

MEMPHIS LIGHT, GAS AND WATER DIVISION

2020 Budget

City Council Approved January 21, 2020

(All numbers exclude the effects of GASB 68 and 75.)

Compassionate Service • Safety • Integrity • Ownership • Inclusion

The MLGW Board of Commissioners & Advisory Board Members



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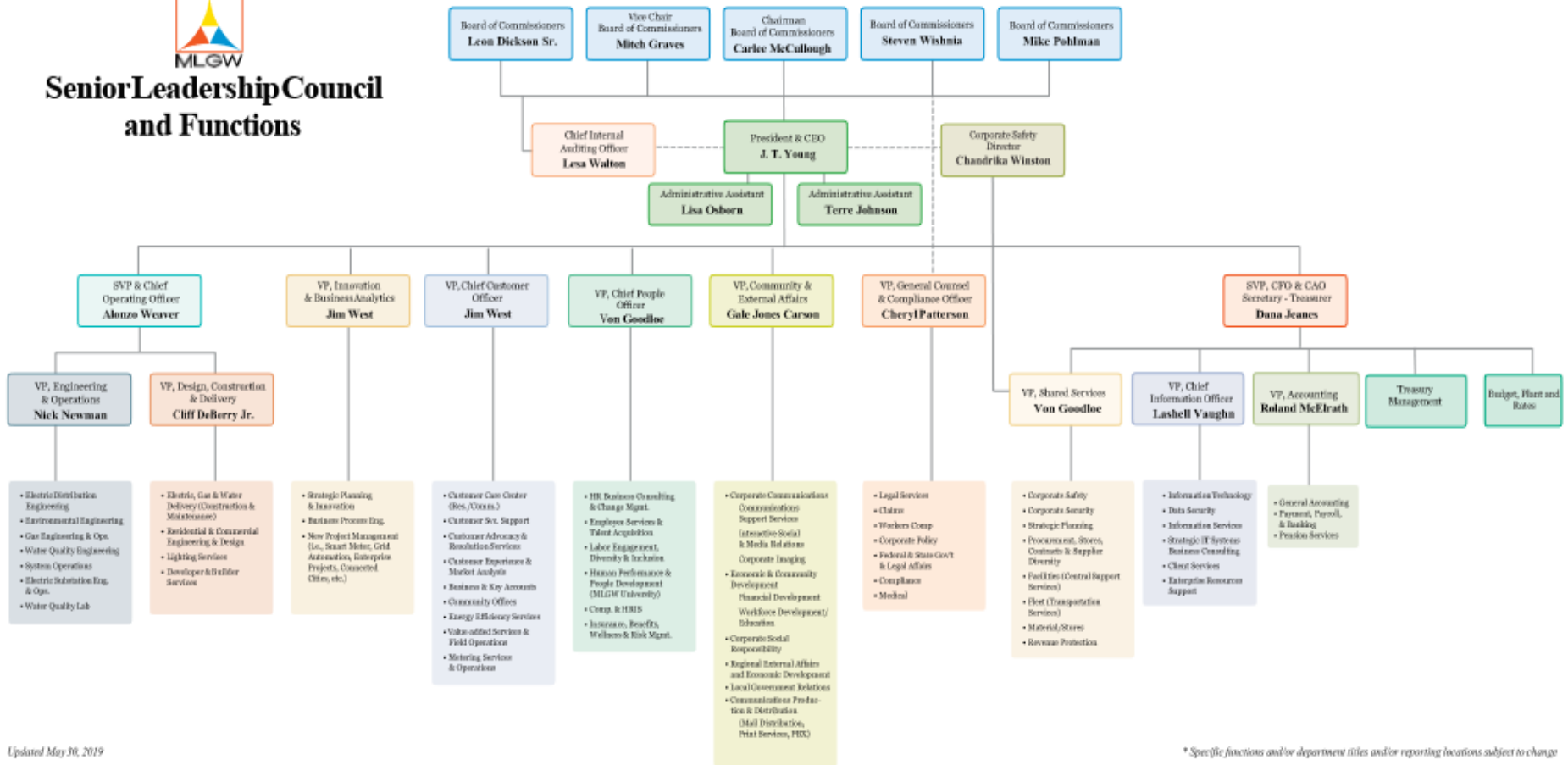
Advisory Board Member Kevin Young



Advisory Board Member Dwain Kicklighter



Senior Leadership Council and Functions



Updated May 30, 2019

* Specific functions and/or department titles and/or reporting locations subject to change

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How to Read the Budget

INTRODUCTION

We are pleased to submit the 2020 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 to 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 2020 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 organization 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 organization supervisors and 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

MLGW Board of Commissioners for review 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 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 2020 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 2018 Actual Expenditures, 2019 Budget and the 2020 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 2019 Budget, 2020 Budget and the difference between the 2019 Budget and 2020 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 2018 Actual, 2019 Budget and the 2020 Budget. Again, the last column is the Reference Number that can be used to look up explanations of each line item. The next four pages (7-10) provide information by project for each of the major line items on page 6. Each project listed has the the amount that will be spent in the Budget year. Every project has a reference number that can be used to find a description of the project in the Appendix.

How to Read the Budget

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 2020 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

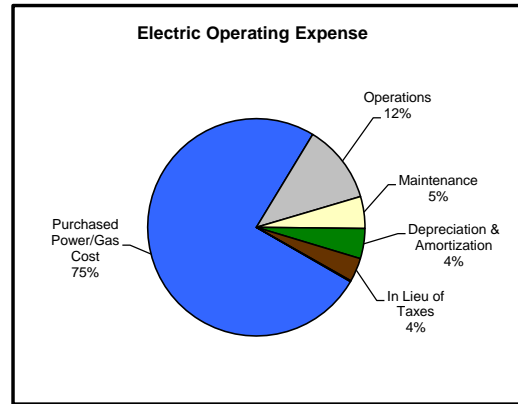
This section presents a definition and/or explanation of specific line items referenced throughout the Budget document. Each page includes a heading stating what page the information is referencing. For example, Page A1 has a heading of “Notes for Page 3 – Capital Expenditures Budget”. This means that 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.

2020 MLGW BUDGET HIGHLIGHTS

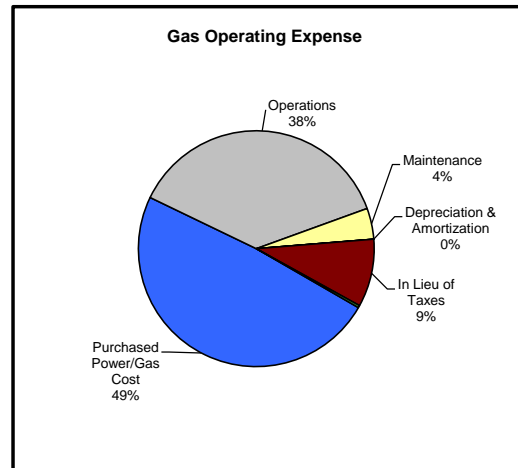
ELECTRIC DIVISION (In Thousands)

Total Operating Revenue	\$ 1,305,710
Purchased Power	\$ 1,023,188
Total O&M Expense	\$ 223,978
Other Operating Expense	\$ 110,772
Total Operating Expense	\$ 1,357,938
Operating Income (Loss)	\$ (52,228)
Change in Net Position	\$ (22,829)
CAPITAL PROGRAM	\$ 109,974



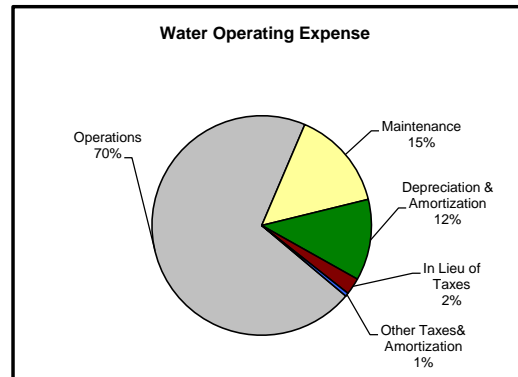
GAS DIVISION (In Thousands)

Total Operating Revenue	\$ 243,928
Purchased Gas	\$ 107,337
Total O&M Expense	\$ 91,401
Other Operating Expense	\$ 44,256
Total Operating Expense	\$ 242,994
Operating Income (Loss)	\$ 934
Change in Net Position	\$ (3,154)
CAPITAL PROGRAM	\$ 24,078



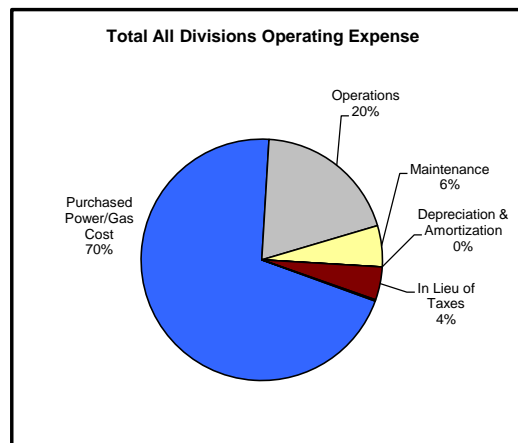
WATER DIVISION (In Thousands)

Total Operating Revenue	\$ 105,903
Total O&M Expense	\$ 85,917
Other Operating Expense	\$ 15,087
Total Operating Expense	\$ 101,004
Operating Income (Loss)	\$ 4,899
Change in Net Position	\$ 1,496
CAPITAL PROGRAM	\$ 30,625



ALL DIVISIONS (In Thousands)

TOTAL OPERATING REVENUE	\$ 1,655,541
TOTAL PURCHASED POWER & GAS	\$ 1,130,525
TOTAL O&M EXPENSE	\$ 401,296
TOTAL OTHER OPERATING EXPENSE	\$ 170,115
TOTAL OPERATING EXPENSE	\$ 1,701,936
OPERATING INCOME	\$ (46,395)
CHANGE IN NET POSITION	\$ (24,487)
TOTAL CAPITAL PROGRAM	\$ 164,677





ALL DIVISIONS

MEMPHIS LIGHT, GAS AND WATER DIVISION
INCOME, EXPENSE, AND CHANGES IN NET POSITION COMPARISON
FOR CALENDAR YEAR OF 2020

ALL DIVISIONS

PAGE 2

DESCRIPTION	THOUSANDS OF DOLLARS			
	ELECTRIC DIVISION	GAS DIVISION	WATER DIVISION	TOTAL
<u>OPERATING REVENUE</u>				
Sales Revenue	1,281,715	214,840	101,638	1,598,193
Revenue Adjustment for Uncollectibles	(4,539)	(1,095)	(886)	(6,520)
Non-Sales Revenue	28,534	30,183	5,151	63,868
OPERATING REVENUE	1,305,710	243,928	105,903	1,655,541
<u>OPERATING EXPENSE</u>				
Purchased Power	1,023,188	-	-	1,023,188
Purchased Gas	-	105,333	-	105,333
Compressed Natural Gas (CNG)	-	72	-	72
Liquefied Natural Gas (LNG)	-	1,932	-	1,932
Production Expense	-	1,403	14,651	16,054
Transmission Expense	8,052	-	-	8,052
Distribution Expense	45,358	26,669	12,673	84,700
Customer Accounts Expense	15,999	11,175	7,811	34,985
Customer Service & Information Expense	1,763	1,551	949	4,263
Sales Expense	1,981	388	364	2,733
Administrative & General Expense	86,355	40,864	34,573	161,792
OPERATING EXPENSE	1,182,696	189,387	71,021	1,443,104
<u>MAINTENANCE EXPENSE</u>				
Transmission Expense	3,118	-	-	3,118
Production Expense	-	417	3,420	3,837
Distribution Expense	56,580	7,559	9,680	73,819
Administrative & General Expense	4,772	1,375	1,796	7,943
MAINTENANCE EXPENSE	64,470	9,351	14,896	88,717
<u>OTHER OPERATING EXPENSE</u>				
Depreciation Expense	56,545	18,590	11,686	86,821
Payment in Lieu of Taxes	48,113	20,471	2,500	71,084
F.I.C.A. Taxes	1,781	678	504	2,963
Amortization of SCBPU Acquisition Adjustments	-	-	-	-
Amortization of Legacy Meters	2,809	565	397	3,771
Amortization of Software	1,524	3,952	-	5,476
OTHER OPERATING EXPENSE	110,772	44,256	15,087	170,115
TOTAL OPERATING EXPENSE	1,357,938	242,994	101,004	1,701,936
<u>INCOME</u>				
Operating Income	(52,228)	934	4,899	(46,395)
Other Income	39,968	281	800	41,049
Reduction of Plant Cost Recovered through CIAC	(28,006)	(4,679)	(2,975)	(35,660)
NET INCOME BEFORE DEBT EXPENSE	(40,266)	(3,464)	2,724	(41,006)
<u>DEBT EXPENSE</u>				
Interest Expense - Long Term Debt	12,704	5,453	4,612	22,769
Amortization of Debt Discount & Expense	(2,135)	(1,084)	(409)	(3,628)
TOTAL DEBT EXPENSE	10,569	4,369	4,203	19,141
NET INCOME AFTER DEBT EXPENSE	(50,835)	(7,833)	(1,479)	(60,147)
Contributions in Aid of Construction	28,006	4,679	2,975	35,660
CHANGE IN NET POSITION	(22,829)	(3,154)	1,496	(24,487)

**MEMPHIS LIGHT, GAS AND WATER DIVISION
INCOME, EXPENSE, AND CHANGES IN NET POSITION COMPARISON
FOR CALENDAR YEAR OF 2020**

ALL DIVISIONS

PAGE 2a

DESCRIPTION	THOUSANDS OF DOLLARS			
	ELECTRIC DIVISION	GAS DIVISION	WATER DIVISION	TOTAL
<u>OPERATING REVENUE</u>				
Sales Revenue	1,281,715	214,840	101,638	1,598,193
Revenue Adjustment for Uncollectibles	(4,539)	(1,095)	(886)	(6,520)
Non-Sales Revenue				
Forfeited Discounts	12,108	2,846	1,366	16,320
Miscellaneous Service Revenue	9,000	2,112	1,800	12,912
Cross Connection Revenue	-	-	1,380	1,380
Other Operating Revenue	1,368	528	372	2,268
Compressed Natural Gas (CNG)	-	192	-	192
Liquefied Natural Gas (LNG)	-	3,852	-	3,852
Rent from Electric/Gas/Water Property Transported Gas	6,058	10,065	233	16,356
Transported Gas	-	10,588	-	10,588
Total Non-Sales Revenue	28,534	30,183	5,151	63,868
OPERATING REVENUE	1,305,710	243,928	105,903	1,655,541
<u>OPERATING EXPENSE</u>				
Purchased Power	1,023,188	-	-	1,023,188
Purchased Gas	-	105,333	-	105,333
Compressed Natural Gas (CNG)	-	72	-	72
Liquified Natural Gas (LNG)	-	1,932	-	1,932
Production Expense				
Chemicals	-	-	1,000	1,000
Fuel or Power Purchased for Pumping	-	-	7,732	7,732
Miscellaneous Expense	-	-	2,631	2,631
Operations Production Water Treatment	-	-	-	-
Operation Labor and Expenses	-	1,258	2,708	3,966
Operation Supervision and Engineering	-	145	283	428
Pumping Labor and Expenses	-	-	297	297
Total Production Expense	-	1,403	14,651	16,054
Transmission Expense				
Load Dispatching	1,092	-	-	1,092
Miscellaneous Transmission Expenses	1,333	-	-	1,333
Operation Supervision and Engineering	5,227	-	-	5,227
Station Expenses	400	-	-	400
Underground Transmission Line Expenses	-	-	-	-
Total Transmission Expense	8,052	-	-	8,052
Distribution Expense				
Customer Installation Expenses	-	5,122	3,009	8,131
Distribution Load Dispatching Expense	1,092	744	-	1,836
Mains and Services	-	4,730	-	4,730
Measuring and Regulating Expenses	-	67	-	67
Meter and House Regulator Expenses	1,122	3,648	1,450	6,220
Miscellaneous Distribution Expenses ⁽¹⁾	25,610	8,926	5,709	40,245
Operation Supervision and Engineering	4,323	3,407	2,122	9,852
Overhead Distribution Line Expense	4,859	-	-	4,859
Rents	-	25	2	27
Services on Customers' Premises	4,947	-	-	4,947
Station Expenses	1,513	-	-	1,513
Storage Facilities	-	-	101	101
Street Lighting and Signal System Expenses	488	-	-	488
Transmission and Distribution Lines	-	-	280	280
UG Distribution	1,404	-	-	1,404
Total Distribution Expense	45,358	26,669	12,673	84,700

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

**MEMPHIS LIGHT, GAS AND WATER DIVISION
INCOME, EXPENSE, AND CHANGES IN NET POSITION COMPARISON
FOR CALENDAR YEAR OF 2020**

ALL DIVISIONS

PAGE 2b

DESCRIPTION	THOUSANDS OF DOLLARS			
	ELECTRIC DIVISION	GAS DIVISION	WATER DIVISION	TOTAL
<u>OPERATING EXPENSE (Continued)</u>				
Customer Accounts Expense				
Customer Order, Records and Collection Expenses	14,743	9,432	6,507	30,682
Meter Reading Expenses	1,125	1,630	1,194	3,949
Supervision-Customer Accounting and Collection	131	113	110	354
Total Customer Accounts Expense	15,999	11,175	7,811	34,985
Customer Service & Information Expense				
Customer Assistance Expenses	894	673	503	2,070
Informational and Instructional Advertising Expenses	157	53	222	432
Miscellaneous Customer Service & Informational Expenses	440	599	-	1,039
Supervision-Customer Service and Information	272	226	224	722
Total Customer Service & Information Expense	1,763	1,551	949	4,263
Sales Expense				
Miscellaneous Sales Expenses	1,981	388	364	2,733
Total Sales Expense	1,981	388	364	2,733
Administrative & General Expense				
Administrative and General Salaries	15,849	6,426	4,494	26,769
Administration Expenses Transferred to Capital	(6,100)	(1,500)	(2,000)	(9,600)
Pension Expense	14,700	5,635	4,165	24,500
Other Active & Retiree Benefits	24,217	12,417	8,961	45,595
Other Post Employment Benefits Funding	2,743	1,051	777	4,571
Injuries and Damages	2,760	1,621	1,395	5,776
Miscellaneous General Expenses ⁽²⁾	8,409	4,028	3,324	15,761
Office Supplies and Expenses	5,075	1,886	1,515	8,476
Outside Services Employed	9,383	5,120	6,597	21,100
Property Insurance	1,201	603	440	2,244
Rents-Miscellaneous	8,118	3,577	4,905	16,600
Total Administrative & General Expense	86,355	40,864	34,573	161,792
OPERATING EXPENSE	1,182,696	189,387	71,021	1,443,104
<u>MAINTENANCE EXPENSE</u>				
Transmission Expense				
Maintenance of Overhead Transmission Lines	4	-	-	4
Maintenance of Station Equipment	1,354	-	-	1,354
Maintenance of Underground Transmission Lines	722	-	-	722
Maintenance of Structures and Improvements	145	-	-	145
Maintenance Supervision and Engineering	893	-	-	893
Total Transmission Expense	3,118	-	-	2,973
Production Expense				
Maintenance of Other Equipment	-	104	-	104
Maintenance of Pumping Equipment	-	-	791	791
Maintenance of Structures and Improvements	-	85	-	85
Maintenance of Water Treatment Equipment	-	-	1,486	1,486
Maintenance of Wells	-	-	1,034	1,034
Maintenance Supervision and Engineering	-	228	109	337
Total Production Expense	-	417	3,420	3,837

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

MEMPHIS LIGHT, GAS AND WATER DIVISION
INCOME, EXPENSE, AND CHANGES IN NET POSITION COMPARISON
FOR CALENDAR YEAR OF 2020

ALL DIVISIONS

PAGE 2c

DESCRIPTION	THOUSANDS OF DOLLARS			
	ELECTRIC DIVISION	GAS DIVISION	WATER DIVISION	TOTAL
<u>MAINTENANCE EXPENSE (Continued)</u>				
Distribution Expense				
Maintenance of Hydrants	-	-	479	479
Maintenance of Line Transformers	2,139	-	-	2,139
Maintenance of Mains	-	4,687	-	4,687
Maintenance of Meters	2,388	301	3,840	6,529
Maintenance of Miscellaneous Distribution Plant	624	-	30	654
Maintenance of Overhead Distribution Lines	30,697	-	-	30,697
Maintenance of Services	-	1,078	1,091	2,169
Maintenance of Station Equipment	2,020	-	-	2,020
Maintenance of Street Lighting and Signal System	5,368	-	-	5,368
Maintenance of Gas Distribution Facilities	-	-	-	-
Maintenance of Transmission and Distribution Mains	-	-	4,240	4,240
Maintenance of Underground Distribution Lines	10,526	-	-	10,526
Maintenance Supervision and Engineering	2,818	85	-	2,903
Measuring and Regulating Equipment Expenses	-	1,408	-	1,408
Total Distribution Expense	56,580	7,559	9,680	73,819
Administrative & General Expense				
Maintenance of General Plant	4,454	1,248	1,796	7,498
Facilities Maintenance Expense	318	127	-	445
Total Administrative & General Expense	4,772	1,375	1,796	7,943
MAINTENANCE EXPENSE	64,470	9,351	14,896	88,717
<u>OTHER OPERATING EXPENSE</u>				
Depreciation Expense	56,545	18,590	11,686	86,821
Payment in Lieu of Taxes	48,113	20,471	2,500	71,084
F.I.C.A. Taxes	1,781	678	504	2,963
Amortization of SCBPU Acquisition Adjustments	-	-	-	-
Amortization of Legacy Meters	2,809	565	397	3,771
Amortization of Software	1,524	3,952	-	5,476
OTHER OPERATING EXPENSE	110,772	44,256	15,087	170,115
TOTAL OPERATING EXPENSE	1,357,938	242,994	101,004	1,701,936
<u>INCOME</u>				
Operating Income	(52,228)	934	4,899	(46,395)
Other Income				
Expenses of Merchandising, Jobbing & Contracts	-	(2,521)	-	(2,521)
Revenues from Merchandising, Jobbing & Contracts	-	1,302	-	1,302
Revenues from Non-Utility Property	-	8	-	8
Revenues from Common Transportation Equipment	-	377	-	377
Revenues from Sinking & Other Funds-Interest Income	2,100	1,000	200	3,300
Medicare Part D Refund	380	81	100	561
Non-Operating Income - TVA Transmission Credit	35,118	-	-	35,118
Miscellaneous Non-Operating Income	2,370	34	500	2,904
Total Other Income	39,968	281	800	41,049
Contributions in Aid of Construction	(28,006)	(4,679)	(2,975)	(35,660)
NET INCOME BEFORE DEBT EXPENSE	(40,266)	(3,464)	2,724	(41,006)

**MEMPHIS LIGHT, GAS AND WATER DIVISION
INCOME, EXPENSE, AND CHANGES IN NET POSITION COMPARISON
FOR CALENDAR YEAR OF 2020**

ALL DIVISIONS

PAGE 2d

DESCRIPTION	THOUSANDS OF DOLLARS			
	ELECTRIC DIVISION	GAS DIVISION	WATER DIVISION	TOTAL
DEBT EXPENSE				
Interest Expense - Long-Term Debt				
Interest on Ltd - Series 2014	2,695	-	455	3,150
Interest on Ltd - Series 2016	1,623	1,623	829	4,075
Interest on Ltd - Series 2017	3,586	1,730	891	6,207
Interest on Ltd - Series 2020	4,800	2,100	2,437	9,337
Total Interest Expense - Long-Term Debt	12,704	5,453	4,612	22,769
Amortization of Debt Discount & Expense				
Amortization of Debt Disc & Exp - Series 2014	(635)	-	(51)	(686)
Amortization of Debt Disc & Exp - Series 2016	(588)	(579)	(170)	(1,337)
Amortization of Debt Disc & Exp - Series 2017	(912)	(505)	(188)	(1,605)
Total Amortization of Debt Discount & Expense	(2,135)	(1,084)	(409)	(3,628)
TOTAL DEBT EXPENSE	10,569	4,369	4,203	19,141
NET INCOME AFTER DEBT EXPENSE	(50,835)	(7,833)	(1,479)	(60,147)
Contributions in Aid of Construction	28,006	4,679	2,975	35,660
CHANGE IN NET POSITION	(22,829)	(3,154)	1,496	(24,487)

MEMPHIS LIGHT, GAS AND WATER DIVISION
 CAPITAL EXPENDITURES
 FOR CALENDAR YEAR OF 2020

ALL DIVISIONS

PAGE 3

DESCRIPTION	THOUSANDS OF DOLLARS				REF. NO.
	ELECTRIC DIVISION	GAS DIVISION	WATER DIVISION	TOTAL	
TOTAL 2020 CAPITAL EXPENDITURES	109,974	24,078	30,625	164,677	3-1

ELECTRIC DIVISION



MEMPHIS LIGHT, GAS AND WATER DIVISION
INCOME, EXPENSE, AND CHANGES IN NET POSITION COMPARISON
2018 THROUGH 2020

ELECTRIC DIVISION

PAGE 4

DESCRIPTION	THOUSANDS OF DOLLARS			REF. NO.
	2018 ACTUAL	2019 BUDGET	2020 BUDGET	
OPERATING REVENUE				
Sales Revenue	1,265,828	1,256,692	1,281,715	4-1
Revenue Adjustment for Uncollectibles	(4,736)	(5,588)	(4,539)	4-2
Non-Sales Revenue	28,815	30,822	28,534	4-3
OPERATING REVENUE	1,289,907	1,281,926	1,305,710	
OPERATING EXPENSE				
Purchased Power	1,035,898	1,013,472	1,023,188	4-4
Transmission Expense	6,407	7,727	8,052	4-5
Distribution Expense	38,467	37,470	45,358	4-6
Customer Accounts Expense	15,209	15,956	15,999	4-7
Customer Service & Information Expense	1,678	1,857	1,763	4-8
Sales Expense	955	822	1,981	4-9
Administrative & General Expense	87,093	79,714	86,355	4-10
OPERATING EXPENSE	1,185,707	1,157,018	1,182,696	
MAINTENANCE EXPENSE				
Transmission Expense	2,824	2,634	3,118	4-11
Distribution Expense	44,338	33,425	56,580	4-12
Administrative & General Expense	3,172	3,585	4,772	4-13
MAINTENANCE EXPENSE	50,334	39,644	64,470	
OTHER OPERATING EXPENSE				
Depreciation Expense	53,928	58,442	56,545	4-14
Payment in Lieu of Taxes	48,410	54,979	48,113	4-15
F.I.C.A. Taxes	1,666	1,728	1,781	4-16
Amortization of Legacy Meters	708	870	2,809	4-17
Amortization of Software	1,208	1,886	1,524	4-18
OTHER OPERATING EXPENSE	105,920	117,905	110,772	
TOTAL OPERATING EXPENSE	1,341,961	1,314,567	1,357,938	
INCOME				
Operating Income	(52,054)	(32,641)	(52,228)	4-19
Other Income	47,950	38,600	39,968	4-20
Reduction of Plant Cost Recovered through CIAC	(17,315)	(14,000)	(28,006)	4-21
NET INCOME BEFORE DEBT EXPENSE	(21,419)	(8,041)	(40,266)	
DEBT EXPENSE				
Interest Expense - Existing Long-Term Debt	13,631	8,165	12,704	4-22
Amortization of Debt Discount & Expense	(3,274)	(2,206)	(2,135)	4-23
TOTAL DEBT EXPENSE	10,357	5,959	10,569	
NET INCOME AFTER DEBT EXPENSE	(31,776)	(14,000)	(50,835)	
Contributions in Aid of Construction	17,315	14,000	28,006	4-24
CHANGE IN NET POSITION	(14,461)	-	(22,829)	

**MEMPHIS LIGHT, GAS AND WATER DIVISION
INCOME, EXPENSE, AND CHANGES IN NET POSITION COMPARISON
2019 THROUGH 2020**

ELECTRIC DIVISION

PAGE 4a

DESCRIPTION	THOUSANDS OF DOLLARS		
	2019 BUDGET	2020 BUDGET	DIFFERENCE
<u>OPERATING REVENUE</u>			
Sales Revenue	1,256,692	1,281,715	25,023
Revenue Adjustment for Uncollectibles	(5,588)	(4,539)	1,049
Non-Sales Revenue			
Forfeited Discounts	11,922	12,108	186
Miscellaneous Service Revenue	10,236	9,000	(1,236)
Other Operating Revenue	1,320	1,368	48
Rent from Gas/Water Property	7,344	6,058	(1,286)
Total Non-Sales Revenue	30,822	28,534	(2,288)
OPERATING REVENUE	1,281,926	1,305,710	23,784
<u>OPERATING EXPENSE</u>			
Purchased Power	1,013,472	1,023,188	9,716
Transmission Expense			
Load Dispatching	1,107	1,092	(15)
Miscellaneous Transmission Expenses	1,139	1,333	194
Operation Supervision and Engineering	5,071	5,227	156
Overhead Transmission Line Expenses	-	-	-
Station Expenses	410	400	(10)
Underground Transmission Line Expenses	-	-	-
Total Transmission Expense	7,727	8,052	325
Distribution Expense			
Distribution Load Dispatching Expense	1,107	1,092	(15)
Meter Expenses	784	1,122	338
Miscellaneous Distribution Expenses ⁽¹⁾	19,923	25,610	5,687
Operation Supervision and Engineering	3,438	4,323	885
Overhead Distribution Line Expense	3,284	4,859	1,575
Services on Customers' Premises	5,283	4,947	(336)
Station Expenses	1,436	1,513	77
Street Lighting and Signal System Expenses	253	488	235
Underground Distribution Line Expenses	1,962	1,404	(558)
Total Distribution Expense	37,470	45,358	7,888
Customer Accounts Expense			
Customer Order, Records and Collection Expenses	13,841	14,743	902
Meter Reading Expenses	2,032	1,125	(907)
Supervision-Customer Accounting and Collection	83	131	48
Total Customer Accounts Expense	15,956	15,999	43
Customer Service & Information Expense			
Customer Assistance Expenses	1,329	894	(435)
Informational and Instructional Advertising Expenses	137	157	20
Miscellaneous Customer Service & Informational Expense	207	440	233
Supervision-Customer Service and Information	184	272	88
Total Customer Service & Information Expense	1,857	1,763	(94)
Sales Expense			
Miscellaneous Sales Expenses	822	1,981	1,159
Total Sales Expense	822	1,981	1,159

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

**MEMPHIS LIGHT, GAS AND WATER DIVISION
INCOME, EXPENSE, AND CHANGES IN NET POSITION COMPARISON
2019 THROUGH 2020**

ELECTRIC DIVISION

PAGE 4b

DESCRIPTION	THOUSANDS OF DOLLARS		
	2019 BUDGET	2020 BUDGET	DIFFERENCE
OPERATING EXPENSE (Continued)			
Administrative & General Expense			
Administrative and General Salaries	15,268	15,849	581
Administration Expenses Transferred to Capital	(8,023)	(6,100)	1,923
Pension Expense	11,224	14,700	3,476
Other Active & Retiree Benefits	26,030	24,217	(1,813)
Other Post Employment Benefits Funding	1,248	2,743	1,495
Injuries and Damages	2,593	2,760	167
Miscellaneous General Expenses ⁽²⁾	9,115	8,409	(706)
Office Supplies and Expenses	5,666	5,075	(591)
Outside Services Employed	7,238	9,383	2,145
Property Insurance	1,053	1,201	148
Rents-Miscellaneous	8,302	8,118	(184)
Total Administrative & General Expense	79,714	86,355	6,641
OPERATING EXPENSE	1,157,018	1,182,696	25,678
MAINTENANCE EXPENSE			
Transmission Expense			
Maintenance of Overhead Transmission Lines	10	4	(6)
Maintenance of Station Equipment	1,217	1,354	137
Maintenance of Underground Transmission Lines	477	722	245
Maintenance of Structures and Improvements	-	145	145
Maintenance Supervision and Engineering	930	893	(37)
Total Transmission Expense	2,634	3,118	484
Distribution Expense			
Maintenance of Line Transformers	2,752	2,139	(613)
Maintenance of Meters	2,111	2,388	277
Maintenance of Miscellaneous Distribution Plant	774	624	(150)
Maintenance of Overhead Distribution Lines	16,171	30,697	14,526
Maintenance of Station Equipment	2,023	2,020	(3)
Maintenance of Street Lighting and Signal System	2,937	5,368	2,431
Maintenance of Underground Distribution Lines	4,293	10,526	6,233
Maintenance Supervision and Engineering	2,364	2,818	454
Total Distribution Expense	33,425	56,580	23,155
Administrative & General Expense			
Maintenance of General Plant	3,105	4,454	1,349
Facilities Maintenance Expense	480	318	(162)
Total Administrative & General Expense	3,585	4,772	1,187
MAINTENANCE EXPENSE	39,644	64,470	24,826

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

MEMPHIS LIGHT, GAS AND WATER DIVISION
 INCOME, EXPENSE, AND CHANGES IN NET POSITION COMPARISON
 2019 THROUGH 2020

ELECTRIC DIVISION

PAGE 4c

DESCRIPTION	THOUSANDS OF DOLLARS		
	2019 BUDGET	2020 BUDGET	DIFFERENCE
OTHER OPERATING EXPENSE			
Depreciation Expense	58,442	56,545	(1,897)
Payment in Lieu of Taxes	54,979	48,113	(6,866)
F.I.C.A. Taxes	1,728	1,781	53
Amortization of Legacy Meters	870	2,809	1,939
Amortization of Software	1,886	1,524	(362)
OTHER OPERATING EXPENSE	117,905	110,772	(7,133)
TOTAL OPERATING EXPENSE	1,314,567	1,357,938	43,371
INCOME			
Operating Income	(32,641)	(52,228)	(19,587)
Other Income			
Revenues from Sinking & Other Funds - Interest Income	2,100	2,100	-
Allowance for Funds Used During Construction	-	-	-
Medicare Part D Refund	353	380	27
Non-Operating Income - Prepay Credit	-	-	-
Non-Operating Income - TVA Transmission Credit	33,947	35,118	1,171
Miscellaneous Non-Operating Income	2,200	2,370	170
Total Other Income	38,600	39,968	1,368
Reduction of Plant Cost Recovered through CIAC	(14,000)	(28,006)	(14,006)
NET INCOME BEFORE DEBT EXPENSE	(8,041)	(40,266)	(32,225)
DEBT EXPENSE			
Interest Expense - Long-Term Debt			
Interest on Ltd - Series 2014	2,779	2,695	(84)
Interest on Ltd - Series 2016	1,678	1,623	(55)
Interest on Ltd - Series 2017	3,708	3,586	(122)
Interest on Ltd - Series 2020	-	4,800	4,800
Total Interest Expense - Long-Term Debt	8,165	12,704	(261)
Amortization of Debt Discount & Expense			
Amortization of Debt Disc & Exp - Series 2014	(647)	(635)	12
Amortization of Debt Disc & Exp - Series 2016	(602)	(588)	14
Amortization of Debt Disc & Exp - Series 2017	(957)	(912)	45
Total Amortization of Debt Discount & Expense	(2,206)	(2,135)	71
TOTAL DEBT EXPENSE	5,959	10,569	4,610
NET INCOME AFTER DEBT EXPENSE	(14,000)	(50,835)	(36,835)
Contributions in Aid of Construction	14,000	28,006	14,006
CHANGE IN NET POSITION	-	(22,829)	(22,829)

MEMPHIS LIGHT, GAS AND WATER DIVISION
SOURCE AND APPLICATION OF FUNDS
2020 BUDGET
(THOUSANDS OF DOLLARS)

ELECTRIC DIVISION

PAGE 5

		REF. NO.
<u>SOURCE OF FUNDS:</u>		
FROM OPERATIONS:		
Change in Net Position	(22,829)	5-1
Non-Cash Charges to Income:		
Depreciation Charged to Operating Income	56,545	5-2
Depreciation Charged to Other Accounts	1,280	5-3
Amortization of Legacy Meters	2,809	5-4
Amortization of Software	1,524	5-5
	39,329	
TOTAL FUNDS FROM OPERATIONS	39,329	
Salvage	1,567	5-6
Financing: Debt Issuance	160,000	5-7
	200,896	
TOTAL FUNDS AVAILABLE	200,896	
<u>APPLICATION OF FUNDS:</u>		
Capital Expenditures	109,974	5-8
Costs of Removal and Other Charges to the Reserve for Depreciation	3,788	5-9
Retirement of Long-Term Debt	7,905	5-10
	121,666	
TOTAL APPLICATION OF FUNDS	121,666	
INCREASE (DECREASE) IN WORKING CAPITAL	79,230	

MEMPHIS LIGHT, GAS AND WATER DIVISION
CAPITAL EXPENDITURES COMPARISON
FOR CALENDAR YEAR OF 2020

ELECTRIC DIVISION

PAGE 6

DESCRIPTION	THOUSANDS OF DOLLARS			REF. NO.
	2018 ACTUAL	2019 BUDGET	2020 BUDGET	
SUBSTATION AND TRANSMISSION				
ELEC - SUBSTATION	18,069	8,600	12,160	6-1
ELEC - SUBSTATION TRANSFORMERS REPLACEMENT	-	900	8,500	6-2
ELEC - SUBSTATION CIRCUIT BREAKERS REPLACEMENT	-	5,300	2,600	6-3
ELEC - TRANSMISSION LINES	1,851	1,100	3,140	6-4
CONTRIBUTION IN AID OF CONSTRUCTION - CIAC	-	-	-	6-5
TOTAL - SUBSTATION AND TRANSMISSION	19,920	15,900	26,400	
DISTRIBUTION SYSTEM				
ELEC - RESIDENTIAL SERVICE IN S/D	56	100	70	6-6
ELEC - RESIDENTIAL SERVICE NOT IN S/D	1,397	1,200	1,431	6-7
ELEC - RESIDENTIAL S/D	27	30	126	6-8
ELEC - APARTMENTS	581	500	710	6-9
ELEC - GENERAL POWER SERVICE	5,114	4,500	12,901	6-10
ELEC - GENERAL POWER S/D	59	-	8	6-11
ELEC - MOBILE HOME PARK	-	-	27	6-12
ELEC - RANCHETTE	-	-	-	6-13
ELEC - TEMPORARY SERVICE	219	-	562	6-14
ELEC - RES SVC IN APT/MOBILE HOME COMM	-	-	-	6-15
ELEC - MOBILE HOME NOT IN PARK	-	-	-	6-16
ELEC - MULTIPLE-UNIT GENERAL POWER	240	300	305	6-17
ELEC - RELOCATE AT CUSTOMER REQUEST	2,170	5,100	5,917	6-18
ELEC - STREET IMPROVEMENTS	245	2,500	8,876	6-19
ELEC - NEW CIRCUITS	2,644	5,000	4,675	6-20
ELEC - VOLTAGE CONVERSION	-	-	20	6-21
ELEC - RECONSTRUCT TO MULTI-PHASE	-	-	-	6-22
ELEC - LINE RECONSTRUCTION/REMOVE IDLE FACILITIES	2,428	1,500	3,675	6-23
ELEC - DEFECT CABLE/FEEDER CABLE REPLACEMENT	2,303	1,000	6,800	6-24
ELEC - UNDERGROUND CABLE REPLACEMENT	-	-	-	6-25
ELEC - DISTRIBUTION POLES	-	-	3,000	6-26
ELEC - DISTRIBUTION AUTOMATION	-	-	6,000	6-27
ELEC - STREET LIGHTS INSTALL	1,847	2,000	10,100	6-28
ELEC - DEMOLITION	47	-	-	6-29
ELEC - STREET LIGHT MAINTENANCE	1,882	2,000	2,040	6-30
ELEC - PLANNED MAINTENANCE	9,293	9,300	9,486	6-31
ELEC - TREE TRIMMING	-	-	5	6-32
ELEC - OPERATIONS MAINTENANCE	187	-	-	6-33
ELEC - LEASED OUTDOOR LIGHTING	445	1,100	443	6-34
ELEC - SHARED USE CONTRACT	-	-	1,000	6-35
ELEC - STORM RESTORATION	4,880	-	-	6-36
ELEC - EMERGENCY MAINTENANCE	5,549	5,500	5,857	6-37
ELEC - COMMUNICATION TOWERS	-	-	-	6-38
JT - RESIDENTIAL SERVICE IN S/D	645	500	583	6-39
JT - RESIDENTIAL SERVICE NOT IN S/D	5	-	5	6-40
JT - RESIDENTIAL S/D	3,523	2,700	2,227	6-41
JT - APARTMENTS	58	50	40	6-42
JT - RES SVC IN APT/MOBILE HOME COMM	-	-	-	6-43
PCI - CAPACITOR BANKS	-	-	575	6-44
PCI - DIST TRANSFORMERS	6,438	3,000	6,034	6-45
ELEC - METERS	10,484	500	984	6-46
CONTRIBUTION IN AID OF CONSTRUCTION - CIAC	(14,720)	(14,000)	(28,006)	
TOTAL - DISTRIBUTION SYSTEM	48,046	34,380	66,476	
GENERAL PLANT				
ELEC - BUILDINGS & STRUCTURES	380	881	779	6-47
ELEC - SECURITY AUTOMATION	48	3,102	4,403	6-48
ELEC - LAND PURCHASE	-	-	1,200	6-49
ELEC - FLEET CAPITAL POWER OPERATED EQUIPMENT	2,721	4,272	2,009	6-50
ELEC - TRANSPORTATION EQUIPMENT	3,144	214	2,633	6-51
ELEC - TOOLS & EQUIPMENT	32	-	31	6-52
ELEC - LAB & TEST	162	-	268	6-53
ELEC - COMMUNICATION EQUIPMENT	379	41	79	6-54
ELEC - COMMUNICATION TOWERS	76	-	14,119	6-55
ELEC - TELECOMMUNICATION NETWORK	1,073	-	3,223	6-56
ELEC - UTILITY MONITORING	-	1,600	1,275	6-57
ELEC - CIS DEVELOPMENT	6,077	7,947	7,994	6-58
ELEC - BUSINESS CONTINUITY	576	3,109	3,122	6-59
ELEC - DATA PROCESSING EQUIPMENT	912	1,736	2,556	6-60
ELEC - IS/IT PROJECTS	243	-	-	6-61
ELEC - CONTINGENCY FUND	-	-	200	6-62
TOTAL - GENERAL PLANT	15,823	22,902	43,891	
TOTAL - ELECTRIC DIVISION	83,789	73,182	136,767	
Delayed Cost Allocations	27	(13,182)	(26,793)	6-63
TOTAL - ELECTRIC DIVISION	83,816	60,000	109,974	

MEMPHIS LIGHT, GAS AND WATER DIVISION
SELECT CAPITAL EXPENDITURE BUDGETS
FOR CALENDAR YEAR OF 2020

ELECTRIC DIVISION

PAGE 7

DESCRIPTION	IN BUDGET YEAR	REF. NO.
<u>SUBSTATION & TRANSMISSION MAJOR PROJECTS</u>		
<u>SUBSTATION</u>		
Purchase Remote Racking System for Breakers in (12) Metal Clad Switchgear	500,000	7-1
TVA CC Plant/Allen Substation Improvements	2,860,000	7-2
Substation 4 Beautification (City of Memphis)	685,000	7-3
Replace 161kV CVT @ Substation 42	180,000	7-4
Refurbish Station Service, Transformer Storage AC, Power & Lighting Substation 32	400,000	7-5
Install TRV Capacitors	120,000	7-6
Portable Generator	125,000	7-7
Other Miscellaneous Replace/Install	50,000	7-8
Install Breaker Fail Protection Scheme various locations	400,000	7-9
Replace RTU's various locations	1,200,000	7-10
Replace relays various locations	550,000	7-11
Replace capacitor banks various locations	2,430,000	7-12
Replace switches various locations	415,000	7-13
Replace batteries various locations	500,000	7-14
Animal Mitigation	20,000	7-15
Seismic Retrofit of Non-Structural Substation Components	50,000	7-16
TOTAL SUBSTATION IMPROVEMENTS	10,485,000	
<u>SUBSTATION - NERC COMPLIANCE</u>		
Transmission Circuit Breaker Replacements	550,000	7-17
Install/Upgrade Digital Fault Recorders	1,000,000	7-18
Install Substation Smart Locks	25,000	7-19
NERC Low Impact Compliance	100,000	7-20
TOTAL NERC COMPLIANCE	1,675,000	
<u>SUBSTATION TRANSFORMERS</u>		
Replace 115/12 kV transformer banks 1157 & 1159 @ Substation 21	3,000,000	7-21
Replace 161/23/12 kV transformer bank 32649 @ Substation 32	3,000,000	7-22
Contingency Failed Transformers/Procure Spares	2,500,000	7-23
TOTAL SUBSTATION TRANSFORMERS	8,500,000	
<u>SUBSTATION CIRCUIT BREAKERS</u>		
Replace Breakers Substation 21 - Network Substation	700,000	7-24
Replace 115 kV Breaker 4151 @ Substation 24	300,000	7-25
Replace 115 kV Breaker 4181 @ Substation 24	300,000	7-26
Replace 23 kV Breaker 7307 @ Substation 7	200,000	7-27
Replace 12 kV Breaker 6609 @ Substation 26	200,000	7-28
Replace 12 kV Breaker 4713 @ Substation 14	200,000	7-29
Replace 23 kV Breaker 4339 @ Substation 4	200,000	7-30
Contingency Replace Breakers	500,000	7-31
TOTAL SUBSTATION CIRCUIT BREAKERS	2,600,000	
TOTAL SUBSTATION	23,260,000	

MEMPHIS LIGHT, GAS AND WATER DIVISION
SELECT CAPITAL EXPENDITURE BUDGETS
FOR CALENDAR YEAR OF 2020

ELECTRIC DIVISION

PAGE 8

DESCRIPTION	IN BUDGET YEAR	REF. NO.
<u>SUBSTATION/TRANSMISSION PROJECTS</u>		
OPGW 42-23	210,000	8-1
Steel Tower Inspection Program	600,000	8-2
Misc. projects (OPGW, structure replacements, etc.)	1,000,000	8-3
TOTAL SUBSTATION/TRANSMISSION PROJECTS	1,810,000	
<u>TRANSMISSION - REIMBURSABLE</u>		
TVA CC Plant - Transmission Improvements	1,100,000	8-4
TVA CC Plant - Horn Lake Line Transmission Improvements	230,000	8-5
TOTAL TRANSMISSION REIMBURSABLE	1,330,000	
TOTAL TRANSMISSION LINES	3,140,000	
TOTAL - SUBSTATION AND TRANSMISSION	26,400,000	
<u>DISTRIBUTION SYS. - MAJOR PROJECTS</u>		
Sub 89 Cabling	2,300,000	8-6
5485 Shelby Drive - Mendenhall to Tuggle (Sub 89 Ckt Ties)	500,000	8-7
4650 Hickory Hill to Crumpler(Sub 89 Ckt Ties)	200,000	8-8
5492 E. Shelby Drive - Mendenhall to Hickory Hill (Sub 89 Ckt Ties)	100,000	8-9
Shelby Drive - Mendenhall to Hickory Hill and Holmes (Sub 89 Ckt Ties)	950,000	8-10
Shelby Drive Underbuilds - Germantown Rd to Hacks Cross (Sub 89 Ckt Ties)	300,000	8-11
Substation 46 Cabling	50,000	8-12
Reconfigure Circuit 15205	600,000	8-13
TOTAL MAJOR NEW CIRCUIT PROJECTS	5,000,000	
<u>MISC. PROJECTS - REIMBURSABLE</u>		
Elvis Presley Blvd. Renovation	2,250,000	8-14
Pinch District Improvements	2,000,000	8-15
Other Relocate at Customer Request Projects	1,666,333	8-16
TOTAL MISC. PROJECTS - REIMBURSABLE	5,916,333	
<u>STREET IMPROVEMENT PROJECTS</u>		
Elvis Presley Corridor - Middle Segment (C/O)	2,400,000	8-17
SR-57/Poplar Bridge @Scott Street & SR-23/Walnut Grove (SP 02/12)	1,500,000	8-18
Holmes Rd - Malone Rd To Lamar Ave	750,000	8-19
Old Brownsville Rd, Covington Pike to Kirby Pkwy (C/O)	570,000	8-20
SR-14, From SR 385 to East of Kerrville-Rosemark	427,000	8-21
Germantown Road @ Wolf River Blvd. (C/O)	350,000	8-22
Raleigh Millington bridge over Big Creek	100,000	8-23
Mudville Road Bridge, over Big Creek Proj.# 100111	100,000	8-24
TOTAL MAJOR STREET IMPROVEMENT PROJECTS	6,197,000	
TOTAL DISTRIBUTION SYS. - MAJOR PROJECTS	17,113,333	

MEMPHIS LIGHT, GAS AND WATER DIVISION
 SELECT CAPITAL EXPENDITURE BUDGETS
 FOR CALENDAR YEAR OF 2020

ELECTRIC DIVISION

PAGE 9

DESCRIPTION	IN BUDGET YEAR	REF. NO.
<u>GENERAL PLANT</u>		
<u>PURCHASE OF LAND</u>	1,200,000	9-1
<u>BUILDINGS & STRUCTURES</u>		
<u>SUBSTATIONS</u>		
Replace Roofs - Various Substations	403,300	9-2
<u>ELECTRIC & SYSTEMS OPERATIONS</u>		
Radio Tower Bldg.: Replace 874 sq. ft. roof	22,000	9-3
<u>BEALE STREET LANDING GARAGE</u>		
Elevator System Modernization	300,000	9-4
<u>NETTERS BUSINESS OPERATIONS CENTER</u>		
UPS Battery Replacement	54,000	9-5
TOTAL BUILDINGS & STRUCTURES	779,300	
ELEC - SECURITY AUTOMATION	4,403,161	9-6
ELEC - FLEET CAPITAL POWER OPERATED EQUIPMENT	2,009,084	9-7
ELEC - TRANSPORTATION EQUIPMENT	2,633,435	9-8
ELEC - COMMUNICATION EQUIPMENT	79,056	9-9
LAB & TEST	268,380	9-10
TOOLS AND EQUIPMENT	30,564	9-11
<u>COMMUNICATION TOWERS</u>		
Microwave/Mobile Radio	14,087,600	9-12
900 MHz radios and Distribution Automation Upgrades	31,600	9-13
TOTAL COMMUNICATION TOWERS	14,119,200	
<u>TELECOMMUNICATION NETWORK</u>		
System Automation	900,000	9-14
Fiber optic multiplexers	596,400	9-15
Fiber optic cable and equipment	1,007,000	9-16
Voice Network	503,100	9-17
Telecommunication Systems Growth	216,000	9-18
TOTAL TELECOMMUNICATIONS NETWORK	3,222,500	
<u>UTILITY MONITORING & CONTROL SYSTEMS</u>		
Systems Backup Control & Communication Plan (CO)	1,275,000	9-19
TOTAL UTILITY MONITORING & CONTROL SYS.	1,275,000	

MEMPHIS LIGHT, GAS AND WATER DIVISION
 SELECT CAPITAL EXPENDITURE BUDGETS
 FOR CALENDAR YEAR OF 2020

ELECTRIC DIVISION

PAGE 10

DESCRIPTION	IN	REF. NO.
	BUDGET YEAR	
<u>GENERAL PLANT (Continued)</u>		
<u>CUSTOMER INFO SYSTEM (CIS) DEVELOPMENT</u>		
CIS Production Hardware & Software Upgrade (C/O)	703,080	10-1
Mobile Dispatching System Replacement (C/O)	3,500,000	10-2
IVR Replacement (C/O)	400,000	10-3
Meter Data Management System (C/O)	1,200,000	10-4
BillGen Replacement	560,000	10-5
Annual Network Enhancements-(C/O)	1,230,938	10-6
Electric Meter Test Board Replacement	400,000	10-7
TOTAL CUSTOMER INFO. SYS. DEVELOPMENT	7,994,018	
<u>BUSINESS CONTINUITY</u>		
Annual New\Replacement Servers\Win OS Upgrades	530,000	10-8
Data Center Enhancements (C/O)	617,656	10-9
Data Center Upgrade (C/O)	600,407	10-10
Backup Expansion (C/O)	333,520	10-11
Network Security Enhancements	500,000	10-12
Network Security Enhancements (C/O)	540,313	10-13
TOTAL BUSINESS CONTINUITY	3,121,896	
<u>PURCHASE OF DATA PROCESSING EQUIPMENT</u>		
PC Equipment	15,336	10-14
Annual New\Replacement Servers\Win OS Upgrades (C/O)	400,000	10-15
Annual Network Upgrades	600,000	10-16
Storage Area Network Upgrade	470,000	10-17
Corporate Wireless Upgrade & Enhancements	150,000	10-18
Corporate Wireless Upgrade & Enhancements (C/O)	157,496	10-19
Work Center Wireless (outdoor)	400,000	10-20
ArcGIS Mobile Viewer	363,000	10-21
TOTAL PURCHASE OF DATA PROCESSING EQUIPMENT	2,555,832	
<u>CONTINGENCY FUNDS - GENERAL PLANT</u>	200,000	10-22
TOTAL GENERAL PLANT	43,891,426	

MEMPHIS LIGHT, GAS AND WATER DIVISION
CAPITAL CARRYOVER SUMMARY*
FOR CALENDAR YEAR OF 2020

ELECTRIC DIVISION

PAGE 11

<u>CAPITAL CARRYOVER CATEGORY</u>	<u>CARRYOVER AMOUNT</u>
Substations, Transmission & Distribution System	3,150,000
Utility Monitoring	475,000
CIS Info Systems Development	7,034,018
Purchase of Data Processing Equipment	557,496
Business Continuity	<u>2,091,896</u>
TOTAL CAPITAL CARRYOVER SUMMARY	<u>13,308,410</u>

*Carryover items constitute the funding necessary for capital projects or purchases not completed during the prior budget year. This would include projects which may have been delayed, large projects requiring multiple years to complete, or commodities ordered but not received. These items are part of the total 2020 Budget.

GAS DIVISION



MEMPHIS LIGHT, GAS AND WATER DIVISION
INCOME, EXPENSE, AND CHANGES IN NET POSITION COMPARISON
2018 THROUGH 2020

GAS DIVISION

PAGE 12

DESCRIPTION	THOUSANDS OF DOLLARS			REF. NO.
	2018 ACTUAL	2019 BUDGET	2020 BUDGET	
OPERATING REVENUE				
Sales Revenue	242,807	218,539	214,840	12-1
Revenue Adjustment for Uncollectibles	(1,347)	(1,529)	(1,095)	12-2
Non-Sales Revenue	32,728	32,302	30,183	12-3
OPERATING REVENUE	274,188	249,312	243,928	
OPERATING EXPENSE				
Production - LNG Plant	1,447	1,131	1,403	12-4
Purchased Gas	135,412	114,586	105,333	12-5
Compressed Natural Gas (CNG)	500	120	72	12-6
Liquefied Natural Gas (LNG)	2,195	1,080	1,932	12-7
Distribution Expense	23,743	23,975	26,669	12-8
Customer Accounts Expense	10,102	9,560	11,175	12-9
Customer Service & Information Expense	1,418	1,240	1,551	12-10
Sales Expense	433	478	388	12-11
Administrative & General Expense	42,909	39,490	40,864	12-12
OPERATING EXPENSE	218,159	191,660	189,387	
MAINTENANCE EXPENSE				
Production Expense	503	470	417	12-13
Distribution Expense	6,800	7,404	7,559	12-14
Administrative & General Expense	217	630	1,375	12-15
MAINTENANCE EXPENSE	7,520	8,504	9,351	
OTHER OPERATING EXPENSE				
Depreciation Expense	16,872	18,316	18,590	12-16
Payment in Lieu of Taxes	20,320	22,651	20,471	12-17
F.I.C.A. Taxes	639	663	678	12-18
Amortization of Leasehold Improvements	-	-	-	12-19
Amortization of Legacy Meters	909	1,377	565	12-20
Amortization of Software	3,702	3,800	3,952	12-21
OTHER OPERATING EXPENSE	42,442	46,807	44,256	
TOTAL OPERATING EXPENSE	268,121	246,971	242,994	
INCOME				
Operating Income	6,067	2,341	934	12-22
Other Income	899	-	281	12-23
Reduction of Plant Cost Recovered through CIAC	(3,018)	(4,304)	(4,679)	12-24
NET INCOME BEFORE DEBT EXPENSE	3,948	(1,963)	(3,464)	
DEBT EXPENSE				
Interest Expense - Long-Term Debt	3,553	3,461	5,453	12-25
Amortization of Debt Discount & Expense	(1,152)	(1,120)	(1,084)	12-26
TOTAL DEBT EXPENSE	2,401	2,341	4,369	
NET INCOME AFTER DEBT EXPENSE	1,547	(4,304)	(7,833)	
Contributions in Aid of Construction	3,018	4,304	4,679	12-27
CHANGE IN NET POSITION	4,565	-	(3,154)	

MEMPHIS LIGHT, GAS AND WATER DIVISION
INCOME, EXPENSE, AND CHANGES IN NET POSITION COMPARISON
2019 THROUGH 2020

GAS DIVISION

PAGE 12a

DESCRIPTION	THOUSANDS OF DOLLARS		
	2019 BUDGET	2020 BUDGET	DIFFERENCE
OPERATING REVENUE			
Sales Revenue	218,539	214,840	(3,699)
Revenue Adjustment for Uncollectibles	(1,529)	(1,095)	434
Non-Sales Revenue			
Forfeited Discounts	2,841	2,846	5
Miscellaneous Service Revenue	2,776	2,112	(664)
Other Operating Revenue	504	528	24
Compressed Natural Gas (CNG)	180	192	12
Liquefied Natural Gas (LNG)	4,464	3,852	(612)
Rent from Electric/Water Property	11,136	10,065	(1,071)
Transported Gas	10,401	10,588	187
Total Non-Sales Revenue	32,302	30,183	(2,119)
OPERATING REVENUE	249,312	243,928	(5,384)
OPERATING EXPENSE			
Purchased Gas	114,586	105,333	(9,253)
Compressed Natural Gas (CNG)	120	72	(48)
Liquified Natural Gas (LNG)	1,080	1,932	852
Production Expense			
Fuel Gas	-	-	-
Operation Labor and Expenses	999	1,258	259
Operation Supervision and Engineering	132	145	13
Total Production Expense	1,131	1,403	272
Distribution Expense			
Customer Installation Expenses	4,961	5,122	161
Distribution Load Dispatching Expense	722	744	22
Mains and Services	2,749	4,730	1,981
Measuring and Regulating Expenses	131	67	(64)
Meter and House Regulator Expenses	3,220	3,648	428
Miscellaneous Distribution Expenses ⁽¹⁾	9,247	8,926	(321)
Rents	24	25	1
Operation Supervision and Engineering	2,921	3,407	486
Total Distribution Expense	23,975	26,669	2,694
Customer Accounts Expense			
Customer Order, Records and Collection Expenses	8,054	9,432	1,378
Meter Reading Expenses	1,462	1,630	168
Supervision-Customer Accounting and Collection	44	113	69
Total Customer Accounts Expense	9,560	11,175	1,615
Customer Service & Information Expense			
Customer Assistance Expenses	798	673	(125)
Informational and Instructional Advertising Expenses	43	53	10
Miscellaneous Customer Service & Informational Expenses	271	599	328
Supervision-Customer Service and Information	128	226	98
Total Customer Service & Information Expense	1,240	1,551	311
Demonstrating and Selling Expenses	-	-	-
Miscellaneous Sales Expenses	478	388	(90)
Total Sales Expense	478	388	(90)

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

**MEMPHIS LIGHT, GAS AND WATER DIVISION
INCOME, EXPENSE, AND CHANGES IN NET POSITION COMPARISON
2019 THROUGH 2020**

GAS DIVISION

PAGE 12b

DESCRIPTION	THOUSANDS OF DOLLARS		
	2019 BUDGET	2020 BUDGET	DIFFERENCE
<u>OPERATING EXPENSE (Continued)</u>			
Administrative & General Expense			
Administrative and General Salaries	5,747	6,426	679
Administration Expenses Transferred to Capital	(2,922)	(1,500)	1,422
Pension Expense	5,612	5,635	23
Other Active & Retiree Benefits	14,724	12,417	(2,307)
Other Post Employment Benefits Funding	624	1,051	427
Injuries and Damages	1,547	1,621	74
Miscellaneous General Expenses ⁽²⁾	3,664	4,028	364
Office Supplies and Expenses	1,824	1,886	62
Outside Services Employed	3,962	5,120	1,158
Property Insurance	457	603	146
Rents-Miscellaneous	4,251	3,577	(674)
Total Administrative & General Expense	39,490	40,864	1,374
OPERATING EXPENSE	191,660	189,387	(2,273)
<u>MAINTENANCE EXPENSE</u>			
Production Expense			
Maintenance of Other Equipment	147	104	(43)
Maintenance of Structures and Improvements	114	85	(29)
Maintenance Supervision and Engineering	209	228	19
Total Production Expense	470	417	(53)
Distribution Expense			
Maintenance of Mains	5,534	4,687	(847)
Maintenance of Meters	292	301	9
Maintenance of Services	606	1,078	472
Maintenance of Gas Distribution Facilities	-	-	-
Maintenance of Structures and Improvements	1	-	(1)
Maintenance Supervision and Engineering	62	85	23
Measuring and Regulating Equipment Expenses	909	1,408	499
Total Distribution Expense	7,404	7,559	155
Administrative & General Expense			
Maintenance of General Plant	564	1,248	684
Facilities Maintenance Expense	66	127	61
Total Administrative & General Expense	630	1,375	745
MAINTENANCE EXPENSE	8,504	9,351	847
<u>OTHER OPERATING EXPENSE</u>			
Depreciation Expense	18,316	18,590	274
Payment in Lieu of Taxes	22,651	20,471	(2,180)
F.I.C.A. Taxes	663	678	15
Amortization of Leasehold Improvements	-	-	-
Amortization of Legacy Meters	1,377	565	(812)
Amortization of Software	3,800	3,952	152
OTHER OPERATING EXPENSE	46,807	44,256	(2,551)
TOTAL OPERATING EXPENSE	246,971	242,994	(3,977)
⁽²⁾ Includes, but not limited to, the following items: Mail distribution, property appraisals, security and janitorial services, and fuel use by MLGW.			

MEMPHIS LIGHT, GAS AND WATER DIVISION
INCOME, EXPENSE, AND CHANGES IN NET POSITION COMPARISON
2019 THROUGH 2020

GAS DIVISION

PAGE 12c

DESCRIPTION	THOUSANDS OF DOLLARS		
	2019 BUDGET	2020 BUDGET	DIFFERENCE
INCOME			
Operating Income	2,341	934	(1,407)
Other Income			
Expenses of Merchandising, Jobbing & Contracts	(3,335)	(2,521)	814
Revenues from Merchandising, Jobbing & Contracts	1,600	1,302	(298)
Revenues from Non-Utility Property	14	8	(6)
Revenues from Common Transportation Equipment	630	377	(253)
Revenues from Sinking & Other Funds-Interest Income	900	1,000	100
Medicare Part D Refund	135	81	(54)
Miscellaneous Non-Operating Income	56	34	(22)
Total Other Income	-	281	281
Reduction of Plant Cost Recovered through CIAC	(4,304)	(4,679)	(375)
NET INCOME BEFORE DEBT EXPENSE	(1,963)	(3,464)	(1,501)
DEBT EXPENSE			
Interest Expense - Long-Term Debt			
Interest on Ltd - Series 2016	1,678	1,623	(55)
Interest on Ltd - Series 2017	1,783	1,730	(53)
Interest on Ltd - Series 2020	-	2,100	2,100
Total Interest Expense - Long-Term Debt	3,461	5,453	1,992
Amortization of Debt Discount & Expense			
Amortization of Debt Disc & Exp - Series 2016	(600)	(579)	21
Amortization of Debt Disc & Exp - Series 2017	(520)	(505)	15
Total Amortization of Debt Discount & Expense	(1,120)	(1,084)	36
TOTAL DEBT EXPENSE	2,341	4,369	2,028
NET INCOME AFTER DEBT EXPENSE	(4,304)	(7,833)	(3,529)
Contributions in Aid of Construction	4,304	4,679	375
CHANGE IN NET POSITION	-	(3,154)	(3,154)

MEMPHIS LIGHT, GAS AND WATER DIVISION
SOURCE AND APPLICATION OF FUNDS
2020 BUDGET
(THOUSANDS OF DOLLARS)

GAS DIVISION

PAGE 13

		REF. NO.
<u>SOURCE OF FUNDS:</u>		
FROM OPERATIONS:		
Change in Net Position	(3,154)	13-1
Non-Cash Charges to Income:		
Depreciation Charged to Operating Income	18,590	13-2
Depreciation Charged to Other Accounts	1,399	13-3
Amortization of Legacy Meters	565	13-4
Amortization of Software	3,952	13-5
	21,352	
TOTAL FUNDS FROM OPERATIONS	21,352	
Salvage	315	13-6
Financing: Debt Issuance	70,000	13-7
	91,667	
TOTAL FUNDS AVAILABLE	91,667	
<u>APPLICATION OF FUNDS:</u>		
Capital Expenditures	24,078	13-8
Costs of Removal and Other Charges to the Reserve for Depreciation	151	13-9
Retirement of Long Term Debt	4,247	13-10
	28,476	
TOTAL APPLICATION OF FUNDS	28,476	
INCREASE (DECREASE) IN WORKING CAPITAL	63,191	

MEMPHIS LIGHT, GAS AND WATER DIVISION
CAPITAL EXPENDITURES COMPARISON
FOR CALENDAR YEAR OF 2020

GAS DIVISION

PAGE 14

DESCRIPTION	THOUSANDS OF DOLLARS			REF. NO.
	2018 ACTUAL	2019 BUDGET	2020 BUDGET	
PRODUCTION SYSTEM				
GAS - LNG PROCESSING FACILITIES	-	175	175	
GAS - CNG STATIONS		-	-	
TOTAL PRODUCTION SYSTEM	-	175	175	14-1
DISTRIBUTION SYSTEM				
GAS - RESIDENTIAL SERVICE IN S/D	-	-	2	14-2
GAS - RESIDENTIAL SERVICE NOT IN S/D	320	227	655	14-3
GAS - RESIDENTIAL S/D	16	4	15	14-4
GAS - LAND PURCHASE	113	-	435	14-5
GAS - APARTMENTS	-	1	-	14-6
GAS - GENERAL POWER SERVICE	298	1,827	2,522	14-7
GAS - GENERAL POWER S/D	3	-	-	14-8
GAS - MOBILE HOME PARK		-	-	14-9
GAS - MULTIPLE-UNIT GENERAL POWER	39	40	62	14-10
GAS - RELOCATE AT CUSTOMER REQUEST	50	50	171	14-11
GAS - PURCHASE OF METERS	24,523	11,760	1,363	14-12
GAS - STREET IMPROVEMENTS	240	2,260	3,571	14-13
GAS - DEMOLITION	288	-	-	14-14
GAS - NEW GAS MAIN	725	1,325	500	14-15
GAS - GAS MAIN/SERVICE REPL (D.O.T.)	4,842	4,500	5,040	14-16
GAS - TRANSMISSION PIPELINES AND FACILITIES	1,402	700	2,500	14-17
GAS - REGULATOR STATIONS	60	400	1,000	14-18
GAS - GATE STATIONS	120	-	-	14-19
GAS - PLANNED MAINTENANCE	5,106	5,017	4,800	14-20
GAS- OPERATIONS MAINTENANCE	10	-	-	14-21
JT - RESIDENTIAL SERVICE IN S/D	1,288	-	379	14-22
JT - RESIDENTIAL SERVICE NOT IN S/D	-	-	3	14-23
JT - RESIDENTIAL S/D	-	1,129	978	14-24
JT - APARTMENTS	5	6	27	14-25
JT - RELOCATE AT CUSTOMER REQUEST	-	-	-	14-27
GAS - EMERGECEY MAINTENANCE	1,023	1,000	1,519	14-28
CONTRIBUTIONS IN AID OF CONSTRUCTION (CIAC)	(1,086)	(4,304)	(4,679)	14-29
TOTAL - DISTRIBUTION SYSTEM	39,385	25,942	20,863	
GENERAL PLANT				
GAS - BUILDINGS & STRUCTURES	365	710	2,653	14-30
GAS - SECURITY AUTOMATION	54	-	960	14-31
GAS - FURNITURE & FIXTRUES	-	72	467	14-32
GAS - AUDIO VISUAL	-	-	-	14-33
GAS - DATA PROCESSING	-	-	-	14-34
GAS - IS/IT PROJECTS	3,773	560	196	14-35
GAS - FLEET CAPITAL COMMON POWER OPERATED EQUIP	2,735	188	334	14-36
GAS - FLEET CAPITAL COMON TRANSPORTATION EQUIP	-	439	1,416	14-37
GAS - FLEET GAS POWER OPERATED EQUIPMENT	1,434	37	2,217	14-38
GAS - FLEET GAS TRANSPORTATION EQUIPMENT	-	67	624	14-39
GAS - AUTOMATED FUELING SYSTEM	406	-	60	14-40
GAS - TOOLS & EQUIPMENT	-	-	110	14-41
GAS - COMMON TOOLS & EQUIPMENT	-	-	222	14-42
GAS - ALTERNATIVE FUELING STRUCTURE	-	-	-	14-43
GAS - CONTINGENCY FUNDS	-	-	200	14-44
TOTAL - GENERAL PLANT	8,767	2,073	9,459	
TOTAL GAS DIVISION	48,152	28,190	30,497	
Delayed Cost Allocations	(187)	(2,190)	(6,419)	14-45
TOTAL - GAS DIVISION	47,965	26,000	24,078	

MEMPHIS LIGHT, GAS AND WATER DIVISION
SELECT CAPITAL EXPENDITURE BUDGETS
FOR CALENDAR YEAR OF 2020

GAS DIVISION

PAGE 15

DESCRIPTION	IN BUDGET YEAR	REF. NO.
<u>PRODUCTION SYSTEM</u>		
Gas - LNG Processing Facilities	175,000	15-1
TOTAL GAS - PRODUCTION SYSTEM	175,000	
<u>DISTRIBUTION SYSTEM - MAJOR PROJECTS</u>		
<u>STREET IMPROVEMENTS</u>		
Third Road - drainage improvements	58,000	15-2
Navy Road Streetscape - Phase 2, US-51 to Church	1,000	15-3
BT 16/03, Old Brownsville Road, Austin Peay to Kirby Whitten		
	246,000	15-4
Holmes Rd, Malone Rd To Lamar Ave	2,500,000	15-5
CP 12/09, Elvis Presley Corridor - North Phase 1		
	139,000	15-6
CP 17/02, Patterson St, Alumni Ave to Walker Ave	62,000	15-7
CP 17/03, Walker Ave, W of Patterson	35,000	15-8
Raleigh Millington @ SR-385	500	15-9
Forest Street Campus Phase 1 - Street Improvements	41,000	15-10
GT 16/01, Germantown Rd at Wolf River Blvd.	135,000	15-11
Raleigh Millington bridge over Big Creek	75,000	15-12
SC 09/04, Macon Rd Bridge over Gray's Creek	127,000	15-13
SP 08/14 New Allen @ Hawkins Mill TDOT	64,000	15-14
SP 08/12 New Allen @ Ridgemont	87,000	15-15
TOTAL GAS - STREET IMPROVEMENTS	3,570,500	
<u>TRANSMISSION PIPELINES AND FACILITIES</u>		
18" XXHP Pipeline Replacement @ Covington Pike & LNRR	500,000	15-16
12" XHP Brooks to McMullen	1,000,000	15-17
Transmission Work	500,000	15-18
12" PEMP Landfill Line, De-Commissioning	500,000	15-19
TOTAL TRANSMISSION PIPELINES AND FACILITIES	2,500,000	
TOTAL DISTRIBUTION SYS. - MAJOR PROJECTS		
	6,070,500	
<u>GENERAL PLANT</u>		
<u>BUILDINGS & STRUCTURES</u>		
<u>SOUTH SERVICE CENTER</u>		
Replace Truck Canopy Roof	215,000	15-20
Replace Storage Canopy Roof	117,000	15-21
<u>NORTH SERVICE CENTER</u>		
Asphalt Paving & Concrete Slabs/ Drives	600,000	15-22
Building #2 Replace DRAVO Heaters & Controls	35,000	15-23
Building #1: Replace Roof-top Unit	45,000	15-24
<u>BRUNSWICK SERVICE CENTER</u>		
Install Automated Gates, Replace Guard House & new Fence	474,000	15-25
Canopy for Transmission Crew Equipment	274,700	15-26
Paving Upgrade	300,000	15-27
<u>WHITEHAVEN COMMUNITY OFFICE</u>		
Replace roof	107,000	15-28
<u>ADMINISTRATION BUILDING</u>		
New Fire Pump	400,000	15-29

MEMPHIS LIGHT, GAS AND WATER DIVISION
 SELECT CAPITAL EXPENDITURE BUDGETS
 FOR CALENDAR YEAR OF 2020

GAS DIVISION

PAGE 16

DESCRIPTION	IN BUDGET YEAR	REF. NO.
<u>GENERAL PLANT (Continued)</u>		
<u>CHOCTAW</u>		
Replace HVAC Roof-Top Units (7)	5,600	16-1
Security Fencing around Choctaw and new property	80,000	16-2
TOTAL BUILDINGS & STRUCTURES	2,653,300	
<u>PURCHASE OF FURNITURE AND FIXTURES</u>		
Furniture & Fixtures	466,560	16-3
TOTAL PURCH. OF FURNITURE & FIXTURES	466,560	
GAS - SECURITY AUTOMATION	959,623	16-4
GAS - TOOLS & EQUIPMENT	331,826	16-5
FLEET CAPITAL COMMON POWER OPERATED EQUIP	334,000	16-6
FLEET CAPITAL COMMON TRANSPORTATION EQUIP	1,415,674	16-7
FLEET GAS POWER OPERATED EQUIPMENT	624,048	16-8
FLEET GAS TRANSPORTATION EQUIPMENT	2,218,527	16-9
<u>IS/IT PROJECTS</u>		
Natural Gas Management System (CO)	195,879	16-10
TOTAL IS/IT PROJECTS	195,879	
AUTOMATED FUELING SYSTEM	60,000	16-11
<u>CONTINGENCY FUNDS - GENERAL PLANT</u>	200,000	16-12
TOTAL GENERAL PLANT	9,459,437	

MEMPHIS LIGHT, GAS AND WATER DIVISION
CAPITAL CARRYOVER SUMMARY*
FOR CALENDAR YEAR OF 2020

GAS DIVISION

PAGE 17

<u>CAPITAL CARRYOVER CATEGORY</u>	<u>CARRYOVER AMOUNT</u>
Distribution System	2,400,000
Data Processing- IS/IT	<u>195,879</u>
TOTAL CAPITAL CARRYOVER SUMMARY	<u>2,595,879</u>

*Carryover items constitute the funding necessary for capital projects or purchases not completed during the prior budget year. This would include projects which may have been delayed, large projects requiring multiple years to complete, or commodities ordered but not received. These items are part of the total 2020 Budget.

WATER DIVISION



MEMPHIS LIGHT, GAS AND WATER DIVISION
INCOME, EXPENSE, AND CHANGES IN NET POSITION COMPARISON
2018 THROUGH 2020

WATER DIVISION

PAGE 18

DESCRIPTION	THOUSANDS OF DOLLARS			REF. NO.
	2018 ACTUAL	2019 BUDGET	2020 BUDGET	
OPERATING REVENUE				
Sales Revenue	98,577	97,389	101,638	18-1
Revenue Adjustment for Uncollectibles	(900)	(1,015)	(886)	18-2
Non-Sales Revenue	5,463	5,292	5,151	18-3
OPERATING REVENUE	103,140	101,666	105,903	
OPERATING EXPENSE				
Production Expense	11,883	13,325	14,651	18-4
Distribution Expense	13,948	12,213	12,673	18-5
Customer Accounts Expense	7,065	7,070	7,811	18-6
Customer Service & Information Expense	963	809	949	18-7
Sales Expense	422	477	364	18-8
Administrative & General Expense	34,370	34,297	34,573	18-9
OPERATING EXPENSE	68,651	68,191	71,021	
MAINTENANCE EXPENSE				
Production Expense	2,475	3,512	3,420	18-10
Distribution Expense	8,330	9,758	9,680	18-11
Administrative & General Expense	3,269	2,624	1,796	18-12
MAINTENANCE EXPENSE	14,074	15,894	14,896	
OTHER OPERATING EXPENSE				
Depreciation Expense	10,399	11,253	11,686	18-13
Payment in Lieu of Taxes	2,500	4,400	2,500	18-14
F.I.C.A. Taxes	472	489	504	18-15
Amortization of SCBPU Acquisition Adjustments	(964)	(482)	-	18-16
Amortization of Legacy Meters	218	459	397	18-17
OTHER OPERATING EXPENSE	12,625	16,119	15,087	
TOTAL OPERATING EXPENSE	95,350	100,204	101,004	
INCOME				
Operating Income	7,790	1,462	4,899	18-18
Other Income	1,177	900	800	18-19
Other Income - Allowance for Funds Used During Construction	-	-	-	18-20
Reduction of Plant Cost Recovered through CIAC	(4,364)	(4,005)	(2,975)	18-21
NET INCOME BEFORE DEBT EXPENSE	4,603	(1,643)	2,724	
DEBT EXPENSE				
Interest Expense - Existing Long - Term Debt	2,295	2,591	4,612	18-22
Amortization of Debt Discount & Expense	(432)	(229)	(409)	18-23
TOTAL DEBT EXPENSE	1,863	2,362	4,203	
NET INCOME AFTER DEBT EXPENSE	2,740	(4,005)	(1,479)	
Contributions in Aid of Construction	4,364	4,005	2,975	18-24
CHANGE IN NET POSITION	7,104	-	1,496	

MEMPHIS LIGHT, GAS AND WATER DIVISION
INCOME, EXPENSE, AND CHANGES IN NET POSITION COMPARISON
2019 THROUGH 2020

WATER DIVISION

PAGE 18a

DESCRIPTION	THOUSANDS OF DOLLARS		
	2019 BUDGET	2020 BUDGET	DIFFERENCE
OPERATING REVENUE			
Sales Revenue	97,389	101,638	4,249
Revenue Adjustment for Uncollectibles	(1,015)	(886)	129
Non-Sales Revenue			
Forfeited Discounts	1,452	1,366	(86)
Miscellaneous Service Revenue	1,884	1,800	(84)
Cross Connection Revenue	1,380	1,380	-
Other Operating Revenue	360	372	12
Rent from Electric/Gas Property	216	233	17
Total Non-Sales Revenue	5,292	5,151	(141)
OPERATING REVENUE	101,666	105,903	4,237
OPERATING EXPENSE			
Production Expense			
Chemicals	1,189	1,000	(189)
Operations Production Water Treatment	68		(68)
Fuel or Power Purchased for Pumping	7,707	7,732	25
Miscellaneous Expense	1,948	2,631	683
Operation Labor and Expenses	1,868	2,708	840
Operation Supervision and Engineering	262	283	21
Pumping Labor and Expenses	283	297	14
Total Production Expense	13,325	14,651	1,326
Distribution Expense			
Customer Installation Expenses	2,988	3,009	21
Meter Expenses	725	1,450	725
Miscellaneous Distribution Expenses ⁽¹⁾	5,777	5,709	(68)
Operation Supervision and Engineering	2,032	2,122	90
Storage Facilities	59	101	42
Transmission and Distribution Lines	630	280	(350)
Rents	2	2	-
Total Distribution Expense	12,213	12,673	460
Customer Accounts Expense			
Customer Order, Records and Collection Expenses	5,910	6,507	597
Meter Reading Expenses	1,126	1,194	68
Supervision-Customer Accounting and Collection	34	110	76
Total Customer Accounts Expense	7,070	7,811	741
Customer Service & Information Expense			
Customer Assistance Expenses	652	503	(149)
Informational and Instructional Advertising Expenses	30	222	192
Supervision-Customer Service and Information	127	224	97
Total Customer Service & Information Expense	809	949	140
Sales Expense			
Demonstrating and Selling Expenses	-	-	-
Miscellaneous Sales Expenses	394	364	(30)
Sales Expense and Supervision	83	-	(83)
Total Sales Expense	477	364	(113)

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

MEMPHIS LIGHT, GAS AND WATER DIVISION
INCOME, EXPENSE, AND CHANGES IN NET POSITION COMPARISON
2019 THROUGH 2020

WATER DIVISION

PAGE 18b

DESCRIPTION	THOUSANDS OF DOLLARS		
	2019 BUDGET	2020 BUDGET	DIFFERENCE
<u>OPERATING EXPENSE (Continued)</u>			
Administrative & General Expense			
Administrative and General Salaries	4,149	4,494	345
Administration Expenses Transferred to Capital	(1,751)	(2,000)	(249)
Pension Expense	3,670	4,165	495
Other Active & Retiree Benefits	9,770	8,961	(809)
Other Post Employment Benefits	408	777	369
Injuries and Damages	1,603	1,395	(208)
Miscellaneous General Expenses ⁽²⁾	3,122	3,324	202
Office Supplies and Expenses	1,611	1,515	(96)
Outside Services Employed	5,885	6,597	712
Property Insurance	310	440	130
Rents-Miscellaneous	5,520	4,905	(615)
Total Administrative & General Expense	34,297	34,573	276
OPERATING EXPENSE	68,191	71,021	2,830
<u>MAINTENANCE EXPENSE</u>			
Production Expense			
Maintenance of Pumping Equipment	2,516	791	(1,725)
Maintenance of Water Treatment Equipment	291	1,486	1,195
Maintenance of Wells	568	1,034	466
Maintenance Supervision and Engineering	137	109	(28)
Total Production Expense	3,512	3,420	(92)
Distribution Expense			
Maintenance of Hydrants	189	479	290
Maintenance of Meters	4,165	3,840	(325)
Maintenance of Miscellaneous Distribution Plant	32	30	(2)
Maintenance of Services	420	1,091	671
Maintenance of Transmission and Distribution Mains	4,952	4,240	(712)
Total Distribution Expense	9,758	9,680	(78)
Administrative & General Expense			
Maintenance of General Plant	832	-	(832)
Facilities Maintenance Expense	1,792	1,796	4
Total Administrative & General Expense	2,624	1,796	(828)
MAINTENANCE EXPENSE	15,894	14,896	(998)
<u>OTHER OPERATING EXPENSE</u>			
Depreciation Expense	11,253	11,686	433
Payment in Lieu of Taxes	4,400	2,500	(1,900)
F.I.C.A. Taxes	489	504	15
Amortization of SCBPU Acquisition Adjustments	(482)	-	482
Amortization of Legacy Meters	459	397	(62)
OTHER OPERATING EXPENSE	16,119	15,087	(1,032)
TOTAL OPERATING EXPENSE	100,204	101,004	800

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

**MEMPHIS LIGHT, GAS AND WATER DIVISION
INCOME, EXPENSE, AND CHANGES IN NET POSITION COMPARISON
2019 THROUGH 2020**

WATER DIVISION

PAGE 18c

DESCRIPTION	THOUSANDS OF DOLLARS		
	2019 BUDGET	2020 BUDGET	DIFFERENCE
<u>INCOME</u>			
Operating Income	1,462	4,899	3,437
Other Income			
Revenues from Sinking & Other Funds-Interest Income	300	200	(100)
Medicare Part D Refund	100	100	-
Miscellaneous Non-Operating Income	500	500	-
Total Other Income	900	800	(100)
Reduction of Plant Cost Recovered through CIAC	(4,005)	(2,975)	1,030
NET INCOME BEFORE DEBT EXPENSE	(1,643)	2,724	4,367
<u>DEBT EXPENSE</u>			
Interest Expense - Long-Term Debt			
Interest on Ltd - Series 2014	467	455	(12)
Interest on Ltd - Series 2016	864	829	(35)
Interest on Ltd - Series 2017	910	891	(19)
Interest on Ltd - Series 2019	350	-	(350)
Interest on Ltd - Series 2020	-	2,437	2,437
Total Interest Expense - Long-Term Debt	2,591	4,612	2,021
Amortization of Debt Discount & Expense			
Amortization of Debt Disc & Exp - Series 2014	(52)	(51)	1
Amortization of Debt Disc & Exp - Series 2016	(177)	(170)	7
Amortization of Debt Disc & Exp - Series 2017	-	(188)	(188)
Total Amortization of Debt Discount & Expense	(229)	(409)	(180)
TOTAL DEBT EXPENSE	2,362	4,203	1,841
NET INCOME AFTER DEBT EXPENSE	(4,005)	(1,479)	2,526
Contributions in Aid of Construction	4,005	2,975	(1,030)
CHANGE IN NET POSITION	-	1,496	1,496

MEMPHIS LIGHT, GAS AND WATER DIVISION
SOURCE AND APPLICATION OF FUNDS
2020 BUDGET
(THOUSANDS OF DOLLARS)

WATER DIVISION

PAGE 19

		REF. NO.
<u>SOURCE OF FUNDS:</u>		
FROM OPERATIONS:		
Change in Net Position	1,496	19-1
Non-Cash Charges to Income:		
Depreciation Charged to Operating Income	11,686	19-2
Depreciation Charged to Other Accounts	288	19-3
Amortization of Legacy Meters	397	19-4
	13,868	
TOTAL FUNDS FROM OPERATIONS	13,868	
Salvage	99	19-5
Financing: Debt Issuance	75,000	19-6
	88,966	
TOTAL FUNDS AVAILABLE	88,966	
<u>APPLICATION OF FUNDS:</u>		
Capital Expenditures	30,625	19-7
Costs of Removal and Other Charges to the Reserve for Depreciation	484	19-8
Retirement of Long-Term Debt	4,333	19-9
	35,442	
TOTAL APPLICATION OF FUNDS	35,442	
INCREASE (DECREASE) IN WORKING CAPITAL	53,524	

MEMPHIS LIGHT, GAS AND WATER DIVISION
CAPITAL EXPENDITURES COMPARISON
FOR CALENDAR YEAR OF 2020

WATER DIVISION

PAGE 20

DESCRIPTION	THOUSANDS OF DOLLARS			REF. NO.
	2018 ACTUAL	2019 BUDGET	2020 BUDGET	
PRODUCTION SYSTEM				
WATER - PUMPING STATIONS	975	2,500	7,299	20-1
WATER - OVERHEAD STORAGE TANKS	1,753	-	950	20-2
WATER - UNDERGROUND STORAGE RESERVOIRS	-	-	4,000	20-3
WATER - PRODUCTION WELLS	3,362	1,800	4,323	20-4
WATER - LAND PURCHASE	-	-	75	20-5
WATER- OPERATIONS MAINTENANCE	-	-	1,000	20-6
Contingency Fund - Production System	-	-	50	20-7
SUBTOTAL - PRODUCTION SYSTEM	6,090	4,300	17,697	
WATER - BUILDINGS & STRUCTURES	1,681	949	6	20-8
TOTAL PROD. SYSTEM - BLDGS. & STRUCT.	7,771	5,249	17,703	
DISTRIBUTION SYSTEM				
WATER - RESIDENTIAL SERVICE IN S/D	167	122	338	20-9
WATER - RESIDENTIAL SERVICE NOT IN S/D	311	276	318	20-10
WATER - RESIDENTIAL S/D	183	66	246	20-11
WATER - APARTMENTS	-	-	50	20-12
WATER - GENERAL POWER SERVICE	2,682	2,900	3,546	20-13
WATER - RELOCATE AT CUSTOMER REQUEST	49	75	282	20-14
WATER - STREET IMPROVEMENTS	986	1,000	2,820	20-15
WATER - NEW WATER MAIN	3,161	1,500	3,089	20-16
WATER- LEAD SERVICE REPLACEMENT	-	-	2,501	20-17
WATER - OPERATIONS MAINTENANCE	708	-	-	20-18
WATER - PURCHASE OF METERS	11,836	5,291	572	20-19
WATER - PLANNED MAINTENANCE	3,184	2,500	3,000	20-20
WATER - EMERGENCY MAINTENANCE	3,923	3,100	3,212	20-21
CONTRIBUTIONS IN AID OF CONSTRUCTION (CIAC)	(3,027)	(4,005)	(2,975)	20-22
TOTAL - DISTRIBUTION SYSTEM	24,163	12,825	16,999	
GENERAL PLANT				
WATER - BUILDINGS & STRUCTURES	300	-	713	20-23
WATER - SECURITY AUTOMATION	37	466	245	20-24
WATER - FLEET CAPITAL POWER OPERATED EQUIP	638	35	86	20-25
WATER - FLEET CAPITAL WATER TRANSPORTATION EQUIP	669	112	1,731	20-26
WATER- IS/IT PROJECTS WATER	-	-	250	20-27
WATER TOOLS & EQUIPMENT	-	-	-	20-28
WATER - LAB EQUIPMENT	43	-	355	20-29
WATER - CONTINGENCY FUND	-	-	200	20-30
TOTAL - GENERAL PLANT	1,687	613	3,580	
TOTAL - WATER DIVISION	33,621	18,687	38,282	
Delayed Cost Allocations	(1,281)	(3,687)	(7,657)	20-31
TOTAL - WATER DIVISION	32,340	15,000	30,625	

MEMPHIS LIGHT, GAS AND WATER DIVISION
SELECT CAPITAL EXPENDITURE BUDGETS
FOR CALENDAR YEAR OF 2020

WATER DIVISION

PAGE 21

DESCRIPTION	IN BUDGET YEAR	REF. NO.
<u>PRODUCTION SYSTEM</u>		
<u>PUMPING STATIONS</u>		
Allen Pumping Station		
Engineer Distributed Process Control System Replacement	45,000	21-1
Install Distributed Process Control System Replacement	75,000	21-2
Dedicated Well Electric Circuit Replacement	100,000	21-3
Medium Voltage Breaker & Switchgear Replacements (CO)	2,000,000	21-4
Station Rehabilitation	700,000	21-5
Total Allen Pumping Station	2,920,000	
Davis Pumping Station		
Engineer Distributed Process Control System Replacement (CO)	50,000	21-6
Total Davis Pumping Station	50,000	
Lichterman Pumping Station		
Engineer Distributed Process Control System Replacement	70,000	21-7
Total Lichterman Pumping Station	70,000	
LNG Pumping Station		
Engineer Distributed Process Control System Replacement	120,000	21-8
Mallory Pumping Station		
Engineer Distributed Process Control System Replacement (CO)	15,000	21-9
VFD, Motor & Transformer Replacements	5,000	21-10
Filter Media Replacement	143,750	21-11
Total Mallory Pumping Station	163,750	
McCord Pumping Station		
Engineer Distributed Process Control System Replacement	250,000	21-12
Filter Media Replacement (CO)	150,000	21-13
Total McCord Pumping Station	400,000	
Morton Pumping Station		
Engineer Distributed Process Control System Replacement	75,000	21-14
VFD, Motor & Transformer Replacements	100,000	21-15
Total Morton Pumping Station	175,000	
Palmer Pumping Station		
Engineer Distributed Process Control System Replacement	120,000	21-16
Total Palmer Pumping Station	120,000	
Sheahan Pumping Station		
Engineer Distributed Process Control System Replacement (CO)	45,000	21-17
Install Distributed Process Control System Replacement	85,000	21-18
Replace Backwash Pump	1,500,000	21-19
VFD, Motor & Transformer Replacements	50,000	21-20
Total Sheahan Pumping Station	1,680,000	
Miscellaneous Pumping Facilities		
Engineering Services Contract (CO)	600,000	21-21
Water Operations Capital Items (CO)	1,000,000	21-22
Total Miscellaneous Pumping Facilities	1,600,000	
TOTAL PUMPING STATIONS	7,298,750	

MEMPHIS LIGHT, GAS AND WATER DIVISION
SELECT CAPITAL EXPENDITURE BUDGETS
FOR CALENDAR YEAR OF 2020

WATER DIVISION

PAGE 22

DESCRIPTION	IN BUDGET YEAR	REF. NO.
<u>OVERHEAD STORAGE TANKS</u>		
Mallory Pumping Station Station Rehabilitation	950,000	22-1
Total Overhead Storage Tanks	950,000	
<u>UNDERGROUND STORAGE RESERVOIRS</u>		
Mallory Pumping Station Construct Wash Water Recovery Basin Replacement	4,000,000	22-2
Total Underground Storage Reservoirs	4,000,000	
<u>PRODUCTION WELLS</u>		
Davis Pumping Station - Construct/Replace Well	1,452,500	22-3
Lichterman Pumping Station - Construct/Replace Well	1,452,500	22-4
Miscellaneous Pumping Facilities Well Failures	1,417,500	22-5
TOTAL PRODUCTION WELLS	4,322,500	
<u>OPERATIONS MAINTENANCE</u>	1,000,000	22-6
<u>LAND PURCHASE</u>	75,000	22-7
<u>BUILDINGS & STRUCTURES</u>		
PALMER PUMPING STATION Aerator Bldg.: Replace Roof	5,800	22-8
SUBTOTAL BUILDINGS & STRUCTURES - PRODUCTION	5,800	
CONTINGENCY FUND - PRODUCTION SYSTEM	50,000	22-9
TOTAL PRODUCTION SYSTEM	17,702,050	
<u>DISTRIBUTION SYSTEM - MAJOR PROJECTS</u>		
<u>NEW WATER MAIN</u>		
Miscellaneous Projects - Reimbursable	315,000	22-10
Major Valve Replacements/Additions	498,824	22-11
Main Replacement Projects	500,000	22-12
Large Main Extensions	650,000	22-13
Collecting Main Installation	300,000	22-14
Watkins St. Bore under the Loosahatchie	750,000	22-15
Miscellaneous Projections	25,000	22-16
Minor System Improvements	50,000	22-17
TOTAL NEW WATER MAIN	3,088,824	
<u>STREET IMPROVEMENTS</u>		
City of Arlington Projects	200,000	22-18
City of Bartlett Projects	350,000	22-19
City of Memphis Projects	1,300,000	22-20
Shelby County Projects	450,000	22-21
Miscellaneous Projections	520,000	22-22
TOTAL STREET IMPROVEMENTS	2,820,000	
<u>LEAD REPLACEMENT</u>	2,500,000	22-23
TOTAL DISTRIBUTION SYSTEM - MAJOR PROJECTS	8,408,824	

MEMPHIS LIGHT, GAS AND WATER DIVISION
 SELECT CAPITAL EXPENDITURE BUDGETS
 FOR CALENDAR YEAR OF 2020

WATER DIVISION

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DESCRIPTION	IN BUDGET YEAR	REF. NO.
<u>GENERAL PLANT</u>		
<u>BUILDINGS & STRUCTURES</u>		
Training Roadway	713,000	23-1
TOTAL BUILDINGS & STRUCTURES	713,000	
<u>IS/IT PROJECT</u>		
Laboratory Information Management System replacement	250,000	23-2
TOTAL IS/IT PROJECT	250,000	
WATER - SECURITY AUTOMATION	245,000	23-3
WATER - FLEET CAPITAL POWER OPERATED EQUIP	85,661	23-4
WATER - FLEET CAPITAL WATER TRANSPORTATION EQUIP	1,731,831	23-5
WATER - LAB EQUIPMENT	355,000	23-6
<u>CONTINGENCY FUNDS - GENERAL PLANT</u>	200,000	23-7
TOTAL GENERAL PLANT	3,580,492	

MEMPHIS LIGHT, GAS AND WATER DIVISION
CAPITAL CARRYOVER SUMMARY*
FOR CALENDAR YEAR OF 2020

WATER DIVISION

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<u>CAPITAL CARRYOVER CATEGORY</u>	<u>CARRYOVER AMOUNT</u>
Production	3,860,000
TOTAL CAPITAL CARRYOVER SUMMARY	<u>3,860,000</u>

*Carryover items constitute the funding necessary for capital projects or purchases not completed during the prior budget year. This would include projects which may have been delayed, large projects requiring multiple years to complete, or commodities ordered but not received. These items are part of the total 2020 Budget.



2020 - 2024 CAPITAL IMPROVEMENT PROGRAM



2020 Electric Capital Summary

ELECTRIC DIVISION

DESCRIPTION	2019 ORIGINAL BUDGET	2019 REVISED BUDGET	2020 BUDGET	2021 PROJECTION	2022 PROJECTION	2023 PROJECTION	2024 PROJECTION
JOB ORDERS							
Pole-Duct Use and Escorts							
Contributions in Aid of Construction							
TOTAL - JOB ORDERS	\$ -		\$ -	\$ -	\$ -	\$ -	
SUBSTATION AND TRANSMISSION							
Substation	\$ 8,765	\$ 8,600	\$ 12,160	\$ 22,407	\$ 23,390	\$ 29,023	\$ 17,023
Substation Circuit Breakers	\$ 2,600	\$ 900	\$ 2,600	\$ 3,050	\$ 3,350	\$ 3,350	\$ 3,350
Substation Transformers	\$ 7,500	\$ 5,300	\$ 8,500	\$ 7,000	\$ 8,500	\$ 7,500	\$ 7,500
Transmission Lines	\$ 4,208	\$ 1,100	\$ 3,140	\$ 4,275	\$ 6,500	\$ 10,250	\$ 7,850
CONTRIBUTIONS IN AID OF CONSTRUCTION	\$ (4,815)	\$ -	\$ -		\$ -	\$ -	
TOTAL - SUBSTATION & TRANSMISSION	\$ 18,258	\$ 15,900	\$ 26,400	\$ 36,732	\$ 41,740	\$ 50,123	\$ 35,723
DISTRIBUTION SYSTEM							
Apartments	\$ 657	\$ 500	\$ 710	\$ 724	\$ 739	\$ 754	\$ 769
Def. Cable/Trans Replace	\$ 10,000	\$ 1,000	\$ 6,800	\$ 11,800	\$ 11,800	\$ 11,800	\$ 11,800
Demolition	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Emergency Maintenance	\$ 5,734	\$ 5,500	\$ 5,857	\$ 5,958	\$ 6,076	\$ 6,198	\$ 6,321
General Power Service	\$ 4,798	\$ 4,500	\$ 12,901	\$ 20,503	\$ 20,913	\$ 21,331	\$ 21,758
General Power Service S/D	\$ -	\$ -	\$ 8	\$ 9	\$ 9	\$ 9	\$ 9
Mobile Home Park	\$ -	\$ -	\$ 27	\$ 27	\$ 28	\$ 28	\$ 29
Leased Outdoor Lighting	\$ 1,100	\$ 1,100	\$ 443	\$ 452	\$ 461	\$ 470	\$ 480
Reconstruct to Multi-phase	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Distribution Automation	\$ 26,500	\$ -	\$ 6,000	\$ 22,000	\$ 34,000	\$ 34,000	\$ 34,000
Line Reconstruction	\$ 2,021	\$ 1,500	\$ 3,675	\$ 3,375	\$ 3,375	\$ 3,375	\$ 3,375
Mobile Home not in Park	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Multiple-Unit Gen Power	\$ 309	\$ 300	\$ 305	\$ 311	\$ 318	\$ 324	\$ 330
New Circuits	\$ 9,151	\$ 5,000	\$ 4,675	\$ 2,500	\$ 9,000	\$ 16,000	\$ 8,000
Voltage Conversion	\$ 20	\$ -	\$ 20	\$ 20	\$ 20	\$ 1,625	\$ 3,250
Operations Maintenance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Planned Maintenance	\$ 906	\$ 9,300	\$ 9,486	\$ 9,676	\$ 9,869	\$ 10,067	\$ 10,268
Distribution Pole Replacement	\$ 3,000	\$ -	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000
Tree Trimming	\$ 5	\$ -	\$ 5	\$ 5	\$ 5	\$ 5	\$ 5
Relocate at Customer Req	\$ 5,125	\$ 5,100	\$ 5,916	\$ 4,825	\$ 4,859	\$ 2,393	\$ 2,429
Residential S/D	\$ 33	\$ 30	\$ 126	\$ 129	\$ 131	\$ 134	\$ 136
Residential Svc in S/D	\$ 115	\$ 100	\$ 70	\$ 71	\$ 73	\$ 74	\$ 76
Residential Svc not S/D	\$ 1,226	\$ 1,200	\$ 1,431	\$ 1,460	\$ 1,489	\$ 1,519	\$ 1,549
Res Svc in Apt/Mobile Home Community	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
JT-Apartments	\$ 69	\$ 50	\$ 40	\$ 41	\$ 42	\$ 43	\$ 44
JT-Resident S/D	\$ 2,784	\$ 2,700	\$ 2,227	\$ 2,271	\$ 2,317	\$ 2,363	\$ 2,410
JT-Resident Svc not S/D	\$ 3	\$ -	\$ 5	\$ 6	\$ 6	\$ 6	\$ 6
JT-Residential Svc in S/D	\$ 508	\$ 500	\$ 583	\$ 595	\$ 607	\$ 619	\$ 631
JT-Res Svc om Apt/Mobile Home Comm	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Shared Use contract	\$ 1,000	\$ -	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000
Storm Restoration	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Street Improvements	\$ 5,365	\$ 2,500	\$ 8,875	\$ 2,870	\$ 1,300	\$ 1,300	\$ 1,300
Street Light Maintenance	\$ 2,342	\$ 2,000	\$ 2,040	\$ 2,081	\$ 2,122	\$ 2,165	\$ 2,208
Street Lights Install	\$ 2,070	\$ 2,000	\$ 10,100	\$ 7,080	\$ 4,000	\$ 4,000	\$ 4,000
Temporary Service	\$ 154	\$ -	\$ 562	\$ 573	\$ 584	\$ 596	\$ 608
Previously Capitalized items - Capacitor Banks	\$ 75	\$ -	\$ 575	\$ 575	\$ 575	\$ 575	\$ 575
Previously Capitalized Items - Transformers	\$ 6,111	\$ 3,000	\$ 6,034	\$ 6,155	\$ 6,278	\$ 6,403	\$ 6,531
Previously Capitalized Items - Meters	\$ 1,903	\$ 500	\$ 984	\$ -	\$ -	\$ -	\$ -
Communication Towers	\$ 1,000	\$ -	\$ -			\$ -	\$ -
Contributions in Aid of Construction	\$ (14,775)	\$ (14,000)	\$ (28,006)	\$ (34,042)	\$ (38,200)	\$ (28,361)	\$ (24,526)
TOTAL - DISTRIBUTION SYSTEM	\$ 79,308	\$ 34,380	\$ 66,476	\$ 76,049	\$ 86,794	\$ 103,814	\$ 102,371

2020 Electric Capital Summary

DESCRIPTION	2019 ORIGINAL BUDGET	2019 REVISED BUDGET	2020 BUDGET	2021 PROJECTION	2022 PROJECTION	2023 PROJECTION	2024 PROJECTION
GENERAL PLANT							
Purchase of Land	\$ 350	\$ -	\$ 1,200	\$ 350	\$ 350	\$ 350	\$ 350
Buildings/Structures	\$ 7,889	\$ 881	\$ 779	\$ 9,860	\$ 43,857	\$ 28,055	\$ 50
Capital Security Automation	\$ 3,102	\$ 3,102	\$ 4,403	\$ 2,634	\$ 2,053	\$ 1,512	\$ 300
Lab and Test	\$ 362		\$ 268	\$ 282	\$ 1,296	\$ 311	\$ 326
Tools and Equipment	\$ 33	\$ -	\$ 31	\$ 35	\$ 39	\$ 41	\$ 43
Utility Monitoring	\$ 1,600	\$ 1,600	\$ 1,275	\$ 950	\$ 300	\$ 900	\$ 900
Communication Equip	\$ 76	\$ 41	\$ 79	\$ 79	\$ 79	\$ 79	\$ 79
Communication Towers	\$ 12,077	\$ -	\$ 14,119	\$ 800	\$ 800	\$ 800	\$ 800
Telecommunication Network	\$ 2,572	\$ -	\$ 3,223	\$ 2,216	\$ 2,216	\$ 2,216	\$ 2,216
Fleet Capital Power Operated Equipment	\$ 7,110	\$ 4,272	\$ 2,009	\$ 2,069	\$ 2,131	\$ 2,195	\$ 2,261
Transportation Equipment	\$ 4,178	\$ 214	\$ 2,633	\$ 2,712	\$ 2,794	\$ 2,878	\$ 2,964
Data Processing	\$ 3,235	\$ 1,736	\$ 2,556	\$ 4,040	\$ 6,540	\$ 3,540	\$ 3,540
IS/IT Projects	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CIS Development	\$ 14,811	\$ 7,947	\$ 7,994	\$ 5,400	\$ 3,000	\$ 3,000	\$ 3,000
Business Continuity	\$ 5,794	\$ 3,109	\$ 3,122	\$ 1,700	\$ 1,700	\$ 1,700	\$ 1,700
Contingency Fund - General Plant	\$ 200	\$ -	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200
TOTAL - GENERAL PLANT	\$ 63,389	\$ 22,902	\$ 43,891	\$ 33,328	\$ 67,354	\$ 47,776	\$ 18,729
Delayed Cost Allocations		\$ (13,182)	\$ (26,793)				
TOTAL - ELECTRIC DIVISION	\$ 160,955	\$ 60,000	\$ 109,974	\$ 146,108	\$ 195,889	\$ 201,713	\$ 156,824

2020 GAS 5-YEAR CAPITAL IMPROVEMENT PROGRAM

GAS DIVISION

DESCRIPTION	2019 BUDGET	REVISED BUDGET	2020 PROJECTION	2021 PROJECTION	2022 PROJECTION	2023 PROJECTION	2024 PROJECTION
PRODUCTION SYSTEM							
LNG - Processing Facilities	\$ 175	\$ 175	\$ 175	\$ 175	\$ 500	\$ 175	175
CNG Stations	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	-
TOTAL PRODUCTION SYSTEM	\$ 175	\$ 175	\$ 175	\$ 175	\$ 500	\$ 175	\$ 175
DISTRIBUTION SYSTEM							
Apartments	\$ 1	\$ 1	\$ -	\$ -	\$ -	\$ -	\$ -
Demolition	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Emergency Maintenance	\$ 1,500	\$ 1,000	\$ 1,520	\$ 1,547	\$ 1,578	\$ 1,610	\$ 1,642
Gas Main-Svc Repl (DOT)	\$ 4,900	\$ 4,500	\$ 5,040	\$ 5,640	\$ 5,640	\$ 5,140	\$ 5,140
Gate Stations	\$ -	\$ -	\$ -	\$ -	\$ 1,500	\$ 1,500	\$ -
General Power S/D	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
General Power Service	\$ 1,827	\$ 1,827	\$ 2,522	\$ 1,042	\$ 1,063	\$ 1,084	\$ 1,106
Mobile Home Park	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Multiple-Unit Gen Power	\$ 40	\$ 40	\$ 62	\$ 63	\$ 64	\$ 65	\$ 67
New Gas Main	\$ 1,736	\$ 1,325	\$ 500	\$ 250	\$ 813	\$ 250	\$ 250
Trans Pipeline/Facilities	\$ 9,500	\$ 700	\$ 2,500	\$ 2,400	\$ 2,618	\$ 1,500	\$ 12,500
Purchase of Land	\$ 975		\$ 435	\$ 75	\$ 75	\$ 75	\$ 75
Operations Maintenance	\$ -		\$ -	\$ -	\$ -	\$ -	\$ -
Planned Maintenance	\$ -	\$ 5,017	\$ 4,800	\$ 4,896	\$ 4,994	\$ 5,094	\$ 5,196
Regulator Stations	\$ 1,000	\$ 400	\$ 1,000	\$ 1,100	\$ 1,100	\$ 1,100	\$ 1,100
Relocate at Customer Req	\$ 50	\$ 50	\$ 171	\$ 174	\$ 178	\$ 182	\$ 185
Residential Svc in S/D	\$ -	\$ -	\$ 2	\$ 2	\$ 2	\$ 2	\$ 2
Residential Svc not S/D	\$ 227	\$ 227	\$ 655	\$ 668	\$ 682	\$ 695	\$ 709
Residential Svc S/D	\$ 4	\$ 4	\$ 15	\$ 15	\$ 15	\$ 16	\$ 16
Street Improvements	\$ 2,260	\$ 2,260	\$ 3,571	\$ 1,500	\$ 1,500	\$ 1,500	\$ 1,500
JT-Apartments	\$ 6	\$ 6	\$ 27	\$ 28	\$ 28	\$ 29	\$ 29
JT-Resident S/D	\$ 1,129	\$ 1,129	\$ 978	\$ 998	\$ 1,017	\$ 1,038	\$ 1,059
JT-Resident Svc not S/D	\$ -	\$ -	\$ 3	\$ 3	\$ 3	\$ 3	\$ 3
JT-Resident in S/D	\$ -	\$ -	\$ 379	\$ 387	\$ 394	\$ 402	\$ 410
JT-Resident in Apt/Mobile Home Comm	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
JT-Relocate at Customer Request	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Previously Capitalized Items - Meters & Metering Equipment	\$ 11,760	\$ 11,760	\$ 1,363	\$ -	\$ -	\$ -	\$ -
Contributions in Aid of Construction	\$ (11,265)	\$ (4,304)	\$ (4,679)	\$ (3,270)	\$ (3,320)	\$ (3,372)	\$ (3,424)
TOTAL DISTRIBUTION SYSTEM	\$ 25,650	\$ 25,942	\$ 20,863	\$ 17,518	\$ 19,945	\$ 17,913	\$ 27,565
GENERAL PLANT							
Buildings/Structures	\$ 4,033	\$ 710	\$ 2,653	\$ 11,365	\$ 3,448	\$ 7,090	\$ 18,477
Audio Visual	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capital Security Automation	\$ 983	\$ -	\$ 960	\$ 152	\$ 227	\$ 86	\$ 80
Furniture & Fixtures	\$ 143	\$ 72	\$ 467	\$ -	\$ -	\$ -	\$ -
Tools and Equipment	\$ 83	\$ -	\$ 110	\$ 115	\$ 121	\$ 127	\$ 133
Tools and Equipment - Common	\$ 305	\$ -	\$ 222	\$ 233	\$ 245	\$ 257	\$ 270
Fleet Capital Transportation & Power Operated Equipment - Gas	\$ 3,704	\$ 104	\$ 2,843	\$ 2,928	\$ 3,016	\$ 3,106	\$ 3,199
Fleet Capital Transportation Equipment & Power Operated Equipment - Common	\$ 3,074	\$ 627	\$ 1,750	\$ 1,802	\$ 1,856	\$ 1,912	\$ 1,969
Automated Fueling System	\$ 100	\$ -	\$ 60	\$ 60	\$ 60	\$ 60	\$ 60
Data Processing	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
IS/IT Projects	\$ 260	\$ 560	\$ 196	\$ 1,000	\$ -	\$ -	\$ -
Contingency Fund - General Plant	\$ 200	\$ -	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200
TOTAL - GENERAL PLANT	\$ 12,885	\$ 2,073	\$ 9,459	\$ 17,855	\$ 9,172	\$ 12,838	\$ 24,389
Delayed Cost Allocations		\$ (2,190)	\$ (6,419)				
TOTAL - GAS DIVISION	\$ 38,710	\$ 26,000	\$ 24,078	\$ 35,549	\$ 29,618	\$ 30,927	\$ 52,129

2020 WATER 5-YEAR CAPITAL IMPROVEMENT PROGRAM

WATER DIVISION

DESCRIPTION	2019 BUDGET	2019 REVISED BUDGET	2020 BUDGET	2021 PROJECTION	2022 PROJECTION	2023 PROJECTION	2024 PROJECTION
PRODUCTION SYSTEM							
Overhead Storage Tanks	\$ -	\$ -	\$ 950	\$ -	\$ -	\$ -	\$ -
Production Wells	\$ 9,640	\$ 1,800	\$ 4,323	\$ 6,070	\$ 6,070	\$ 6,070	\$ 6,070
Pumping Stations	\$ 16,150	\$ 2,500	\$ 7,299	\$ 7,951	\$ 32,950	\$ 25,435	\$ 20,495
Underground Storage Reservoirs	\$ 3,740	\$ -	\$ 4,000	\$ 2,500	\$ -	\$ -	\$ -
Purchase of Land	\$ 95	\$ -	\$ 75	\$ 75	\$ 75	\$ 75	\$ 75
Operations Maintenance	\$ -	\$ -	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000
Contingency Fund - Production system	\$ 50	\$ -	\$ 50	\$ 50	\$ 50	\$ 50	\$ 50
SUBTOTAL - PRODUCTION SYSTEM	\$ 29,675	\$ 4,300	\$ 17,696	\$ 17,646	\$ 40,145	\$ 32,630	\$ 27,690
SUBTOTAL - BLDGS. AND STRUCTURES	\$ 2,343	\$ 949	\$ 6	\$ 1,514	\$ 2,960	\$ 570	\$ -
TOTAL PROD. SYSTEM w/BLDGS & STRUCT.	\$ 32,018	\$ 5,249	\$ 17,702	\$ 19,160	\$ 43,105	\$ 33,200	\$ 27,690
DISTRIBUTION SYSTEM							
Apartments	\$ -	\$ -	\$ 50	\$ 51	\$ 52	\$ 54	\$ 55
Booster Stations	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Emergency Maintenance	\$ 3,137	\$ 3,100	\$ 3,212	\$ 3,265	\$ 3,330	\$ 3,397	\$ 3,465
General Power Service	\$ 2,928	\$ 2,900	\$ 3,546	\$ 3,617	\$ 3,690	\$ 3,764	\$ 3,839
New Water Main	\$ 7,399	\$ 1,500	\$ 3,089	\$ 2,594	\$ 2,339	\$ 2,349	\$ 2,349
Lead Service Replacement	\$ -	\$ -	\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500
Planned Maintenance	\$ -	\$ 2,500	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000
Relocate at Customer Req	\$ 75	\$ 75	\$ 282	\$ 288	\$ 293	\$ 299	\$ 305
Residential S/D	\$ 66	\$ 66	\$ 246	\$ 251	\$ 256	\$ 261	\$ 266
Residential Svc in S/D	\$ 122	\$ 122	\$ 338	\$ 345	\$ 352	\$ 359	\$ 366
Residential Svc not S/D	\$ 276	\$ 276	\$ 318	\$ 324	\$ 330	\$ 337	\$ 344
Street Improvements	\$ 2,415	\$ 1,000	\$ 2,820	\$ 2,350	\$ 2,350	\$ 2,350	\$ 2,350
Previously Capitalized Items - Meters	\$ 5,291	\$ 5,291	\$ 572	\$ -	\$ -	\$ -	\$ -
Contributions in Aid of Construction	\$ (3,957)	\$ (4,005)	\$ (2,975)	\$ (3,034)	\$ (3,095)	\$ (3,157)	\$ (3,200)
TOTAL - DISTRIBUTION SYSTEM	\$ 17,752	\$ 12,825	\$ 16,999	\$ 15,551	\$ 15,398	\$ 15,512	\$ 15,638
GENERAL PLANT							
Buildings/Structures	\$ 560	\$ -	\$ 713	\$ 260	\$ 200	\$ -	\$ -
Capital Security Automation	\$ 466	\$ 466	\$ 245	\$ 138	\$ 56	\$ 46	\$ 52
Fleet Capital Power Operated Equipment	\$ 102	\$ 35	\$ 86	\$ 88	\$ 91	\$ 94	\$ 96
Transportation Equipment	\$ 2,056	\$ 112	\$ 1,732	\$ 1,784	\$ 1,837	\$ 1,892	\$ 1,949
IS/IT Projects Water		\$ -	\$ 250	\$ -	\$ -	\$ -	\$ -
Tools and Equipment	\$ 60	\$ -	\$ -	\$ 0	\$ 0	\$ 0	\$ 0
Lab Equipment	\$ 80	\$ -	\$ 355	\$ -	\$ -	\$ -	\$ -
Contingency Fund - General Plant	\$ 200	\$ -	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200
TOTAL - GENERAL PLANT	\$ 3,524	\$ 613	\$ 3,580	\$ 2,470	\$ 2,384	\$ 2,232	\$ 2,297
Delayed Cost Allocations		\$ (3,687)	\$ (7,657)				
TOTAL - WATER DIVISION	\$ 53,294	\$ 15,000	\$ 30,625	\$ 37,181	\$ 60,888	\$ 50,944	\$ 45,626

NOTES FOR PAGE 3—Capital Expenditures Budget

Total Capital Expenditures

3-1	Total Capital Expenditures	Expected capital spend in 2020 budget year.
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NOTES FOR PAGE 4—INCOME & EXPENSE COMPARISON

Operating Revenue

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

Operating Expense

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

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

Maintenance Expense

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

Other Operating Expense

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

Income

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

Debt Expense

4-22	Interest Expense - Existing Long-Term Debt	Bond interest payments due 06-01-2020 and 12-01-2020 per the bond debt schedules are funded in equal monthly installments in 2020.
4-23	Amortization of Debt Discount and Expense	This represents the spreading of bond issuance costs over the life span of the bond series rather than recognizing such costs all at the time of sale.
4-24	Contributions in Aid of Construction	Contributions in aid of construction are the donations or contributions of cash, services, or property from states, municipalities, or other governmental agencies, individuals, and others for construction purposes.

NOTES FOR PAGE 5—SOURCES AND APPLICATION OF FUNDS

Source of Funds

5-1	Change in Net Position	Please see Budget page 4.
5-2	Depreciation Charged to Operating Income	Please see Appendix 4-14.
5-3	Depreciation Charged to Other Accounts	Depreciation charged to other accounts is the annual depreciation for transportation and power operated equipment. Depreciation on these plant items is charged to a clearing account and used in the equipment rate calculations.
5-4	Amortization of Legacy Meters	Non-cash expense related to amortization charges related to meter expenditures.
5-5	Amortization of Software	Non-cash expense related to amortization charges related to software expenditures.
5-6	Salvage	Salvage is the amount received for property retired from plant in service. The property may be sold for
5-7	Debt Issuance	Expected debt issuance in the Electric Division for the 2020 budget year.

Application of Funds

5-8	Capital Expenditures	Please see Budget page 6.
5-9	Retirement of Long-Term Debt	Bond principal amounts due 12-01-2020 per the bond debt schedules are funded in equal monthly
5-10	Pollution Remediation Liability	Per Governmental Accounting Standards Board (GASB) 49 requirements, obligations pertaining to

NOTES FOR PAGE 6—CAPITAL EXPENDITURES

Substation and Transmission

6-1	Substation	Please see Appendix 7-1 through 7-2.
6-2	Substation Transformers	Please see Appendix 7-18 through 7-20.
6-3	Substation Circuit Breakers	Please see Appendix 7-21 through 7-29 .
6-4	Transmission Lines	Please see Appendix 7-13 through 7-17 .
6-5	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.

Distribution System**Major Projects**

6-6	Residential Service in S/D	All subdivisions that are fed internally by overhead electric primary lines.
6-7	Residential Service Not in S/D	Property not in subdivisions fed internally by overhead electric primary lines.
6-8	Residential S/D	Other property not in subdivisions fed internally by overhead electric primary lines.
6-9	Apartments	All apartments and mobile home communities that are fed internally by overhead electric primary lines.
6-10	General Power Service	Commercial properties that are fed internally by overhead or underground electric primary lines
6-11	General Power S/D	Commercial properties in subdivisions that are fed internally by overhead or underground electric primary lines
6-12	Mobile Home Park	All apartments and mobile home communities that are fed internally by overhead electric primary lines.
6-13	Ranchette	All Ranchette style homes that are fed internally by electric primary lines.
6-14	Temporary Service	Services used for temporary construction
6-15	Res Svc In Apt/Mobile Home Comm	All apartments and mobile home communities that are fed internally by underground electric primary lines.
6-16	Mobile Home Not In Park	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	Multiple Unit General Power	Commercial properties and apartments that are fed internally by overhead or underground electric primary lines
6-18	Relocate At Customer Request	This budget category provides for the expenses incurred at customers request for facilities to be relocated.
6-19	Street Improvements	This budget category provides for the expenses incurred when City, State and Federal Street Improvements dictate that facilities must be relocated. Please see Appendix 8-18 through 8-25.
6-20	New Circuits	Please see Appendix 8-7 through 8-14 .
6-21	Voltage Conversion	Please see Appendix .
6-22	Reconstruct To Multi Phase	This category describes projects whereby existing single phase distribution lines are rebuilt to provide three phase power, typically when an existing overhead single phase line serving mostly residential customers needs to be upgraded to serve new customers requiring three phase power.
6-23	Line Reconstruction/Remove Idle Facilities	This category describes projects whereby existing distribution lines are improved and/or removed. These projects can include instances where existing circuits are rebuilt to create ties to other circuits to improve reliability to customers; conductors are upgraded to increase the current carrying ability of the circuit; devices such as switches, voltage regulators, capacitors, or reclosers are added to a circuit to improve
6-24	Defect Cable/Transformer Replace	This category describes the systematic retrofitting of the Division's Underground Residential Distribution system. The cable is replaced as it reaches end-of-life as determined by in service failures. Obsolete transformers and other distribution hardware are also replaced in this category. Cable replacement was initiated in 1982.
6-25	Underground Cable Replacement	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.
6-26	Distribution Poles	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	Distribution Automation	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 2020 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 2020 budget year.
6-30	Street Light Maintenance	The 2020 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
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
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
	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	Buildings and Structures	Please see Appendix 9-2 through 9-5.
6-48	Security Automation	Please see Appendix 9-6.
6-49	Land Purchase	Please see Appendix 9-1.
6-50	Fleet Capital Power Operated	Please see Appendix 9-7.
6-51	Transportation Equipment	Please see Appendix 9-8.
6-52	Tools & Equipment	Please see Appendix 9-11.
6-53	Lab & Test	Please see Appendix 9-10.
6-54	Communication Equipment	Please see Appendix 9-9.
6-55	Communication Towers	Please see Appendix 9-12 through 9-13.
6-56	Telecommunication Network	Please see Appendix 9-14 through 9-18.
6-57	Utility Monitoring	Please see Appendix 10-5.
6-58	Customer Information System Development	Please see Appendix 10-1 through 10-7.
6-59	Business Continuity	Please see Appendix 10-8 through 10-13.
6-60	Purchase of Data Processing Equipment	Please see Appendix 10-14 through 10-21.
6-61	IS/IT Projects	No expenditures planned for the 2020 budget year.
6-62	Contingency Fund	Please see Appendix 10-22.
6-63	Delayed Cost Allocations	These are funds budgeted in the current year for items that may arrive late from the previous year's budget.

NOTES FOR PAGE 7-CAPITAL EXPENDITURES BUDGET

Substation & Transmission**Substation**

7-1	Purchase Remote Racking System for Breakers in (12) Metal Clad Switchgear	Description/Location	Various locations
		Purpose/Necessity	Upgrade/update of existing infrastructure with insufficient fault current capability.
7-2	TVA CC Plant/Allen Substation Improvements	Description/Location	TVA CC Plant/Allen Substation Improvements
		Purpose/Necessity	Various locations
7-3	Substation 4 Beautification (City of Memphis)	Description/Location	Substation 4 Beautification (City of Memphis)
		Purpose/Necessity	Install new equipment at Substation 4 Beautification
7-4	Replace 161kV CVT @Substation 42	Description/Location	Replace 161kV CVT @Substation 42
		Purpose/Necessity	To change out PCB contaminated capacitor banks
7-5	Refurbish Station Service, Transformer Storage AC, Power & lightning Substation 32	Description/Location	Refurbish Station Service, Transformer Storage AC, Power & lightning Substation 32
		Purpose/Necessity	Install new equipment at Substation 32
7-6	Install TRV Capacitors	Description/Location	Install TRV Capacitors
		Purpose/Necessity	Install new TRV Capacitors various locations
7-7	Portable Generator	Description/Location	Portable Generator
		Purpose/Necessity	Replace Portable Generators various locations
7-8	Other Miscellaneous Replace/Install	Description/Location	Other Miscellaneous Replace/Install
		Purpose/Necessity	Replace/Install Miscellaneous equipment various locations
7-9	Install Breaker Fail Protection Scheme various locations	Description/Location	Install Breaker Fail Protection Scheme various locations
7-10	Replace RTU's various locations	Description/Location	Replace RTU's various locations
		Purpose/Necessity	Replace failed breakers
7-11	Replace relays various locations	Description/Location	Replace capacitor various locations
		Purpose/Necessity	Replace failed breakers
7-12	Replace capacitor banks various locations	Description/Location	Replace capacitor banks various locations
		Purpose/Necessity	Replace failed breakers
7-13	Replace switches various locations	Description/Location	Replace switches various locations
7-14	Replace batteries various locations	Description/Location	Replace batteries various locations
7-15	Animal Mitigation	Description/Location	Various locations
		Purpose/Necessity	Protect electric equipment from outages due to animals
7-16	Seismic Retrofit of Non-Structural Substation	Description/Location	Various locations
		Purpose/Necessity	Nonstructural anchorage, bracing or restraints for nonstructural control and metering equipment in substation control and oil buildings and in the electric operations/SCADA building. (2007 Multi-Hazard Risk Assessment)

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

7-17	Transmission Circuit Breaker Replacements	Description/Location	Transmission Circuit Breaker Replacements
		Purpose/Necessity	Replace overstressed circuit breakers, required due to NERC standard TPL-001.
7-18	Install/Upgrade Digital Fault Recorders	Description/Location	Install/Upgrade Digital Fault Recorders
		Purpose/Necessity	Needed for disturbance recording due to NERC standard PRC-002.
7-19	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.
7-20	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.

NOTES FOR PAGE 7-CAPITAL EXPENDITURES BUDGET (Continued)

Substation/Transmission Projects (Continued)**Substation Transformers**

7-21	Replace 23/12kV transformer banks 1157 & 1159 @ Substation 21	Description/Location	Substation #21, 290 E. Mallory
		Purpose/Necessity	Upgrade / update of existing aging infrastructure that is no longer adequate
7-22	Replace 161/23/12 kV transformer bank 32649@Substation 32	Description/Location	Substation # 4 67 Jackson
		Purpose/Necessity	Upgrade / update of existing aging infrastructure that is no longer adequate
7-23	Contingency Failed Transformers/Procure Spares	Description/Location	Various substations.
		Purpose/Necessity	Replacement of failed transformers at various substations

Substation Circuit Breakers

7-24	Replace Breakers Substation 21	Description/Location	Replace Breakers Substation 21
		Purpose/Necessity	Replace failed breakers
7-25	Replace 115 kV Breaker 4151 @ Substation 24	Description/Location	Replace 115 kV Breaker 4151 @ Substation 24
		Purpose/Necessity	Replace failed breakers
7-26	Replace 115 kV Breaker 4181 @ Substation 24	Description/Location	Replace 115 kV Breaker 4181 @ Substation 24
		Purpose/Necessity	Replace failed breakers
7-27	Replace 23 kV Breaker 7307 @ Substation 7	Description/Location	Replace 23 kV Breaker 7307 @ Substation 7
		Purpose/Necessity	Replace failed breakers
7-28	Replace 12 kV Breaker 6609 @ Substation 26	Description/Location	Replace 12 kV Breaker 7309 @ Substation 26
		Purpose/Necessity	Replace failed breakers
7-29	Replace 12 kV Breaker 4713 @ Substation 14	Description/Location	Replace 12 kV Breaker 4713 @ Substation 14
		Purpose/Necessity	Replace failed breakers
7-30	Replace 23 kV Breaker 4339 @ Substation 4	Description/Location	Replace 23 kV Breaker 4339 @ Substation 4
		Purpose/Necessity	Replace failed breakers
7-31	Contingency Replace Breakers	Description/Location	Various substations
		Purpose/Necessity	Replace failed breakers

NOTES FOR PAGE 8—CAPITAL EXPENDITURES BUDGET (Continued)

Substation/Transmission Projects (Continued)**Substation/Transmission Projects**

8-1	OPGW 42--23	Description/Location	Various Locations
		Purpose/Necessity	Install fiber for substation communications at various locations.
8-2	Steel Tower Inspection Program	Purpose/Necessity	Upgrade/update structure
		Description/Location	Steel Tower Inspection Program
		Purpose/Necessity	The purpose of this program is to inspect and perform a condition assessment of all ~2,600 steel 161 & 115 kV transmission structures (towers, poles, anchor bolts and concrete foundations) to determine the presence and extent of corrosion damage. The program will estimate the rate of future corrosion damage and compare with allowable cross-sectional area loss. Prioritized recommendations as to remediation will be made.
8-3	Misc. Projects (OPGW, Structure Replacements, etc.)	Description/Location	Various Locations
		Purpose/Necessity	Small fiber jobs, Structure replacements (aging)

Transmission - Reimbursable

8-4	TVA CC Transmission 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.
8-5	TVA Combined Cycle Plant -Horn Lake Line Transmission Improvements	Description/Location	Nouritech
		Purpose/Necessity	Upgrade/update of existing infrastructure with insufficient fault current capability.

NOTES FOR PAGE 8-CAPITAL EXPENDITURES BUDGET

Distribution System - Major ProjectsNew Circuits Out of Substations

8-6	Sub 89 Cabling	Description/Location	Substation 89 site
		Purpose/Necessity	To install getaway cables from Substation 89.
8-7	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
8-8	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
8-9	5492 E. Shelby Drive - Mendenhall to Hickory Hill (Sub 89 Ckt Ties)	Description/Location	5492 E. Shelby Drive - Mendenhall to Hickory Hill (Sub 89 Ckt Ties)
		Purpose/Necessity	Reliability and switching flexibility
8-10	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
8-11	Shelby Drive Underbuilds - Germantown Rd to Hacks Cross (Sub 28 to Sub 9)	Description/Location	Shelby Drive Underbuilds - Germantown Rd to Hacks Cross (Sub to
		Purpose/Necessity	Reliability and switching flexibility
8-12	Sub 46 Cabling	Description/Location	At existing Substation 46 site-- 4440 Millington Rd.
		Purpose/Necessity	To repair collapsed duct line at Substation 46
8-13	Reconfigure Circuit 15205	Description/Location	Near existing Substation 15 site-- 5127 Navy Road
		Purpose/Necessity	To reconfigure circuit 15205 based on Navy Base solar array.

Miscellaneous Reimbursable Projects

8-14	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.
8-15	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.
8-16	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 request

Street Improvement Projects

8-17	Eves Presley Corridor-Middle Segment (C/O)	Description/Location	Eves Presley Corridor-Middle Segment (C/O)
		Purpose/Necessity	Relocate utilities for proposed street improvement project by TDOT or municipalities
8-18	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-*19	Holmes Rd-Malone Rd to Lamar Ave	Description/Location	Holmes Rd-Malone Rd to Lamar Ave
		Purpose/Necessity	
8-20	Old Brownsville Rd, Covington Pike to Kirby Whitten-widening (SP10/08)	Description/Location	Old Brownsville Rd
		Purpose/Necessity	Relocate utilities for proposed street improvement project by TDOT or municipalities
8-21	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
8-22	Germantown Road @ Wolf River.Blvd (C/O)	Description/Location	
		Purpose/Necessity	Relocate utilities for proposed street improvement project by TDOT or municipalities
8-23	Raleigh Millington bridge over Big Creek	Description/Location	Raleigh Millington bridge over Big Creek
		Purpose/Necessity	Relocate utilities for proposed street improvement project by TDOT or municipalities
8-24	Mudville Road Bridge, over Big Creek Proj.# 100111	Description/Location	Mudville Road Bridge, over Big Creek Proj.# 100111
		Purpose/Necessity	Relocate utilities for proposed street improvement project by TDOT or municipalities

NOTES FOR PAGE 9—CAPITAL EXPENDITURES BUDGET

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

9-1	Purchase of Land	Description/Location	Land purchase or the acquisition of land rights for distribution and transmission line facilities.
		Purpose/Necessity	To accommodate electric facilities, transmission lines, feeder circuits, etc.
9-2	Replace Roofs - Various Substations	Description/Location	Various Substations
		Purpose/Necessity	This project was identified in the Master Roof Plan to be replaced at this time due to increased maintenance, potential leaking, and projected life expectancy.

Electrical & Systems Operations

9-3	Radio Tower Bldg.: Replace 874 sq. ft. roof	Description/Location	Electric & Systems Operations
		Purpose/Necessity	This project was identified in the Master Roof Plan to be replaced at this time due to increased maintenance, potential leaking, and projected life expectancy.

Beale Street Landing Garage

9-4	Elevator System Modernization	Description/Location	Beale Street Landing Garage
		Purpose/Necessity	The existing elevator is original to the building and is currently experiencing may maintenance problems.

Netters Business Operations Center

9-5	UPS Battery Replacement	Description/Location	Netters Business Operations Center
		Purpose/Necessity	This is a periodic upgrade to assure UPS system is reliable

Security Automation

9-6	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.

NOTES FOR PAGE 9—CAPITAL EXPENDITURES BUDGET (Continued)

General Plant (Continued)

Fleet Capital Power Operated Equipment

9-7	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. Additions are evaluated based on

Transportation Equipment

9-8	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

9-9	Communication Equipment	Description/Location	Control Area for Communication Equipment
		Purpose/Necessity	To satisfy the Division needs for Electric Communication Equipment for the 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

Laboratory & Test Equipment

9-10	Lab & Test Equipment	Description/Location	Control Area for Lab & Test Equipment
		Purpose/Necessity	To satisfy the Division needs for Electric Laboratory Equipment. 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

Tools and Equipment

9-11	Tools & Equipment	Description/Location	Control Area for Tool & Test Equipment
		Purpose/Necessity	To satisfy the Division needs for Electric Laboratory Equipment . The replacement policy is broken down into the following categories: 1. Lost or Stolen; 2. Damaged Beyond Repair; 3. Not Repairable/No Abuse; 4. Obsolete

Communication Tower Projects

Microwave/Mobile Radio

9-12	Microwave/Mobile Radio	Description/Location	Reconfigure microwave loop for Netters radio tower
		Purpose/Necessity	Installation of Netters radio tower requires reconfiguration of microwave loop

SCADA & Distribution Automation

9-13	900 MHz Radios and DA Upgrades	Description/Location	Replace obsolete 900 MHz radios
		Purpose/Necessity	Maintain communications for SCADA and Distribution Automation

NOTES FOR PAGE 9—CAPITAL EXPENDITURES BUDGET (Continued)

General Plant (continued)Telecom Network ProjectsFiber Optic Cable & Equipment

9-14	System Automation	Description/Location	To install communications and hardware to allow for system automated operation to provide for more advanced restoration capabilities.
		Purpose/Necessity	Miscellaneous Projections
9-15	Fiber Optic Multiplexers	Description/Location	Purchase and install fiber optic end equipment (places light on the optical fibers and "makes them work") at various locations.
		Purpose/Necessity	Enable communications over proposed fiber optic cable.
9-16	Fiber Optic Cable and Equipment	Description/Location	Install fiber optic cable at various locations.
		Purpose/Necessity	Provide fiber optic communications to specified facilities.

Voice Network

	Voice Network (CO)	Description/Location	Replace Administration Building telephone switch
9-17		Purpose/Necessity	Replace obsolete switch; reconfigure voice system to have three "master" switches that provide service to all MLGW facilities instead of separate switches at each location.

Telecommunications System Growth

9-18	Telecommunications System Growth	Description/Location	Telecom systems growth - various locations. This is to cover unplanned and unforeseen Telecom expenditures that typically occur.
		Purpose/Necessity	Previous Telecom budgets had separate line items for systems growth in Mobile Radio, Fiber Optic, Microwave, Voice Recorder, Video Conferencing, Audio Conferencing, Voice System, etc. This item consolidates the separate items.

Utility Monitoring & Control Systems

9-19	System Backup Control & Communication Plan (CO)	Description/Location	SCADA and CARES Systems long-term development
		Purpose/Necessity	Support long-term development of SCADA and CARES systems which involves implementation of backup system, upgrade of SCADA communications systems which includes relocating communication paths from ESO to fiber ring.

NOTES FOR PAGE 10—CAPITAL EXPENDITURES BUDGET

Customer Information System Development

10-1	CIS Production Hardware & Software Upgrade (C/O)	Description/Location	CIS Upgrade Production HW & SW
		Purpose/Necessity	This will provide an upgrade to the CIS hardware and software (Oracle Database 12c and Linux Operating system). The current hardware and software is over 8 years old.
10-2	Mobile Dispatching System Replacement (CO)	Description/Location	Mobile Dispatching System Replacement & Expansion
		Purpose/Necessity	Replace the mobile dispatch system which is several releases behind and does not allow for MLGW to develop it's own functions within the software. Currently the vendor has to develop all functions.
10-3	IVR Replacement (CO)	Description/Location	The current IVR system does not allow MLGW to make its own changes. The vendor must make the changes to the IVR system. The new system would allow MLGW to make changes as needed to better meet customer needs and improve customer experience.
		Purpose/Necessity	To improve customer ease of use and experience.
10-4	Meter Data Management System (CO)	Description/Location	The Meter Data Management (MDM) system is an application that provides analytical tools, reports, calculates billing reads, and time of use billing and reports.
		Purpose/Necessity	To implement a primary application for meter data management.
10-5	Bill Gen Replacement	Description/Location	Replace the current BillGen system.
		Purpose/Necessity	GSA-3 customers may become Time Of Use (TOU) customers in October 2018. The current BillGen would not be able to handle these additional customers.
10-6	Annual Network Enhancements & upgrades	Description/Location	Annual Network Enhancements and upgrades
		Purpose/Necessity	To replace obsolete network devices that will not be covered by the manufacture or other vendors.
10-7	Electric Meter Test Board Replacement	Description/Location	The Electric Meter Area's capital budget for the purchase of electric metering equipment along with installation of revenue metering at the gate stations.
		Purpose/Necessity	Contributions in aid of construction are the donations or contributions of cash,

NOTES FOR PAGE 10-CAPITAL EXPENDITURES BUDGET (Continued)

General Plant (continued)Business Continuity

10-8	Annual Network Enhancements & upgrades (CO)	Description/Location	Annual Network Enhancements and upgrades (CO)
		Purpose/Necessity	To replace obsolete network devices that will not be covered by the manufacture or other vendors.
10-9	Data Center Enhancements (CO)	Description/Location	Data Center Upgrade and Enhancements (CO)
		Purpose/Necessity	To increase reliability and redundancy/failover of user access, applications and Customer satisfaction by adding additional network switches in the System Operations Data Center.
10-10	Data Center Upgrade (C/O)	Description/Location	Data Center Upgrade and Enhancements
		Purpose/Necessity	To increase reliability and redundancy/failover of user access, applications and Customer satisfaction by adding additional network switches in the System Operations Data Center.
10-11	Backup Expansion (CO)	Description/Location	Backup Expansion (CO)
		Purpose/Necessity	Our current backup system will need to be expanded to store additional backup data from the increase in corporate servers.
10-12	Network Security Enhancements	Description/Location	Network Security Enhancements
		Purpose/Necessity	Replace network security systems which have reached end of life.
10-13	Network Security Enhancements (C/O)	Description/Location	Network Security Enhancements
		Purpose/Necessity	Replace network security systems which have reached end of life.

General Plant (continued)Purchase of Data Processing Equipment

10-14	PC Equipment	Description/Location	PC equipment (above \$5000 unit cost) requested for various reasons
		Purpose/Necessity	PC equipment requested for various reasons including: additional functionality, laptops with docking stations to replace desktop PCs, and laptops needing replacement ahead of schedule due to software requirements.
10-15	Annual New/Replacement Servers/Win OS Upgrades (CO)	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.
10-16	Annual New/Replacement Servers/Win OS Upgrades	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.
10-17	Storage Area Network Upgrade	Description/Location	Upgrade the Storage Area Network (SAN) Fabric and EMC SAN
		Purpose/Necessity	The purpose is to upgrade the Storage Area Network (SAN) to allow for failover to the disaster recovery copy of the production virtual server environment. In the event of a disaster this project would allow all existing and future virtual servers located at the Netters Data Center to come online at the Administration building.
10-18	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.
10-19	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.
10-20	Work Center Wireless (outdoor)	Description/Location	Work Center Wireless (outdoor)
		Purpose/Necessity	To expand MLGW's wireless outdoor network at North, South, Hickory Hill and Brunswick service centers.
10-21	ArcGIS Mobile Viewer	Description/Location	Business Objects Upgrade
		Purpose/Necessity	Miscellaneous Projections
10-22	Contingency Fund - General Plant	Description/Location	This is an estimated budget amount to cover unforeseen emergency items that may arise in the current year.

NOTES FOR PAGE 12—INCOME & EXPENSE COMPARISON

Operating Revenue

12-1	Sales Revenue	This account includes projected revenue from the sale of natural gas to the residential, commercial, industrial, and interdepartmental customer classes.
12-2	Revenue Adjustment for Uncollectible	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.
12-3	Non-Sales Revenue	This account includes revenue from forfeited discounts (extra charges for payments received after net due date), plus rent charged for Gas Division property that is used by the Electric and Water Divisions, other miscellaneous revenue (e.g., fees for connecting/disconnecting service), and charges for transporting gas, CNG and LNG within the MLGW system for those industrial customers who arrange for purchase of their gas from suppliers other than MLGW.

Operating Expense

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

Maintenance Expense

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

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

Other Operating Expense

12-16	Depreciation Expense	The purpose of depreciation is to allocate the original cost of a fixed asset over its estimated useful
12-17	Payment in Lieu of Taxes	Payment in lieu of taxes is the amount paid to the municipalities in which MLGW has plant. The formula for payment in lieu of taxes is based on the Municipal Electric System Tax Equivalent Law of 1987 and the Municipal Gas Equivalent Law which became effective July 1, 1988. The tax
12-18	F.I.C.A. Taxes	This represents the 1.45% Medicare portion of Social Security Tax that is required to be paid on all MLGW employees hired after 03-31-1986.
12-19	Amortization of Leasehold Improvements	This account includes amortization charges related to expenditures on leased property where the service life of the improvements are terminable by action of the lease.
12-20	Amortization of Legacy Meters	This account includes amortization charges related to expenditures on meters.
12-21	Amortization of Software	This account includes amortization charges related to expenditures on software.

Income

12-22	Operating Income	Operating income is equal to operating revenue less total operating expense.
12-23	Other Income	This consists primarily of investment income and property rentals. It does not include any sales of
12-24	Reduction of Plant Recovered through CIAC	Contributions in aid of construction are the donations or contributions of cash, services, or property from states, municipalities, or other governmental agencies, individuals, and others for construction

Debt Expense

12-25	Interest Expense -Long Term Debt	Anticipated bond interest payments per the bond debt schedules.
12-26	Amortization of Debt Discount & Expense	This represents the spreading of bond issuance costs over the life span of the bond series rather than recognizing such costs all at the time of sale.
12-27	Contributions in Aid of Construction	Contributions in aid of construction are the donations or contributions of cash, services, or property from states, municipalities, or other governmental agencies, individuals, and others for construction purposes.

NOTES FOR PAGE 13—SOURCES AND APPLICATION OF FUNDS

Source of Funds

13-1	Change in Net Position	Please see Budget page 13.
13-2	Depreciation Charged to	Please see Appendix 13-16.
13-3	Depreciation Charged to Other Accounts	Depreciation charged to other accounts is the annual depreciation for transportation and power operated equipment. Depreciation on these plant items is charged to a clearing account and used
13-4	Amortization of Legacy Meters	Non-cash expense related to employee pension expenses above or below actual funding due to change in accounting principles.
13-5	Amortization of Software	Non-cash expense related to amortization charges related to software expenditures.
13-6	Salvage	Salvage is the amount received for property retired from plant in service. The property may be sold for scrap or returned to stores inventory for reuse.
13-7	Debt Issuance	Expected debt issuance in the Gas Division for the 2020 budget year.

Applications of Funds

13-8	Capital Expenditures	Please see Budget page 14.
13-9	Costs of Removal and Other Charges to the Reserve for	Cost of removal is the cost associated with demolishing, dismantling, tearing down or otherwise removing utility plant, including the cost of transportation and labor.
13-10	Retirement of Long-Term Debt	Bond principal amounts due 01-01-2020 per the bond debt schedules are funded in equal monthly installments during 2020.

NOTES FOR PAGE 14—CAPITAL EXPENDITURES BUDGET

Production System

14-1	Production System	LNG Processing Facilities- Purchase and installation of regeneration heating equipment,
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Distribution System

14-2	Residential Service in S/D	This budget category provides for the expenses incurred by the Gas Division for customer requests for service located in a subdivision.
14-3	Residential Service Not in S/D	This budget category provides for the expenses incurred by the Gas Division for customer requests for service not located in a subdivision.
14-4	Residential S/D	This budget category provides for the expenses incurred by the Gas Division for developer requests for gas facilities located in a subdivision.
14-5	Land Purchase	This budget category provides for the purchase of land rights that will be needed for Capital Budget Projects.
14-6	Apartments	This budget category provides for the expenses incurred by the Gas Division for developer requests for gas facilities for new apartment developments.
14-7	General Power Service	This budget category provides for the expenses incurred by the Gas Division for customer requests for new General Power Service.
14-8	General Power S/D	This budget category provides for the expenses incurred by the Gas Division for customer requests for new General Power Service located in a subdivision.
14-9	Mobile Home Park	This budget category provides for the expenses incurred by the Gas Division for developer requests for gas facilities located in a mobile home development.
14-10	Multiple-Unit General Power	This budget category provides for the expenses incurred by the Gas Division for customer requests for multiple units of new General Power Service by the same customer and general location.
14-11	Relocate At Customer Request	This budget category provides for the expenses incurred by the Gas Division for customer requests to relocate existing gas facilities.
14-12	Purchase of Meters	This budget category provides for the expenses incurred from buying new gas meters and reconditioning existing gas meters.
14-13	Street Improvements	This budget category provides for the expenses incurred when City, State and Federal Street Improvements dictate that facilities must be relocated. Please see Appendix 16-1 through 16-11.
14-14	Demolition	No expenditures planned for the 2020 budget year.
14-15	New Gas Main	This budget category provides for the expenses incurred for the installation of miscellaneous new gas mains and facilities.
14-16	Gas Main/Service Repl (D.O.T.)	This budget category provides for replacement of old cast iron main that requires excessive maintenance and that has a history of leaking. This is a 30 year project that began in 1991 and was requested by the TN Regulatory Authority to replace 330 miles. This budget category also provides for replacement of steel taps and associated services, if needed, that have a history of leaking. This is a program initiated by DIMP findings.
14-17	Transmission Pipelines and Facilities	This budget category provides for the expenses incurred for maintenance of cased gas transmission crossings required by regulatory changes, minor repair of transmission pipelines from scheduled inspections, and minor transmission improvements.
14-18	Regulator Stations	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.
14-19	Gate Stations	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.
14-20	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.
14-21	Operations Maintenance	This budget category provides for the expenses incurred by the Gas Division for customer requests for service located in a joint trench subdivision.
14-22	JT-Residential Service in S/D	This budget category provides for the expenses incurred by the Gas Division for customer requests for service located in a joint trench subdivision.

GAS DIVISION

NOTES FOR PAGE 14—CAPITAL EXPENDITURES BUDGET (Continued)

Distribution System (Continued)

14-23	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.
14-24	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.
14-25	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.
14-26	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.
14-27	Miscellaneous Emergency Construction	This budget line item provides for emergency repair work when leaks and cut facilities require immediate repair.
14-28	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

14-29	Buildings and Structures	Please see Appendix 16-16 through 17-16.
14-30	Security Automation	Please see Appendix 17-17 through 17-21.
14-31	Purchase of Furniture & Fixtures	Please see Appendix 17-22.
14-32	Audiovisual	No capital expenditures planned for the 2020 budget year.
14-33	Data Processing	No expenditures planned for the 2020 budget year.
14-34	IS/IT Projects	Please see Appendix 17-23.
14-35	Fleet Capital Common Power Operated Equip	Please see Appendix 18-1.
14-36	Fleet Capital Common Transportation Equip	Please see Appendix 18-2.
14-37	Fleet Gas Power Operated Equipment	Please see Appendix 18-3.
14-38	Fleet Gas Transportation Equipment	Please see Appendix 18-4.
14-39	Automated Fueling System	Please see Appendix 18-5.
14-40	Tools & Equipment	Please see Appendix 18-6.
14-41	Common Tools & Equipment	Please see Appendix 18-7.
14-42	Alternative Fueling Infrastructure	No expenditures planned for the 2020 budget year.
14-43	Contingency Fund - General Plant	Please see Appendix 18-8.

14-44	Delayed Cost Allocations	These are funds budgeted in the current year for items that may arrive late from the previous year's
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NOTES FOR PAGE 15—CAPITAL EXPENDITURES BUDGET

Production System

15-1	LNG Processing Facilities	Description/Location	
		Purpose/Necessity	Projects related to Capital Maintenance of the Capleville Liquefied Natural Gas Facility.

Distribution System- Major Projects

Street Improvements

15-2	Third Road-drainage improvements	Description/Location	Third Road-drainage 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.
15-3	Navy Road Streetscape-Phase 2, US-51 to Church	Description/Location	Navy Road Streetscape-Phase 2, US-51 to Church
		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	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.
15-5	Holmes Rd, Malone Rd to Lamar Ave.	Description/Location	Holmes Rd, Malone Rd to Lamar 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 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.
15-7	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.
15-8	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.
15-9	Raleigh Millington @ SR-385	Description/Location	Raleigh Millington @ SR-385
		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	Forest Street Campus Phase 1-Streets Improvement	Description/Location	Forest Street Campus Phase 1-Streets Improvement
		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	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.
15-12	Raleigh Millington bridge over Big Creek	Description/Location	Raleigh Millington bridge over Big Creek

GAS DIVISION

NOTES FOR PAGE 15—CAPITAL EXPENDITURES BUDGET (Continued)

		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.
15-13	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.
15-14	SP 08/14 New Allen @ Hawkins Mills TDOT	Description/Location	SP 08/14 New Allen @ Hawkins Mills TDOT
		Purpose/Necessity	Expenses incurred when City, State and Federal Street Improvements dictate that facilities must be relocated for the drainage, elevation changes and/or new sewer facilities.
15-15	SP 08/12 New Allen @ Ridgemont	Description/Location	SP 08/12 New Allen @ Ridgemont
		Purpose/Necessity	Expenses incurred when City, State and Federal Street Improvements dictate that facilities must be relocated for the drainage, elevation changes and/or new sewer facilities.

Transmission Pipelines and Facilities

15-16	18" XXHP Pipeline Replacement @ Covington Pike & LNRR	Description/Location	18" XXHP Pipeline Replacement @ Covington Pike & LNRR
		Purpose/Necessity	This budget line item provides for the expenses related to gas piping systems that are discovered to be unsafe due to corrosion defects, aged facilities, third party damages, or necessary relocations due to erosion problems for transmission as well as distribution.
15-17	12" XHP Pipeline Replacements - Brooks to McMullen	Description/Location	Pipeline Replacements
		Purpose/Necessity	This budget line item provides for the expenses related to gas piping systems that are discovered to be unsafe due to corrosion defects, aged facilities, third party damages, or necessary relocations due to erosion problems for transmission as well as distribution.
15-18	Transmission Work	Description/Location	Transmission Work
		Purpose/Necessity	This budget line item provides for the expenses related to Transmission Work 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.
15-19	12' PEMP Landfill Line, De-	Description/Location	12' PEMP Landfill Line, De-Commissioning
		Purpose/Necessity	This budget line item provides for the expenses related to gas piping systems that are discovered to be unsafe due to corrosion defects, aged facilities, third party damages, or necessary relocations due to erosion problems for transmission as well as distribution.

General Plant

GAS DIVISION

Buildings and Structures

NOTES FOR PAGE 15-CAPITAL EXPENDITURES BUDGET

South Service Center

15-20	Replace Truck Canopy Roof	Description/Location	South Service Center
		Purpose/Necessity	All roof replacement projects are targeted in the Facilities master plan based on expected life expectancy and existing maintenance issues.
15-21	Replace Storage Canopy Roof	Description/Location	South Service Center
		Purpose/Necessity	All roof replacement projects are targeted in the Facilities master plan

North Service Center

15-22	Asphalt Paving & Concrete Slabs/Drives (continued)	Description/Location	North Service Center
		Purpose/Necessity	This project was identified in the Master Plan. All asphalt drives, parking areas are in very bad shape. Also, there is a need to pave areas for safe movement of material.
15-23	Building Services #2 Replace DRAVO Heaters & Controls	Description/Location	North Service Center
		Purpose/Necessity	This project was recommended to store Building Services and Grounds' chemicals used for facility maintenance activities.
15-24	Building #1: Replace Roof-Top Unit	Description/Location	North Service Center
		Purpose/Necessity	All roof replacement projects are targeted in the Facilities master plan

Brunswick Service Center

15-25	Install Automated Gates & Replace Guard House	Description/Location	Brunswick Service Center
		Purpose/Necessity	The existing Guard house is extremely old and needs to be updated.
15-26	Canopy for Transmission	Description/Location	Brunswick Service Center
		Purpose/Necessity	This is an area request so they could work on larger trucks outside under cover.
15-27	Paving Upgrade	Description/Location	Brunswick Service Center
		Purpose/Necessity	This project was identified in the Master Plan. All asphalt drives, parking

Whitehaven Community Center

15-28	Replace Roofs	Description/Location	Whitehaven Community Center
		Purpose/Necessity	All roof replacement projects are targeted in the Facilities master plan

Administration Building

15-29	New Fire Pump	Description/Location	Administration Building
		Purpose/Necessity	Replace old fire pump per code enforcement.

NOTES FOR PAGE 16—CAPITAL EXPENDITURES BUDGET (Continued)

General Plant (Continued)

Buildings and Structures (Continued)

Choctaw Service Center

16-1	Replace HVAC Roof -Tops	Description/Location	Choctaw Service Center
		Purpose/Necessity	To store network transformers, protectors, and switches.
16-2	Security Fencing around Choctaw and new property	Description/Location	Choctaw Service Center
		Purpose/Necessity	Improve fencing to secure the center.
16-3	Furniture & Fixtures	Description/Location	Furniture & Fixtures
		Purpose/Necessity	To provide standardized audiovisual equipment for the Division, including the purchase of additions and replacements of cameras, data/video projectors, recorders, camcorders, color monitors, editing systems and other items to meet the Division's needs.

Security Automation

16-4	Gas-Security Automation	Description/Location	Gas-Security Automation
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16-5	Tools & Equipment	Description/Location	Division tools/equipment used for work in and around Shelby County.
		Purpose/Necessity	To purchase approved budget items, in order to provide equipment for employees to complete job assignments. Tools are considered replacements for the following reasons: i. Damaged beyond repair; ii. Worn from time/age/use, cost does not justify repair; iii. Lost/Stolen report submitted in a timely manner; iv. No longer suited for work being done, replace with a new model; v. Safety hazard; vi. Repair cost is at or above 50% of cost of new tool; vii. High occurrence of maintenance that creates excessive downtime.
16-6	Fleet Capital Common 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. Additions are evaluated based on justification request and proper approval.
16-7	Fleet Capital Common 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 areas' needs. Additions are evaluated based on justification request and proper approval.
16-8	Fleet Gas Power Operated Equipment	Description/Location	Division vehicles/equipment used for work in and around Shelby County.
		Purpose/Necessity	To purchase approved budget items in order to provide equipment for 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.
16-9	Fleet Gas Transportation Equipment	Description/Location	Division vehicles/equipment used for work in and around Shelby County.
		Purpose/Necessity	To purchase approved budget items in order to provide equipment for crews to complete job assignments. Replacements are evaluated based

IS/IT Projects

16-10	Natural Gas Management System (CO)	Description/Location	Replace the Allegro Gas Management system with a new system.
		Purpose/Necessity	This system is needed for accurate and timely information of natural gas and derivatives, supplier and pipeline invoice reconciliation.

NOTES FOR PAGE 16-CAPITAL EXPENDITURES BUDGET

Automated Fueling System

16-11	Automated Fueling System (CO)	Description/Location	Automated Fuel Management System for entire Division.
		Purpose/Necessity	The Automated Fuel Management System will have the capability of collecting data from vehicles and equipment, such as fuel consumption, miles, engine hours, idle time, etc., as well as aid the Transportation Department in managing the fleet Preventative Maintenance Program and vehicle life cycle more effectively.
16-12	Contingency Fund - General Plant		This is an estimated budget amount to cover unforeseen emergency items that may arise in the current year.

NOTES FOR PAGE 18—INCOME & EXPENSE COMPARISON

Operating Revenue

18-1	Sales Revenue	This account includes projected revenue from the sale of water to the residential, commercial, resale, and interdepartmental customer classes, as well as revenue from fire protection services.
18-2	Revenue Adjustment for Uncollectible	Per Governmental Accounting Standards Board (Water) 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.
18-3	Non-Sales Revenue	This account includes revenue from forfeited discounts (charges for payments received after net due date), plus rent charged for Water Division property that is used by the Electric and Water Divisions, and other miscellaneous revenue (e.g., fees for connecting/disconnecting service).

Operating Expense

18-4	Production Expense	This account includes the cost of labor and expenses incurred in the general supervision and operation of the water source of supply facilities, the power production and pumping facilities, and the water treatment expenses. Also included is the fuel used in the production of power to operate the pumps, all chemicals used in the treatment of water and miscellaneous expenses including general clerical labor, building services, general operating supplies and care of grounds.
18-5	Distribution Expense	This account includes the cost of labor and expenses incurred in the operation of distribution reservoirs and tanks, meter expenses, customer installation expenses and miscellaneous expenses including preparing maps and prints, general clerical support, operating records, service interruption, trouble records, and other miscellaneous labor.
18-6	Customer Accounts Expense	This account includes the cost of labor and expenses incurred in the reading of customer meters, in customer applications, orders, contracts, credit investigations, billing and accounting, collections and complaints.
18-7	Customer Service and Information Expense	This account includes the cost of labor and expenses incurred in customer service and informational activities, the purpose of which is to encourage safe and efficient use of the utility's services, to promote the conservation of the utility's services and to assist customers in answering specific inquiries as to the proper and economic use of the utility's services.
18-8	Sales Expense	This account includes the cost of labor, materials and expenses incurred in promotional, demonstrating and selling activities, advertising designed to promote or retain the use of utility services and miscellaneous sales expense. Included are exhibitions, displays, lectures, engineering and technical advice, advertising in newspapers, periodicals, billboards, radio, etc., postage on direct mail advertising, printing booklets, bulletins, etc.
18-9	Administrative and General Expense	This account includes the compensation of board members, executives, and other administrative and general employees of the utility not chargeable directly to a particular operating function. It also includes the cost of insurance to protect the utility against physical plant losses, cost of reserve accruals to protect the utility against injuries and damage claims of employees or others, such as liability, property damage, casualty, and employee liability. Employee pensions and benefits including payments to pension funds, life insurance, group medical expenses, payments for accident, sickness, hospital and death benefits, and expenses in connection with educational and wellness activities are also included in this account. In accordance with Water 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

18-10	Production Expense	This account includes the labor and expenses incurred in the maintenance of structures and improvements, collecting and impounding reservoirs, maintenance of wells, the maintenance of observation wells, the maintenance of structures and improvements used in connection with pumping, maintenance of power production equipment used directly in pumping operations, the maintenance of pumping equipment, maintenance of structures and improvements to the water treatment plant, and water treatment plant equipment.
18-11	Distribution Expense	This account includes the labor and expenses incurred in the maintenance of the distribution system including structures and improvements, mains, services, meters, meter testing equipment, fire hydrants, and miscellaneous plant.
18-12	Administrative & General Expense	Please see Appendix 18-9.

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

Other Operating Expense

18-13	Depreciation Expense	The purpose of depreciation is to allocate the original cost of a fixed asset over its estimated useful life. In a utility environment, the annual depreciation rate also takes into account the estimated salvage and cost of removal upon retirement.
18-14	Payment In Lieu of Taxes	MLGW and the City of Memphis have agreed on a P.I.L.O.T. in the amount of \$2,500,000 to be made on an annual basis to the City from the revenues of the Water Division through fiscal years 2028.
18-15	F.I.C.A. Taxes	This represents the 1.45% Medicare portion of Social Security Tax that is required to be paid on all MLGW employees hired after 03-31-1986.
18-16	Amortization of SCBPU Acquisition Adjustments	The amortization of SCBPU Acquisition Adjustment is the allocation over a twenty year period of the difference in the purchase price and the estimated original cost less depreciation of Shelby County Board of Public Utilities which was purchased by MLGW in July, 1999.
18-17	Amortization of Legacy Meters	This account includes amortization charges related to expenditures on meters.

Income

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

Debt Expense

18-22	Interest Expense – Existing Long-Term Debt	Bond interest payments due 06-01-2020 and 12-01-2020 per the bond debt schedules are funded in equal monthly installments in 2020.
18-23	Amortization of Debt Discount & Expense	This represents the spreading of bond issuance costs over the life span of the bond series rather than recognizing such costs all at the time of sale.
18-24	Contributions in Aid of Construction	Please see Appendix 18-21.

NOTES FOR PAGE 19—INCOME & EXPENSE COMPARISON

Source of Funds

19-1	Change in Net Position	Please see Budget page 20.
19-2	Depreciation Charged to Operating Income	Please see Appendix 20-18.
19-3	Depreciation Charged to Other Accounts	Depreciation charged to other accounts is the annual depreciation for transportation and power operated equipment. Depreciation on these plant items is charged to a clearing account and used in the equipment rate calculations.
19-4	Amortization of Legacy Meters	Non-cash expense related to amortization charges related to meter expenditures.
19-5	Salvage	Salvage is the amount received for property retired from plant in service. The property may be sold for scrap or returned to stores inventory for reuse.
19-6	Debt Issuance	Expected debt issuance in the Water Division for the 2020 budget year.

Application of Funds

19-7	Capital Expenditures	Please see Budget page 22.
19-8	Costs of Removal and Other Charges to the Reserve for Depreciation	Cost of removal is the cost associated with demolishing, dismantling, tearing down or otherwise removing utility plant, including the cost of transportation and labor.
19-9	Retirement of Long-Term Debt	Bond principal amounts due 12-01 per the bond debt schedules are funded in equal monthly installments during 2020.

NOTES FOR PAGE 20–CAPITAL EXPENDITURES BUDGET

Production System

20-1	Pumping Stations	Please see Appendix 21-1 through 21-22.
20-2	Overhead Storage Tanks	No expenditures planned for the 2020 budget year.
20-3	Underground Storage Reservoirs	Please see Appendix starting at 22-1.
20-4	Production Wells	Please see Appendix starting at 22-3.
20-5	Land Purchase	Please see Appendix 22-7.
20-6	Operation Maintenance	Please see Appendix 22-7.
20-7	Contingency Fund - Production System	Please see Appendix 22-9.
20-8	Buildings and Structures - Production System	Please see Appendix 22-8.

Distribution System

20-9	Residential Service in S/D	This budget category provides for the expenses incurred by the Water Division for customer requests for service located in a subdivision.
20-10	Residential Service not in S/D	This budget category provides for the expenses incurred by the Water Division for customer requests for service not located in a subdivision.
20-11	Residential S/D	This budget category provides for the expenses incurred by the Water Division for developer requests for Water facilities located in a subdivision.
20-12	Apartments	This budget category provides for the expenses incurred by the Water Division for developer
20-13	General Power Service	This budget category provides for the expenses incurred by the Water Division for customer requests for new General Power Service.
20-14	Relocate at Customer Request	This budget category provides for the expenses incurred by the Water Division for customer requests to relocate existing Water facilities.
20-15	Street Improvements	This budget category provides for the expenses incurred when City, State and Federal Street Improvements dictate that facilities must be relocated. Please see Appendix 25-9 through 25-14.
20-16	New Water Main	This budget category provides for the expenses incurred for the installation of miscellaneous new water mains and facilities.
20-17	Lead Service Replacement	Replace lead services with copper at known locations throughout Shelby County.
20-18	Operations Maintenance	Capital Maintenance Items related to the Water Production System.
20-19	Purchase of Meters	The number of meters purchased is based on projections for the coming year. These meters include meters that will be paid for by customer contributions relating to new residential and commercial development and replacement of existing meters.
20-20	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.
20-21	Miscellaneous Emergency Construction	This budget line item provides for emergency repair work when leaks and cut facilities require immediate repair.
20-22	Contributions in Aid of Construction	Contributions in aid of construction are the donations or contributions of cash, services, or property from states, municipalities, or other governmental agencies, individuals, and others for construction purposes.

General Plant

20-23	Buildings and Structures	Please see Appendix starting at 23-1.
20-24	Security Automation	Please see Appendix starting at 23-3.
20-25	Fleet Capital Power Operated Equip	Please see Appendix 23-4.
20-26	Fleet Capital Water Transportation Equip	Please see Appendix 23-5.
20-27	IS/IT Projects Water	
20-28	Tools & Equipment	
20-29	Water Lab Equipment	Please see Appendix 23-6.
20-30	Contingency Fund-General Plant	Please see Appendix 23-7.
20-31	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 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.
21-3	Dedicated Well Electric Circuit Replacement	Description/Location	Dedicated Well Electric Circuit 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.
21-4	Medium Voltage Breaker & Switchgear Replacements (CO)	Description/Location	Design, purchase and installation of the 12kV and 5 kV circuit breakers. Allen Pumping Station
		Purpose/Necessity	Parts for the existing 12kV and 5 kV Circuit Breakers are unavailable and there are safety concerns related to the existing breakers
21-5	Station Rehabilitation	Description/Location	The purchase and installation of replacement valves, piping, hardware, meters, actuators, etc.... Rehabilitation of concrete structural components. Allen Pumping Station
		Purpose/Necessity	The existing infrastructure can no longer be operated safely or reliably.

Davis Pumping Station

21-6	Engineer Distributed Process Control System Replacement	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.

Lichterman Pumping Station

21-7	Engineer Distributed Process Control System Replacement	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.

NOTES FOR PAGE 21—CAPITAL EXPENDITURES BUDGET (Continued)

Production System (Continued)

Pumping Stations (Continued)

LNG Pumping Station

21-8	Engineer Distributed Process Control System Replacement	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.

Mallory Pumping Station

21-9	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 VFDs chronically overheat and replacement parts are unavailable when the VFDs fail.
21-10	VFD Motor & Transformer Replacements	Description/Location	Design, Construction Administration and Integration needed to replace the existing distributed process control system.
		Purpose/Necessity	The existing VFDs chronically overheat and replacement parts are unavailable when the VFDs fail.
21-11	Filter Media Replacement	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

21-12	Engineer Distributed Process Control System Replacement	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.
21-13	Filter Media Replacement (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.

Morton Pumping Station

21-14	Engineer Distributed Process Control System Replacement	Description/Location	Design, Construction Administration and Integration needed to replace the existing distributed process control system. Morton Pumping Station
		Purpose/Necessity	The existing DPC system is outdated and parts can no longer be obtained for the existing controller. This is needed for regulatory compliance with Tennessee Department of Environment and Conservation standards.
21-15	VFD, Motor, Transformer Replacements	Description/Location	Design, Construction Administration and Integration needed to replace the existing distributed process control system.
		Purpose/Necessity	The existing VFDs chronically overheat and replacement parts are unavailable when the VFDs fail.

NOTES FOR PAGE 21—CAPITAL EXPENDITURES BUDGET (Continued)

Production System (Continued)

Pumping Stations (Continued)

Palmer Pumping Station

21-16	Engineer Distributed Process Control System Replacement	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.

Sheahan Pumping Station

21-17	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.
21-18	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.
21-19	Replace Backwash Pump	Description/Location	Replace Backwash Pump
		Purpose/Necessity	
21-20	VFD, Motor & Transformer Replacements	Description/Location	Design, Construction Administration and Integration needed to replace the existing distributed process control system.
		Purpose/Necessity	The existing VFDs chronically overheat and replacement parts are unavailable when the VFDs fail.

Miscellaneous Pumping Facilities

21-21	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.
21-22	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.

NOTES FOR PAGE 22-CAPITAL EXPENDITURES BUDGET

Production System (Continued)

Underground Storage Reservoirs

Mallory Pumping Station

22-1	Station Rehabilitation	Description/Location	Station Rehabilitation
		Purpose/Necessity	
22-2	Construct Wash Water Recovery Basin Replacement	Description/Location	Construction of WWRB at Mallory Pumping Station
		Purpose/Necessity	The existing WWRB is the retrofitted Equalizing Basin. The operational performance of the existing WWRB is very poor. There are regulatory issues with the existing WWRB.

Production Wells

Davis Pumping Station

22-3	Construct/Replace Well	Description/Location	Construction of a large water production well. Davis Pumping Station
		Purpose/Necessity	A number of the Davis wells need to be replaced. This well field does not meet the capacity plus 2 MGD requirement

Lichterman Pumping Station

22-4	Construct/Replace Well	Description/Location	Construction of a large water production well. Lichterman Pumping Station
		Purpose/Necessity	A number of the Lichterman wells need to be replaced. This well field does not meet the capacity plus 2 MGD requirement

Miscellaneous Pumping Facilities

22-5	Well Failures	Description/Location	Construction of a large water production well. Various pumping station.
		Purpose/Necessity	Water production wells fail unexpectedly and need to be replaced.

22-6	Operations Maintenance	Description/Location	
		Purpose/Necessity	

Purchase Property and R.O.W.

22-7	Land Purchase (Var. Pump. Sta. Well Lots)	Description/Location	Purchase water production well lots/Various locations.
		Purpose/Necessity	Well lots are needed to install new/replacement water production wells to provide an adequate source water supply for customers.

Building & Structures - Production

Palmer Pumping Station

22-8	Aerator Bldg.: Replace Roof	Description/Location	Aerator Bldg.: Replace Roof
		Purpose/Necessity	MLGW will meet the utility relocation needs of the City, County, and State for their street improvement projects.

22-9	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 EXPENDITURE BUDGET

Distribution System - Major Projects

New Water Main

22-10	Miscellaneous Projects- Reimbursable	Description/Location	The project will be on N. Parkway, from Bellevue to Clay brook, in order to replace the existing lead main feeding that side of the street.
		Purpose/Necessity	Remove lead main from water system.
22-11	Major Valve Replacements/ Additions	Description/Location	The project will involve the replacement and additions of 12" and larger valves
		Purpose/Necessity	Replacement of non functioning and key valves and adding strategically place valves on primary and secondary feeders to optimize the ability to isolate large mains while minimizing the number of cut off customers
22-12	Main Replacement Projects	Description/Location	Older cast iron mains in older parts of town sometimes break several times and it is more feasible to replace the main than to continue to repair them.
		Purpose/Necessity	Old cast iron mains that have many breaks that occur on a section are candidates to be totally replaced.
22-13	Large Main Extensions	Description/Location	Large Main Extensions
		Purpose/Necessity	Large Main Extensions
22-14	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.
22-15	Watkins St. Bore under the Loosahatchie	Description/Location	Watkins St. Bore under the Loosahatchie
		Purpose/Necessity	MLGW will meet the utility relocation needs of the City, County, and State for their street improvement projects.
22-16	Miscellaneous Projections	Description/Location	Miscellaneous Projections
		Purpose/Necessity	MLGW will meet the utility relocation needs of the City, County, and State for their street improvement projects.
22-17	Minor System Improvements	Description/Location	Minor System Improvements
		Purpose/Necessity	MLGW will meet the utility relocation needs of the City, County, and State for their street improvement projects.

Street Improvements

22-18	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.
22-19	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.
22-20	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.
22-21	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.
22-22	Miscellaneous Projections	Description/Location	Miscellaneous Projections
		Purpose/Necessity	Miscellaneous Projections

WATER DIVISION

22-23	Lead Replacement	Description/Location	Miscellaneous Projections
		Purpose/Necessity	Miscellaneous Projections

NOTES FOR PAGE 23—CAPITAL EXPENDITURES BUDGET

General Plant

Buildings and Structures

23-1	Training Roadway	Description/Location	Training roadway to be located at the Memphis Light Water and Water University.
		Purpose/Necessity	The roadway will help reduce accident/incident rates by providing a training ground with equipment.

IS/IT PROJECT

23-2	Laboratory Information Management System Replacement	Description/Location	Water Laboratory data information system replacement software.
		Purpose/Necessity	

Security Automation

23-3	Security Automation	Description/Location	Security Automation
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NOTES FOR PAGE 26—CAPITAL EXPENDITURES BUDGET

Purchase of Fleet Capital Power Operated Equipment

23-4	Fleet Capital Power Operated Equipment	Description/Location	Division vehicles/equipment used for work in and around Shelby County.
		Purpose/Necessity	To purchase approved budget items, in order to provide equipment for crews to complete job assignments. Replacements are evaluated based on age, actual operational usage, projected usage, repair cost and frequency, parts availability, and effectiveness to meet area's needs. Additions are evaluated based on justification request and proper approval.

Purchase of Fleet Capital Transportation Equipment

23-5	Fleet Capital Transportation Equipment	Description/Location	Division vehicles/equipment used for work in and around Shelby County.
		Purpose/Necessity	To purchase approved budget items, in order to provide equipment for crews to complete job assignments. Replacements are evaluated based on age, actual operational usage, projected usage, repair cost and frequency, parts availability, and effectiveness to meet area's needs. Additions are evaluated based on justification request and proper approval.

Purchase of Tools and Equipment

23-6	Water Lab Equipment	Description/Location	Auto Titrator and Analyzer and an Automatic Absorption Spectrometer to be located at the Water Lab.
		Purpose/Necessity	To ensure that MLGW is in compliance with Tennessee Department of Environment and Conservation Rules and Regulations for quality

GLOSSARY

ACD: Automatic Call Distributor.

ACSR: Aluminum, Cable Steel Reinforced cable.

ADA: Americans with Disabilities Act.

BNSF: Burlington Northern Santé Fe Railway Company.

BTU: British Thermal Unit.

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

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

CA: Cab to Axle.

CARES: Computer Assisted Restoration of the Electric System.

CCTV: Closed-circuit television.

C&C: Cab and Chassis.

CC&C: Crew Cab & Chassis.

CKT: Circuit.

CN: Canadian National Railway.

CNG: Compressed Natural Gas.

CO: Carryover.

CPU: Central Processing Unit.

CSX: CSX Transportation.

CSX/RR: CSX Transportation Railroad.

DA: Distribution Automation.

DASD: Direct Access Storage Device.

DB: Decibel.

DDC: Direct Digital Controller.

Debt Service: Principal and interest payments on outstanding bonds.

DIMP: Distribution Integrity Management Program.

DOT: Department of Transportation.

GLOSSARY

ERC: Emergency Response Center.

ESO: Electric Systems Operations.

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

FC: Suffix for connector type.

FCI: Failed Circuit Indicators.

FEMA: Federal Emergency Management Agency.

FIS: Facility Information System.

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

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

GASB: Governmental Accounting Standards Board.

GIS: Geographic Information System.

GPS: Global Positioning System.

HHSC: Hickory Hill Service Center.

HMI: Human Machine Interface.

HP: High Pressure.

HSP: High Service Pump.

HVAC: Heating, Ventilation, and Air Conditioning.

IC RR: Illinois Central Railroad.

IDS: Intrusion Detection System.

IR: Infrared.

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

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/Duct line.

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

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.