>3,689</b>	<b>2,634</b>	<b>(1,055)</b>
<b>Distribution Expense</b>			
Maintenance of Line Transformers	1,860	2,752	892
Maintenance of Meters	2,521	2,111	(410)
Maintenance of Miscellaneous Distribution Plant	574	774	200
Maintenance of Overhead Distribution Lines	23,335	16,171	(7,164)
Maintenance of Station Equipment	1,157	2,023	866
Maintenance of Street Lighting and Signal System	4,322	2,937	(1,385)
Maintenance of Structures and Improvements	3	-	(3)
Maintenance of Underground Distribution Lines	6,801	4,293	(2,508)
Maintenance Supervision and Engineering	2,233	2,364	131
<b>Total Distribution Expense</b>	<b>42,806</b>	<b>33,425</b>	<b>(9,381)</b>
<b>Administrative &amp; General Expense</b>			
Maintenance of General Plant	4,526	3,105	(1,421)
Facilities Maintenance Expense	-	480	480
<b>Total Administrative &amp; General Expense</b>	<b>4,526</b>	<b>3,585</b>	<b>(941)</b>
<b>MAINTENANCE EXPENSE</b>	<b>51,021</b>	<b>39,644</b>	<b>(11,377)</b>

<sup>(2)</sup> 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**  
**2018 THROUGH 2019**

**ELECTRIC DIVISION**

PAGE 4c

DESCRIPTION	THOUSANDS OF DOLLARS		
	2018 BUDGET	2019 BUDGET	DIFFERENCE
<b><u>OTHER OPERATING EXPENSE</u></b>			
Depreciation Expense	58,367	58,442	75
Payment in Lieu of Taxes	51,518	54,979	3,461
F.I.C.A. Taxes	1,541	1,728	187
Amortization of Legacy Meters	797	870	73
Amortization of Software	1,800	1,886	86
<b>OTHER OPERATING EXPENSE</b>	<b>114,023</b>	<b>117,905</b>	<b>3,882</b>
<b>TOTAL OPERATING EXPENSE</b>	<b>1,326,611</b>	<b>1,314,567</b>	<b>(12,044)</b>
<b><u>INCOME</u></b>			
Operating Income	(63,242)	(32,641)	30,601
<b>Other Income</b>			
Revenues from Sinking & Other Funds - Interest Income	1,012	2,100	1,088
Allowance for Funds Used During Construction	280	-	(280)
Medicare Part D Refund	402	353	(49)
Non-Operating Income - Prepay Credit	10,986	-	(10,986)
Non-Operating Income - TVA Transmission Credit	33,900	33,947	47
Miscellaneous Non-Operating Income	1,375	2,200	825
<b>Total Other Income</b>	<b>47,955</b>	<b>38,600</b>	<b>(9,355)</b>
Reduction of Plant Cost Recovered through CIAC	(13,020)	14,000	27,020
<b>NET INCOME BEFORE DEBT EXPENSE</b>	<b>(28,307)</b>	<b>19,959</b>	<b>48,266</b>
<b><u>DEBT EXPENSE</u></b>			
<b>Interest Expense - Long-Term Debt</b>			
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	2,779	(103)
Interest on Ltd - Series 2016	1,731	1,678	(53)
Interest on Ltd - Series 2017	3,760	3,708	(52)
<b>Total Interest Expense - Long-Term Debt</b>	<b>13,595</b>	<b>8,165</b>	<b>(5,430)</b>
<b>Amortization of Debt Discount &amp; Expense</b>			
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)	(647)	24
Amortization of Debt Disc & Exp - Series 2016	(621)	(602)	19
Amortization of Debt Disc & Exp - Series 2017	(535)	(957)	(422)
<b>Total Amortization of Debt Discount &amp; Expense</b>	<b>(3,117)</b>	<b>(2,206)</b>	<b>911</b>
<b>TOTAL DEBT EXPENSE</b>	<b>10,478</b>	<b>5,959</b>	<b>(4,519)</b>
<b>NET INCOME AFTER DEBT EXPENSE</b>	<b>(38,785)</b>	<b>14,000</b>	<b>52,785</b>
Contributions in Aid of Construction	13,020	(14,000)	(27,020)
<b>CHANGE IN NET POSITION</b>	<b>(25,765)</b>	<b>-</b>	<b>25,765</b>

MEMPHIS LIGHT, GAS AND WATER DIVISION  
 SOURCE AND APPLICATION OF FUNDS  
 2019 BUDGET  
 (THOUSANDS OF DOLLARS)

ELECTRIC DIVISION

PAGE 5

		REF. NO.
<b><u>SOURCE OF FUNDS:</u></b>		
<b>FROM OPERATIONS:</b>		
Change in Net Position	-	5-1
<b>Non-Cash Charges to Income:</b>		
Depreciation Charged to Operating Income	58,442	5-2
Depreciation Charged to Other Accounts	1,299	5-3
Amortization of Legacy Meters	870	5-4
Amortization of Software	1,886	5-5
	62,497	
<b>TOTAL FUNDS FROM OPERATIONS</b>	<b>62,497</b>	
Salvage	1,514	5-6
	64,011	
<b>TOTAL FUNDS AVAILABLE</b>	<b>64,011</b>	
<b><u>APPLICATION OF FUNDS:</u></b>		
Capital Expenditures	60,000	5-7
Costs of Removal and Other Charges to the Reserve for Depreciation	3,551	5-8
Retirement of Long-Term Debt	9,540	5-9
	73,091	
<b>TOTAL APPLICATION OF FUNDS</b>	<b>73,091</b>	
 <b>INCREASE (DECREASE) IN WORKING CAPITAL</b>	 <b>(9,080)</b>	

MEMPHIS LIGHT, GAS AND WATER DIVISION  
CAPITAL EXPENDITURES COMPARISON  
FOR CALENDAR YEAR OF 2019

ELECTRIC DIVISION

PAGE 6

DESCRIPTION	THOUSANDS OF DOLLARS			REF. NO.
	2017 ACTUAL	2018 BUDGET	2019 BUDGET	
<b>SUBSTATION AND TRANSMISSION</b>				
ELEC - SUBSTATION	11,326	18,318	8,600	6-1
ELEC - SUBSTATION TRANSFORMERS REPLACEMENT	-	-	900	6-2
ELEC - SUBSTATION CIRCUIT BREAKERS REPLACEMENT	-	-	5,300	6-3
ELEC - TRANSMISSION LINES	(987)	1,955	1,100	6-4
CONTRIBUTION IN AID OF CONSTRUCTION - CIAC	-	(1,625)	-	6-5
<b>TOTAL - SUBSTATION AND TRANSMISSION</b>	<b>10,339</b>	<b>18,647</b>	<b>15,900</b>	
<b>DISTRIBUTION SYSTEM</b>				
ELEC - RESIDENTIAL SERVICE IN S/D	254	208	100	6-6
ELEC - RESIDENTIAL SERVICE NOT IN S/D	991	767	1,200	6-7
ELEC - RESIDENTIAL S/D	142	55	30	6-8
ELEC - APARTMENTS	580	1,040	500	6-9
ELEC - GENERAL POWER SERVICE	5,416	3,375	4,500	6-10
ELEC - GENERAL POWER S/D	-	51	-	6-11
ELEC - MOBILE HOME PARK	-	2	-	6-12
ELEC - RANCHETTE	-	-	-	6-13
ELEC - TEMPORARY SERVICE	211	5	-	6-14
ELEC - RES SVC IN APT/MOBILE HOME COMM	-	-	-	6-15
ELEC - MOBILE HOME NOT IN PARK	1	0	-	6-16
ELEC - MULTIPLE-UNIT GENERAL POWER	357	190	300	6-17
ELEC - RELOCATE AT CUSTOMER REQUEST	2,782	2,226	5,100	6-18
ELEC - STREET IMPROVEMENTS	466	2,007	2,500	6-19
ELEC - NEW CIRCUITS	2,169	9,081	5,000	6-20
ELEC - VOLTAGE CONVERSION	-	20	-	6-21
ELEC - RECONSTRUCT TO MULTI-PHASE	-	4	-	6-22
ELEC - LINE RECONSTRUCTION/REMOVE IDLE FACILITIES	1,643	5,859	1,500	6-23
ELEC - DEFECT CABLE/FEEDER CABLE REPLACEMENT	2,955	9,056	1,000	6-24
ELEC - UNDERGROUND CABLE REPLACEMENT	-	-	-	6-25
ELEC - DISTRIBUTION POLES	-	-	-	6-26
ELEC - DISTRIBUTION AUTOMATION	-	-	-	6-27
ELEC - STREET LIGHTS INSTALL	3,608	1,464	2,000	6-28
ELEC - DEMOLITION	31	-	-	6-29
ELEC - STREET LIGHT MAINTENANCE	1,340	-	2,000	6-30
ELEC - PLANNED MAINTENANCE	12,334	3,829	9,300	6-31
ELEC - TREE TRIMMING	-	5	-	6-32
ELEC - OPERATIONS MAINTENANCE	159	-	-	6-33
ELEC - LEASED OUTDOOR LIGHTING	695	1,067	1,100	6-34
ELEC - SHARED USE CONTRACT	-	-	-	6-35
ELEC - STORM RESTORATION	16,506	-	-	6-36
ELEC - EMERGENCY MAINTENANCE	6,331	5,721	5,500	6-37
ELEC - COMMUNICATION TOWERS	832	1,000	-	6-38
JT - RESIDENTIAL SERVICE IN S/D	354	898	500	6-39
JT - RESIDENTIAL SERVICE NOT IN S/D	120	22	-	6-40
JT - RESIDENTIAL S/D	1,233	1,090	2,700	6-41
JT - APARTMENTS	57	158	50	6-42
JT - RES SVC IN APT/MOBILE HOME COMM	-	1	-	6-43
PCI - CAPACITOR BANKS	-	-	-	6-44
PCI - DIST TRANSFORMERS	6,709	6,010	3,000	6-45
ELEC - METERS	26,958	8,426	500	6-46
CONTRIBUTION IN AID OF CONSTRUCTION - CIAC	(21,042)	(13,019)	(14,000)	
<b>TOTAL - DISTRIBUTION SYSTEM</b>	<b>74,192</b>	<b>50,618</b>	<b>34,380</b>	
<b>GENERAL PLANT</b>				
ELEC - BUILDINGS & STRUCTURES	1,360	1,977	881	6-47
ELEC - SECURITY AUTOMATION	6	2,673	3,102	6-48
ELEC - LAND PURCHASE	152	350	-	6-49
ELEC - FLEET CAPITAL POWER OPERATED EQUIPMENT	4,482	6,930	4,272	6-50
ELEC - TRANSPORTATION EQUIPMENT	1,523	4,198	214	6-51
ELEC - TOOLS & EQUIPMENT	158	133	-	6-52
ELEC - LAB & TEST	207	311	-	6-53
ELEC - COMMUNICATION EQUIPMENT	502	104	41	6-54
ELEC - COMMUNICATION TOWERS	-	6,532	-	6-55
ELEC - TELECOMMUNICATION NETWORK	842	1,335	-	6-56
ELEC - UTILITY MONITORING	-	1,225	1,600	6-57
ELEC - CIS DEVELOPMENT	247	14,715	7,947	6-58
ELEC - BUSINESS CONTINUITY	75	4,258	3,109	6-59
ELEC - DATA PROCESSING EQUIPMENT	3,155	3,919	1,736	6-60
ELEC - IS/IT PROJECTS	283	-	-	6-61
ELEC - CONTINGENCY FUND	-	200	-	6-62
<b>TOTAL - GENERAL PLANT</b>	<b>12,992</b>	<b>48,861</b>	<b>22,902</b>	
<b>TOTAL - ELECTRIC DIVISION</b>	<b>97,523</b>	<b>118,125</b>	<b>73,182</b>	
Delayed Cost Allocations	3,830	(5,907)	(13,182)	6-63
<b>TOTAL - ELECTRIC DIVISION</b>	<b>101,353</b>	<b>112,218</b>	<b>60,000</b>	

MEMPHIS LIGHT, GAS AND WATER DIVISION  
CAPITAL EXPENDITURES BUDGET  
FOR CALENDAR YEAR OF 2019

ELECTRIC DIVISION

PAGE 7

DESCRIPTION	ESTIMATED COST SCHEDULE				REF. NO.
	TOTAL COST ESTIMATE	PRIOR TO BUDGET YEAR	IN BUDGET YEAR	AFTER BUDGET YEAR	
<b><u>SUBSTATION &amp; TRANSMISSION MAJOR PROJECTS</u></b>					
<b><u>SUBSTATION</u></b>					
TVA Combined Cycle Plant Substation Improvements	6,680,000	2,250,000	1,500,000	2,930,000	7-1
Install Substation 89 161/23kV Facilities	20,152,708	17,865,810	2,215,898	71,000	7-2
Install Substation 84 third 161/23kV transformer	4,154,506	2,050,000	2,104,506	-	7-3
Replace RTU's various locations	696,922	-	696,922	-	7-4
Project Atlantis Substation Improvements	935,000	75,000	750,000	110,000	7-5
Replace relays various locations	425,000	-	425,000	-	7-6
Replace switches various locations	252,682	-	252,682	-	7-7
<b>TOTAL SUBSTATION IMPROVEMENTS</b>	<b>33,296,818</b>	<b>22,240,810</b>	<b>7,945,008</b>	<b>3,111,000</b>	
<b><u>SUBSTATION - NERC COMPLIANCE</u></b>					
Change Metering Equip. at Transmission System Subs	475,000	445,000	30,000	-	7-8
Install/Upgrade Digital Fault Recorders	1,350,000	382,000	300,000	668,000	7-9
Install Substation Smart Locks	225,000	-	225,000	-	7-10
NERC Low Impact Compliance	100,000	-	100,000	-	7-11
<b>TOTAL NERC COMPLIANCE</b>	<b>2,150,000</b>	<b>827,000</b>	<b>655,000</b>	<b>668,000</b>	
<b><u>SUBSTATION TRANSFORMERS</u></b>					
Replace 23/12 kV transformer banks 1835 & 1837 @ Substation 11	2,625,000	625,000	2,000,000	-	7-12
Replace 115/12 kV transformer banks 4557 & 4559 @ Substation 4	3,000,000	-	3,000,000	-	7-13
Replace 23/12 kV transformer banks @ Substation 7	4,384,239	-	110,000	4,274,239	7-14
Replace Potential Transformer #62 @ Substation 34	225,000	35,000	190,000	-	7-15
<b>TOTAL SUBSTATION TRANSFORMERS</b>	<b>10,234,239</b>	<b>660,000</b>	<b>5,300,000</b>	<b>4,274,239</b>	
<b><u>SUBSTATION CIRCUIT BREAKERS</u></b>					
Contingency Replace Breakers	900,000	-	900,000	-	7-16
<b>TOTAL SUBSTATION CIRCUIT BREAKERS</b>	<b>900,000</b>	<b>-</b>	<b>900,000</b>	<b>-</b>	
<b>TOTAL SUBSTATION</b>	<b>46,581,057</b>	<b>23,727,810</b>	<b>14,800,008</b>	<b>8,053,239</b>	
<b><u>SUBSTATION/TRANSMISSION PROJECTS</u></b>					
FAA Tower Lights	500,000	-	500,000	-	7-17
Sub 26 Structure Modifications	500,000	-	500,000	-	7-18
<b>TOTAL SUBSTATION/TRANSMISSION PROJECTS</b>	<b>1,000,000</b>	<b>-</b>	<b>1,000,000</b>	<b>-</b>	
<b><u>TRANSMISSION - REIMBURSABLE</u></b>					
TVA Combined Cycle Plant Transmission Improvements	1,430,000	80,000	100,000	1,250,000	7-19
<b>TOTAL TRANSMISSION REIMBURSABLE</b>	<b>1,430,000</b>	<b>80,000</b>	<b>100,000</b>	<b>1,250,000</b>	
<b>TOTAL TRANSMISSION LINES</b>	<b>2,430,000</b>	<b>80,000</b>	<b>1,100,000</b>	<b>1,250,000</b>	
<b>TOTAL - SUBSTATION AND TRANSMISSION</b>	<b>49,011,057</b>	<b>23,807,810</b>	<b>15,900,008</b>	<b>9,303,239</b>	

MEMPHIS LIGHT, GAS AND WATER DIVISION  
CAPITAL EXPENDITURES BUDGET  
FOR CALENDAR YEAR OF 2019

ELECTRIC DIVISION

PAGE 8

DESCRIPTION	ESTIMATED COST SCHEDULE				REF. NO.
	TOTAL COST ESTIMATE	PRIOR TO BUDGET YEAR	IN BUDGET YEAR	AFTER BUDGET YEAR	
<b><u>DISTRIBUTION SYS. - MAJOR PROJECTS</u></b>					
Sub 89 Cabling	2,300,000	-	2,300,000	-	8-1
5485 Shelby Drive - Mendenhall to Tuggle (Sub 89 Ckt Ties)	500,000	-	500,000	-	8-2
4650 Hickory Hill to Crumpler(Sub 89 Ckt Ties)	200,000	-	200,000	-	8-3
5492 E. Shelby Drive - Mendenhall to Hickory Hill (Sub 89 Ckt Ties)	100,000		100,000		8-4
Shelby Drive - Mendenhall to Hickory Hill and Holmes (Sub 89 Ckt Ties)	950,000	-	950,000	-	8-5
Shelby Drive Underbuild - Germantown Rd to Hacks Cross (Sub 28 to Sub 9)	300,000	-	300,000	-	8-6
Substation 46 Cabling	50,000	-	50,000	-	8-7
Reconfigure Circuit 15205	600,000	-	600,000	-	8-8
<b>TOTAL MAJOR NEW CIRCUIT PROJECTS</b>	<b>5,000,000</b>	<b>-</b>	<b>5,000,000</b>	<b>-</b>	
<b><u>MISC. PROJECTS - REIMBURSABLE</u></b>					
Elvis Presley Blvd. Renovation	4,412,505	1,287,505	625,000	2,500,000	8-9
Pinch District Improvements	6,000,000	-	3,478,110	2,521,890	8-10
Other Relocate at Customer Request Projects	1,000,000	-	1,000,000	-	8-11
<b>TOTAL MISC. PROJECTS - REIMBURSABLE</b>	<b>11,412,505</b>	<b>1,287,505</b>	<b>5,103,110</b>	<b>5,021,890</b>	
<b><u>STREET IMPROVEMENT PROJECTS</u></b>					
SR-57/Poplar Bridge @Scott Street & SR-23/Walnut Grove (SP 02/12)	1,500,000	-	1,500,000	-	8-12
Center Street Redevelopment (CV 14/03)	525,000	263,000	262,000	-	8-13
SR-14, From SR 385 to East of Kerrville-Rosemark	740,000		313,000	427,000	8-14
<b>TOTAL MAJOR STREET IMPROVEMENT PROJECTS</b>	<b>2,765,000</b>	<b>263,000</b>	<b>2,075,000</b>	<b>427,000</b>	
<b>TOTAL DISTRIBUTION SYS. - MAJOR PROJECTS</b>	<b>19,177,505</b>	<b>1,550,505</b>	<b>12,178,110</b>	<b>5,448,890</b>	
<b><u>GENERAL PLANT</u></b>					
<b><u>BUILDINGS &amp; STRUCTURES</u></b>					
<b><u>SUBSTATIONS</u></b>					
Replace Roofs - Various Substations	524,625	215,785	299,840	9,000	8-15
<b><u>ELECTRIC &amp; SYSTEMS OPERATIONS</u></b>					
Radio Tower Bldg: UPS and Generator	595,075	14,306	580,769	-	8-16
<b>TOTAL BUILDINGS &amp; STRUCTURES</b>	<b>1,119,700</b>	<b>230,091</b>	<b>880,609</b>	<b>9,000</b>	
<b>ELEC - SECURITY AUTOMATION</b>	<b>11,399,344</b>	<b>167,589</b>	<b>3,102,190</b>	<b>8,129,565</b>	8-17
<b>ELEC - FLEET CAPITAL POWER OPERATED EQUIPMENT</b>	<b>4,272,105</b>	<b>-</b>	<b>4,272,105</b>	<b>-</b>	8-18
<b>ELEC - TRANSPORTATION EQUIPMENT</b>	<b>214,212</b>	<b>-</b>	<b>214,212</b>	<b>-</b>	8-19
<b>ELEC - COMMUNICATION EQUIPMENT</b>	<b>41,425</b>	<b>-</b>	<b>41,425</b>	<b>-</b>	8-20

**MEMPHIS LIGHT, GAS AND WATER DIVISION  
CAPITAL EXPENDITURES BUDGET  
FOR CALENDAR YEAR OF 2019**

**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	
<b><u>GENERAL PLANT (Continued)</u></b>					
<b><u>UTILITY MONITORING &amp; CONTROL SYSTEMS</u></b>					
Systems Backup Control & Communication Plan (CO)	6,137,000	1,012,500	1,600,000	3,524,500	9-1
<b>TOTAL UTILITY MONITORING &amp; CONTROL SYS.</b>	<b>6,137,000</b>	<b>1,012,500</b>	<b>1,600,000</b>	<b>3,524,500</b>	
<b><u>CUSTOMER INFO SYSTEM (CIS) DEVELOPMENT</u></b>					
2018 CIS Upgrade Production HW & SW	1,406,160	703,080	703,080	-	9-2
Mobile Dispatching System Replacement (C/O)	9,272,833	4,000,000	5,272,833	-	9-3
IVR Replacement (C/O)	5,940,000	3,200,000	740,000	2,000,000	9-4
Annual Network Enhancements (C/O)	1,742,938		1,230,938	512,000	9-5
<b>TOTAL CUSTOMER INFO. SYS. DEVELOP</b>	<b>28,959,110</b>	<b>10,005,570</b>	<b>7,946,851</b>	<b>11,006,689</b>	
<b><u>BUSINESS CONTINUITY</u></b>					
Annual Network Enhancements and Upgrades	5,720,000	-	400,000	5,320,000	9-6
Data Center Upgrade and Enhancements (C/O)	1,809,116	667,656	617,656	523,804	9-7
Data Center Upgrade and Enhancements	600,407	-	600,407	-	9-8
Backup Expansion (C/O)	675,340	341,820	333,520	-	9-9
Network Security Enhancements	540,313	-	540,313	-	9-10
Network DNS/DHCP Project	617,039	-	617,039	-	9-11
<b>TOTAL BUSINESS CONTINUITY</b>	<b>12,362,334</b>	<b>1,666,657</b>	<b>3,108,935</b>	<b>7,586,742</b>	
<b><u>PURCHASE OF DATA PROCESSING EQUIPMENT</u></b>					
Annual New\Replacement Servers\Win OS Upgrades - (C/O)	648,000	-	400,000	248,000	9-12
Annual New\Replacement Servers\Win OS Upgrades - New	609,400	-	609,400	-	9-13
Corporate Wireless Upgrade & Enhancements	1,672,824	815,328	157,496	700,000	9-14
Corporate Wireless Upgrade & Enhancements - (C/O)	338,256	169,128	169,128	-	9-15
Work Center Wireless	800,000	400,000	400,000	-	9-16
<b>TOTAL PURCHASE OF DATA PROCESSING EQUIPMENT</b>	<b>10,789,488</b>	<b>1,384,456</b>	<b>1,736,024</b>	<b>7,669,008</b>	
<b>TOTAL GENERAL PLANT</b>	<b>75,294,718</b>	<b>14,466,863</b>	<b>22,902,351</b>	<b>37,925,504</b>	



MEMPHIS LIGHT, GAS AND WATER DIVISION  
CAPITAL CARRYOVER SUMMARY\*  
FOR CALENDAR YEAR OF 2019

ELECTRIC DIVISION

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<u>CAPITAL CARRYOVER CATEGORY</u>	<u>CARRYOVER AMOUNT</u>
Substations, Transmission & Distribution System	4,956,922
Buildings	275,000
Transportation	4,486,000
Security Automation	2,214,413
Utility Monitoring	827,000
CIS Info Systems Development	7,243,771
Purchase of Data Processing Equipment	569,128
Business Continuity	951,176
<b>TOTAL CAPITAL CARRYOVER SUMMARY</b>	<b><u>21,523,410</u></b>

\*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 2019 Budget.

# **GAS DIVISION**



MEMPHIS LIGHT, GAS AND WATER DIVISION  
INCOME, EXPENSE, AND CHANGES IN NET POSITION COMPARISON  
2018 THROUGH 2019

GAS DIVISION

PAGE 12

DESCRIPTION	THOUSANDS OF DOLLARS			REF. NO.
	2017 ACTUAL	2018 BUDGET	2019 BUDGET	
<b>OPERATING REVENUE</b>				
Sales Revenue	202,428	225,931	218,539	12-1
Revenue Adjustment for Uncollectibles	(1,749)	(1,346)	(1,529)	12-2
Non-Sales Revenue	25,724	29,981	32,302	12-3
<b>OPERATING REVENUE</b>	<b>226,403</b>	<b>254,566</b>	<b>249,312</b>	
<b>OPERATING EXPENSE</b>				
Production - LNG Plant	1,512	1,681	1,131	12-4
Purchased Gas	104,541	123,421	114,586	12-5
Compressed Natural Gas (CNG)	1,078	24	120	12-6
Liquefied Natural Gas (LNG)	110	1,968	1,080	12-7
Distribution Expense	28,106	28,597	23,975	12-8
Customer Accounts Expense	10,145	9,985	9,560	12-9
Customer Service & Information Expense	1,371	1,514	1,240	12-10
Sales Expense	391	573	478	12-11
Administrative & General Expense	41,832	43,775	39,490	12-12
<b>OPERATING EXPENSE</b>	<b>189,086</b>	<b>211,538</b>	<b>191,660</b>	
<b>MAINTENANCE EXPENSE</b>				
Production Expense	629	752	470	12-13
Distribution Expense	8,332	10,631	7,404	12-14
Administrative & General Expense	761	752	630	12-15
<b>MAINTENANCE EXPENSE</b>	<b>9,722</b>	<b>12,135</b>	<b>8,504</b>	
<b>OTHER OPERATING EXPENSE</b>				
Depreciation Expense	17,676	13,051	18,316	12-16
Payment in Lieu of Taxes	19,432	21,600	22,651	12-17
F.I.C.A. Taxes	624	591	663	12-18
Amortization of Leasehold Improvements	-	38	-	12-19
Amortization of Leagacy Meters	445	1,161	1,377	12-20
Amortization of Software	-	5,500	3,800	12-21
<b>OTHER OPERATING EXPENSE</b>	<b>38,177</b>	<b>41,941</b>	<b>46,807</b>	
<b>TOTAL OPERATING EXPENSE</b>	<b>236,985</b>	<b>265,614</b>	<b>246,971</b>	
<b>INCOME</b>				
Operating Income	(10,582)	(11,048)	2,341	12-22
Other Income	(186)	(173)	-	12-23
Reduction of Plant Cost Recovered through CIAC	(3,833)	(12,698)	(4,304)	12-24
<b>NET INCOME BEFORE DEBT EXPENSE</b>	<b>(14,601)</b>	<b>(23,919)</b>	<b>(1,963)</b>	
<b>DEBT EXPENSE</b>				
Interest Expense - Long-Term Debt	2,242	3,537	3,461	12-25
Amortization of Debt Discount & Expense	(772)	(1,150)	(1,120)	12-26
<b>TOTAL DEBT EXPENSE</b>	<b>1,470</b>	<b>2,387</b>	<b>2,341</b>	
<b>NET INCOME AFTER DEBT EXPENSE</b>	<b>(16,071)</b>	<b>(26,306)</b>	<b>(4,304)</b>	
Contributions in Aid of Construction	3,833	12,698	4,304	12-27
<b>CHANGE IN NET POSITION</b>	<b>(12,238)</b>	<b>(13,608)</b>	<b>-</b>	

**MEMPHIS LIGHT, GAS AND WATER DIVISION**  
**INCOME, EXPENSE, AND CHANGES IN NET POSITION COMPARISON**  
**2018 THROUGH 2019**

GAS DIVISION

PAGE 12a

DESCRIPTION	THOUSANDS OF DOLLARS		
	2018 BUDGET	2019 BUDGET	DIFFERENCE
<b>OPERATING REVENUE</b>			
<b>Sales Revenue</b>	225,931	218,539	(7,392)
<b>Revenue Adjustment for Uncollectibles</b>	(1,346)	(1,529)	(183)
<b>Non-Sales Revenue</b>			
Forfeited Discounts	3,138	2,841	(297)
Miscellaneous Service Revenue	2,776	2,776	-
Other Operating Revenue	480	504	24
Compressed Natural Gas (CNG)	84	180	96
Liquefied Natural Gas (LNG)	4,488	4,464	(24)
Rent from Electric/Water Property	10,850	11,136	286
Transported Gas	8,165	10,401	2,236
<b>Total Non-Sales Revenue</b>	29,981	32,302	2,321
<b>OPERATING REVENUE</b>	254,566	249,312	(5,254)
<b>OPERATING EXPENSE</b>			
<b>Purchased Gas</b>	123,421	114,586	(8,835)
<b>Compressed Natural Gas (CNG)</b>	24	120	96
<b>Liquified Natural Gas (LNG)</b>	1,968	1,080	(888)
<b>Production Expense</b>			
Fuel Gas	355	-	(355)
Operation Labor and Expenses	1,203	999	(204)
Operation Supervision and Engineering	123	132	9
<b>Total Production Expense</b>	1,681	1,131	(550)
<b>Distribution Expense</b>			
Customer Installation Expenses	5,611	4,961	(650)
Distribution Load Dispatching Expense	630	722	92
Mains and Services	3,685	2,749	(936)
Measuring and Regulating Expenses	507	131	(376)
Meter and House Regulator Expenses	3,638	3,220	(418)
Miscellaneous Distribution Expenses <sup>(1)</sup>	11,263	9,247	(2,016)
Rents	24	24	-
Operation Supervision and Engineering	3,239	2,921	(318)
<b>Total Distribution Expense</b>	28,597	23,975	(4,622)
<b>Customer Accounts Expense</b>			
Customer Order, Records and Collection Expenses	8,386	8,054	(332)
Meter Reading Expenses	1,552	1,462	(90)
Supervision-Customer Accounting and Collection	47	44	(3)
<b>Total Customer Accounts Expense</b>	9,985	9,560	(425)
<b>Customer Service &amp; Information Expense</b>			
Customer Assistance Expenses	793	798	5
Informational and Instructional Advertising Expenses	52	43	(9)
Miscellaneous Customer Service & Informational Expenses	552	271	(281)
Supervision-Customer Service and Information	117	128	11
<b>Total Customer Service &amp; Information Expense</b>	1,514	1,240	(274)
<b>Total Sales Expense</b>	573	478	(95)
<b>Total Sales Expense</b>	573	478	(95)

<sup>(1)</sup> 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  
2018 THROUGH 2019**

GAS DIVISION

PAGE 12b

DESCRIPTION	THOUSANDS OF DOLLARS		
	2018 BUDGET	2019 BUDGET	DIFFERENCE
<b><u>OPERATING EXPENSE (Continued)</u></b>			
<b>Administrative &amp; General Expense</b>			
Administrative and General Salaries	5,498	5,747	249
Administration Expenses Transferred to Capital	(1,099)	(2,922)	(1,823)
Pension Expense	5,687	5,612	(75)
Other Active & Retiree Benefits	14,949	14,724	(225)
Other Post Employment Benefits Funding	3,985	624	(3,361)
Injuries and Damages	2,241	1,547	(694)
Miscellaneous General Expenses <sup>(2)</sup>	3,481	3,664	183
Office Supplies and Expenses	1,236	1,824	588
Outside Services Employed	3,306	3,962	656
Property Insurance	446	457	11
Rents-Miscellaneous	4,045	4,251	206
<b>Total Administrative &amp; General Expense</b>	<b>43,775</b>	<b>39,490</b>	<b>(4,285)</b>
<b>OPERATING EXPENSE</b>	<b>211,538</b>	<b>191,660</b>	<b>(19,878)</b>
<b><u>MAINTENANCE EXPENSE</u></b>			
<b>Production Expense</b>			
Maintenance of Other Equipment	363	147	(216)
Maintenance of Structures and Improvements	205	114	(91)
Maintenance Supervision and Engineering	184	209	25
<b>Total Production Expense</b>	<b>752</b>	<b>470</b>	<b>(282)</b>
<b>Distribution Expense</b>			
Maintenance of Mains	6,909	5,534	(1,375)
Maintenance of Meters	642	292	(350)
Maintenance of Services	1,904	606	(1,298)
Maintenance of Gas Distribution Facilities	-	-	-
Maintenance of Structures and Improvements	1	1	-
Maintenance Supervision and Engineering	83	62	(21)
Measuring and Regulating Equipment Expenses	1,092	909	(183)
<b>Total Distribution Expense</b>	<b>10,631</b>	<b>7,404</b>	<b>(3,227)</b>
<b>Administrative &amp; General Expense</b>			
Maintenance of General Plant	752	564	(188)
Facilities Maintenance Expense	-	66	66
<b>Total Administrative &amp; General Expense</b>	<b>752</b>	<b>630</b>	<b>(122)</b>
<b>MAINTENANCE EXPENSE</b>	<b>12,135</b>	<b>8,504</b>	<b>(3,631)</b>
<b><u>OTHER OPERATING EXPENSE</u></b>			
Depreciation Expense	13,051	18,316	5,265
Payment in Lieu of Taxes	21,600	22,651	1,051
F.I.C.A. Taxes	591	663	72
Amortization of Leasehold Improvements	38	-	(38)
Amortization of Legacy Meters	1,161	1,377	216
Amortization of Software	5,500	3,800	(1,700)
<b>OTHER OPERATING EXPENSE</b>	<b>41,941</b>	<b>46,807</b>	<b>4,866</b>
<b>TOTAL OPERATING EXPENSE</b>	<b>265,614</b>	<b>246,971</b>	<b>(18,643)</b>

<sup>(2)</sup> 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**  
**2018 THROUGH 2019**

GAS DIVISION

PAGE 12c

DESCRIPTION	THOUSANDS OF DOLLARS		
	2018 BUDGET	2019 BUDGET	DIFFERENCE
<b>INCOME</b>			
<b>Operating Income</b>	<b>(11,048)</b>	<b>2,341</b>	<b>13,389</b>
<b>Other Income</b>			
Expenses of Merchandising, Jobbing & Contracts	(3,182)	(3,335)	(153)
Revenues from Merchandising, Jobbing & Contracts	1,538	1,600	62
Revenues from Non-Utility Property	15	14	(1)
Revenues from Common Transportation Equipment	766	630	(136)
Revenues from Sinking & Other Funds-Interest Income	443	900	457
Medicare Part D Refund	179	135	(44)
Miscellaneous Non-Operating Income	68	56	(12)
<b>Total Other Income</b>	<b>(173)</b>	<b>-</b>	<b>173</b>
<b>Reduction of Plant Cost Recovered through CIAC</b>	<b>(12,698)</b>	<b>(4,304)</b>	<b>8,394</b>
<b>NET INCOME BEFORE DEBT EXPENSE</b>	<b>(23,919)</b>	<b>(1,963)</b>	<b>21,956</b>
<b>DEBT EXPENSE</b>			
<b>Interest Expense - Long-Term Debt</b>			
Interest on Ltd - Series 2016	1,731	1,678	(53)
Interest on Ltd - Series 2017	1,806	1,783	(23)
<b>Total Interest Expense - Long-Term Debt</b>	<b>3,537</b>	<b>3,461</b>	<b>(76)</b>
<b>Amortization of Debt Discount &amp; Expense</b>			
Amortization of Debt Disc & Exp - Series 2016	(620)	(600)	20
Amortization of Debt Disc & Exp - Series 2017	(530)	(520)	10
<b>Total Amortization of Debt Discount &amp; Expense</b>	<b>(1,150)</b>	<b>(1,120)</b>	<b>30</b>
<b>TOTAL DEBT EXPENSE</b>	<b>2,387</b>	<b>2,341</b>	<b>(46)</b>
<b>NET INCOME AFTER DEBT EXPENSE</b>	<b>(26,306)</b>	<b>(4,304)</b>	<b>22,002</b>
Contributions in Aid of Construction	12,698	4,304	(8,394)
<b>CHANGE IN NET POSITION</b>	<b>(13,608)</b>	<b>-</b>	<b>13,608</b>

MEMPHIS LIGHT, GAS AND WATER DIVISION  
 SOURCE AND APPLICATION OF FUNDS  
 2019 BUDGET  
 (THOUSANDS OF DOLLARS)

GAS DIVISION

PAGE 13

		REF. NO.
<b><u>SOURCE OF FUNDS:</u></b>		
<b>FROM OPERATIONS:</b>		
Change in Net Position	-	13-1
<b>Non-Cash Charges to Income:</b>		
Depreciation Charged to Operating Income	18,316	13-2
Depreciation Charged to Other Accounts	1,431	13-3
Amortization of Legacy Meters	1,377	13-4
Amortization of Software	3,800	13-5
<b>TOTAL FUNDS FROM OPERATIONS</b>	<b>24,924</b>	
Salvage	316	13-6
<b>TOTAL FUNDS AVAILABLE</b>	<b>25,240</b>	
<b><u>APPLICATION OF FUNDS:</u></b>		
Capital Expenditures	26,000	13-7
Costs of Removal and Other Charges to the Reserve for Depreciation	106	13-8
Retirement of Long Term Debt	4,360	13-9
<b>TOTAL APPLICATION OF FUNDS</b>	<b>30,466</b>	
<b>INCREASE (DECREASE) IN WORKING CAPITAL</b>	<b>(5,226)</b>	

MEMPHIS LIGHT, GAS AND WATER DIVISION  
CAPITAL EXPENDITURES COMPARISON  
FOR CALENDAR YEAR OF 2019

GAS DIVISION

PAGE 14

DESCRIPTION	THOUSANDS OF DOLLARS			REF. NO.
	2017 ACTUAL	2018 BUDGET	2019 BUDGET	
<b>PRODUCTION SYSTEM</b>				
GAS - LNG PROCESSING FACILITIES	-	-	175	
GAS - CNG STATIONS	55	-	-	
<b>TOTAL PRODUCTION SYSTEM</b>	<b>55</b>	<b>-</b>	<b>175</b>	14-1
<b>DISTRIBUTION SYSTEM</b>				
GAS - RESIDENTIAL SERVICE IN S/D	6	1	-	14-2
GAS - RESIDENTIAL SERVICE NOT IN S/D	166	212	227	14-3
GAS - RESIDENTIAL S/D	22	6	4	14-4
GAS - LAND PURCHASE	427	975	-	14-5
GAS - APARTMENTS	1	1	1	14-6
GAS - GENERAL POWER SERVICE	823	2,020	1,827	14-7
GAS - GENERAL POWER S/D	1	9	-	14-8
GAS - MOBILE HOME PARK	-	1	-	14-9
GAS - MULTIPLE-UNIT GENERAL POWER	54	18	40	14-10
GAS - RELOCATE AT CUSTOMER REQUEST	193	27	50	14-11
GAS - PURCHASE OF METERS	28,977	28,457	11,760	14-12
GAS - STREET IMPROVEMENTS	2,410	2,861	2,260	14-13
GAS - DEMOLITION	287	-	-	14-14
GAS - NEW GAS MAIN	1,236	3,277	1,325	14-14
GAS - GAS MAIN/SERVICE REPL (D.O.T.)	3,177	5,070	4,500	14-16
GAS - TRANSMISSION PIPELINES AND FACILITIES	1,121	12,430	700	14-17
GAS - REGULATOR STATIONS	30	1,455	400	14-18
GAS - GATE STATIONS	7	-	-	14-19
GAS - PLANNED MAINTENANCE	2,652	-	5,017	14-20
JT - RESIDENTIAL SERVICE IN S/D	-	226	-	14-21
JT - RESIDENTIAL SERVICE NOT IN S/D	-	5	-	14-22
JT - RESIDENTIAL S/D	536	222	1,129	14-23
JT - APARTMENTS	8	56	6	14-24
JT - RELOCATE AT CUSTOMER REQUEST	-	1	-	14-25
GAS - EMERGENCY MAINTENANCE	1,049	1,504	1,000	14-26
CONTRIBUTIONS IN AID OF CONSTRUCTION (CIAC)	(2,604)	(12,698)	(4,304)	
<b>TOTAL - DISTRIBUTION SYSTEM</b>	<b>40,579</b>	<b>46,136</b>	<b>25,942</b>	
<b>GENERAL PLANT</b>				
GAS - BUILDINGS & STRUCTURES	1,033	2,001	710	14-27
GAS - SECURITY AUTOMATION	138	2,828	-	14-28
GAS - FURNITURE & FIXTURES	-	-	72	14-29
GAS - AUDIO VISUAL	-	39	-	14-30
GAS - DATA PROCESSING	32	-	-	14-31
GAS - IS/IT PROJECTS	1,494	3,922	560	14-32
GAS - FLEET CAPITAL COMMON POWER OPERATED EQUIP	597	1,328	188	14-33
GAS - FLEET CAPITAL COMMON TRANSPORTATION EQUIP	-	3,255	439	14-34
GAS - FLEET GAS POWER OPERATED EQUIPMENT	2,342	735	37	14-35
GAS - FLEET GAS TRANSPORTATION EQUIPMENT	-	995	67	14-36
GAS - AUTOMATED FUELING SYSTEM	(129)	575	-	14-37
GAS - TOOLS & EQUIPMENT	47	30	-	14-38
GAS - COMMON TOOLS & EQUIPMENT	22	154	-	14-39
GAS - ALTERNATIVE FUELING STRUCTURE	-	-	-	14-40
GAS - CONTINGENCY FUNDS	-	200	-	14-41
<b>TOTAL - GENERAL PLANT</b>	<b>5,576</b>	<b>16,063</b>	<b>2,073</b>	
<b>TOTAL GAS DIVISION</b>	<b>46,210</b>	<b>62,199</b>	<b>28,190</b>	
Delayed Cost Allocations	831	(2,488)	(2,190)	14-42
<b>TOTAL - GAS DIVISION</b>	<b>47,041</b>	<b>59,711</b>	<b>26,000</b>	



MEMPHIS LIGHT, GAS AND WATER DIVISION  
CAPITAL EXPENDITURES BUDGET  
FOR CALENDAR YEAR OF 2019

GAS DIVISION

PAGE 15

DESCRIPTION	ESTIMATED COST SCHEDULE				REF. NO.
	TOTAL COST ESTIMATE	PRIOR TO BUDGET YEAR	IN BUDGET YEAR	AFTER BUDGET YEAR	
<b><u>DISTRIBUTION SYSTEM - MAJOR PROJECTS</u></b>					
<b><u>STREET IMPROVEMENTS</u></b>					
CV 14/03, Center Street Development	265,000	-	265,000	-	15-1
BT 16/03, Old Brownsville Road, Austin Peay to Kirby Whitten	250,000	-	250,000	-	15-2
SR-14, from SR-204/Singleton Pkwy to Old Covington Pike (Phase 1) TDOT	656,459	509,243	147,216	-	15-3
CP 12/09, Elvis Presley Corridor - North Phase 1	415,000	-	415,000	-	15-4
CP 17/02, Patterson St, Alumni Ave to Walker Ave	60,000	-	60,000	-	15-5
CP 17/03, Walker Ave, W of Patterson	35,000	-	35,000	-	15-6
GT 16/01, Germantown Rd at Wolf River Blvd.	150,000	-	150,000	-	15-7
AP 16/01 Airline Rd, I-40 to Milton Wilson	16,000	-	16,000	-	15-8
AP 16/02, SR-1/US-70 from SR-385 to Airline - Arlington	15,000	-	15,000	-	15-9
SC 09/04, Macon Rd Bridge over Gray's Creek	75,000	-	75,000	-	15-10
Projections 2019-2022	831,784	-	831,784	-	15-11
<b>TOTAL GAS - STREET IMPROVEMENTS</b>	<b>2,769,243</b>	<b>509,243</b>	<b>2,260,000</b>	<b>-</b>	
<b><u>TRANSMISSION PIPELINES AND FACILITIES</u></b>					
Casing Replacements	2,500,000	-	700,000	1,800,000	15-12
<b>TOTAL TRANSMISSION PIPELINES AND FACILITIES</b>	<b>2,500,000</b>	<b>-</b>	<b>700,000</b>	<b>1,800,000</b>	
<b>TOTAL DISTRIBUTION SYS. - MAJOR PROJECTS</b>	<b>5,269,243</b>	<b>509,243</b>	<b>2,960,000</b>	<b>1,800,000</b>	
<b><u>GENERAL PLANT</u></b>					
<b><u>BUILDINGS &amp; STRUCTURES</u></b>					
<b><u>SOUTH SERVICE CENTER</u></b>					
Brooks Road Gate Station	333,000	-	39,845	293,155	15-13
<b><u>ADMINISTRATION BUILDING</u></b>					
New Fire Pump	388,000	18,000	370,000	-	15-14
<b><u>NEW BUILDINGS</u></b>					
New North Community Pay Office	7,900,000	-	300,000	7,600,000	15-15
<b>TOTAL BUILDINGS &amp; STRUCTURES</b>	<b>8,621,000</b>	<b>18,000</b>	<b>709,845</b>	<b>7,893,155</b>	
<b><u>PURCHASE OF FURNITURE AND FIXTURES</u></b>					
Furniture & Fixtures	72,000	-	72,000	-	15-16
<b>TOTAL PURCH. OF FURNITURE &amp; FIXTURES</b>	<b>72,000</b>	<b>-</b>	<b>72,000</b>	<b>-</b>	
<b><u>DATA PROCESSING</u></b>					
Natural Gas Management System (CO) Budget System	1,863,687	1,603,800	259,887	-	15-17
	300,000	-	300,000	-	15-18
<b>TOTAL DATA PROCESSING</b>	<b>2,163,687</b>	<b>1,603,800</b>	<b>559,887</b>	<b>-</b>	

MEMPHIS LIGHT, GAS AND WATER DIVISION  
 CAPITAL EXPENDITURES BUDGET  
 FOR CALENDAR YEAR OF 2019

GAS DIVISION

PAGE 16

DESCRIPTION	ESTIMATED COST SCHEDULE				REF. NO.
	TOTAL COST ESTIMATE	PRIOR TO BUDGET YEAR	IN BUDGET YEAR	AFTER BUDGET YEAR	
<u>GENERAL PLANT (Continued)</u>					
FLEET CAPITAL COMMON POWER OPERATED EQUIP	188,000	-	188,000	-	16-1
FLEET CAPITAL COMMON TRANSPORTATION EQUIP	439,000	-	439,000	-	16-2
FLEET GAS POWER OPERATED EQUIPMENT	37,000	-	37,000	-	16-3
FLEET GAS TRANSPORTATION EQUIPMENT	67,000	-	67,000	-	16-4
<b>TOTAL GENERAL PLANT</b>	<b>11,587,687</b>	<b>1,621,800</b>	<b>2,072,732</b>	<b>7,893,155</b>	

MEMPHIS LIGHT, GAS AND WATER DIVISION  
CAPITAL CARRYOVER SUMMARY\*  
FOR CALENDAR YEAR OF 2019

GAS DIVISION

PAGE 17

<u>CAPITAL CARRYOVER CATEGORY</u>	<u>CARRYOVER AMOUNT</u>
Distribution System	11,622,216
Buildings	710,000
Transportation	731,000
Data Processing- IS/IT	<u>259,887</u>
<b>TOTAL CAPITAL CARRYOVER SUMMARY</b>	<b><u>13,323,103</u></b>

\*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 2019 Budget.

# WATER DIVISION



MEMPHIS LIGHT, GAS AND WATER DIVISION  
INCOME, EXPENSE, AND CHANGES IN NET POSITION COMPARISON  
2018 THROUGH 2019

WATER DIVISION

PAGE 18

DESCRIPTION	THOUSANDS OF DOLLARS			REF. NO.
	2017 ACTUAL	2018 BUDGET	2019 BUDGET	
<b>OPERATING REVENUE</b>				
Sales Revenue	95,701	95,758	97,389	18-1
Revenue Adjustment for Uncollectibles	(1,004)	(945)	(1,015)	18-2
Non-Sales Revenue	4,816	4,913	5,292	18-3
<b>OPERATING REVENUE</b>	<b>99,513</b>	<b>99,726</b>	<b>101,666</b>	
<b>OPERATING EXPENSE</b>				
Production Expense	12,051	14,530	13,325	18-4
Distribution Expense	14,742	16,288	12,213	18-5
Customer Accounts Expense	7,192	7,120	7,070	18-6
Customer Service & Information Expense	875	779	809	18-7
Sales Expense	417	537	477	18-8
Administrative & General Expense	30,044	35,695	34,297	18-9
<b>OPERATING EXPENSE</b>	<b>65,321</b>	<b>74,949</b>	<b>68,191</b>	
<b>MAINTENANCE EXPENSE</b>				
Production Expense	2,662	3,562	3,512	18-10
Distribution Expense	10,723	10,586	9,758	18-11
Administrative & General Expense	2,185	1,374	2,624	18-12
<b>MAINTENANCE EXPENSE</b>	<b>15,570</b>	<b>15,522</b>	<b>15,894</b>	
<b>OTHER OPERATING EXPENSE</b>				
Depreciation Expense	9,257	11,450	11,253	18-13
Payment in Lieu of Taxes	4,400	4,400	4,400	18-14
F.I.C.A. Taxes	461	437	489	18-15
Amortization of SCBPU Acquisition Adjustments	(963)	(915)	(482)	18-16
Amortization of Legacy Meters	110	248	459	18-17
<b>OTHER OPERATING EXPENSE</b>	<b>13,265</b>	<b>15,620</b>	<b>16,119</b>	
<b>TOTAL OPERATING EXPENSE</b>	<b>94,156</b>	<b>106,091</b>	<b>100,204</b>	
<b>INCOME</b>				
Operating Income	5,357	(6,365)	1,462	18-18
Other Income	944	671	900	18-19
Other Income - Allowance for Funds Used During Construction	56	-	-	18-20
Reduction of Plant Cost Recovered through CIAC	(3,576)	(3,390)	(4,005)	18-21
<b>NET INCOME BEFORE DEBT EXPENSE</b>	<b>2,781</b>	<b>(9,084)</b>	<b>(1,643)</b>	
<b>DEBT EXPENSE</b>				
Interest Expense - Existing Long - Term Debt	1,652	2,795	2,591	18-22
Amortization of Debt Discount & Expense	(294)	(236)	(229)	18-23
<b>TOTAL DEBT EXPENSE</b>	<b>1,358</b>	<b>2,559</b>	<b>2,362</b>	
<b>NET INCOME AFTER DEBT EXPENSE</b>	<b>1,423</b>	<b>(11,643)</b>	<b>(4,005)</b>	
Contributions in Aid of Construction	3,576	3,390	4,005	18-24
<b>CHANGE IN NET POSITION</b>	<b>4,999</b>	<b>(8,253)</b>	<b>-</b>	

**MEMPHIS LIGHT, GAS AND WATER DIVISION**  
**INCOME, EXPENSE, AND CHANGES IN NET POSITION COMPARISON**  
**2018 THROUGH 2019**

WATER DIVISION

PAGE 18a

DESCRIPTION	THOUSANDS OF DOLLARS		
	2018 BUDGET	2019 BUDGET	DIFFERENCE
<b>OPERATING REVENUE</b>			
<b>Sales Revenue</b>	95,758	97,389	1,631
<b>Revenue Adjustment for Uncollectibles</b>	(945)	(1,015)	(70)
<b>Non-Sales Revenue</b>			
Forfeited Discounts	1,412	1,452	40
Miscellaneous Service Revenue	1,595	1,884	289
Cross Connection Revenue	1,380	1,380	-
Other Operating Revenue	360	360	-
Rent from Electric/Gas Property	166	216	50
<b>Total Non-Sales Revenue</b>	4,913	5,292	379
<b>OPERATING REVENUE</b>	<b>99,726</b>	<b>101,666</b>	<b>1,940</b>
<b>OPERATING EXPENSE</b>			
<b>Production Expense</b>			
Chemicals	1,264	1,189	(75)
Operations Production Water Treatment	-	68	68
Fuel or Power Purchased for Pumping	7,350	7,707	357
Miscellaneous Expense	2,874	1,948	(926)
Operation Labor and Expenses	2,566	1,868	(698)
Operation Supervision and Engineering	200	262	62
Pumping Labor and Expenses	276	283	7
<b>Total Production Expense</b>	<b>14,530</b>	<b>13,325</b>	<b>(1,205)</b>
<b>Distribution Expense</b>			
Customer Installation Expenses	3,831	2,988	(843)
Meter Expenses	618	725	107
Miscellaneous Distribution Expenses <sup>(1)</sup>	8,915	5,777	(3,138)
Operation Supervision and Engineering	2,035	2,032	(3)
Storage Facilities	272	59	(213)
Transmission and Distribution Lines	615	630	15
Rents	2	2	-
<b>Total Distribution Expense</b>	<b>16,288</b>	<b>12,213</b>	<b>(4,075)</b>
<b>Customer Accounts Expense</b>			
Customer Order, Records and Collection Expenses	6,153	5,910	(243)
Meter Reading Expenses	930	1,126	196
Supervision-Customer Accounting and Collection	37	34	(3)
<b>Total Customer Accounts Expense</b>	<b>7,120</b>	<b>7,070</b>	<b>(50)</b>
<b>Customer Service &amp; Information Expense</b>			
Customer Assistance Expenses	576	652	76
Informational and Instructional Advertising Expenses	110	30	(80)
Supervision-Customer Service and Information	93	127	34
<b>Total Customer Service &amp; Information Expense</b>	<b>779</b>	<b>809</b>	<b>30</b>
<b>Sales Expense</b>			
Demonstrating and Selling Expenses	-	-	-
Miscellaneous Sales Expenses	458	394	(64)
Sales Expense and Supervision	79	83	4
<b>Total Sales Expense</b>	<b>537</b>	<b>477</b>	<b>(60)</b>

<sup>(1)</sup> 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**  
**2018 THROUGH 2019**

WATER DIVISION

PAGE 18b

DESCRIPTION	THOUSANDS OF DOLLARS		
	2018 BUDGET	2019 BUDGET	DIFFERENCE
<b><u>OPERATING EXPENSE (Continued)</u></b>			
<b>Administrative &amp; General Expense</b>			
Administrative and General Salaries	3,771	4,149	378
Administration Expenses Transferred to Capital	(894)	(1,751)	(857)
Pension Expense	3,776	3,670	(106)
Other Active & Retiree Benefits	10,128	9,770	(358)
Other Post Employment Benefits	2,646	408	(2,238)
Injuries and Damages	2,114	1,603	(511)
Miscellaneous General Expenses <sup>(2)</sup>	3,294	3,122	(172)
Office Supplies and Expenses	931	1,611	680
Outside Services Employed	4,400	5,885	1,485
Property Insurance	296	310	14
Rents-Miscellaneous	5,233	5,520	287
<b>Total Administrative &amp; General Expense</b>	<b>35,695</b>	<b>34,297</b>	<b>(1,398)</b>
<b>OPERATING EXPENSE</b>	<b>74,949</b>	<b>68,191</b>	<b>(6,758)</b>
<b><u>MAINTENANCE EXPENSE</u></b>			
<b>Production Expense</b>			
Maintenance of Pumping Equipment	2,157	2,516	359
Maintenance of Water Treatment Equipment	428	291	(137)
Maintenance of Wells	891	568	(323)
Maintenance Supervision and Engineering	86	137	51
<b>Total Production Expense</b>	<b>3,562</b>	<b>3,512</b>	<b>(50)</b>
<b>Distribution Expense</b>			
Maintenance of Hydrants	471	189	(282)
Maintenance of Meters	4,609	4,165	(444)
Maintenance of Miscellaneous Distribution Plant	8	32	24
Maintenance of Services	1,209	420	(789)
Maintenance of Transmission and Distribution Mains	4,289	4,952	663
<b>Total Distribution Expense</b>	<b>10,586</b>	<b>9,758</b>	<b>(828)</b>
<b>Administrative &amp; General Expense</b>			
Maintenance of General Plant	1,374	832	(542)
Facilities Maintenance Expense	-	1,792	1,792
<b>Total Administrative &amp; General Expense</b>	<b>1,374</b>	<b>2,624</b>	<b>1,250</b>
<b>MAINTENANCE EXPENSE</b>	<b>15,522</b>	<b>15,894</b>	<b>372</b>
<b><u>OTHER OPERATING EXPENSE</u></b>			
Depreciation Expense	11,450	11,253	(197)
Payment in Lieu of Taxes	4,400	4,400	-
F.I.C.A. Taxes	437	489	52
Amortization of SCBPU Acquisition Adjustments	(915)	(482)	433
Amortization of Legacy Meters	248	459	211
<b>OTHER OPERATING EXPENSE</b>	<b>15,620</b>	<b>16,119</b>	<b>499</b>
<b>TOTAL OPERATING EXPENSE</b>	<b>106,091</b>	<b>100,204</b>	<b>(5,887)</b>

<sup>(2)</sup> 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  
2018 THROUGH 2019**

WATER DIVISION

PAGE 18c

DESCRIPTION	THOUSANDS OF DOLLARS		
	2018 BUDGET	2019 BUDGET	DIFFERENCE
<b>INCOME</b>			
<b>Operating Income</b>	(6,365)	1,462	7,827
<b>Other Income</b>			
Revenues from Sinking & Other Funds-Interest Income	120	300	180
Allowance for Funds Used During Construction	37	-	(37)
Medicare Part D Refund	119	100	(19)
Miscellaneous Non-Operating Income	395	500	105
<b>Total Other Income</b>	<b>671</b>	<b>900</b>	<b>229</b>
Reduction of Plant Cost Recovered through CIAC	(3,390)	(4,005)	(615)
<b>NET INCOME BEFORE DEBT EXPENSE</b>	<b>(9,084)</b>	<b>(1,643)</b>	<b>7,441</b>
<b>DEBT EXPENSE</b>			
<b>Interest Expense - Long-Term Debt</b>			
Interest on Ltd - Series 2014	480	467	(13)
Interest on Ltd - Series 2016	888	864	(24)
Interest on Ltd - Series 2017	927	910	(17)
Interest on Ltd - Series 2018	500	-	(500)
Interest on Ltd - Series 2019	-	350	350
<b>Total Interest Expense - Long-Term Debt</b>	<b>2,795</b>	<b>2,591</b>	<b>(204)</b>
<b>Amortization of Debt Discount &amp; Expense</b>			
Amortization of Debt Disc & Exp - Series 2014	(54)	(52)	2
Amortization of Debt Disc & Exp - Series 2016	(182)	(177)	5
<b>Total Amortization of Debt Discount &amp; Expense</b>	<b>(236)</b>	<b>(229)</b>	<b>7</b>
<b>TOTAL DEBT EXPENSE</b>	<b>2,559</b>	<b>2,362</b>	<b>(197)</b>
<b>NET INCOME AFTER DEBT EXPENSE</b>	<b>(11,643)</b>	<b>(4,005)</b>	<b>7,638</b>
Contributions in Aid of Construction	3,390	4,005	615
<b>CHANGE IN NET POSITION</b>	<b>(8,253)</b>	<b>-</b>	<b>8,253</b>



MEMPHIS LIGHT, GAS AND WATER DIVISION  
SOURCE AND APPLICATION OF FUNDS  
2019 BUDGET  
(THOUSANDS OF DOLLARS)

WATER DIVISION

PAGE 19

		REF. NO.
<b><u>SOURCE OF FUNDS:</u></b>		
<b>FROM OPERATIONS:</b>		
Change in Net Position	-	19-1
<b>Non-Cash Charges to Income:</b>		
Depreciation Charged to Operating Income	11,253	19-2
Depreciation Charged to Other Accounts	304	19-3
Amortization of SCBPU Acquisitions Adjustments	(482)	19-4
Amortization of Legacy Meters	459	19-5
<b>TOTAL FUNDS FROM OPERATIONS</b>	<b>11,534</b>	
Salvage	112	19-6
Financing: Debt Issuance	10,000	19-7
<b>TOTAL FUNDS AVAILABLE</b>	<b>21,646</b>	
<b><u>APPLICATION OF FUNDS:</u></b>		
Capital Expenditures	15,000	19-8
Costs of Removal and Other Charges to the Reserve for Depreciation	331	19-9
Retirement of Long-Term Debt	4,980	19-10
<b>TOTAL APPLICATION OF FUNDS</b>	<b>20,311</b>	
<b>INCREASE (DECREASE) IN WORKING CAPITAL</b>	<b>1,335</b>	

MEMPHIS LIGHT, GAS AND WATER DIVISION  
CAPITAL EXPENDITURES COMPARISON  
FOR CALENDAR YEAR OF 2019

WATER DIVISION

PAGE 20

DESCRIPTION	THOUSANDS OF DOLLARS			REF. NO.
	2017 ACTUAL	2018 BUDGET	2019 BUDGET	
<b>PRODUCTION SYSTEM</b>				
WATER - PUMPING STATIONS	10,398	8,035	2,500	20-1
WATER - OVERHEAD STORAGE TANKS	-	1,700	-	20-2
WATER - UNDERGROUND STORAGE RESERVOIRS	-	815	-	20-3
WATER - PRODUCTION WELLS	3,276	7,867	1,800	20-4
WATER - LAND PURCHASE	114	95	-	20-5
Contingency Fund - Production System	-	50	-	20-6
<b>SUBTOTAL - PRODUCTION SYSTEM</b>	<b>13,788</b>	<b>18,562</b>	<b>4,300</b>	
WATER - BUILDINGS & STRUCTURES	1,268	3,348	949	20-7
<b>TOTAL PROD. SYSTEM - BLDGS. &amp; STRUCT.</b>	<b>15,056</b>	<b>21,909</b>	<b>5,249</b>	
<b>DISTRIBUTION SYSTEM</b>				
WATER - RESIDENTIAL SERVICE IN S/D	117	78	122	20-8
WATER - RESIDENTIAL SERVICE NOT IN S/D	220	168	276	20-9
WATER - RESIDENTIAL S/D	187	215	66	20-10
WATER - APARTMENTS	1	-	-	20-11
WATER - GENERAL POWER SERVICE	2,615	2,675	2,900	20-12
WATER - RELOCATE AT CUSTOMER REQUEST	44	13	75	20-13
WATER - STREET IMPROVEMENTS	809	2,350	1,000	20-14
WATER - NEW WATER MAIN	3,627	8,889	1,500	20-15
WATER - OPERATIONS MAINTENANCE	258	-	-	20-16
WATER - PURCHASE OF METERS	22,107	16,067	5,291	20-17
WATER - PLANNED MAINTENANCE	1,748	-	2,500	20-18
WATER- BOOSTER STATIONS	2	-	-	20-19
WATER - EMERGENCY MAINTENANCE	2,576	3,131	3,100	20-20
CONTRIBUTIONS IN AID OF CONSTRUCTION (CIAC)	(3,438)	(3,390)	(4,005)	
<b>TOTAL - DISTRIBUTION SYSTEM</b>	<b>30,873</b>	<b>30,197</b>	<b>12,825</b>	
<b>GENERAL PLANT</b>				
WATER - BUILDINGS & STRUCTURES	201	26	-	20-21
WATER - SECURITY AUTOMATION	79	1,054	466	20-22
WATER - FLEET CAPITAL POWER OPERATED EQUIP	301	120	35	20-23
WATER - FLEET CAPITAL WATER TRANSPORTATION EQUIP	1,008	1,446	112	20-24
WATER TOOLS & EQUIPMENT	74	42	-	20-25
WATER - LAB EQUIPMENT	-	130	-	20-26
WATER - CONTINGENCY FUND	-	200	-	20-27
<b>TOTAL - GENERAL PLANT</b>	<b>1,663</b>	<b>3,017</b>	<b>613</b>	
<b>TOTAL - WATER DIVISION</b>	<b>47,592</b>	<b>55,123</b>	<b>18,687</b>	
Delayed Cost Allocations	(2,570)	(1,508)	(3,687)	20-28
<b>TOTAL - WATER DIVISION</b>	<b>45,022</b>	<b>53,615</b>	<b>15,000</b>	

MEMPHIS LIGHT, GAS AND WATER DIVISION  
CAPITAL EXPENDITURES BUDGET  
FOR CALENDAR YEAR OF 2019

WATER DIVISION

PAGE 21

DESCRIPTION	ESTIMATED COST SCHEDULE				REF. NO.
	TOTAL COST ESTIMATE	PRIOR TO BUDGET YEAR	IN BUDGET YEAR	AFTER BUDGET YEAR	
<b>PRODUCTION SYSTEM</b>					
<b>PUMPING STATIONS</b>					
Allen Pumping Station					
Engineer Distributed Process Control System Replacement	230,000	190,000	8,716	31,284	21-1
Install Distributed Process Control System Replacement	1,140,000	930,000	34,862	175,138	21-2
Total Allen Pumping Station	1,370,000	1,120,000	43,578	206,422	
Davis Pumping Station					
Engineer Distributed Process Control System Replacement (CO)	1,650,000	-	31,274	1,618,726	21-3
Install Distributed Process Control System Replacement (CO)	620,617	340,000	16,717	263,901	21-4
Total Davis Pumping Station	2,270,617	340,000	47,991	1,882,627	
Mallory Pumping Station					
Engineer Distributed Process Control System Replacement (CO)	1,650,000	-	39,622	1,610,378	21-5
Station Rehabilitation (CO)	4,500,000	-	613,050	3,886,950	21-6
Total Mallory Pumping Station	6,150,000	-	652,672	5,497,328	
McCord Pumping Station					
Filter Media Replacement (CO)	290,000	-	60,806	229,194	21-7
Total McCord Pumping Station	290,000	-	60,806	229,194	
Shaw Pumping Station					
Generator #1 Protective System Upgrade (CO)	300,000	30,000	110,774	159,226	21-8
Total Shaw Pumping Station	300,000	30,000	110,774	159,226	
Sheahan Pumping Station					
Engineer Distributed Process Control System Replacement (CO)	230,000	190,000	21,840	18,160	21-9
Install Distributed Process Control System Replacement	1,451,512	840,000	262,901	348,611	21-10
Station Rehabilitation (CO)	3,000,000	-	616,949	2,383,051	21-11
Total Sheahan Pumping Station	4,681,512	1,030,000	901,690	2,749,822	
Miscellaneous Pumping Facilities					
Engineering Services Contract (CO)	2,900,000	400,000	136,498	2,363,502	21-12
Water Operations Capital Items (CO)	5,800,000	800,000	545,991	4,454,009	21-13
Total Miscellaneous Pumping Facilities	8,700,000	1,200,000	682,489	6,817,511	
<b>TOTAL PUMPING STATIONS</b>	<b>23,762,129</b>	<b>3,720,000</b>	<b>2,500,000</b>	<b>17,542,129</b>	
<b>PRODUCTION WELLS</b>					
Davis Pumping Station - Construc/Replace Well	5,650,268	1,690,268	873,671	3,086,329	21-14
Lichterman Pumping Station - Construct/Replace Well	7,926,500	6,500	779,341	7,140,659	21-15
Mallory Pumping Station - Construct/Replace Well	3,966,500	6,500	41,243	3,918,757	21-16
McCord Pumping Station - Construct/Replace Well	3,960,000	-	105,746	3,854,254	21-17
<b>TOTAL PRODUCTION WELLS</b>	<b>21,503,268</b>	<b>1,703,268</b>	<b>1,800,000</b>	<b>18,000,000</b>	

MEMPHIS LIGHT, GAS AND WATER DIVISION  
CAPITAL EXPENDITURES BUDGET  
FOR CALENDAR YEAR OF 2019

WATER DIVISION

PAGE 22

DESCRIPTION	ESTIMATED COST SCHEDULE				REF. NO.
	TOTAL COST ESTIMATE	PRIOR TO BUDGET YEAR	IN BUDGET YEAR	AFTER BUDGET YEAR	
<b><u>BUILDINGS &amp; STRUCTURES</u></b>					
<b><u>WATER LABORATORY</u></b>					
Water Lab Upgrade	3,645,660	2,696,227	949,433	-	22-1
<b>SUBTOTAL BUILDINGS &amp; STRUCTURES - PRODUCTION</b>	<b>3,645,660</b>	<b>2,696,227</b>	<b>949,433</b>	<b>-</b>	
<b>CONTINGENCY FUND - PRODUCTION SYSTEM</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>22-2</b>
<b>TOTAL PRODUCTION SYSTEM</b>	<b>48,911,057</b>	<b>8,119,495</b>	<b>5,249,433</b>	<b>35,542,129</b>	
<b><u>DISTRIBUTION SYSTEM - MAJOR PROJECTS</u></b>					
<b><u>NEW WATER MAIN</u></b>					
Collecting Main Installation	6,230,000	1,230,000	500,000	4,500,000	22-3
Lead Main/Service Replacements	30,350,000	5,350,000	1,000,000	24,000,000	22-4
<b>TOTAL NEW WATER MAIN</b>	<b>36,580,000</b>	<b>6,580,000</b>	<b>1,500,000</b>	<b>28,500,000</b>	
<b><u>STREET IMPROVEMENTS</u></b>					
City of Arlington Projects	200,000	-	150,000	50,000	22-5
City of Bartlett Projects	450,000	-	335,000	115,000	22-6
City of Memphis Projects	1,555,000	75,000	365,000	1,115,000	22-7
Shelby County Projects	495,000	295,000	150,000	50,000	22-8
<b>TOTAL STREET IMPROVEMENTS</b>	<b>2,700,000</b>	<b>370,000</b>	<b>1,000,000</b>	<b>1,330,000</b>	
<b>TOTAL DISTRIBUTION SYSTEM - MAJOR PROJECTS</b>	<b>39,280,000</b>	<b>6,950,000</b>	<b>2,500,000</b>	<b>29,830,000</b>	
<b><u>GENERAL PLANT</u></b>					
<b><u>SECURITY AUTOMATION</u></b>					
Davis Pumping Sta. Camera Infrastructure (CO)	21,600	-	21,600	-	22-9
Mallory Pumping Sta. Camera Infrastructure (CO)	34,560	-	34,560	-	22-10
Video & Alarm System Head End Equipment and Software	409,871	-	409,871	-	22-11
<b>TOTAL SECURITY AUTOMATION</b>	<b>466,031</b>	<b>-</b>	<b>466,031</b>	<b>-</b>	
<b>WATER - FLEET CAPITAL POWER OPERATED EQUIP</b>	<b>35,000</b>	<b>-</b>	<b>35,000</b>	<b>-</b>	<b>22-12</b>
<b>WATER - FLEET CAPITAL WATER TRANSPORTATION EQUIP</b>	<b>112,000</b>	<b>-</b>	<b>112,000</b>	<b>-</b>	<b>22-13</b>
<b>TOTAL GENERAL PLANT</b>	<b>613,031</b>	<b>-</b>	<b>613,031</b>	<b>-</b>	

MEMPHIS LIGHT, GAS AND WATER DIVISION  
CAPITAL CARRYOVER SUMMARY\*  
FOR CALENDAR YEAR OF 2019

WATER DIVISION

PAGE 23

<u>CAPITAL CARRYOVER CATEGORY</u>	<u>CARRYOVER AMOUNT</u>
Production	2,193,521
Distribution	1,050,000
Buildings - Production & Distribution	115,600
Purchase of Transportation	147,000
Security Automation	466,000
<b>TOTAL CAPITAL CARRYOVER SUMMARY</b>	<b><u>3,972,121</u></b>

\*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 2019 Budget.

**NOTES FOR PAGE 3-CAPITAL EXPENDITURES BUDGET**

**Total Capital Expenditures**

3-1	Total Capital Expenditures	Expected capital spend in 2019
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## NOTES FOR PAGE 4—INCOME &amp; EXPENSE COMPARISON

**Operating Revenue**

4-1	<b>Sales Revenue</b>	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	<b>Revenue Adjustment for Uncollectibles</b>	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	<b>Non-Sales Revenue</b>	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	<b>Purchased Power</b>	This account includes the cost of electricity purchased from TVA for resale to customers.
4-5	<b>Transmission Expense</b>	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	<b>Distribution Expense</b>	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	<b>Customer Accounts Expense</b>	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	<b>Customer Service and Information Expense</b>	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	<b>Sales Expense</b>	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	<b>Administrative and General Expense</b>	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 &amp; EXPENSE COMPARISON (Continued)

**Maintenance Expense**

4-11	<b>Transmission Expense</b>	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	<b>Distribution Expense</b>	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	<b>Administrative and General Expense</b>	Please see Appendix 4-10.

**Other Operating Expense**

4-14	<b>Depreciation Expense</b>	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	<b>Payment in Lieu of Taxes</b>	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	<b>F.I.C.A. Taxes</b>	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	<b>Amortization of Legacy Meters</b>	This account includes amortization charges related to expenditures on meters.
4-18	<b>Amortization of Software</b>	This account includes amortization charges related to expenditures on software.

**Income**

4-19	<b>Operating Income</b>	Operating income is equal to operating revenue less total operating expense.
4-20	<b>Other Income</b>	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	<b>Reduction of Plant Recovered through CIAC</b>	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	<b>Interest Expense - Existing Long-Term Debt</b>	Bond interest payments due 06-01-2019 and 12-01-2019 per the bond debt schedules are funded in equal monthly installments in 2019.
4-23	<b>Amortization of Debt Discount and Expense</b>	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	<b>Contributions in Aid of Construction</b>	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	<b>Change in Net Position</b>	Please see Budget page 4.
5-2	<b>Depreciation Charged to Operating Income</b>	Please see Appendix 4-14.
5-3	<b>Depreciation Charged to Other Accounts</b>	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.
5-4	<b>Amortization of Legacy Meters</b>	Non-cash expense related to amortization charges related to meter expenditures.
5-5	<b>Amortization of Software</b>	Non-cash expense related to amortization charges related to software expenditures.
5-6	<b>Salvage</b>	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**

5-7	<b>Capital Expenditures</b>	Please see Budget page 6.
5-8	<b>Costs of Removal and Other Charges to the Reserve for Depreciation</b>	Cost of removal is the cost associated with demolishing, dismantling, tearing down or otherwise removing utility plant, including the cost of transportation and labor.
5-9	<b>Retirement of Long-Term Debt</b>	Bond principal amounts due 12-01-2019 per the bond debt schedules are funded in equal monthly installments during 2019.

## NOTES FOR PAGE 6-CAPITAL EXPENDITURES

**Substation and Transmission**

6-1	<b>Substation</b>	Please see Appendix 7-1 through 7-11.
6-2	<b>Substation Transformers</b>	Please see Appendix 7-12 through 7-15.
6-3	<b>Substation Circuit Breakers</b>	Please see Appendix 7-16.
6-4	<b>Transmission Lines</b>	Please see Appendix 7-17 through 7-19 .
6-5	<b>Contribution in Aid of Construction</b>	Contribution 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.

**Distribution System****Major Projects**

6-6	<b>Residential Service in S/D</b>	All subdivisions that are fed internally by overhead electric primary lines.
6-7	<b>Residential Service Not in S/D</b>	Property not in subdivisions fed internally by overhead electric primary lines.
6-8	<b>Residential S/D</b>	Other property not in subdivisions fed internally by overhead electric primary lines.
6-9	<b>Apartments</b>	All apartments and mobile home communities that are fed internally by overhead electric primary lines.
6-10	<b>General Power Service</b>	Commercial properties that are fed internally by overhead or underground electric primary lines
6-11	<b>General Power S/D</b>	Commercial properties in subdivisions that are fed internally by overhead or underground electric primary lines
6-12	<b>Mobile Home Park</b>	All apartments and mobile home communities that are fed internally by overhead electric primary lines.
6-13	<b>Ranchette</b>	All Ranchette style homes that are fed internally by electric primary lines.
6-14	<b>Temporary Service</b>	Services used for temporary construction
6-15	<b>Res Svc In Apt/Mobile Home Comm</b>	All apartments and mobile home communities that are fed internally by underground electric primary lines.
6-16	<b>Mobile Home Not In Park</b>	This budget category provides for the expenses incurred by the Electric Division for developer requests for electric facilities not located in a mobile home development.
6-17	<b>Multiple Unit General Power</b>	Commercial properties and apartments that are fed internally by overhead or underground electric primary lines
6-18	<b>Relocate At Customer Request</b>	This budget category provides for the expenses incurred at customers request for facilities to be relocated.
6-19	<b>Street Improvements</b>	This budget category provides for the expenses incurred when City, State and Federal Street Improvements dictate that facilities must be relocated. Please see Appendix 8-23 through 8-25.
6-20	<b>New Circuits</b>	Please see Appendix 8-1 through 8-8 .
6-21	<b>Voltage Conversion</b>	No expenditures planned for the 2019 budget year.
6-22	<b>Reconstruct To Multi Phase</b>	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.
6-23	<b>Line Reconstruction/Remove Idle Facilities</b>	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.
6-24	<b>Defect Cable/Feeder Cable Replacement</b>	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.
6-25	<b>Underground Cable Replacement</b>	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.
6-26	<b>Distribution Poles</b>	The budget includes utility poles used to support overhead power lines and various other public utilities, such as electrical cable, fiber optic cable, and related equipment such as transformers and street lights.
6-27	<b>Distribution Automation</b>	To install communications and hardware to allow for remote/automated operation to provide for more advanced restoration capabilities.

## NOTES FOR PAGE 6--CAPITAL EXPENDITURES (Continued)

## Major Projects (Continued)

6-28	Street Lights Install	The 2019 budget includes work necessary to provide street light maintenance in existing subdivisions, along roadways, Memphis city annexations, and adjustments to lights in existing developments requested by the cities throughout the year.
6-29	Demolition	No expenditures planned for the 2019 budget year.
6-30	Street Light Maintenance	The 2019 budget includes work necessary to provide street light maintenance in existing subdivisions, along roadways, Memphis city annexations, and adjustments to lights in existing developments requested by the cities throughout the year.
6-31	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.
6-32	Tree Trimming	Trim or remove trees interfering with overhead lines.
6-33	Operations Maintenance	
6-34	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.
6-35	Shared Use Contract	To account for small cell pole attachments.
6-36	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.
6-37	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.
6-38	Communication Towers	This category is for installation of the telecommunication system infrastructure required to support smart meters.
6-39	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).
6-40	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).
6-41	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).
6-42	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).
6-43	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).
6-44	PCI-Capacitor Banks	To change out PCB contaminated capacitor banks
6-45	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.
6-46	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.

## NOTES FOR PAGE 6-CAPITAL EXPENDITURES (Continued)

## General Plant

6-47	<b>Buildings and Structures</b>	Please see Appendix 8-15 through 8-16.
6-48	<b>Security Automation</b>	Please see Appendix 8-17.
6-49	<b>Land Purchase</b>	N/A
6-50	<b>Fleet Capital Power Operated Equipment</b>	Please see Appendix 8-18.
6-51	<b>Transportation Equipment</b>	Please see Appendix 8-19.
6-52	<b>Tools &amp; Equipment</b>	No expenditures planned for the 2019 budget year.
6-53	<b>Lab &amp; Test</b>	No expenditures planned for the 2019 budget year.
6-54	<b>Communication Equipment</b>	Please see Appendix 8-20.
6-55	<b>Communication Towers</b>	No expenditures planned for the 2019 budget year.
6-56	<b>Telecommunication Network</b>	No expenditures planned for the 2019 budget year.
6-57	<b>Utility Monitoring</b>	Please see Appendix 9-1.
6-58	<b>Customer Information System Development</b>	Please see Appendix 9-2 through 9-5.
6-59	<b>Business Continuity</b>	Please see Appendix 9-6 through 9-11.
6-60	<b>Purchase of Data Processing Equipment</b>	Please see Appendix 9-12 through 9-16.
6-61	<b>IS/IT Projects</b>	No expenditures planned for the 2019 budget year.
6-62	<b>Contingency Fund</b>	No expenditures planned for the 2019 budget year.
6-63	<b>Delayed Cost Allocations</b>	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	TVA Combined Cycle Plant Substation Improvements	Description/Location	Upgrade/update of existing infrastructure with insufficient fault current capability.
		Purpose/Necessity	Install transformer
7-2	Install Substation 89 161/23kV Facilities	Description/Location	
		Purpose/Necessity	Substation 89
7-3	Install Substation 84 third 161/23kV transformer	Description/Location	Install transformer
		Purpose/Necessity	Substation 84
7-4	Replace RTU's (Various Locations)	Description/Location	Various locations
		Purpose/Necessity	To change out aging infrastructure
7-5	Project Atlantis Substation Improvements	Description/Location	Nouritech
		Purpose/Necessity	Upgrade/update of existing infrastructure with insufficient fault current capability.
7-6	Replace Relays (Various Locations)	Description/Location	Various locations
		Purpose/Necessity	To change out aging infrastructure
7-7	Replace Switches (Various Locations)	Description/Location	Various locations
		Purpose/Necessity	To change out switches

**Substation/Transmission Projects****Transmission - NERC Compliance**

7-8	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.
7-9	Transmission Circuit Breaker Replacements	Description/Location	Transmission Circuit Breaker Replacements
		Purpose/Necessity	Replace overstressed circuit breakers, required due to NERC standard TPL-001.
7-10	Install/Upgrade Digital Fault Recorders	Description/Location	Install/Upgrade Digital Fault Recorders
		Purpose/Necessity	Needed for disturbance recording due to NERC standard PRC-002.
7-11	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.
7-12	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.

**Substation Transformers**

7-12	Replace 23/12kV transformer banks 1835 & 1837 @ Substation 11	Description/Location	Substation #11, 290 E. Mallory
		Purpose/Necessity	Upgrade / update of existing aging infrastructure that is no longer adequate
7-13	Replace 115/12kV transformer banks 4557 & 4559 @ Substation 4	Description/Location	Substation # 4 67 Jackson
		Purpose/Necessity	Upgrade / update of existing aging infrastructure that is no longer adequate
7-14	Replace 23/12kV transformer banks @ Substation 7	Description/Location	Substation 7
		Purpose/Necessity	Upgrade / update of existing aging infrastructure that is no longer adequate
7-15	Replace Potential Transformer #62 @ Substation 34	Description/Location	Substation 34
		Purpose/Necessity	Upgrade / update of existing aging infrastructure that is no longer adequate

**Substation Circuit Breakers**

7-16	Contingency Replace Breakers	Description/Location	Various substations
		Purpose/Necessity	Replace failed breakers

**NOTES FOR PAGE 7-CAPITAL EXPENDITURES BUDGET (Continued)****Substation/Transmission Projects**

7-17	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.
7-18	Sub 26 Structure Modifications	Description/Location	Substation #26 5107 Macon
		Purpose/Necessity	Upgrade/update structure

**Transmission Reimbursable Projects**

7-19	TVA Combined Cycle Plant Substation Improvements	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.

## NOTES FOR PAGE 8—CAPITAL EXPENDITURES BUDGET

**Distribution System - Major Projects****New Circuits Out of Substations**

8-1	Sub 89 Cabling	Description/Location	Substation 89 site
		Purpose/Necessity	To install getaway cables from Substation 89.
8-2	5485 Shelby Drive-Mendenhall to Tuggle (Sub 89 Ckt Ties)	Description/Location	5485 Shelby Drive-Mendenhall to Tuggle (Sub 89 Ckt Ties)
		Purpose/Necessity	Reliability and switching flexibility
8-3	4650 Hickory Hill to Crumpler (Sub 89 Ckt Ties)	Description/Location	4650 Hickory Hill to Crumpler (Sub 89 Ckt Ties)
		Purpose/Necessity	Reliability and switching flexibility
8-4	Shelby Drive - Mendenhall to Hickory Hill (Sub 89 Ckt Ties)	Description/Location	Shelby Drive - Mendenhall to Hickory Hill (Sub 89 Ckt Ties)
		Purpose/Necessity	Reliability and switching flexibility
8-5	Shelby Drive - Mendenhall to Hickory Hill & Holmes (Sub 89 Ckt Ties)	Description/Location	Shelby Drive - Mendenhall to Hickory Hill & Holmes (Sub 89 Ckt Ties)
		Purpose/Necessity	Reliability and switching flexibility
8-6	Shelby Drive Underbuild - Germantown Rd to Hacks Cross (Sub 28 to Sub 9)	Description/Location	Shelby Drive Underbuild - Germantown Rd to Hacks Cross (Sub to
	Substation 46 Cabling	Purpose/Necessity	At existing Substation 46 site-- 4440 Millington Rd.
8-7		Description/Location	To repair collapsed duct line at Substation 46
	Reconfigure Circuit 15205	Purpose/Necessity	Near existing Substation 15 site-- 5127 Navy Road
8-8		Description/Location	To reconfigure circuit 15205 based on Navy Base solar array.

**Miscellaneous Reimbursable Projects**

8-9	Elvis Presley Blvd. Renovation	Description/Location	Elvis Presley Blvd. Renovation
		Purpose/Necessity	This project will relocate/improve electric facilities in conjunction with the proposed improvements to Elvis Presley Blvd. landmark area in Whitehaven.
8-10	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.
8-11	Other Relocate at Customer Request Projects	Description/Location	Downtown area
		Purpose/Necessity	Relocating/improving electric facilities in conjunction with the proposed improvements in various areas at customers' requests.

**Street Improvement Projects**

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
8-13	Center Street Redevelopment (CV 14/03)	Description/Location	Center Street
		Purpose/Necessity	Relocate utilities for proposed street improvement project by TDOT or municipalities
8-14	SR-14, From 385 to East of Kerrville-Rosemark	Description/Location	SR-14, From 385 to East of Kerrville-Rosemark
		Purpose/Necessity	Relocate utilities for proposed street improvement project by TDOT or municipalities

**General Plant****Buildings and Structures****Substations**

8-15	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.

**NOTES FOR PAGE 8—CAPITAL EXPENDITURES BUDGET (Continued)**
**General Plant Continued****Buildings and Structures (Continued)****Electrical & Systems Operations**

8-16	Radio Tower Bldg.: UPS & Generator	Description/Location	Electric & Systems Operations
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**Security Automation**

8-17	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.

**Fleet Capital Power Operated Equipment**

8-18	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**

8-19	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.

**Communication Equipment**

8-20	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

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

9-1	<b>System Backup Control &amp; Communication Plan (CO)</b>	<b>Description/Location</b>	SCADA and CARES Systems long-term development
		<b>Purpose/Necessity</b>	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**

9-2	<b>2018 CIS Upgrade Production HW &amp; SW</b>	<b>Description/Location</b>	2018 CIS Upgrade Production HW & SW
		<b>Purpose/Necessity</b>	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.
9-3	<b>Mobile Dispatching System Replacement (CO)</b>	<b>Description/Location</b>	Mobile Dispatching System Replacement & Expansion
		<b>Purpose/Necessity</b>	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.
9-4	<b>IVR Replacement (CO)</b>	<b>Description/Location</b>	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.
		<b>Purpose/Necessity</b>	To improve customer ease of use and experience.
9-5	<b>Annual Network Enhancements &amp; upgrades (CO)</b>	<b>Description/Location</b>	Annual Network Enhancements and upgrades (CO)
		<b>Purpose/Necessity</b>	To replace obsolete network devices that will not be covered by the manufacture or other vendors.

**Business Continuity**

9-6	<b>Annual Network Enhancements &amp; upgrades</b>	<b>Description/Location</b>	Annual Network Enhancements and upgrades
		<b>Purpose/Necessity</b>	To replace obsolete network devices that will not be covered by the manufacture or other vendors.
9-7	<b>Data Center Upgrade &amp; Enhancements (CO)</b>	<b>Description/Location</b>	Data Center Upgrade and Enhancements (CO)
		<b>Purpose/Necessity</b>	To increase reliability and redundancy/failover of user access, applications and Customer satisfaction by adding additional network switches in the System Operations Data Center.
9-8	<b>Data Center Upgrade &amp; Enhancements</b>	<b>Description/Location</b>	Data Center Upgrade and Enhancements
		<b>Purpose/Necessity</b>	To increase reliability and redundancy/failover of user access, applications and Customer satisfaction by adding additional network switches in the System Operations Data Center.
9-9	<b>Backup Expansion (CO)</b>	<b>Description/Location</b>	Backup Expansion (CO)
		<b>Purpose/Necessity</b>	Our current backup system will need to be expanded to store additional backup data from the increase in corporate servers.
9-10	<b>Network Security Enhancements</b>	<b>Description/Location</b>	Network Security Enhancements
		<b>Purpose/Necessity</b>	Replace network security systems which have reached end of life.
9-11	<b>Network DNS/DHCP Project</b>	<b>Description/Location</b>	Network DNS/DHCP Project
		<b>Purpose/Necessity</b>	DNS/DHCP services are a critical component of mg's network. some pieces of the current solution will no longer be supported by the manufacturer next year.

## NOTES FOR PAGE 9—CAPITAL EXPENDITURES BUDGET (Continued)

**General Plant (continued)****Purchase of Data Processing Equipment**

9-12	Annual New/Replacement Servers/Win OS Upgrades	Description/Location	Annual New/Replacement Servers/Win OS Upgrades
		Purpose/Necessity	Purchase or replace existing servers which have reached end-of-life and will no longer be supported by the manufacturer.
9-13	Annual New/Replacement Servers/Win OS Upgrades (CO)	Description/Location	Annual New/Replacement Servers/Win OS Upgrades (CO)
		Purpose/Necessity	Purchase or replace existing servers which have reached end-of-life and will no longer be supported by the manufacturer.
9-14	Corporate Wireless Upgrade & Enhancements	Description/Location	Corporate Wireless Upgrade & Enhancements
		Purpose/Necessity	Add and expand Wireless Network at multiple locations for business needs and access to the corporate network.
9-15	Corporate Wireless Upgrade & Enhancements (CO)	Description/Location	Corporate Wireless Upgrade & Enhancements (CO)
		Purpose/Necessity	Add and expand Wireless Network at multiple locations for business needs and access to the corporate network.
9-16	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.

**NOTES FOR PAGE 12–INCOME & EXPENSE COMPARISON**

**Operating Revenue**

<b>12-1</b>	<b>Sales Revenue</b>	This account includes projected revenue from the sale of natural gas to the residential, commercial, industrial, and interdepartmental customer classes.
<b>12-2</b>	<b>Revenue Adjustment for Uncollectibles</b>	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.
<b>12-3</b>	<b>Non-Sales Revenue</b>	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**

<b>12-4</b>	<b>Production – LNG Plant</b>	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.
<b>12-5</b>	<b>Purchased Gas</b>	This account includes the cost of natural gas and transportation of this gas to be used for injection into the system for resale.
<b>12-6</b>	<b>Compressed Natural Gas (CNG)</b>	This account includes the cost of compressed natural gas and transportation of this gas to be used for injection into the system for resale.
<b>12-7</b>	<b>Liquefied Natural Gas (LNG)</b>	This account includes the cost of liquefied natural gas and transportation of this gas to be used for injection into the system for resale.
<b>12-8</b>	<b>Distribution Expense</b>	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.
<b>12-9</b>	<b>Customer Accounts Expense</b>	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.
<b>12-10</b>	<b>Customer Service and Information Expense</b>	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.
<b>12-11</b>	<b>Sales Expense</b>	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.
<b>12-12</b>	<b>Administrative and General Expense</b>	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**

<b>12-13</b>	<b>Production Expense</b>	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.
<b>12-14</b>	<b>Distribution Expense</b>	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.
<b>12-15</b>	<b>Administrative and General Expense</b>	Please see Appendix 12-12.

**NOTES FOR PAGE 12—INCOME & EXPENSE COMPARISON (Continued)**

**Other Operating Expense**

12-16	<b>Depreciation Expense</b>	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.
12-17	<b>Payment in Lieu of Taxes</b>	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.
12-18	<b>F.I.C.A. Taxes</b>	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.
12-19	<b>Amortization of Leasehold Improvements</b>	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.
12-20	<b>Amortization of Legacy Meters</b>	This account includes amortization charges related to expenditures on meters.
12-21	<b>Amortization of Software</b>	This account includes amortization charges related to expenditures on software.

**Income**

12-22	<b>Operating Income</b>	Operating income is equal to operating revenue less total operating expense.
12-23	<b>Other Income</b>	This consists primarily of investment income and property rentals. It does not include any sales of electricity, gas or water.
12-24	<b>Reduction of Plant Recovered through CIAC</b>	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**

12-25	<b>Interest Expense -Long Term Debt</b>	Anticipated bond interest payments per the bond debt schedules.
12-26	<b>Amortization of Debt Discount &amp; Expense</b>	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.
12-27	<b>Contributions in Aid of Construction</b>	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 13—SOURCES AND APPLICATION OF FUNDS**

**Source of Funds**

<b>13-1</b>	<b>Change in Net Position</b>	Please see Budget page 12.
<b>13-2</b>	<b>Depreciation Charged to Operating Income</b>	Please see Appendix 12-16.
<b>13-3</b>	<b>Depreciation Charged to Other Accounts</b>	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.
<b>13-4</b>	<b>Amortization of Legacy Meters</b>	Non-cash expense related to amortization charges related to meter expenditures.
<b>13-5</b>	<b>Amortization of Software</b>	Non-cash expense related to amortization charges related to software expenditures.
<b>13-6</b>	<b>Salvage</b>	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**

<b>13-7</b>	<b>Capital Expenditures</b>	Please see Budget page 14.
<b>13-8</b>	<b>Costs of Removal and Other Charges to the Reserve for Depreciation</b>	Cost of removal is the cost associated with demolishing, dismantling, tearing down or otherwise removing utility plant, including the cost of transportation and labor.
<b>13-9</b>	<b>Retirement of Long-Term Debt</b>	Bond principal amounts due 01-01-2019 per the bond debt schedules are funded in equal monthly installments during 2019.

**GAS DIVISION**

**NOTES FOR PAGE 14-CAPITAL EXPENDITURES BUDGET**

**Production System**

<b>14-1</b>	<b>Production System</b>	LNG Processing Facilities- Purchase and installation of regeneration heating equipment, replacement of existing 20 year old equipment.
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**Distribution System**

<b>14-2</b>	<b>Residential Service in S/D</b>	This budget category provides for the expenses incurred by the Gas Division for customer requests for service located in a subdivision.
<b>14-3</b>	<b>Residential Service Not in S/D</b>	This budget category provides for the expenses incurred by the Gas Division for customer requests for service not located in a subdivision.
<b>14-4</b>	<b>Residential S/D</b>	This budget category provides for the expenses incurred by the Gas Division for developer requests for gas facilities located in a subdivision.
<b>14-5</b>	<b>Land Purchase</b>	This budget category provides for the purchase of land rights that will be needed for Capital Budget Projects.
<b>14-6</b>	<b>Apartments</b>	This budget category provides for the expenses incurred by the Gas Division for developer requests for gas facilities for new apartment developments.
<b>14-7</b>	<b>General Power Service</b>	This budget category provides for the expenses incurred by the Gas Division for customer requests for new General Power Service.
<b>14-8</b>	<b>General Power S/D</b>	This budget category provides for the expenses incurred by the Gas Division for customer requests for new General Power Service located in a subdivision.
<b>14-9</b>	<b>Mobile Home Park</b>	This budget category provides for the expenses incurred by the Gas Division for developer requests for gas facilities located in a mobile home development.
<b>14-10</b>	<b>Multiple-Unit General Power</b>	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.
<b>14-11</b>	<b>Relocate At Customer Request</b>	This budget category provides for the expenses incurred by the Gas Division for customer requests to relocate existing gas facilities.
<b>14-12</b>	<b>Purchase of Meters</b>	This budget category provides for the expenses incurred from buying new gas meters and reconditioning existing gas meters.
<b>14-13</b>	<b>Street Improvements</b>	This budget category provides for the expenses incurred when City, State and Federal Street Improvements dictate that facilities must be relocated. Please see Appendix 15-1 through 15-11.
<b>14-14</b>	<b>Demolition</b>	No expenditures planned for the 2019 budget year.
<b>14-15</b>	<b>New Gas Main</b>	This budget category provides for the expenses incurred for the installation of miscellaneous new gas mains and facilities.
<b>14-16</b>	<b>Gas Main/Service Repl (D.O.T.)</b>	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.
<b>14-17</b>	<b>Transmission Pipelines and Facilities</b>	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. Please see Appendix 15-12.
<b>14-18</b>	<b>Regulator Stations</b>	This budget line item provides for the expenses incurred from upgrading obsolete regulator station equipment. The DOT Code mandates that regulators must be maintained to operate within the design parameters of the gas distribution system.
<b>14-19</b>	<b>Gate Stations</b>	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.
<b>14-20</b>	<b>Planned Maintenance</b>	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.
<b>14-21</b>	<b>JT-Residential Service in S/D</b>	This budget category provides for the expenses incurred by the Gas Division for customer requests for service located in a joint trench subdivision.

**GAS DIVISION**

**NOTES FOR PAGE 14–CAPITAL EXPENDITURES BUDGET (Continued)**

**Distribution System (Continued)**

14-22	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.
14-23	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.
14-24	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.
14-25	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.
14-26	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.

**General Plant**

14-27	Buildings and Structures	Please see Appendix 15-13 through 15-15.
14-28	Security Automation	No expenditures planned for the 2019 budget year.
14-29	Purchase of Furniture & Fixtures	Please see Appendix 15-16.
14-30	Audiovisual	No capital expenditures planned for the 2019 budget year.
14-31	Data Processing	Please see Appendix 15-17 through 15-18.
14-32	IS/IT Projects	No expenditures planned for the 2019 budget year.
14-33	Fleet Capital Common Power Operated Equip	Please see Appendix 16-1.
14-34	Fleet Capital Common Transportation Equip	Please see Appendix 16-2.
14-35	Fleet Gas Power Operated Equipment	Please see Appendix 16-3.
14-36	Fleet Gas Transportation Equipment	Please see Appendix 16-4.
14-37	Automated Fueling System	No expenditures planned for the 2019 budget year.
14-38	Tools & Equipment	No expenditures planned for the 2019 budget year.
14-39	Common Tools & Equipment	No expenditures planned for the 2019 budget year.
14-40	Alternative Fueling Infrastructure	No expenditures planned for the 2019 budget year.
14-41	Contingency Fund - General Plant	No expenditures planned for the 2019 budget year.
14-42	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 15-CAPITAL EXPENDITURES BUDGET**

**Distribution System- Major Projects**

**Street Improvements**

15-1	CV 14-03, Center Street Development	Description/Location	Collierville- Center Street Redevelopment-Offset mains for drainage & grade changes.
		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.
15-2	BT 6-03, Old Brownsville Road, Austin Peay to Kirby Whitten	Description/Location	Bartlett- Old Brownsville, Austin Peay to Kirby Whitten PIN 010619 - 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.
15-3	SR-14, from SR-204/Singleton Pkwy to Old Covington Pike (Phase 1) TDOT	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.
15-4	CP 12/09, Elvis Presley Corridor - North Phase 1	Description/Location	Memphis- 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.
15-5	CP 17/02, Patterson St, Alumni Ave to Walker Ave	Description/Location	Memphis- Patterson St @ Walker Ave
		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.
15-6	CP 17/03, Walker Ave, W of Patterson	Description/Location	Memphis- Walker Avenue- Phase 2 PW-04103
		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.
15-7	GT 16/01, Germantown Rd @ Wolf River Blvd	Description/Location	Germantown- 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.
15-8	AP 16/01 Airline Rd, I-40 to Milton Wilson	Description/Location	Arlington- Airline Rd, from I-40 to south of Hayes Road
		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.
15-9	AP 16/02, SR-1/US-70 from SR-385 to Airline - Arlington	Description/Location	Arlington- 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.
15-10	SC 09/04, Macon Rd Bridge over Gray's Creek	Description/Location	Shelby County- Macon Road Bridge over Gray's Creek
		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.
15-11	Projections 2019-2022	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.



**GAS DIVISION**

**NOTES FOR PAGE 15-CAPITAL EXPENDITURES BUDGET (Continued)**

**Transmission Pipelines and Facilities**

15-12	<b>Casing Replacements</b>	<b>Description/Location</b>	Casing replacements- various locations
		<b>Purpose/Necessity</b>	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.

**General Plant**

**Buildings and Structures**

**South Service Center**

15-13	<b>Brooks Road Gate Station</b>	<b>Description/Location</b>	South Service Center
		<b>Purpose/Necessity</b>	Brooks Road Gate Station: (Replace 1,221 square foot roof)

**Administration Building**

15-14	<b>New Fire Pump</b>	<b>Description/Location</b>	Administration Building
		<b>Purpose/Necessity</b>	Replace old fire pump per code enforcement.

**New Buildings**

15-15	<b>New North Community Pay Office</b>	<b>Description/Location</b>	North Memphis Area
		<b>Purpose/Necessity</b>	This is a request from the Executive Staff and Customer Service management.

**Furniture & Fixtures**

15-16	<b>Furniture &amp; Fixtures</b>	<b>Description/Location</b>	Furniture & Fixtures Control Area for Entire Division
		<b>Purpose/Necessity</b>	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**

15-17	<b>Natural Gas Management System (CO)</b>	<b>Description/Location</b>	Replace the Allegro Gas Management system with a new system.
		<b>Purpose/Necessity</b>	This system is needed for accurate and timely information of natural gas and derivatives, supplier and pipeline invoice reconciliation.
15-18	<b>Budget System</b>	<b>Description/Location</b>	Replacing the Legacy Budget System
		<b>Purpose/Necessity</b>	This is needed to complete the design and implementation of the new budget system for the Division.

**NOTES FOR PAGE 16–CAPITAL EXPENDITURES BUDGET**

**Fleet Capital Common Power Operated Equipment**

<b>16-1</b>	<b>Fleet Capital Common Power Operated Equipment</b>	<b>Description/Location</b>	Division vehicles/equipment used for work in and around Shelby County.
		<b>Purpose/Necessity</b>	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.

**Fleet Capital Common Transportation Equipment**

<b>16-2</b>	<b>Fleet Capital Common Transportation Equipment</b>	<b>Description/Location</b>	Division vehicles/equipment used for work in and around Shelby County.
		<b>Purpose/Necessity</b>	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.

**Fleet Gas Power Operated Equipment**

<b>16-3</b>	<b>Fleet Gas Power Operated Equipment</b>	<b>Description/Location</b>	Division vehicles/equipment used for work in and around Shelby County.
		<b>Purpose/Necessity</b>	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.

**Fleet Gas Transportation Equipment**

<b>16-4</b>	<b>Fleet Gas Transportation Equipment</b>	<b>Description/Location</b>	Division vehicles/equipment used for work in and around Shelby County.
		<b>Purpose/Necessity</b>	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.

**NOTES FOR PAGE 18—INCOME & EXPENSE COMPARISON**

**Operating Revenue**

<b>18-1</b>	<b>Sales Revenue</b>	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.
<b>18-2</b>	<b>Revenue Adjustment for Uncollectibles</b>	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.
<b>18-3</b>	<b>Non-Sales Revenue</b>	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**

<b>18-4</b>	<b>Production Expense</b>	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.
<b>18-5</b>	<b>Distribution Expense</b>	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.
<b>18-6</b>	<b>Customer Accounts Expense</b>	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.
<b>18-7</b>	<b>Customer Service and Information Expense</b>	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.
<b>18-8</b>	<b>Sales Expense</b>	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.
<b>18-9</b>	<b>Administrative and General Expense</b>	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**

<b>18-10</b>	<b>Production Expense</b>	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.
<b>18-11</b>	<b>Distribution Expense</b>	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.
<b>18-12</b>	<b>Administrative &amp; General Expense</b>	Please see Appendix 18-9.

**NOTES FOR PAGE 18—INCOME & EXPENSE COMPARISON (Continued)**

**Other Operating Expense**

18-13	<b>Depreciation Expense</b>	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.
18-14	<b>Payment In Lieu of Taxes</b>	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.
18-15	<b>F.I.C.A. Taxes</b>	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.
18-16	<b>Amortization of SCBPU Acquisition Adjustments</b>	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.
18-17	<b>Amortization of Legacy Meters</b>	This account includes amortization charges related to expenditures on meters.

**Income**

18-18	<b>Operating Income</b>	Operating income is equal to operating revenue less total operating expense.
18-19	<b>Other Income</b>	This consists primarily of interest and investment income. It does not include any sales of electricity, Water or water.
18-20	<b>Other Income- Allowance for Funds Used During Construction</b>	Cost of both the debt and equity funds used to finance utility plant additions during the construction period for such additions, determined in accordance with GAAP.
18-21	<b>Reduction of Plant Recovered through CIAC</b>	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**

18-22	<b>Interest Expense – Existing Long-Term Debt</b>	Bond interest payments due 06-01-2019 and 12-01-2019 per the bond debt schedules are funded in equal monthly installments in 2019.
18-23	<b>Amortization of Debt Discount &amp; Expense</b>	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.
18-24	<b>Contributions in Aid of Construction</b>	Please see Appendix 18-21.

**NOTES FOR PAGE 19—INCOME & EXPENSE COMPARISON**

**Source of Funds**

19-1	<b>Change in Net Position</b>	Please see Budget page 18.
19-2	<b>Depreciation Charged to Operating Income</b>	Please see Appendix 18-13.
19-3	<b>Depreciation Charged to Other Accounts</b>	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.
19-4	<b>Amortization of SCBPU Acquisitions Adjustments</b>	Please see Appendix 18-16.
19-5	<b>Amortization of Legacy Meters</b>	Non-cash expense related to amortization charges related to meter expenditures. Please see Appendix 18-17.
19-6	<b>Salvage</b>	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.
19-7	<b>Debt Issuance</b>	Expected debt issuance in the Water Division for the 2019 budget year.

**Application of Funds**

19-8	<b>Capital Expenditures</b>	Please see Budget page 20.
19-9	<b>Costs of Removal and Other Charges to the Reserve for Depreciation</b>	Cost of removal is the cost associated with demolishing, dismantling, tearing down or otherwise removing utility plant, including the cost of transportation and labor.
19-10	<b>Retirement of Long-Term Debt</b>	Bond principal amounts due 01-01-2019 per the bond debt schedules are funded in equal monthly installments during 2019.

**NOTES FOR PAGE 20-CAPITAL EXPENDITURES BUDGET**

**Production System**

20-1	<b>Pumping Stations</b>	Please see Appendix 21-1 through 21-13.
20-2	<b>Overhead Storage Tanks</b>	No expenditures planned for the 2019 budget year.
20-3	<b>Underground Storage Reservoirs</b>	Please see Appendix 22-6 through 22-7.
20-4	<b>Production Wells</b>	Please see Appendix 21-14 through 21-17.
20-5	<b>Land Purchase</b>	No expenditures planned for the 2019 budget year.
20-6	<b>Contingency Fund - Production System</b>	Please see Appendix 22-2
20-7	<b>Buildings and Structures - Production System</b>	Please see Appendix 22-1.

**Distribution System**

20-8	<b>Residential Service in S/D</b>	This budget category provides for the expenses incurred by the Water Division for customer requests for service located in a subdivision.
20-9	<b>Residential Service not in S/D</b>	This budget category provides for the expenses incurred by the Water Division for customer requests for service not located in a subdivision.
20-10	<b>Residential S/D</b>	This budget category provides for the expenses incurred by the Water Division for developer requests for Water facilities located in a subdivision.
20-11	<b>Apartments</b>	This budget category provides for the expenses incurred by the Water Division for developer
20-12	<b>General Power Service</b>	This budget category provides for the expenses incurred by the Water Division for customer requests for new General Power Service.
20-13	<b>Relocate at Customer Request</b>	This budget category provides for the expenses incurred by the Water Division for customer requests to relocate existing Water facilities.
20-14	<b>Street Improvements</b>	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.
20-15	<b>New Water Main</b>	This budget category provides for the expenses incurred for the installation of miscellaneous new water mains and facilities.
20-16	<b>Operations Maintenance</b>	
20-17	<b>Purchase of Meters</b>	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.
20-18	<b>Planned Maintenance</b>	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.
20-19	<b>Booster Stations</b>	Designed to boost the pressure of water within a long pipeline.
20-20	<b>Miscellaneous Emergency Construction</b>	This budget line item provides for emergency repair work when leaks and cut facilities require immediate repair.
	<b>Contributions in Aid of Construction</b>	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**

20-21	<b>Buildings and Structures</b>	No expenditures planned for the 2019 budget year.
20-22	<b>Security Automation</b>	Please see Appendix 22-9 through 22-11.
20-23	<b>Fleet Capital Power Operated Equip</b>	Please see Appendix 22-12.
20-24	<b>Fleet Capital Water Transportation Equip</b>	Please see Appendix 22-13.
20-25	<b>Tools &amp; Equipment</b>	No expenditures planned for the 2019 budget year.
20-26	<b>Water Lab Equipment</b>	No expenditures planned for the 2019 budget year.
20-27	<b>Contingency Fund-General Plant</b>	No expenditures planned for the 2019 budget year.
20-28	<b>Delayed Cost Allocations</b>	These are funds budgeted in the current year for items that may arrive late from the previous year's budget.

**NOTES FOR PAGE 21–CAPITAL EXPENDITURES BUDGET**

**Production System**

**Pumping Stations**

**Allen Pumping Station**

21-1	Engineer Distributed Process Control System Replacement	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.
21-2	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.

**Davis Pumping Station**

21-3	Engineering Distriubted Process Control System Replacement (CO)	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.
21-4	Install Distriubted Process Control System Replacement (CO)	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.

**Mallory Pumping Station**

21-5	Engineering Distriubted Process Control System Replacement (CO)	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.
21-6	Station Rehabilitation (CO)	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.

**McCord Pumping Station**

21-7	Fileter Media Replacement (CO)	Description/Location	This project involves the replacemen of the filter media at the McCord Pumping Station
		Purpose/Necessity	Replace old media that has become less efficient in remmoving iron from the raw water in order to better maintain a consistent water quality.

**Shaw Pumping Station**

21-8	Generator #1 Protective System Upgrade (CO)	Description/Location	This project involves the replacement of relays and breakers in Generator #1's protective system. / Shaw Pumping Station
		Purpose/Necessity	The purpose of this project is to replace the protective system and restore generator #1 to working order. / The protective system is needed to protect the equipment electrically.

**NOTES FOR PAGE 22-CAPITAL EXPENDITURES BUDGET**

**Production System (Continued)**

**Pumping Stations (Continued)**

**Sheahan Pumping Station**

22-9	Engineer Distributed Process Control System Replacement (CO)	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.
22-10	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.
22-11	Station Rehabilitation (CO)	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.

**Miscellaneous Pumping Facilities**

22-12	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.
22-13	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.

**Davis Pumping Station**

21-14	Construct/Replace Well	Description/Location	Construction of a large water production well. Davis 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

**Lichterman Pumping Station**

21-15	Construct/Replace Well	Description/Location	Construction of a large water production well. Lichterman 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

**Mallory Pumping Station**

21-16	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**

21-17	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

**Building & Structures - Production**

**Water Lab**

22-1	Water Lab Upgrade (includes design costs/Construction & loadings)	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.

22-2	Contingency Fund - Production System	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 22-CAPITAL EXPENDITURES BUDGET (Continued)**

**Distribution System - Major Projects**

**New Water Main**

22-3	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.
22-4	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

**Street Improvements**

22-5	City of Arlington Projects	Description/Location	These are street improvement projects done by the City of Arlington 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.
22-6	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.
22-7	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.
22-8	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.

**General Plant**

**Security Automation**

22-9	Davis Pumping Station Camera Infrastructure (CO)	Description/Location	Davis Pumping Station
		Purpose/Necessity	Camera Infrastructure Installation
22-10	Mallory Pumping Station Camera Infrastructure (CO)	Description/Location	Mallory Pumping Station
		Purpose/Necessity	Camera Infrastructure Installation
22-11	Video & Alarm System Head End Equipment & Software	Description/Location	Various Water Locations to be determined by necessity
		Purpose/Necessity	Security Enhancement Infrastructure

**Purchase of Fleet Capital Power Operated Equipment**

22-12	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 Equipment**

22-13	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.

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## GLOSSARY

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**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

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**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 Principles. 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.

**JT:** Joint Trench.

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

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

**KW:** Kilowatt.

## GLOSSARY

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**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.

## GLOSSARY

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**PV:** Photo-Voltaic or solar cells.

**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.