

In the opinion of Co-Bond Counsel, under existing laws, regulations, rulings, and judicial decisions and assuming the accuracy of certain representations and continuous compliance with certain covenants described herein, interest on the Series 2020 Tax-Exempt Bonds (defined in "TAX MATTERS" herein) is excludable from gross income under federal income tax laws pursuant to Section 103 of the Internal Revenue Code of 1986, as amended to the date of delivery of the Series 2020 Tax-Exempt Bonds (the "Code"), and is excludable from federal alternative minimum taxable income as defined in Section 55(b)(2) of the Code. In the opinion of Co-Bond Counsel, interest on the Series 2020B Electric System Refunding Bonds (defined below) is included in gross income for federal income tax purposes. Co-Bond Counsel is further of the opinion that, under existing law, the Series 2020 Bonds (defined below) and the income therefrom shall be free from all state, county and municipal taxation in the State of Tennessee, except inheritance, transfer and estate taxes, and Tennessee franchise and excise taxes. For a more complete description, see "TAX MATTERS" herein.

**CITY OF MEMPHIS, TENNESSEE
MEMPHIS LIGHT, GAS AND WATER DIVISION**

**\$148,000,000
ELECTRIC SYSTEM REVENUE BONDS,
SERIES 2020A**

**\$63,000,000
GAS SYSTEM REVENUE BONDS,
SERIES 2020**



**\$29,000,000
ELECTRIC SYSTEM REVENUE
REFUNDING BONDS, SERIES 2020B
(Federally Taxable)**

**\$68,000,000
WATER SYSTEM REVENUE BONDS,
SERIES 2020**

Dated: Date of Delivery

Due: As shown on the inside cover

The City of Memphis, Tennessee (the "City") at the request of the Board of Commissioners (the "Board") of the Memphis Light, Gas and Water Division ("MLGW" or the "Division") is issuing four separate financings for the Electric, Gas and Water Divisions as set forth herein. Described in this Official Statement are the \$148,000,000 Electric System Revenue Bonds, Series 2020A (the "Series 2020A Electric System Bonds"), the \$29,000,000 Electric System Refunding Bonds, Series 2020B (Federally Taxable) (the "Series 2020B Electric System Refunding Bonds"), the \$63,000,000 Gas System Revenue Bonds, Series 2020 (the "Series 2020 Gas System Bonds") and the \$68,000,000 Water System Revenue Bonds, Series 2020 (the "Series 2020 Water System Bonds" and together with the Series 2020A Electric System Bonds, the Series 2020B Electric System Refunding Bonds and the Series 2020 Gas System Bonds, are collectively referred to herein as the "Series 2020 Bonds"). The Series 2020 Bonds are being issued by the City pursuant to certain provisions of Tennessee law, the Charter of the City and to certain resolutions adopted by the Board and the Council of the City (the "City Council") as further described herein.

The Series 2020A Electric System Bonds are being issued to (i) finance the costs of acquiring, expanding and/or improving the Electric System (defined herein) and to (ii) pay certain costs of issuance with respect to the Series 2020A Electric System Bonds. The Series 2020B Electric System Refunding Bonds are being issued to (i) advance refund on a federally taxable basis, a portion of the outstanding Electric System Revenue Bonds, Series 2014 (the "Refunded Bonds") and (ii) pay certain costs of issuance with respect to the Series 2020B Electric System Refunding Bonds. See "PLAN OF FINANCE – Series 2020A Electric System Bonds and Series 2020B Electric System Refunding Bonds" herein and "APPENDIX A – OPERATING INFORMATION REGARDING THE ELECTRIC DIVISION – CAPITAL IMPROVEMENT PROGRAM OF THE ELECTRIC DIVISION AND SOURCES OF FUNDING" attached hereto. The Series 2020 Gas System Bonds are being issued to (i) finance the costs of acquiring, expanding and/or improving the Gas System (defined herein) and to (ii) pay certain costs of issuance with respect to the Series 2020 Gas System Bonds. See "PLAN OF FINANCE – Series 2020 Gas System Bonds" herein and "APPENDIX B – OPERATING INFORMATION REGARDING THE GAS DIVISION – CAPITAL IMPROVEMENT PROGRAM OF THE GAS DIVISION AND SOURCES OF FUNDING" attached hereto. The Series 2020 Water System Bonds are being issued to (i) finance the costs of acquiring, expanding and/or improving the Water System (defined herein) and to (ii) pay certain costs of issuance with respect to the Series 2020 Water System Bonds. See "PLAN OF FINANCE – Series 2020 Water System Bonds" herein and "APPENDIX C – OPERATING INFORMATION REGARDING THE WATER DIVISION – CAPITAL IMPROVEMENT PROGRAM OF THE WATER DIVISION AND SOURCES OF FUNDING" attached hereto.

The Series 2020A Electric System Bonds will be secured solely by the Electric System Pledged Revenues (defined herein). The Series 2020B Electric System Refunding Bonds will be secured by the Electric System Pledged Revenues. Additionally, the scheduled payment of principal of and interest on the Series 2020B Electric System Refunding Bonds will be guaranteed under an insurance policy to be issued concurrently with the delivery of the Series 2020B Electric System Refunding Bonds by ASSURED GUARANTY MUNICIPAL CORP. See "BOND INSURANCE" herein and "APPENDIX K – SPECIMEN MUNICIPAL BOND INSURANCE POLICY" attached hereto.



The Series 2020 Gas System Bonds will be secured solely by the Gas System Pledged Revenues (defined herein). The Series 2020 Water System Bonds will be secured solely by the Water System Pledged Revenues (defined herein). All capitalized terms used herein and not otherwise defined herein are used with the meanings assigned thereto in "APPENDIX F – SUMMARY OF CERTAIN PROVISIONS OF THE ELECTRIC SYSTEM RESOLUTION", "APPENDIX G – SUMMARY OF CERTAIN PROVISIONS OF THE GAS SYSTEM RESOLUTION" and "APPENDIX H – SUMMARY OF CERTAIN PROVISIONS OF THE WATER SYSTEM RESOLUTION," respectively, attached hereto.

The Series 2020 Bonds will be dated the date of their delivery and will bear interest from the dated dates thereof, at the rates set forth on the inside cover of this Official Statement. Interest on the Series 2020 Bonds is payable semiannually on June 1 and December 1 of each year, commencing December 1, 2020. Principal on the Series 2020 Bonds is payable on December 1 of each year, commencing December 1, 2021. See "DESCRIPTION OF THE SERIES 2020 BONDS" herein. The Series 2020 Bonds are subject to optional and mandatory redemption prior to maturity as described herein. See "REDEMPTION PROVISIONS FOR THE SERIES 2020 BONDS" herein. The Series 2020 Bonds shall be fully registered bonds without coupons in denominations of \$5,000 as described herein and integral multiples thereof, and when issued will be registered in the name of Cede & Co. as nominee of The Depository Trust Company, New York, New York, ("DTC") to which principal and interest will be paid. Beneficial owners of the Series 2020 Bonds will not receive physical delivery of Series 2020 Bond certificates except as described herein. Regions Bank, Nashville, Tennessee, will act as the initial bond registrar and paying agent for the Series 2020 Bonds (in that capacity, the "Bond Registrar and Paying Agent"). See "DESCRIPTION OF THE SERIES 2020 BONDS – Book-Entry Only System" herein.

The Series 2020 Bonds are being issued as General Revenue Obligations under the Electric System Resolution (as defined herein), Gas System Resolution (as defined herein) and Water System Resolution (as defined herein), respectively; and, as such, are limited obligations of the City payable solely from and secured by a pledge of the Electric System Pledged Revenues (as defined herein), Gas System Pledged Revenues (as defined herein) and Water System Pledged Revenues (as defined herein), respectively. The Electric System Pledged Revenues, the Gas System Pledged Revenues and the Water System Pledged Revenues, respectively, are permitted to be used only for payment for the principal, premium (if any) and interest of the Series 2020 Bonds for the particular system to which they relate. See "Security and Source of Payment for the Series 2020 Bonds" herein.

THE SERIES 2020 BONDS DO NOT CONSTITUTE A DEBT OF THE CITY OR MLGW WITHIN THE MEANING OF ANY CONSTITUTIONAL, CITY CHARTER OR STATUTORY LIMITATION. NEITHER THE FULL FAITH AND CREDIT NOR THE TAXING POWER OF THE STATE OF TENNESSEE OR ANY POLITICAL SUBDIVISION THEREOF, INCLUDING THE CITY, IS PLEDGED TO THE PAYMENT OF THE SERIES 2020 BONDS, AND NO HOLDER OF THE SERIES 2020 BONDS SHALL HAVE THE RIGHT TO COMPEL ANY EXERCISE OF THE TAXING POWERS OF THE CITY TO PAY THE SERIES 2020 BONDS, OR THE INTEREST THEREON, AND THE SERIES 2020 BONDS, INCLUDING THE INTEREST THEREON, ARE LIMITED OBLIGATIONS OF THE CITY AND MLGW AS PROVIDED IN THE ELECTRIC SYSTEM RESOLUTION, THE GAS SYSTEM RESOLUTION AND THE WATER SYSTEM RESOLUTION, RESPECTIVELY, PAYABLE SOLELY FROM THE ELECTRIC SYSTEM PLEDGED REVENUES, THE GAS SYSTEM PLEDGED REVENUES AND THE WATER SYSTEM PLEDGED REVENUES, RESPECTIVELY. THE SERIES 2020 BONDS DO NOT CONSTITUTE A CHARGE, LIEN OR ENCUMBRANCE UPON ANY OTHER PROPERTY OF THE CITY EXCEPTING ONLY THE ELECTRIC SYSTEM PLEDGED REVENUES, THE GAS SYSTEM PLEDGED REVENUES AND THE WATER SYSTEM PLEDGED REVENUES, RESPECTIVELY.

This cover page contains limited information for quick reference only. It is not a summary of the matters relating to the Series 2020 Bonds. Potential investors must read this entire Official Statement (including the cover page and all appendices attached hereto) to obtain information essential to the making of an informed investment decision.

The Series 2020 Bonds are being offered when, as and if issued by the City and received by the Underwriters, subject to prior sale and to withdrawal or modification of the offer without notice, and subject to the approving opinions of The Wade Law Firm, PLLC and Butler Snow LLP, both of Memphis, Tennessee, Co-Bond Counsel to MLGW. Certain legal matters will be passed upon for the Underwriters by their counsel Carpenter Law, PLLC, Memphis, Tennessee. Certain legal matters will be passed upon for the City by Jennifer A. Sink, Esquire, Chief Legal Counsel/ City Attorney. Certain legal matters will be passed upon for MLGW by Cheryl W. Patterson, Esquire, Vice-President and General Counsel (Compliance Officer) to MLGW. ComCap Partners, Memphis, Tennessee and Stephens Inc., Nashville, Tennessee are serving as Co-Financial Advisors to MLGW. It is anticipated that the delivery of the Series 2020 Bonds will be made on or about September 22, 2020 through the facilities of DTC in New York, New York.

RAYMOND JAMES

Duncan-Williams, Inc.

FHN Financial Capital Markets

Siebert Williams Shank & Co., LLC

**MATURITIES, PRINCIPAL AMOUNTS, INTEREST RATES,
PRICES OR YIELDS AND INITIAL CUSIPS NUMBERS**

\$148,000,000

**ELECTRIC SYSTEM REVENUE BONDS
SERIES 2020A**

SERIAL BONDS

<u>Maturity</u> <u>(December 1)</u>	<u>Principal</u> <u>Amount</u>	<u>Interest</u> <u>Rate</u>	<u>Price</u>	<u>Yield</u>	<u>Initial</u> <u>CUSIP No. †</u>
2021	\$2,500,000	4.00%	104.545	0.18%	586158QH3
2022	2,600,000	4.00	108.305	0.20	586158QJ9
2023	2,705,000	5.00	115.021	0.27	586158QK6
2024	2,840,000	5.00	119.470	0.32	586158QL4
2025	2,980,000	5.00	123.553	0.41	586158QM2
2026	3,130,000	5.00	127.191	0.53	586158QN0
2027	3,285,000	5.00	130.269	0.68	586158QP5
2028	3,450,000	5.00	133.143	0.81	586158QQ3
2029	3,625,000	5.00	135.774	0.93	586158QR1
2030	3,805,000	5.00	138.431	1.02	586158QS9
2031	3,995,000	5.00	136.464 C	1.19	586158QT7
2032	4,195,000	5.00	135.209 C	1.30	586158QU4
2033	4,405,000	5.00	134.304 C	1.38	586158QV2
2034	4,625,000	5.00	134.079 C	1.40	586158QW0
2035	4,855,000	3.00	111.126 C	1.80	586158QX8
2036	5,000,000	3.00	110.342 C	1.88	586158QY6
2037	5,150,000	3.00	109.854 C	1.93	586158QZ3
2038	5,305,000	3.00	109.370 C	1.98	586158RA7
2039	5,465,000	3.00	108.984 C	2.02	586158RB5
2040	5,630,000	3.00	108.599 C	2.06	586158RC3
2041	5,800,000	3.00	108.312 C	2.09	586158RV1
2042	5,970,000	3.00	108.026 C	2.12	586158RW9

TERM BONDS

<u>Maturity</u> <u>(December 1)</u>	<u>Principal</u> <u>Amount</u>	<u>Interest</u> <u>Rate</u>	<u>Price</u>	<u>Yield</u>	<u>Initial</u> <u>CUSIP No. †</u>
2045	\$19,205,000	4.00%	118.254 C	2.01%	586158RD1
2050	\$37,480,000	4.00%	117.448 C	2.09%	586158RE9

C Priced to December 1, 2030 par call.

† CUSIP is a registered trademark of the American Bankers Association. CUSIP data herein are provided by Standard and Poor's CUSIP Service Bureau, a Division of the McGraw-Hill Companies, Inc. These data are not intended to create a database and do not serve in any way as a substitute for the CUSIP Services. Neither the City, MLGW nor the Underwriters' are responsible for the selection or correctness of the CUSIP numbers set forth above. They are included solely for the convenience of the readers of this Official Statement.

**MATURITIES, PRINCIPAL AMOUNTS, INTEREST RATES,
PRICES OR YIELDS AND INITIAL CUSIPS NUMBERS**

\$29,000,000

**ELECTRIC SYSTEM REVENUE
REFUNDING BONDS
SERIES 2020B (Federally Taxable)**

SERIAL BONDS

<u>Maturity</u> <u>(December 1)</u>	<u>Principal</u> <u>Amount</u>	<u>Interest</u> <u>Rate</u>	<u>Price</u>	<u>Yield</u>	<u>Initial</u> <u>CUSIP No. †</u>
2021	\$ 445,000	0.430%	100	0.430%	586158RF6
2022	450,000	0.480	100	0.480	586158RG4
2023	450,000	0.550	100	0.550	586158RH2
2024	455,000	0.700	100	0.700	586158RJ8
2025	455,000	0.875	100	0.875	586158RK5
2026	460,000	1.100	100	1.100	586158RL3
2027	465,000	1.250	100	1.250	586158RM1
2028	470,000	1.450	100	1.450	586158RN9
2029	480,000	1.550	100	1.550	586158RP4
2030	4,805,000	1.620	100	1.620	586158RQ2
2031	4,885,000	1.720	100	1.720	586158RR0
2032	4,965,000	1.820	100	1.820	586158RS8
2033	5,060,000	1.920	100	1.920	586158RT6
2034	5,155,000	1.970	100	1.970	586158RU3

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**MATURITIES, PRINCIPAL AMOUNTS, INTEREST RATES,
PRICES OR YIELDS AND INITIAL CUSIPS NUMBERS**

**\$63,000,000
GAS SYSTEM REVENUE BONDS
SERIES 2020**

SERIAL BONDS

<u>Maturity (December 1)</u>	<u>Principal Amount</u>	<u>Interest Rate</u>	<u>Price</u>	<u>Yield</u>	<u>Initial CUSIP No. †</u>
2021	\$1,065,000	4.00%	104.545	0.18%	58616PBS6
2022	1,105,000	4.00	108.259	0.22	58616PBT4
2023	1,150,000	5.00	115.124	0.24	58616PBU1
2024	1,210,000	5.00	119.608	0.29	58616PBV9
2025	1,270,000	5.00	123.727	0.38	58616PBW7
2026	1,330,000	5.00	127.541	0.48	58616PBX5
2027	1,400,000	5.00	130.596	0.64	58616PBY3
2028	1,470,000	5.00	133.423	0.78	58616PBZ0
2029	1,540,000	5.00	136.090	0.90	58616PCA4
2030	1,620,000	5.00	138.781	0.99	58616PCB2
2031	1,700,000	5.00	137.154 C	1.13	58616PCC0
2032	1,785,000	5.00	135.892 C	1.24	58616PCD8
2033	1,875,000	5.00	134.982 C	1.32	58616PCE6
2034	1,970,000	5.00	134.530 C	1.36	58616PCF3
2035	2,065,000	3.00	112.016 C	1.71	58616PCG1
2036	2,130,000	3.00	111.028 C	1.81	58616PCH9
2037	2,195,000	3.00	110.439 C	1.87	58616PCJ5
2038	2,260,000	3.00	109.952 C	1.92	58616PCK2
2039	2,325,000	3.00	109.466 C	1.97	58616PCL0
2040	2,395,000	3.00	108.984 C	2.02	58616PCM8
2041	2,470,000	3.00	108.695 C	2.05	58616PCQ9
2042	2,540,000	3.00	108.408 C	2.08	58616PCR7

TERM BONDS

<u>Maturity (December 1)</u>	<u>Principal Amount</u>	<u>Interest Rate</u>	<u>Price</u>	<u>Yield</u>	<u>Initial CUSIP No. †</u>
2045	\$ 8,175,000	4.00%	118.964 C	1.94%	58616PCN6
2050	\$15,955,000	4.00%	117.951 C	2.04%	58616PCP1

C Priced to December 1, 2030 par call.

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**MATURITIES, PRINCIPAL AMOUNTS, INTEREST RATES,
PRICES OR YIELDS AND INITIAL CUSIPS NUMBERS**

**\$68,000,000
WATER SYSTEM REVENUE BONDS
SERIES 2020**

SERIAL BONDS

<u>Maturity</u> <u>(December 1)</u>	<u>Principal</u> <u>Amount</u>	<u>Interest</u> <u>Rate</u>	<u>Price</u>	<u>Yield</u>	<u>Initial</u> <u>CUSIP No. †</u>
2021	\$1,160,000	4.00%	104.581	0.15%	586226HY1
2022	1,205,000	4.00	108.305	0.20	586226HZ8
2023	1,255,000	5.00	115.159	0.23	586226JA1
2024	1,315,000	5.00	119.654	0.28	586226JB9
2025	1,380,000	5.00	123.785	0.37	586226JC7
2026	1,450,000	5.00	127.611	0.47	586226JD5
2027	1,525,000	5.00	130.760	0.62	586226JE3
2028	1,600,000	5.00	133.610	0.76	586226JF0
2029	1,680,000	5.00	136.511	0.86	586226JG8
2030	1,765,000	5.00	138.898	0.98	586226JH6
2031	1,850,000	5.00	137.849 C	1.07	586226JJ2
2032	1,945,000	5.00	136.579 C	1.18	586226JK9
2033	2,040,000	5.00	135.777 C	1.25	586226JL7
2034	2,145,000	5.00	135.322 C	1.29	586226JM5
2035	2,250,000	3.00	112.614 C	1.65	586226JN3
2036	2,315,000	3.00	111.917 C	1.72	586226JP8
2037	2,385,000	3.00	111.422 C	1.77	586226JQ6
2038	2,460,000	3.00	110.929 C	1.82	586226JR4
2039	2,530,000	3.00	110.439 C	1.87	586226JS2
2040	2,610,000	3.00	109.952 C	1.92	586226JT0

TERM BONDS

<u>Maturity</u> <u>(December 1)</u>	<u>Principal</u> <u>Amount</u>	<u>Interest</u> <u>Rate</u>	<u>Price</u>	<u>Yield</u>	<u>Initial</u> <u>CUSIP No. †</u>
2045	\$14,260,000	3.00%	108.026 C	2.12%	586226JU7
2050	\$16,875,000	4.00%	118.862 C	1.95%	586226JV5

C Priced to December 1, 2030 par call.

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CITY OF MEMPHIS, TENNESSEE

Jim Strickland, *Mayor*

CITY COUNCIL:

Patrice Robinson, *Chairwoman*
Frank Colvett, Jr., *Vice-Chairman*

J. Ford Canale	Rhonda Logan
Chase Carlisle	Worth Morgan
Michalyn Easter-Thomas	JB Smiley, Jr.
Edmund Ford, Sr.	Jamita Swearengen
Cheyenne Johnson	Dr. Jeff Warren
Martavius Jones	

CITY ADMINISTRATION:

Douglas McGowen Chief Operating Officer
Jennifer Sink, Esquire Chief Legal Officer/City Attorney
Shirley Ford Chief Financial Officer
Dywuana Morris City Comptroller

MEMPHIS LIGHT, GAS AND WATER DIVISION

BOARD OF COMMISSIONERS:

Carlee McCullough, Esquire, *Chair*
Mitch Graves, *Vice-Chair*
Leon Dickson, Sr.
Michael E. Pohlman
Steven Wishnia
Dwain Kicklighter (*Advisory Board Member*)
Kevin Young (*Advisory Board Member*)

OFFICERS:

Jarl T. Young President and Chief Executive Officer
Dana Jeanes Senior Vice-President, Chief Financial Officer and
Chief Administrative Officer (Secretary-Treasurer)
Alonzo Weaver, III Senior Vice-President, Chief Operating Officer
Cheryl W. Patterson, Esquire Vice-President and General Counsel (Compliance Officer)
Roland McElrath Vice-President of Accounting
Cliff DeBerry, Jr. Vice-President of Design, Construction and Delivery
Nicholas Newman Vice-President of Engineering and Operations
Von Goodloe Vice-President of Shared Services
Lashell Vaughn Vice-President and Chief Information Officer
Jim West Vice-President and Chief Customer Officer
Gale Jones Carson Vice-President of Community & External Affairs
Lesa Walton Chief Internal Auditing Officer

CO-BOND COUNSEL

The Wade Law Firm, PLLC	Butler Snow LLP
Memphis, Tennessee	Memphis, Tennessee

CO-FINANCIAL ADVISORS

ComCap Partners	Stephens Inc.
Memphis, Tennessee	Nashville, Tennessee

INDEPENDENT AUDITOR

Mayer Hoffman McCann P.C.
Memphis, Tennessee

No dealer, broker, salesperson or other person has been authorized to give information or to make any representation, other than those contained in this Official Statement, in connection with the offering of the Series 2020 Bonds, and, if given or made, such information or representation must not be relied upon as having been authorized by the City, MLGW, the Underwriters (defined herein) or their respective consultants and attorneys. This Official Statement does not constitute an offer or solicitation in any jurisdiction which such offer or solicitation is not authorized, or in which any person making such offer or solicitation is not qualified to do so, or to any person to whom it is unlawful to make such offer or solicitation. The information set forth herein has been obtained from the City, MLGW and other sources which are believed to be reliable, but it is not guaranteed as to accuracy or completeness by, and it not to be construed as a representation by, the Underwriters.

This Official Statement is not to be construed as a contract with the purchaser of the Series 2020 Bonds. Statements contained in this Official Statement which involve estimates, forecasts, or matters of opinion, whether or not expressly so described herein, are intended solely as such, and are not to be construed as a representation of fact. This Official Statement contains "forward-looking" statements within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended. Such statements may involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance and achievements to be different from future results, performance and achievements expressed or implied by such forward-looking statements. Investors are cautioned that the actual results could differ materially from those set forth in the forward-looking statements.

The information and expressions of opinions contained herein are subject to change without notice, and neither the delivery of this Official Statement nor any sale made hereunder will, under any circumstances, create any implication that there has been no change in the affairs of the City or MLGW since the date hereof.

The summaries of various constitutional provisions, statutes, the Electric System Resolution, the Gas System Resolution, the Water System Resolution, the Continuing Disclosure Certificate and other documents are intended as summaries only and are qualified in their entirety by reference to such documents, and references herein to the Series 2020 Bonds are qualified in their entirety to the forms thereof included in the Electric System Resolution, the Gas System Resolution and the Water System Resolution, respectively. During the period of the offering of the Series 2020 Bonds, copies of the Electric System Resolution, the Gas System Resolution, the Water System Resolution and other relevant documents and information are available, upon request and upon payment of a charge for copying, mailing and handling, from Mr. Chad Myers, Senior Vice-President, Raymond James & Associates, Inc., 50 North Front Street, Suite 1600, Memphis, Tennessee 38103, (901) 579-4923.

THIS OFFICIAL STATEMENT IS INTENDED TO REFLECT MATERIAL FACTS AND CIRCUMSTANCES AS THEY EXIST ON THE DATE OF THIS OFFICIAL STATEMENT OR ON SUCH OTHER DATE OR AT SUCH OTHER TIME AS IDENTIFIED HEREIN. NO ASSURANCE CAN BE GIVEN THAT SUCH INFORMATION WILL NOT BE MISLEADING AT A LATER DATE. CONSEQUENTLY, RELIANCE ON THIS OFFICIAL STATEMENT AT TIMES SUBSEQUENT TO THE ISSUANCE OF THE SERIES 2020 BONDS SHOULD NOT BE MADE ON THE ASSUMPTION THAT ANY SUCH FACTS OR CIRCUMSTANCES ARE UNCHANGED.

THE SERIES 2020 BONDS HAVE NOT BEEN REGISTERED WITH THE SECURITIES AND EXCHANGE COMMISSION BY REASON OF CERTAIN EXEMPTIONS CONTAINED IN THE SECURITIES ACT OF 1933, AS AMENDED. IN MAKING AN INVESTMENT DECISION, INVESTORS MUST RELY ON THEIR OWN EXAMINATION OF THE INFORMATION CONTAINED IN THIS OFFICIAL STATEMENT REGARDING THE CITY, MLGW, THE SERIES 2020 BONDS AND THE TERMS OF THE OFFERING, INCLUDING THE MERITS AND RISKS INVOLVED. THESE SECURITIES HAVE NOT BEEN RECOMMENDED BY ANY FEDERAL OR STATE SECURITIES COMMISSION OR REGULATORY AUTHORITY, NOR HAVE SUCH AUTHORITIES CONFIRMED THE ACCURACY OR DETERMINED THE ACCURACY OF THIS DOCUMENT. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

THE CO-FINANCIAL ADVISORS HAVE BEEN EMPLOYED BY THE CITY AND MLGW TO ADVISE THEM WITH RESPECT TO CERTAIN MATTERS RELATING TO THE PROPOSED STRUCTURE OF THE SERIES 2020 BONDS. THE CO-FINANCIAL ADVISORS HAVE NOT BEEN EMPLOYED AND ASSUME NO DUTY OR OBLIGATION TO ADVISE ANY OTHER PARTY AS TO ANY ASPECT OF THE TRANSACTION, INCLUDING THE HOLDERS OF THE SERIES 2020 BONDS.

THE UNDERWRITERS HAVE PROVIDED THE FOLLOWING SENTENCE FOR INCLUSION IN THIS OFFICIAL STATEMENT: THE UNDERWRITERS HAVE REVIEWED THE INFORMATION IN THIS OFFICIAL STATEMENT IN ACCORDANCE WITH, AND AS A PART OF, THEIR RESPECTIVE RESPONSIBILITIES TO INVESTORS UNDER THE FEDERAL SECURITIES LAWS AS APPLIED TO THE FACTS AND CIRCUMSTANCES OF THIS TRANSACTION, BUT THE UNDERWRITERS DO NOT GUARANTEE THE ACCURACY OR COMPLETENESS OF SUCH INFORMATION.

IN CONNECTION WITH THIS OFFERING, THE UNDERWRITERS MAY OVER-ALLOT OR EFFECT TRANSACTIONS WHICH STABILIZE THE MARKET PRICE OF THE SERIES 2020 BONDS AT A LEVEL ABOVE THAT WHICH MIGHT OTHERWISE PREVAIL IN THE OPEN MARKET. SUCH STABILIZING, IF COMMENCED, MAY BE DISCONTINUED AT ANY TIME.

Assured Guaranty Municipal Corp. ("AGM") makes no representation regarding the Series 2020 Bonds or the advisability of investing in the Series 2020 Bonds. In addition, AGM has not independently verified, makes no representation regarding, and does not accept any responsibility for the accuracy or completeness of this Official Statement or any information or disclosure contained herein, or omitted herefrom, other than with respect to the accuracy of the information regarding AGM supplied by AGM and presented under the heading "Bond Insurance" and "**APPENDIX K** – SPECIMEN MUNICIPAL BOND INSURANCE POLICY".

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TABLE OF CONTENTS

	Pages
INTRODUCTION.....	1
General.....	1
City of Memphis, Tennessee.....	2
Memphis Light, Gas and Water Division	2
Electric Division	2
Gas Division	2
Water Division.....	2
Authority for the Issuance of the Series 2020 Bonds	3
Purpose of the Series 2020 Bonds	3
Bond Registrar and Paying Agent.....	4
Description of the Series 2020 Bonds.....	4
Security and Source of Payment for the Series 2020 Bonds.....	4
Forward-Looking Statements.....	8
Prospective Financial and Operating Information	8
Additional Information	9
PLAN OF FINANCE	10
Series 2020A Electric System Bonds.....	10
Series 2020B Electric System Refunding Bonds.....	10
Series 2020 Gas System Bonds.....	11
Series 2020 Water System Bonds	11
SOURCES AND USES OF FUNDS	12
DESCRIPTION OF THE SERIES 2020 BONDS	13
General.....	13
Book-Entry Only System.....	13
Use of Certain Terms in Other Sections of this Official Statement	16
Effect of Discontinuance of Book-Entry Only System.....	16
BOND INSURANCE.....	16
Bond Insurance Policy	16
Assured Guaranty Municipal Corp.....	16
REDEMPTION PROVISIONS FOR THE SERIES 2020 BONDS	19
Redemption Provisions for the Series 2020A Electric System Bonds.....	19
Redemption Provisions for the Series 2020B Electric System Refunding Bonds	20
Redemption Provisions for the Series 2020 Gas System Bonds.....	20
Redemption Provisions for the Series 2020 Water System Bonds	21
Redemption Notice Provisions Applicable to the Series 2020 Bonds	22
CITY OF MEMPHIS, TENNESSEE	24
MEMPHIS LIGHT, GAS AND WATER DIVISION.....	24
Organization and History.....	24
Service Area.....	24
Management.....	24
Board of Commissioners.....	25
Advisory Board Members.....	26
Executives and Officers	26

Employee Relations	29
Insurance	30
Memphis Light, Gas and Water Division Retirement and Pension System.....	31
Pension Plan Reform.....	34
Other Postemployment Benefits	35
Net OPEB Liability and OPEB Expense	36
Funding Policy and Annual OPEB Contributions	36

SECURITY AND SOURCE OF PAYMENT FOR THE SERIES 2020

ELECTRIC SYSTEM BONDS	38
The Electric System	38
Pledge Under the Electric System Resolution	38
Electric System Pledged Revenues	38
Rate Covenant.....	39
Additional Revenue Obligations.....	39
No Debt Service Reserve	40
Limited Obligations	40
Outstanding Electric System Senior Lien Revenue Obligations.....	41
Electric Division Long-Term Debt Service Schedule.....	42

SECURITY AND SOURCE OF PAYMENT FOR THE SERIES 2020

GAS SYSTEM BONDS	43
The Gas System	43
Pledge Under the Gas System Resolution.....	43
Gas System Pledged Revenues	43
Rate Covenant.....	43
Additional Revenue Obligations.....	44
No Debt Service Reserve	45
Limited Obligations	45
Outstanding Gas System Senior Lien Revenue Obligations	45
Gas Division Long-Term Debt Service Schedule.....	46

SECURITY AND SOURCE OF PAYMENT FOR THE SERIES 2020

WATER SYSTEM BONDS	47
The Water System.....	47
Pledge Under the Water System Resolution	47
Water System Pledged Revenues.....	47
Rate Covenant.....	47
Additional Revenue Obligations.....	48
No Debt Service Reserve	49
Limited Obligations	49
Outstanding Water System Senior Lien Revenue Obligations	49
Water Division Long-Term Debt Service Schedule	50

LITIGATION	51
-------------------------	----

INVESTMENT CONSIDERATIONS	52
General.....	52
Coronavirus Disease 2019	52
Enforceability of Remedies.....	53
Additional Obligations.....	53
Early Payment Prior To Maturity	54
Limited Protection Against Loss of Tax Exemption.....	54

The New Madrid Seismic Zone and Other Risk Factors	54
Climate Change.....	55
Cybersecurity	55
Risk of Future Legislative Action and/or Court Decisions	55
CONTINUING DISCLOSURE UNDERTAKING	56
TAX MATTERS	58
Series 2020 Tax-Exempt Bonds.....	58
Series 2020B Electric System Refunding Bonds.....	59
State of Tennessee Taxes	63
Changes In Federal and State Tax Law.....	63
APPROVAL OF LEGAL MATTERS	63
CO-FINANCIAL ADVISORS	64
INDEPENDENT AUDITOR.....	64
VERIFICATION OF DEFEASANCE	64
RATINGS	65
UNDERWRITING.....	65
MISCELLANEOUS	66
AUTHORIZATION OF AND CERTIFICATION REGARDING THE OFFICIAL STATEMENT.....	68

APPENDICES

<u>APPENDIX A</u>	–	OPERATING INFORMATION REGARDING THE ELECTRIC DIVISION
<u>APPENDIX B</u>	–	OPERATING INFORMATION REGARDING THE GAS DIVISION
<u>APPENDIX C</u>	–	OPERATING INFORMATION REGARDING THE WATER DIVISION
<u>APPENDIX D</u>	–	ECONOMIC AND DEMOGRAPHIC INFORMATION REGARDING THE CITY OF MEMPHIS, TENNESSEE AND SHELBY COUNTY, TENNESSEE
<u>APPENDIX E</u>	–	AUDITED FINANCIAL STATEMENTS OF MLGW FOR THE FISCAL YEAR ENDED DECEMBER 31, 2019
<u>APPENDIX F</u>	–	SUMMARY OF CERTAIN PROVISIONS OF THE ELECTRIC SYSTEM RESOLUTION
<u>APPENDIX G</u>	–	SUMMARY OF CERTAIN PROVISIONS OF THE GAS SYSTEM RESOLUTION

<u>APPENDIX H</u>	–	SUMMARY OF CERTAIN PROVISIONS OF THE WATER SYSTEM RESOLUTION
<u>APPENDIX I-1</u>	–	FORM OF THE CONTINUING DISCLOSURE CERTIFICATE RELATING TO THE SERIES 2020A ELECTRIC SYSTEM BONDS
<u>APPENDIX I-2</u>	–	FORM OF THE CONTINUING DISCLOSURE CERTIFICATE RELATING TO THE SERIES 2020B ELECTRIC SYSTEM REFUNDING BONDS
<u>APPENDIX I-3</u>	–	FORM OF THE CONTINUING DISCLOSURE CERTIFICATE RELATING TO THE SERIES 2020 GAS SYSTEM BONDS
<u>APPENDIX I-4</u>	–	FORM OF THE CONTINUING DISCLOSURE CERTIFICATE RELATING TO THE SERIES 2020 WATER SYSTEM BONDS
<u>APPENDIX J-1</u>	–	PROPOSED FORM OF CO-BOND COUNSEL OPINIONS FOR THE SERIES 2020A ELECTRIC SYSTEM BONDS
<u>APPENDIX J-2</u>	–	PROPOSED FORM OF CO-BOND COUNSEL OPINIONS FOR THE SERIES 2020B ELECTRIC SYSTEM REFUNDING BONDS
<u>APPENDIX J-3</u>	–	PROPOSED FORM OF CO-BOND COUNSEL OPINIONS FOR THE SERIES 2020 GAS SYSTEM BONDS
<u>APPENDIX J-4</u>	–	PROPOSED FORM OF CO-BOND COUNSEL OPINIONS FOR THE SERIES 2020 WATER SYSTEM BONDS
<u>APPENDIX K</u>	–	SPECIMEN MUNICIPAL BOND INSURANCE POLICY

OFFICIAL STATEMENT

CITY OF MEMPHIS, TENNESSEE

MEMPHIS LIGHT, GAS AND WATER DIVISION

\$148,000,000
ELECTRIC SYSTEM REVENUE BONDS,
SERIES 2020A

\$29,000,000
ELECTRIC SYSTEM REVENUE
REFUNDING BONDS, SERIES 2020B
(Federally Taxable)

\$63,000,000
GAS SYSTEM REVENUE BONDS,
SERIES 2020

\$68,000,000
WATER SYSTEM REVENUE BONDS,
SERIES 2020

INTRODUCTION

This introduction contains a summary of the offering and certain documents. Investors must read this Official Statement, including the appendices attached hereto, in its entirety.

General

The City of Memphis, Tennessee (the “City”) at the request of the Board of Commissioners (the “Board”) of the Memphis Light, Gas and Water Division (“MLGW” or the “Division”) is issuing four separate financings for the Electric, Gas and Water Divisions as set forth herein. Described in this disclosure document are the \$148,000,000 Electric System Revenue Bonds, Series 2020A (the “Series 2020A Electric System Bonds”), the \$29,000,000 Electric System Revenue Refunding Bonds, Series 2020B (Federally Taxable) (the “Series 2020B Electric System Refunding Bonds”), the \$63,000,000 Gas System Revenue Bonds, Series 2020 (the “Series 2020 Gas System Bonds”) and the \$68,000,000 Water System Revenue Bonds, Series 2020 (the “Series 2020 Water System Bonds” and, together with the Series 2020A Electric System Bonds, the Series 2020B Electric System Refunding Bonds and the Series 2020 Gas System Bonds, are collectively referred to herein as the “Series 2020 Bonds”). The Series 2020 Bonds are being issued by the City pursuant to certain provisions of Tennessee law, the Charter of the City (the “City Charter”) and to certain resolutions adopted by the Board and the Council of the City (the “City Council”) as further described herein.

The Series 2020A Electric System Bonds will be secured solely by the Electric System Pledged Revenues (defined herein). The Series 2020B Electric System Refunding Bonds will be secured by the Electric System Pledged Revenues. Additionally, the scheduled payment of principal of and interest on the Series 2020B Electric System Refunding Bonds will be guaranteed under an insurance policy to be issued concurrently with the delivery of the Series 2020B Electric System Refunding Bonds by ASSURED GUARANTY MUNICIPAL CORP. See “BOND INSURANCE” herein and “**APPENDIX K – SPECIMEN MUNICIPAL BOND INSURANCE POLICY**” attached hereto.

The Series 2020 Gas System Bonds will be secured solely by the Gas System Pledged Revenues (defined herein). The Series 2020 Water System Bonds will be secured solely by the Water System Pledged Revenues (defined herein). All capitalized terms used herein and not otherwise defined herein are used with the meanings assigned thereto in “**APPENDIX F – SUMMARY OF CERTAIN PROVISIONS OF THE ELECTRIC SYSTEM RESOLUTION**”, “**APPENDIX G – SUMMARY OF CERTAIN PROVISIONS OF THE GAS SYSTEM RESOLUTION**” and “**APPENDIX H – SUMMARY OF CERTAIN PROVISIONS OF THE WATER SYSTEM RESOLUTION**,” respectively, attached hereto.

City of Memphis, Tennessee

The City of Memphis, Tennessee (the "City"), is a municipal corporation organized under the laws of the State of Tennessee (the "State"). The City is located on the east bank of the Mississippi River in the southwest corner of the State. The City is the State's largest city not having a metropolitan form of government and is the county seat of Shelby County, Tennessee (the "County"). For information regarding the economics, demographics and governance of the City, see "CITY OF MEMPHIS, TENNESSEE" herein and "**APPENDIX D – ECONOMIC AND DEMOGRAPHIC INFORMATION REGARDING THE CITY OF MEMPHIS, TENNESSEE AND SHELBY COUNTY, TENNESSEE**" attached hereto for more information regarding the City and the County.

Memphis Light, Gas and Water Division

In 1939, the City Charter was amended to create the Memphis Light, Gas and Water Division as a division of the City. MLGW is owned by the City and administered by the Board of Commissioners of MLGW. MLGW provides electric, gas and water utility services through separate electric, gas and water divisions (as defined herein). An amendment, approved in 1981, to the City Charter permits the establishment of additional divisions to provide other energy services. MLGW operates on a fiscal year that commences January 1 and ends on December 31 (the "Fiscal Year"). See "MEMPHIS LIGHT, GAS AND WATER DIVISION" herein for more information regarding MLGW.

Electric Division

The Electric Division of MLGW (the "Electric Division") designs, constructs, operates and maintains an electrical transmission and distribution system (the "Electric System") which served an average of 432,482 customers during the Fiscal Year ended December 31, 2019. The Electric Division currently purchases all its electricity from the Tennessee Valley Authority ("TVA"). See "The Electric System" herein and "**APPENDIX A – OPERATING INFORMATION REGARDING THE ELECTRIC DIVISION**" attached hereto for more information regarding the Electric Division and TVA.

Gas Division

The Gas Division of MLGW (the "Gas Division") designs, constructs, operates and maintains a gas transmission and distribution system (the "Gas System") which served an average of 314,213 customers during the Fiscal Year ended December 31, 2019. The Gas Division purchases its gas requirements on the open market from various suppliers. See "The Gas System" herein and "**APPENDIX B – OPERATING INFORMATION REGARDING THE GAS DIVISION**" attached hereto for more information regarding the Gas Division.

Water Division

The Water Division of MLGW (the "Water Division") designs, constructs, operates and maintains a water supply and distribution system and facilities (the "Water System") which served an average of 255,558 customers during the Fiscal Year ended December 31, 2019. The Water System has been owned and operated by the City, through MLGW and predecessor organizations, since 1903. See "The Water System" herein and "**APPENDIX C – OPERATING INFORMATION REGARDING THE WATER DIVISION**" attached hereto for more information regarding the Water Division.

Authority for the Issuance of the Series 2020 Bonds

Electric System. The Series 2020A Electric System Bonds are being issued pursuant to Chapter 34, Title 7, Tennessee Code Annotated, as amended (the “Act”), the City Charter, and the Electric System Revenue Obligations Master Resolution adopted by the Board of MLGW on June 20, 2002, and by the City Council on July 2, 2002, as previously amended and supplemented (the “Master Electric System Resolution”), and particularly as supplemented in respect to the Series 2020A Electric System Bonds by that certain Eighth Supplemental Resolution adopted by the Board of MLGW on June 30, 2020, and by the City Council on July 21, 2020 (the “Eighth Supplemental Resolution”).

The Series 2020B Electric System Refunding Bonds are being issued pursuant to the Act, the City Charter and Master Electric System Resolution, and particularly as supplemented by that certain Ninth Supplemental Resolution adopted by the Board of MLGW on June 30, 2020, and by the City Council on July 21, 2020 (the “Ninth Supplemental Resolution” and, together with the Master Electric System Resolution, and the Eighth Supplemental Resolution, the “Electric System Resolution”). For a more complete statement of the general covenants and provisions pursuant to which the Series 2020A Electric System Bonds and Series 2020B Electric System Refunding Bonds are issued, see “**APPENDIX F – SUMMARY OF CERTAIN PROVISIONS OF THE ELECTRIC SYSTEM RESOLUTION**” attached hereto.

Gas System. The Series 2020 Gas System Bonds are being issued pursuant to the Act, the City Charter, and the Gas System Revenue Obligations Master Resolution adopted by the Board of MLGW on June 1, 2016 and by the City Council on July 5, 2016 (the “Master Gas System Resolution”), particularly as supplemented in respect to the Series 2020 Gas System Bonds by that certain Third Supplemental Resolution adopted by the Board of MLGW on June 30, 2020, and by the City Council on July 21, 2020 (the “Third Supplemental Resolution” and, together with the Master Gas System Resolution, the “Gas System Resolution”). For a more complete statement of the general covenants and provisions pursuant to which the Series 2020 Gas System Bonds are issued, see “**APPENDIX G – SUMMARY OF CERTAIN PROVISIONS OF THE GAS SYSTEM RESOLUTION**” attached hereto.

Water System. The Series 2020 Water System Bonds are being issued pursuant to the Act, the City Charter, and the Water System Revenue Obligations Master Resolution adopted by the Board of MLGW on December 5, 2013, and by the City Council on December 17, 2013, as previously amended and supplemented (the “Master Water System Resolution”), and particularly as supplemented in respect to the Series 2020 Water System Bonds by that certain Fourth Supplemental Resolution adopted by the Board of MLGW on June 30, 2020, and by the City Council on July 21, 2020 (the “Fourth Supplemental Resolution” and, together with the Master Water System Resolution, the “Water System Resolution”). For a more complete statement of the general covenants and provisions pursuant to which the Series 2020 Water System Bonds are issued, see “**APPENDIX H – SUMMARY OF CERTAIN PROVISIONS OF THE WATER SYSTEM RESOLUTION**” attached hereto.

Purpose of the Series 2020 Bonds

Series 2020A Electric System Bonds. The Series 2020A Electric System Bonds are being issued to (i) finance the costs of acquiring, expanding and/or improving the Electric System and to (ii) pay certain costs of issuance with respect to the Series 2020A Electric System Bonds. See “PLAN OF FINANCE – Series 2020A Electric System Bonds” herein and “**APPENDIX A – OPERATING INFORMATION REGARDING THE ELECTRIC DIVISION – CAPITAL IMPROVEMENT PROGRAM OF THE ELECTRIC DIVISION AND SOURCES OF FUNDING**” attached hereto.

Series 2020B Electric System Refunding Bonds. The Series 2020B Electric System Refunding Bonds are being issued to (i) advance refund, on a federally taxable basis, a portion of the Electric System Revenue

Bonds, Series 2014 (the “Refunded Bonds”) and to (ii) pay certain costs of issuance with respect to the Series 2020B Electric System Refunding Bonds. See “PLAN OF FINANCE – Series 2020B Electric System Refunding Bonds” herein and “**APPENDIX A – OPERATING INFORMATION REGARDING THE ELECTRIC DIVISION – CAPITAL IMPROVEMENT PROGRAM OF THE ELECTRIC DIVISION AND SOURCES OF FUNDING**” attached hereto.

Series 2020 Gas System Bonds. The Series 2020 Gas System Bonds are being issued to (i) finance the costs of acquiring, expanding and/or improving the Gas System and to (ii) pay certain costs of issuance with respect to the Series 2020 Gas System Bonds. See “PLAN OF FINANCE – Series 2020 Gas System Bonds” herein and “**APPENDIX B – OPERATING INFORMATION REGARDING THE GAS DIVISION – CAPITAL IMPROVEMENT PROGRAM OF THE GAS DIVISION AND SOURCES OF FUNDING**” attached hereto.

Series 2020 Water System Bonds. The Series 2020 Water System Bonds are being issued to (i) finance the costs of acquiring, expanding and/or improving the Water System and to (ii) pay certain costs of issuance with respect to the Series 2020 Water System Bonds. See “PLAN OF FINANCE – Series 2020 Water System Bonds” herein and “**APPENDIX C – OPERATING INFORMATION REGARDING THE WATER DIVISION – CAPITAL IMPROVEMENT PROGRAM OF THE WATER DIVISION AND SOURCES OF FUNDING**” attached hereto.

Bond Registrar and Paying Agent

Regions Bank, Nashville, Tennessee, will act as the initial bond registrar and paying agent for the Series 2020 Bonds (in that capacity, the "Bond Registrar and Paying Agent").

Description of the Series 2020 Bonds

The Series 2020 Bonds will be dated the date of their delivery and will bear interest from the dated dates thereof, at the rates set forth on the inside cover of this Official Statement. Interest on the Series 2020 Bonds is payable semiannually on June 1 and December 1 of each year, commencing December 1, 2020. Principal on the Series 2020 Bonds is payable on December 1 of each year, commencing December 1, 2021. See "DESCRIPTION OF THE SERIES 2020 BONDS" herein. The Series 2020 Bonds are subject to optional and mandatory redemption prior to maturity as described herein. See "REDEMPTION PROVISIONS FOR THE SERIES 2020 BONDS" herein. The Series 2020 Bonds shall be fully registered bonds without coupons in denominations of \$5,000 as described herein and integral multiples thereof, and when issued will be registered in the name of Cede & Co. as nominee of The Depository Trust Company, New York, New York, (“DTC”) to which principal and interest will be paid. Beneficial owners of the Series 2020 Bonds will not receive physical delivery of Bond certificates except as described herein. See "DESCRIPTION OF THE SERIES 2020 BONDS – Book-Entry Only System" herein.

Security and Source of Payment for the Series 2020 Bonds

The Series 2020A Electric System Bonds and the Series 2020B Electric System Refunding Bonds will be secured solely by the Electric System Pledged Revenues (defined herein). The Series 2020 Gas System Bonds will be secured solely by the Gas System Pledged Revenues (defined herein). The Series 2020 Water System Bonds will be secured solely by the Water System Pledged Revenues (defined herein). All capitalized terms used herein and not otherwise defined herein are used with the meanings assigned thereto in "**APPENDIX F – SUMMARY OF CERTAIN PROVISIONS OF THE ELECTRIC SYSTEM RESOLUTION**", "**APPENDIX G – SUMMARY OF CERTAIN PROVISIONS OF THE GAS SYSTEM RESOLUTION**" and "**APPENDIX H – SUMMARY OF CERTAIN PROVISIONS OF THE WATER SYSTEM RESOLUTION**," respectively, attached hereto.

Article 65 of the City Charter requires the Electric Division, the Gas Division, and the Water Division to be financially separate with such joint or common expenses as shall be advisable and economical as determined by the Board. Revenues of the Electric Division, the Gas Division and Water Division are permitted to be used only for the payment of bonds and interest on the applicable division to which they relate.

Series 2020A Electric System Bonds. The Series 2020A Electric System Bonds are being issued as General Revenue Obligations under the Electric System Resolution and, as such, are limited obligations of the City payable solely from and secured by a pledge of the Electric System Pledged Revenues (as defined herein), which is on a parity and equality of lien with respect to the Electric System Pledged Revenues with any Outstanding Electric System Senior Lien Revenue Obligations (as defined herein) issued under the Master Electric System Resolution, and any additional Senior Lien Revenue Obligations hereafter issued thereunder, and such lien is senior in lien and right of payment to any Outstanding Subordinate Lien Revenue Obligations (as defined herein) issued under the Master Electric System Resolution or any Subordinate Lien Revenue Obligations issued under the Master Electric System Resolution in the future. See “SECURITY AND SOURCE OF PAYMENT FOR THE SERIES 2020 ELECTRIC SYSTEM BONDS” herein.

Series 2020B Electric System Refunding Bonds. The Series 2020B Electric System Refunding Bonds are being issued as General Revenue Obligations under the Electric System Resolution and, as such, are limited obligations of the City payable solely from and secured by a pledge of the Electric System Pledged Revenues (as defined herein), which is on a parity and equality of lien with respect to the Electric System Pledged Revenues with any Outstanding Electric System Senior Lien Revenue Obligations (as defined herein) issued under the Master Electric System Resolution, and any additional Senior Lien Revenue Obligations hereafter issued thereunder, and such lien is senior in lien and right of payment to any Outstanding Subordinate Lien Revenue Obligations (as defined herein) issued under the Master Electric System Resolution or any Subordinate Lien Revenue Obligations issued under the Master Electric System Resolution in the future.

The City has previously issued its Electric System Revenue Bonds, Series 2014, (the “Series 2014 Electric System Bonds”), its Electric System Revenue Bonds, Series 2016 (the “Series 2016 Electric System Bonds”), and its Electric System Revenue Bonds, Series 2017 (the “Series 2017 Electric System Bonds”) which are currently outstanding in the aggregate principal amount of \$178,480,000 (collectively, the “Outstanding Electric System Senior Lien Revenue Obligations”). Pursuant to the Master Electric System Resolution, the City has previously issued Subordinate Lien Revenue Obligations (the “Electric System Subordinate Lien Revenue Obligations”), however, no Electric System Subordinate Lien Revenue Obligations are currently outstanding. See “SECURITY AND SOURCE OF PAYMENT FOR THE SERIES 2020 ELECTRIC SYSTEM BONDS – Outstanding Electric System Senior Lien Revenue Obligations” herein. Subject to certain conditions as set forth in the Master Electric System Resolution, the City may issue Additional Obligations pursuant to the Master Electric System Resolution. See “SECURITY AND SOURCE OF PAYMENT FOR THE SERIES 2020 ELECTRIC SYSTEM BONDS – Additional Revenue Obligations” herein.

THE ELECTRIC SYSTEM PLEDGED REVENUES RELATE SOLELY TO REVENUES OF THE ELECTRIC DIVISION. THE SERIES 2020A ELECTRIC SYSTEM BONDS AND THE SERIES 2020B ELECTRIC SYSTEM REFUNDING BONDS ARE NOT PAYABLE FROM REVENUES OF MLGW'S GAS DIVISION OR WATER DIVISION.

The Series 2020A Electric System Bonds and the Series 2020B Electric System Refunding Bonds are not obligations of TVA or the United States and are not secured by any revenues or property of TVA or the United States. For a more complete statement of the general covenants and provisions pursuant to which the Series 2020A Electric System Bonds and the Series 2020B Electric System Refunding Bonds are issued, see

“APPENDIX F – SUMMARY OF CERTAIN PROVISIONS OF THE ELECTRIC SYSTEM RESOLUTION” attached hereto.

THE SERIES 2020A ELECTRIC SYSTEM BONDS AND THE SERIES 2020B ELECTRIC SYSTEM REFUNDING BONDS DO NOT CONSTITUTE A DEBT OF THE CITY OR MLGW WITHIN THE MEANING OF ANY CONSTITUTIONAL, CITY CHARTER OR STATUTORY LIMITATION. NEITHER THE FULL FAITH AND CREDIT NOR THE TAXING POWER OF THE STATE OR ANY POLITICAL SUBDIVISION THEREOF, INCLUDING THE CITY, IS PLEDGED TO THE PAYMENT OF THE SERIES 2020A ELECTRIC SYSTEM BONDS AND THE SERIES 2020B ELECTRIC SYSTEM REFUNDING BONDS, AND NO HOLDER OF THE SERIES 2020A ELECTRIC SYSTEM BONDS OR THE SERIES 2020B ELECTRIC SYSTEM REFUNDING BONDS SHALL HAVE THE RIGHT TO COMPEL ANY EXERCISE OF THE TAXING POWERS OF THE CITY TO PAY THE SERIES 2020A ELECTRIC SYSTEM BONDS, THE SERIES 2020B ELECTRIC SYSTEM REFUNDING BONDS OR THE INTEREST THEREON, AND THE SERIES 2020A ELECTRIC SYSTEM BONDS, THE SERIES 2020B ELECTRIC SYSTEM REFUNDING BONDS, INCLUDING THE INTEREST THEREON, ARE LIMITED OBLIGATIONS OF THE CITY AND MLGW AS PROVIDED IN THE ELECTRIC SYSTEM RESOLUTION PAYABLE SOLELY FROM THE ELECTRIC SYSTEM PLEDGED REVENUES. THE SERIES 2020A ELECTRIC SYSTEM BONDS AND THE SERIES 2020B ELECTRIC SYSTEM REFUNDING BONDS DO NOT CONSTITUTE A CHARGE, LIEN OR ENCUMBRANCE UPON ANY OTHER PROPERTY OF THE CITY EXCEPTING ONLY THE ELECTRIC SYSTEM PLEDGED REVENUES.

Series 2020 Gas System Bonds. The Series 2020 Gas System Bonds are being issued as General Revenue Obligations under the Gas System Resolution and, as such, are limited obligations of the City payable solely from and secured by a pledge of the Gas System Pledged Revenues (as defined herein), which is on a parity and equality of lien with respect to the Gas System Pledged Revenues with any additional Senior Lien Revenue Obligations hereafter issued under the Master Gas System Resolution, and such lien is senior in lien and right of payment to any Subordinate Lien Revenue Obligations issued under the Master Gas System Resolution in the future. See “SECURITY AND SOURCE OF PAYMENT FOR THE SERIES 2020 GAS SYSTEM BONDS” herein.

The City has previously issued its Gas System Revenue Bonds, Series 2016 (the “Series 2016 Gas System Bonds”) and its Gas System Revenue Bonds, Series 2017 (the “Series 2017 Gas System Bonds”) which are currently outstanding in the aggregate principal amount of \$73,500,000 (the “Outstanding Gas System Senior Lien Revenue Obligations”). See “SECURITY AND SOURCE OF PAYMENT FOR THE SERIES 2020 GAS SYSTEM BONDS – Outstanding Gas System Senior Lien Revenue Obligations” herein. The City has no outstanding subordinate lien revenue obligations in the Gas Division. Subject to certain conditions as set forth in the Master Gas System Resolution, the City may issue Additional Obligations pursuant to the Master Gas System Resolution. See “SECURITY AND SOURCE OF PAYMENT FOR THE SERIES 2020 GAS SYSTEM BONDS – Additional Revenue Obligations” herein.

THE GAS SYSTEM PLEDGED REVENUES RELATE SOLELY TO REVENUES OF THE GAS DIVISION. THE SERIES 2020 GAS SYSTEM BONDS ARE NOT PAYABLE FROM REVENUES OF MLGW'S ELECTRIC DIVISION OR WATER DIVISION.

For a more complete statement of the general covenants and provisions pursuant to which the Series 2020 Gas System Bonds are issued, see “APPENDIX G – SUMMARY OF CERTAIN PROVISIONS OF THE GAS SYSTEM RESOLUTION” attached hereto.

THE SERIES 2020 GAS SYSTEM BONDS DO NOT CONSTITUTE A DEBT OF THE CITY OR MLGW WITHIN THE MEANING OF ANY CONSTITUTIONAL, CITY CHARTER OR STATUTORY LIMITATION. NEITHER THE FULL FAITH AND CREDIT NOR THE TAXING POWER OF THE STATE OR ANY POLITICAL SUBDIVISION THEREOF, INCLUDING THE CITY, IS PLEDGED TO THE PAYMENT OF THE SERIES 2020 GAS SYSTEM BONDS, AND NO HOLDER OF THE SERIES 2020 GAS SYSTEM BONDS SHALL HAVE THE RIGHT TO COMPEL ANY EXERCISE OF THE TAXING POWERS OF THE CITY TO PAY THE SERIES 2020 GAS SYSTEM BONDS, OR THE INTEREST THEREON, AND THE SERIES 2020 GAS SYSTEM BONDS, INCLUDING THE INTEREST THEREON, ARE LIMITED OBLIGATIONS OF THE CITY AND MLGW AS PROVIDED IN THE GAS SYSTEM RESOLUTION PAYABLE SOLELY FROM THE GAS SYSTEM PLEDGED REVENUES. THE SERIES 2020 GAS SYSTEM BONDS DO NOT CONSTITUTE A CHARGE, LIEN OR ENCUMBRANCE UPON ANY OTHER PROPERTY OF THE CITY EXCEPTING ONLY THE GAS SYSTEM PLEDGED REVENUES.

Series 2020 Water System Bonds. The Series 2020 Water System Bonds are being issued as General Revenue Obligations under the Water System Resolution and, as such, are limited obligations of the City payable solely from and secured by a pledge of the Water System Pledged Revenues (as defined herein), which is on a parity and equality of lien with respect to the Water System Pledged Revenues with any Outstanding Water System Senior Lien Revenue Obligations issued under the Master Water System Resolution and any additional Senior Lien Revenue Obligations hereafter issued under the Master Water System Resolution, and such lien is senior in lien and right of payment to any Subordinate Lien Revenue Obligations issued under the Master Water System Resolution in the future. See “SECURITY AND SOURCE OF PAYMENT FOR THE SERIES 2020 WATER SYSTEM BONDS” herein.

The City has previously issued its Water System Revenue Bonds, Series 2014 (the “Series 2014 Water System Bonds”), its Water System Revenue Bonds, Series 2016 (the “Series 2016 Water System Bonds”), and its Water System Revenue Bonds, Series 2017 (the “Series 2017 Water System Bonds”), which are currently outstanding in the aggregate principal amount of \$61,860,000 (collectively, the “Outstanding Water System Senior Lien Revenue Obligations”). See “SECURITY AND SOURCE OF PAYMENT FOR THE SERIES 2020 WATER SYSTEM BONDS – Outstanding Water System Senior Lien Revenue Obligations” herein. The City has no outstanding subordinate lien revenue obligations in the Water Division. Subject to certain conditions as set forth in the Master Water System Resolution, the City may issue Additional Obligations pursuant to the Master Water System Resolution. See “SECURITY AND SOURCE OF PAYMENT FOR THE SERIES 2020 WATER SYSTEM BONDS – Additional Revenue Obligations” herein.

THE WATER SYSTEM PLEDGED REVENUES RELATE SOLELY TO REVENUES OF THE WATER DIVISION. THE SERIES 2020 WATER SYSTEM BONDS ARE NOT PAYABLE FROM REVENUES OF MLGW'S ELECTRIC DIVISION OR GAS DIVISION.

For a more complete statement of the general covenants and provisions pursuant to which the Series 2020 Water System Bonds are issued, see “**APPENDIX H – SUMMARY OF CERTAIN PROVISIONS OF THE WATER SYSTEM RESOLUTION**” attached hereto.

THE SERIES 2020 WATER SYSTEM BONDS DO NOT CONSTITUTE A DEBT OF THE CITY OR MLGW WITHIN THE MEANING OF ANY CONSTITUTIONAL, CITY CHARTER OR STATUTORY LIMITATION. NEITHER THE FULL FAITH AND CREDIT NOR THE TAXING POWER OF THE STATE OR ANY POLITICAL SUBDIVISION THEREOF, INCLUDING THE CITY, IS PLEDGED TO THE PAYMENT OF THE SERIES 2020 WATER SYSTEM BONDS, AND NO HOLDER OF THE SERIES 2020 WATER SYSTEM BONDS SHALL HAVE THE RIGHT TO COMPEL ANY EXERCISE OF THE TAXING POWERS OF THE CITY TO PAY THE SERIES 2020

WATER SYSTEM BONDS, OR THE INTEREST THEREON, AND THE SERIES 2020 WATER SYSTEM BONDS, INCLUDING THE INTEREST THEREON, ARE LIMITED OBLIGATIONS OF THE CITY AND MLGW AS PROVIDED IN THE WATER SYSTEM RESOLUTION PAYABLE SOLELY FROM THE WATER SYSTEM PLEDGED REVENUES. THE SERIES 2020 WATER SYSTEM BONDS DO NOT CONSTITUTE A CHARGE, LIEN OR ENCUMBRANCE UPON ANY OTHER PROPERTY OF THE CITY EXCEPTING ONLY THE WATER SYSTEM PLEDGED REVENUES.

Forward-Looking Statements

The statements contained in this Official Statement, including the appendices attached hereto that are not purely historical, are forward-looking statements, including statements regarding MLGW's or the Board's expectations, hopes, intentions or strategies regarding the future. Such statements are generally identifiable by the terminology used such as "plan," "expect," "estimate," "budget," "project," "forecast," "will likely result," "are expected to," "will continue," "is anticipated," "intend" or other similar words. Prospective investors should not place undue reliance on forward-looking statements. All forward-looking statements included in this Official Statement are based on information available to MLGW and the Board on the date hereof, and MLGW and the Board assume no obligation to update any such forward-looking statements with new forward-looking statements. It is important to note that MLGW's actual results likely will differ and could vary materially from those in such forward-looking statements.

The forward-looking statements herein are based on various assumptions and estimates and are inherently subject to various risks and uncertainties, including risks and uncertainties relating to the possible invalidity of the underlying assumptions and estimates and possible changes or developments in social, economic, business, industry, market, legal and regulatory circumstances and conditions and actions taken or omitted to be taken by third parties, including customers, suppliers and competitors, among others, and legislative, judicial and other governmental authorities and officials. Assumptions related to the foregoing involve judgments with respect to, among other things, future economic, competitive and market conditions and future business decisions, all of which are difficult to predict accurately and many of which are beyond the control of MLGW and the Board. Therefore, there can be no assurance that the forward-looking statements included in this Official Statement will prove to be accurate.

Prospective Financial and Operating Information

The forecasted financial information and operating data set forth herein has been prepared by the management of MLGW to present the forecasted debt service coverage and forecasted operating data for the Electric Division, Gas Division and the Water Division after issuance of the Series 2020 Bonds. The forecasted financial information and operating data was prepared, in the view of MLGW management, on a reasonable basis, and reflects the best currently available estimates and judgments and presents, to the best of management's knowledge and belief, the expected course of action and the expected future financial performance of MLGW. Such forecasted financial information was not prepared with a view towards complying with any applicable guidelines established by the American Institute of Certified Public Accountants with respect to such prospective information. This information is not fact and should not be relied upon as necessarily indicative of future results, and potential investors are cautioned not to place undue reliance on the forecasted financial information or operating data. Neither MLGW's independent auditors, nor any other independent accountants or consultants, have compiled, examined, or performed any procedures with respect to the prospective financial information or operating data contained herein, nor have they expressed any opinion or any form of assurance on such information or its achievability, and assume no responsibility for, and disclaim any association with, such prospective information.

The assumptions and estimates underlying the prospective financial information and operating data are inherently uncertain and, though considered reasonable by the management of MLGW as of the date of

this Official Statement, are subject to a wide variety of significant business, economic and competitive risks and uncertainties that could cause actual results to differ materially from those forecasted.

Accordingly, there can be no assurance that forecasted results are indicative of the future performance of MLGW or that actual results will not be materially higher or lower than those forecasted. Inclusion of the prospective financial information and operating data in this Official Statement should not be regarded as a representation by the City, MLGW, the Underwriters or any other person that the forecasted results will be achieved.

MLGW does not generally publish its business plans and strategies or make external forecasts of its anticipated financial position or results of operations. Accordingly, MLGW does not intend to update or otherwise revise the prospective financial information and operating data to reflect circumstances existing since its preparation or to reflect the occurrence of unanticipated events, even in the event that any or all of the underlying assumptions are shown to be in error. Furthermore, MLGW does not intend to update or revise the prospective financial information and operating data to reflect changes in general economic or industry conditions.

Additional Information

All references in this Official Statement referring to the operating information regarding the Electric, Gas and Water Divisions are qualified by reference and are attached hereto as **APPENDIX A**, **APPENDIX B** and **APPENDIX C**, respectively. The economic and demographic information regarding the City and the County are attached hereto as **APPENDIX D**. Financial statements of MLGW for the Fiscal Year ended December 31, 2019 are attached hereto as **APPENDIX E**. A summary of certain provisions of the Electric System Resolution, the Gas System Resolution and the Water System Resolution are attached hereto as **APPENDIX F**, **APPENDIX G** and **APPENDIX H**, respectively. The forms of the Continuing Disclosure Certificates that will be entered into in connection with the issuance of the Series 2020 Bonds are attached hereto as **APPENDIX I-1**, **APPENDIX I-2**, **APPENDIX I-3** and **APPENDIX I-4**. The proposed forms of the approving opinions of Co-Bond Counsel that will be delivered in connection with the issuance of the Series 2020 Bonds are attached hereto as **APPENDIX J-1**, **APPENDIX J-2**, **APPENDIX J-3** and **APPENDIX J-4**. The specimen of the Municipal Bond Insurance Policy that will be entered into concurrently with the issuance of the Series 2020B Electric System Refunding Bonds is attached hereto as **APPENDIX K**.

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PLAN OF FINANCE

Series 2020A Electric System Bonds

The Series 2020A Electric System Bonds are being issued under the Electric System Resolution in order to (i) finance the costs of acquiring, expanding and/or improving the Electric System, all of which constitute a portion of the Electric Division Capital Improvement Program (as defined herein) and to (ii) pay certain costs of issuance with respect to the Series 2020A Electric System Bonds.

Series 2020B Electric System Refunding Bonds

The Series 2020B Electric System Refunding Bonds are being issued to (i) advance refund, on a federally taxable basis, a portion of the Electric System Revenue Bonds, Series 2014 (the "Refunded Bonds") and to (ii) pay certain costs of issuance with respect to the Series 2020B Electric System Refunding Bonds.

The Refunded Bonds are as follows:

<u>Maturity</u> <u>Date</u>	<u>Principal</u> <u>Amount</u>	<u>Interest</u> <u>Rate</u>	<u>Redemption</u> <u>Date</u>	<u>Redemption</u> <u>Price</u>
2030	\$4,320,000	5.00%	12/01/2024	100%
2031	4,535,000	5.00	12/01/2024	100
2032	4,760,000	5.00	12/01/2024	100
2033	5,000,000	5.00	12/01/2024	100
2034	5,250,000	5.00	12/01/2024	100

Upon delivery of the Series 2020B Electric System Refunding Bonds, MLGW will enter into an Escrow Agreement (the "Escrow Agreement") with Regions Bank, Nashville, Tennessee (in that capacity, the "Escrow Agent"). A portion of the proceeds of the Series 2020B Electric System Refunding Bonds and other available monies, if required, will be deposited into one or more escrow funds created under the Escrow Agreement (the "Escrow Fund") and a portion of such proceeds will be used to acquire non-callable, direct general obligations of the United States of America Treasury Bonds, Notes, Bills and/or Treasury Strips (the "Government Obligations"). The Government Obligations and the interest earned thereon will be sufficient and will be used, together with cash retained in the Escrow Fund, to pay (a) the redemption prices of the Refunded Bonds on their respective redemption dates, and (b) the interest on the Refunded Bonds payable on and prior to such respective redemption dates.

MLGW will obtain verification of the sufficiency of the amounts and Government Obligations deposited into the Escrow Fund for the Refunded Bonds, and of certain yields, from the Verification Agent (as defined herein). See "VERIFICATION OF DEFESANCE" herein.

Upon issuance of the Series 2020B Electric System Refunding Bonds, the Refunded Bonds will be irrevocably designated for redemption on their respective redemption dates at their respective prices as stated within the table above, plus accrued and unpaid interest to their respective redemption dates, and provisions will be made by MLGW in the Escrow Agreement for the giving of notice of redemption of the Refunded Bonds. While DTC, or its nominee, is the registered owner of the Refunded Bonds, such notices will be sent to DTC or its nominee or successor, and neither MLGW nor the City shall be responsible for making notices of redemption to DTC Participants or to the Beneficial Owners of the Refunded Bonds.

Amounts on deposit in the Escrow Fund will not be available to pay debt service on the Series 2020B Electric System Refunding Bonds.

In addition to the issuance of the Series 2020A Electric System Bonds and the Series 2020B Electric System Refunding Bonds, the City contemplates issuing Additional Obligations to finance the costs of additional portions of the Electric Division Capital Improvement Program. See “**APPENDIX A – OPERATING INFORMATION REGARDING THE ELECTRIC DIVISION – CAPITAL IMPROVEMENT PROGRAM OF THE ELECTRIC DIVISION AND SOURCES OF FUNDING**” attached hereto.

Series 2020 Gas System Bonds

The Series 2020 Gas System Bonds are being issued under the Gas System Resolution in order to (i) finance the costs of acquiring, expanding and/or improving the Gas System, all of which constitute a portion of the Gas Division Capital Improvement Program (as defined herein) and to (ii) pay certain costs of issuance with respect to the Series 2020 Gas System Bonds. In addition to the issuance of the Series 2020 Gas System Bonds, the City contemplates issuing Additional Obligations to finance the costs of additional portions of the Gas Division Capital Improvement Program. See “**APPENDIX B – OPERATING INFORMATION REGARDING THE GAS DIVISION – CAPITAL IMPROVEMENT PROGRAM OF THE GAS DIVISION AND SOURCES OF FUNDING**” attached hereto.

Series 2020 Water System Bonds

The Series 2020 Water System Bonds are being issued under the Water System Resolution in order to (i) finance the costs of acquiring, expanding and/or improving the Water System, all of which constitute a portion of the Water Division Capital Improvement Program (as defined herein) and to (ii) pay certain costs of issuance with respect to the Series 2020 Water System Bonds. In addition to the issuance of the Series 2020 Water System Bonds, the City contemplates issuing Additional Obligations to finance the costs of additional portions of the Water Division Capital Improvement Program. See “**APPENDIX C – OPERATING INFORMATION REGARDING THE WATER DIVISION – CAPITAL IMPROVEMENT PROGRAM OF THE WATER DIVISION AND SOURCES OF FUNDING**” attached hereto.

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SOURCES AND USES OF FUNDS

The table below illustrates the sources and uses of funds in connection with the issuance of (i) the Series 2020A Electric System Bonds, (ii) the Series 2020B Electric System Refunding Bonds, (iii) the Series 2020 Gas System Bonds and (iv) the Series 2020 Water System Bonds, respectively:

SOURCES	<u>Electric System Series 2020A</u>	<u>Electric System Refunding Series 2020B</u>	<u>Gas System Series 2020</u>	<u>Water System Series 2020</u>
Par Amount	\$148,000,000.00	\$29,000,000.00	\$63,000,000.00	\$68,000,000.00
Original Issue Premium/Discount	27,803,020.65		12,145,669.30	12,488,748.80
Other Available Monies		298,312.50		
TOTALS	<u>\$175,803,020.65</u>	<u>\$29,298,312.50</u>	<u>\$75,145,669.30</u>	<u>\$80,488,748.80</u>
USES				
Deposit to Series 2020A Electric Project Account*	\$174,928,520.65			
Deposit to Series 2020B Electric Escrow Fund		\$29,008,221.03		
Deposit to Series 2020 Gas Project Account*			\$ 74,661,919.30	
Deposit to Series 2020 Water Proceeds Account*				\$79,970,248.80
Costs of Issuance**	874,500.00	290,091.47	483,750.00	518,500.00
TOTALS	<u>\$175,803,020.65</u>	<u>\$29,298,312.50</u>	<u>\$75,145,669.30</u>	<u>\$80,488,748.80</u>

* Deposits to the Electric, Gas and Water Division Proceeds Accounts, respectively, are permitted to be used only for the Division to which they relate and are not cross-collateralized in any manner.

** Includes Underwriters' discount, legal counsel fees, co-financial advisor fees, rating agencies fees, printing and mailing expenses, municipal bond insurance premium and other costs of issuance with respect to the Series 2020 Bonds.

DESCRIPTION OF THE SERIES 2020 BONDS

General

The Series 2020 Bonds will be dated their date of delivery and will bear interest at the rates set forth on the inside cover of this Official Statement, and will be paid in lawful money of the United States of America semiannually on June 1 and December 1 of each year (each, an "Interest Payment Date"), commencing on December 1, 2020. Principal on the Series 2020 Bonds is payable on December 1 of each year, subject to redemption prior to maturity, from December 1, 2021. The Series 2020 Bonds will be issued in denominations of \$5,000 or any integral multiple thereof. Interest on the Series 2020 Bonds will be calculated on the basis of a 360-day year consisting of twelve 30-day months.

The Series 2020 Bonds will be issued in fully registered form in the name of Cede & Co., as registered owner and nominee of The Depository Trust Company, New York, New York ("DTC"). DTC will act as securities depository for the Series 2020 Bonds. So long as the Series 2020 Bonds are held in book-entry only form, principal of, premium, if any, and interest on the Series 2020 Bonds will be paid directly to DTC for distribution to the Beneficial Owners (as defined herein) of the Series 2020 Bonds in accordance with the procedures adopted by DTC. Payments of principal, premium, if any, and interest on the Series 2020 Bonds will be paid by the Trustee to DTC for subsequent disbursement to DTC Participants who will remit such payments to the Beneficial Owners of the Series 2020 Bonds. See "DESCRIPTION OF THE SERIES 2020 BONDS – Book-Entry Only System" below.

Interest on the Series 2020 Bonds will be paid by wire transfer or by check or draft mailed by the Bond Registrar and Paying Agent on any Interest Payment Date to the person in whose name the Series 2020 Bond is registered in the bond registration books kept by the Bond Registrar and Paying Agent as of the close of business on the 15th day of the calendar month preceding any Interest Payment Date. Notwithstanding the foregoing, while the Series 2020 Bonds are held in the book-entry only system all principal, premium, if any, and interest will be paid by DTC (as defined herein), or its nominee by wire transfer.

Book-Entry Only System

The information in this section concerning DTC and DTC's book-entry only system has been obtained from DTC and neither the City nor MLGW is making any representation or warranty or take any responsibility for the accuracy or completeness of such information.

DTC will act as securities depository for the Series 2020 Bonds. The Series 2020 Bonds will be issued as fully-registered securities registered in the name of Cede & Co., DTC's partnership nominee, or such other name as may be requested by an authorized representative of DTC. One fully-registered Series 2020 Bond certificate will be issued for each maturity of each series of the Series 2020 Bonds as set forth on the inside front cover page of this Official Statement, each in the aggregate principal amount of such maturity, and will be deposited with DTC.

DTC is a limited-purpose trust company organized under the New York Banking Law, a "banking organization" within the meaning of the New York Banking Law, a member of the Federal Reserve System, a "clearing corporation" within the meaning of the New York Uniform Commercial Code and a "clearing agency" registered pursuant to the provisions of Section 17A of the Securities Exchange Act of 1934. DTC holds and provides asset servicing for U.S. and non-U.S. equity issues, corporate and municipal debt issues and money market instruments that DTC's participants ("Direct Participants") deposit with DTC. DTC also facilitates the post-trade settlement among Direct Participants of sales and other securities transactions in deposited securities, through electronic computerized book-entry transfers and pledges between accounts of

Direct Participants. This eliminates the need for physical movement of securities certificates. Direct Participants include both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, clearing corporations and certain other organizations. DTC is a wholly-owned subsidiary of The Depository Trust & Clearing Corporation ("DTCC"). DTCC is the holding company for DTC, National Securities Clearing Corporation and Fixed Income Clearing Corporation, all of which are registered clearing agencies. DTCC is owned by the users of its regulated subsidiaries. Access to the DTC system is also available to others such as both U.S. and non-U.S. securities brokers and dealers, banks, trust companies and clearing corporations that clear through or maintain a custodial relationship with a Direct Participant, either directly or indirectly ("Indirect Participants" and, together with the Direct Participants, the "DTC Participants"). The DTC Rules applicable to its Participants are on file with the SEC. More information about DTC can be found at www.dtcc.com.

Purchases of Series 2020 Bonds under the DTC system must be made by or through Direct Participants, which will receive a credit for the Series 2020 Bonds on DTC's records. The ownership interest of each actual purchaser of each Series 2020 Bond (a "Beneficial Owner") is in turn to be recorded on the Direct and Indirect Participants' records. Beneficial Owners will not receive written confirmation from DTC of their purchase. Beneficial Owners are, however, expected to receive written confirmations providing details of the transaction, as well as periodic statements of their holdings, from the Direct or Indirect Participant through which the Beneficial Owner entered into the transaction. Transfers of ownership interests in the Series 2020 Bonds are to be accomplished by entries made on the books of Direct and Indirect Participants acting on behalf of Beneficial Owners. Beneficial Owners will not receive certificates representing their ownership interests in the Series 2020 Bonds, except in the event that use of the book-entry only system for the Series 2020 Bonds is discontinued.

To facilitate subsequent transfers, all Series 2020 Bonds deposited by Direct Participants with DTC are registered in the name of DTC's partnership nominee, Cede & Co., or such other name as may be requested by an authorized representative of DTC. The deposit of the Series 2020 Bonds with DTC and their registration in the name of Cede & Co. or such other DTC nominee do not effect any change in beneficial ownership. DTC has no knowledge of the actual Beneficial Owners of the Series 2020 Bonds; DTC's records reflect only the identity of the Direct Participants to whose accounts such Series 2020 Bonds are credited, which may or may not be the Beneficial Owners. The Direct and Indirect Participants will remain responsible for keeping account of their holdings on behalf of their customers.

Conveyance of notices and other communications by DTC to Direct Participants, by Direct Participants to Indirect Participants and by Direct Participants and Indirect Participants to Beneficial Owners will be governed by arrangements among them, subject to any statutory or regulatory requirements as may be in effect from time to time. Beneficial Owners of Series 2020 Bonds may wish to take certain steps to augment the transmission to them of notices of significant events with respect to the Series 2020 Bonds, such as redemptions, tenders, defaults, and proposed amendments to the security documents. For example, Beneficial Owners of Series 2020 Bonds may wish to ascertain that the nominee holding the Series 2020 Bonds for their benefit has agreed to obtain and transmit notices to Beneficial Owners. In the alternative, Beneficial Owners may wish to provide their names and addresses to the registrar and request that copies of the notices be provided directly to them. Redemption notices shall be sent to DTC. If less than all of the Series 2020 Bonds within a series and maturity of the Series 2020 Bonds are being redeemed, DTC's practice is to determine by lot the amount of the interest of each Direct Participant in such series or maturity to be redeemed.

Neither DTC nor Cede & Co. (nor any other DTC nominee) will consent or vote with respect to the Series 2020 Bonds unless authorized by a Direct Participant in accordance with DTC's MMI Procedures. Under its usual procedures, DTC mails an Omnibus Proxy to the City as soon as possible after the record date. The Omnibus Proxy assigns Cede & Co.'s consenting or voting rights to those Direct Participants to whose

accounts Series 2020 Bonds are credited on the record date, as identified in a listing attached to the Omnibus Proxy.

Principal, premium, if any, and interest payments on the Series 2020 Bonds will be made to Cede & Co., or such other nominee as may be requested by an authorized representative of DTC. DTC's practice is to credit Direct Participants' accounts upon DTC's receipt of funds and corresponding detail information from the City or the Bond Registrar and Paying Agent on the payment date in accordance with their respective holdings shown on DTC's records. Payments by Direct Participants or Indirect Participants to Beneficial Owners will be governed by standing instructions and customary practices, as is the case with securities held for the accounts of customers in bearer form or registered in "street name," and will be the responsibility of such Direct Participant or Indirect Participant and not of DTC, the Bond Registrar and Paying Agent or the City, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of principal, premium, if any, and interest on the Series 2020 Bonds, as applicable, to Cede & Co. (or such other nominee as may be requested by an authorized representative of DTC) is the responsibility of the City and/or the Bond Registrar and Paying Agent, disbursement of such payments to Direct Participants will be the responsibility of DTC and disbursement of such payments to the Beneficial Owners will be the responsibility of Direct Participants and Indirect Participants.

DTC may discontinue providing its services as depository with respect to the Series 2020 Bonds at any time by giving reasonable notice to the City or the Bond Registrar and Paying Agent. Under such circumstances, in the event that a successor depository is not obtained, Series 2020 Bonds certificates are required to be printed and delivered.

The City and MLGW may decide to discontinue use of the system of book-entry only transfers through DTC (or a successor securities depository). In that event, Series 2020 Bonds certificates will be printed and delivered to the Holders of the Series 2020 Bonds.

THE ABOVE INFORMATION CONCERNING DTC AND DTC'S BOOK-ENTRY ONLY SYSTEM HAS BEEN OBTAINED FROM SOURCES THAT THE CITY, MLGW AND THE UNDERWRITERS BELIEVE TO BE RELIABLE, BUT THE CITY AND THE UNDERWRITERS TAKE NO RESPONSIBILITY FOR THE ACCURACY THEREOF. NONE OF THE CITY, MLGW NOR THE BOND REGISTRAR AND PAYING AGENT WILL HAVE ANY RESPONSIBILITY OR OBLIGATION TO DIRECT PARTICIPANTS, INDIRECT PARTICIPANTS, BENEFICIAL OWNERS OR OTHER NOMINEES OF SUCH BENEFICIAL OWNERS FOR (A) THE ACCURACY OF ANY RECORDS MAINTAINED BY DTC OR ANY DIRECT PARTICIPANT OR INDIRECT PARTICIPANT; (B) DISTRIBUTION OF CERTIFICATES REPRESENTING AN OWNERSHIP INTEREST OR OTHER CONFIRMATION OF BENEFICIAL OWNERSHIP INTERESTS IN THE SERIES 2020 BONDS; (C) THE PAYMENT BY DTC OR BY ANY DIRECT PARTICIPANT OR INDIRECT PARTICIPANT OF ANY AMOUNT DUE TO ANY BENEFICIAL OWNER IN RESPECT TO THE PRINCIPAL AMOUNT OR REDEMPTION OR PURCHASE PRICE OF, OR INTEREST ON, ANY SERIES 2020 BONDS; (D) THE DELIVERY OF ANY NOTICE BY DTC OR ANY DIRECT PARTICIPANT OR INDIRECT PARTICIPANT; (E) THE ELECTION OF THE DIRECT PARTICIPANTS, THE INDIRECT PARTICIPANTS OR THE BENEFICIAL OWNERS TO RECEIVE PAYMENT IN THE EVENT OF ANY PARTIAL REDEMPTION OF THE SERIES 2020 BONDS; OR (F) ANY CONSENT GIVEN OR ANY OTHER ACTION TAKEN BY DTC OR ANY DIRECT PARTICIPANT OR INDIRECT PARTICIPANT.

So long as Cede & Co. is the registered owner of the Series 2020 Bonds, as nominee for DTC, references herein to the registered owners of the Series 2020 Bonds shall mean Cede & Co., as aforesaid, and shall not mean the Beneficial Owners of the Series 2020 Bonds.

Use of Certain Terms in Other Sections of this Official Statement

In reading this Official Statement it should be understood that while the Series 2020 Bonds are in the Book-Entry Only System, references in other sections of this Official Statement to registered owners should be read to include the person for which the Participant acquires an interest in the Series 2020 Bonds, but (i) all rights of ownership must be exercised through DTC and the Book-Entry Only System, and (ii) except as described above, notices that are to be given to registered owners pursuant to the Electric System Resolution, Gas System Resolution and Water System Resolution, as applicable, will be given only to DTC.

The information herein concerning DTC and the Book-Entry Only System has been obtained from DTC and none of the City, MLGW, the Co-Financial Advisors or the Underwriters make any representation or warranty or take any responsibility for the accuracy or completeness of such information.

Effect of Discontinuance of Book-Entry Only System

In the event that the Book-Entry Only System is discontinued by DTC or the use of the Book-Entry Only System is discontinued by the City, printed Series 2020 Bonds will be issued to the holders and the Series 2020 Bonds will be subject to transfer, exchange and registration provisions as set forth in the Electric System Resolution, Gas System Resolution and Water System Resolution, as applicable.

BOND INSURANCE

Bond Insurance Policy

Concurrently with the issuance of the Series 2020B Electric System Refunding Bonds, Assured Guaranty Municipal Corp. ("AGM") will issue its Municipal Bond Insurance Policy for the Series 2020B Electric System Refunding Bonds (the "Policy"). The Policy guarantees the scheduled payment of principal of and interest on the Series 2020B Electric System Refunding Bonds when due as set forth in the form of the Policy included as **APPENDIX K** to this Official Statement.

The Policy is not covered by any insurance security or guaranty fund established under New York, California, Connecticut or Florida insurance law.

Assured Guaranty Municipal Corp.

AGM is a New York domiciled financial guaranty insurance company and an indirect subsidiary of Assured Guaranty Ltd. ("AGL"), a Bermuda-based holding company whose shares are publicly traded and are listed on the New York Stock Exchange under the symbol "AGO". AGL, through its operating subsidiaries, provides credit enhancement products to the U.S. and international public finance (including infrastructure) and structured finance markets and, as of October 1, 2019, asset management services. Neither AGL nor any of its shareholders or affiliates, other than AGM, is obligated to pay any debts of AGM or any claims under any insurance policy issued by AGM.

AGM's financial strength is rated "AA" (stable outlook) by S&P Global Ratings, a business unit of Standard & Poor's Financial Services LLC ("S&P"), "AA+" (stable outlook) by Kroll Bond Rating Agency, Inc. ("KBRA") and "A2" (stable outlook) by Moody's Investors Service, Inc. ("Moody's"). Each rating of AGM should be evaluated independently. An explanation of the significance of the above ratings may be obtained from the applicable rating agency. The above ratings are not recommendations to buy, sell or hold any security, and such ratings are subject to revision or withdrawal at any time by the rating agencies, including withdrawal initiated at the request of AGM in its sole discretion. In addition, the rating agencies

may at any time change AGM's long-term rating outlooks or place such ratings on a watch list for possible downgrade in the near term. Any downward revision or withdrawal of any of the above ratings, the assignment of a negative outlook to such ratings or the placement of such ratings on a negative watch list may have an adverse effect on the market price of any security guaranteed by AGM. AGM only guarantees scheduled principal and scheduled interest payments payable by the issuer of bonds insured by AGM on the date(s) when such amounts were initially scheduled to become due and payable (subject to and in accordance with the terms of the relevant insurance policy), and does not guarantee the market price or liquidity of the securities it insures, nor does it guarantee that the ratings on such securities will not be revised or withdrawn.

Current Financial Strength Ratings

On July 16, 2020, S&P announced it had affirmed AGM's financial strength rating of "AA" (stable outlook). AGM can give no assurance as to any further ratings action that S&P may take.

On December 19, 2019, KBRA announced it had affirmed AGM's insurance financial strength rating of "AA+" (stable outlook). AGM can give no assurance as to any further ratings action that KBRA may take.

On August 13, 2019, Moody's announced it had affirmed AGM's insurance financial strength rating of "A2" (stable outlook). AGM can give no assurance as to any further ratings action that Moody's may take.

For more information regarding AGM's financial strength ratings and the risks relating thereto, see AGL's Annual Report on Form 10-K for the fiscal year ended December 31, 2019.

Capitalization of AGM

At June 30, 2020:

- The policyholders' surplus of AGM was approximately \$2,667 million.
- The contingency reserves of AGM and its indirect subsidiary Municipal Assurance Corp. ("MAC") (as described below) were approximately \$1,018 million. Such amount includes 100% of AGM's contingency reserve and 60.7% of MAC's contingency reserve.
- The net unearned premium reserves and net deferred ceding commission income of AGM and its subsidiaries (as described below) were approximately \$2,048 million. Such amount includes (i) 100% of the net unearned premium reserve and deferred ceding commission income of AGM, (ii) the net unearned premium reserves and net deferred ceding commissions of AGM's wholly owned subsidiaries Assured Guaranty (Europe) plc ("AGE UK") and Assured Guaranty (Europe) SA ("AGE SA"), and (iii) 60.7% of the net unearned premium reserve of MAC.

The policyholders' surplus of AGM and the contingency reserves, net unearned premium reserves and deferred ceding commission income of AGM and MAC were determined in accordance with statutory accounting principles. The net unearned premium reserves and net deferred ceding commissions of AGE UK and AGE SA were determined in accordance with accounting principles generally accepted in the United States of America.

Incorporation of Certain Documents by Reference

Portions of the following documents filed by AGL with the Securities and Exchange Commission (the “SEC”) that relate to AGM are incorporated by reference into this Official Statement and shall be deemed to be a part hereof:

(i) the Annual Report on Form 10-K for the fiscal year ended December 31, 2019 (filed by AGL with the SEC on February 28, 2020);

(ii) the Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2020 (filed by AGL with the SEC on May 8, 2020); and

(iii) the Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2020 (filed by AGL with the SEC on August 7, 2020).

All information relating to AGM included in, or as exhibits to, documents filed by AGL with the SEC pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, excluding Current Reports or portions thereof “furnished” under Item 2.02 or Item 7.01 of Form 8-K, after the filing of the last document referred to above and before the termination of the offering of the Series 2020B Electric System Refunding Bonds shall be deemed incorporated by reference into this Official Statement and to be a part hereof from the respective dates of filing such documents. Copies of materials incorporated by reference are available over the internet at the SEC’s website at <http://www.sec.gov>, at AGL’s website at <http://www.assuredguaranty.com>, or will be provided upon request to Assured Guaranty Municipal Corp.: 1633 Broadway, New York, New York 10019, Attention: Communications Department (telephone (212) 974-0100). Except for the information referred to above, no information available on or through AGL’s website shall be deemed to be part of or incorporated in this Official Statement.

Any information regarding AGM included herein under the caption “BOND INSURANCE – Assured Guaranty Municipal Corp.” or included in a document incorporated by reference herein (collectively, the “AGM Information”) shall be modified or superseded to the extent that any subsequently included AGM Information (either directly or through incorporation by reference) modifies or supersedes such previously included AGM Information. Any AGM Information so modified or superseded shall not constitute a part of this Official Statement, except as so modified or superseded.

Miscellaneous Matters

AGM makes no representation regarding the Series 2020B Electric System Refunding Bonds or the advisability of investing in the Series 2020B Electric System Refunding Bonds. In addition, AGM has not independently verified, makes no representation regarding, and does not accept any responsibility for the accuracy or completeness of this Official Statement or any information or disclosure contained herein, or omitted herefrom, other than with respect to the accuracy of the information regarding AGM supplied by AGM and presented under the heading “BOND INSURANCE”.

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REDEMPTION PROVISIONS FOR THE SERIES 2020 BONDS

Redemption Provisions for the Series 2020A Electric System Bonds

Optional Redemption. The Series 2020A Electric System Bonds maturing on or before December 1, 2030, shall not be subject to redemption prior to maturity. The Series 2020A Electric System Bonds maturing on or after December 1, 2031 (or portions thereof in authorized denominations of \$5,000 and integral multiples thereof) are subject to optional redemption by the City, at the direction of the Board, on and after December 1, 2030 in whole or in part, at any time in such order as determined by the City at a redemption price equal to the principal amount of the Series 2020A Electric System Bonds or portion thereof to be redeemed together with interest accrued thereon to the date fixed for redemption.

Mandatory Redemption. The Series 2020A Electric System Bonds maturing on December 1, 2045 and December 1, 2050 (the “Term Bonds”) are subject to mandatory redemption, by operation of sinking fund installments (the “Sinking Fund Requirements”), prior to maturity on December 1 of each of the years indicated herein and are payable at one hundred percent (100%) of the amount so redeemed or paid, plus accrued interest thereon to the date of redemption, as follows:

The Series 2020A Electric System Bonds maturing December 1, 2045:

<u>Year</u>	<u>Principal Amount</u>
2043	\$6,150,000
2044	6,400,000
2045*	6,655,000

* Final Maturity

The Series 2020A Electric System Bonds maturing December 1, 2050:

<u>Year</u>	<u>Principal Amount</u>
2046	\$6,920,000
2047	7,195,000
2048	7,485,000
2049	7,785,000
2050*	8,095,000

* Final Maturity

At the option of the City, at the direction of the Board, whenever the Series 2020A Electric System Bonds are purchased, or redeemed (other than pursuant to the scheduled Sinking Fund Requirements), the principal amount of Series 2020A Electric System Bonds so retired will satisfy and be credited against the Sinking Fund Requirements (and the corresponding redemption requirements) for the Series 2020A Electric System Bonds of the same series in such manner as the City, at the direction of the Board, determines.

Redemption Provisions for the Series 2020B Electric System Refunding Bonds

Optional Redemption. The Series 2020B Electric System Refunding Bonds maturing on or before December 1, 2030, shall not be subject to redemption prior to maturity. The Series 2020B Electric System Refunding Bonds maturing on or after December 1, 2031 (or portions thereof in authorized denominations of \$5,000 and integral multiples thereof) are subject to optional redemption by the City, at the direction of the Board, on and after December 1, 2030 in whole or in part, at any time in such order as determined by the City at a redemption price equal to the principal amount of the Series 2020B Electric System Refunding Bonds or portion thereof to be redeemed together with interest accrued thereon to the date fixed for redemption.

In addition to and independent of the redemption rights described in the preceding paragraph, the Series 2020B Bonds of any maturity may be redeemed, in whole or in part, at the option of the City, from funds from any source, at any time at a redemption price equal to the greater of (i) 100% of the principal amount of the Series 2020B Bonds of such maturity to be redeemed and (ii) the sum of the present values of the applicable remaining scheduled payments of principal and interest on the Series 2020B Bonds of such maturity to be redeemed, not including any portion of those payments on interest accrued and unpaid as of the date on which such Series 2020B Bonds are to be redeemed, discounted to the date of redemption on a semi-annual basis (assuming a 360-day year consisting of twelve 30-day months) at the Treasury Rate plus 25 basis points, plus in each case, accrued and unpaid interest on the Series 2020B Bonds being redeemed to the date fixed for redemption (the “Make-Whole Redemption Price”).

“*Treasury Rate*” means, with respect to any redemption date for a particular Series 2020B Bond, the yield to maturity as of such redemption date of United States Treasury securities with a constant maturity (as compiled and published in the most recent Federal Reserve Statistical Release H. 15 (519) that has become publicly available at least two Business Days (as defined below) prior to the redemption date (excluding inflation indexed securities) (or, if such Statistical Release is no longer published, any publicly available source of similar market data) most nearly equal to the period from the redemption date to the maturity date of the Series 2020B Bonds to be redeemed; provided, however, that if the period from the redemption date to such maturity date is less than one year, the weekly average yield on actually traded United States Treasury securities adjusted to a constant maturity of one year will be used.

“*Business Day*” means any day, other than a Saturday or Sunday, and other than a day on which the Bond Registrar and Paying Agent is required, or authorized or not prohibited, by law (including without limitation, executive orders) to close and is closed.

The City will retain an independent accounting firm or an independent financial advisor to determine the Make-Whole Redemption Price and to perform all actions and make all calculations required to determine the Make-Whole Redemption Price. The City and the Bond Registrar and Paying Agent may conclusively rely on such accounting firm’s or financial advisor’s calculations in connection with, and determination of, the Make-Whole Redemption Price, and neither the City nor the Bond Registrar and Paying Agent will have any liability for their reliance. The determination of the Make-Whole Redemption Price by such accounting firm or financial advisor will be conclusive and binding on the City, the Bond Registrar and Paying Agent, and the registered owners of the Series 2020B Bonds.

Redemption Provisions for the Series 2020 Gas System Bonds

Optional Redemption. The Series 2020 Gas System Bonds maturing on or before December 1, 2030, shall not be subject to redemption prior to maturity. The Series 2020 Gas System Bonds maturing on or after December 1, 2031 (or portions thereof in authorized denominations of \$5,000 and integral multiples thereof) are subject to optional redemption by the City, at the direction of the Board, on and after December 1, 2030 in whole or in part, at any time in such order as determined by the City at a redemption price equal to the

principal amount of the Series 2020 Gas System Bonds or portion thereof to be redeemed together with interest accrued thereon to the date fixed for redemption.

Mandatory Redemption. The Series 2020 Gas System Bonds maturing on December 1, 2045 and December 1, 2050 (the “Term Bonds”) are subject to mandatory redemption, by operation of sinking fund installments (the “Sinking Fund Requirements”), prior to maturity on December 1 of each of the years indicated herein and are payable at one hundred percent (100%) of the amount so redeemed or paid, plus accrued interest thereon to the date of redemption, as follows:

The Series 2020 Gas System Bonds maturing December 1, 2045:

<u>Year</u>	<u>Principal Amount</u>
2043	\$2,620,000
2044	2,725,000
2045*	2,830,000

* Final Maturity

The Series 2020 Gas System Bonds maturing December 1, 2050:

<u>Year</u>	<u>Principal Amount</u>
2046	\$2,945,000
2047	3,065,000
2048	3,185,000
2049	3,315,000
2050*	3,445,000

* Final Maturity

At the option of the City, at the direction of the Board, whenever the Series 2020 Gas System Bonds are purchased, or redeemed (other than pursuant to the scheduled Sinking Fund Requirements), the principal amount of Series 2020 Gas System Bonds so retired will satisfy and be credited against the Sinking Fund Requirements (and the corresponding redemption requirements) for the Series 2020 Gas System Bonds of the same series in such manner as the City, at the direction of the Board, determines.

Redemption Provisions for the Series 2020 Water System Bonds

Optional Redemption. The Series 2020 Water System Bonds maturing on or before December 1, 2030, shall not be subject to redemption prior to maturity. The Series 2020 Water System Bonds maturing on or after December 1, 2031 (or portions thereof in authorized denominations of \$5,000 and integral multiples thereof) are subject to optional redemption by the City, at the direction of the Board, on and after December 1, 2030, in whole or in part, at any time in such order as determined by the City at a redemption price equal to the principal amount of the Series 2020 Water System Bonds or portion thereof to be redeemed together with interest accrued thereon to the date fixed for redemption.

Mandatory Redemption. The Series 2020 Water System Bonds maturing on December 1, 2045 and December 1, 2050 (the “Term Bonds”) are subject to mandatory redemption, by operation of sinking fund installments (the “Sinking Fund Requirements”), prior to maturity on December 1 of each of the years indicated herein and are payable at one hundred percent (100%) of the amount so redeemed or paid, plus accrued interest thereon to the date of redemption, as follows:

The Series 2020 Water System Bonds maturing December 1, 2045:

<u>Year</u>	<u>Principal Amount</u>
2041	\$2,685,000
2042	2,765,000
2043	2,850,000
2044	2,935,000
2045*	3,025,000

* Final Maturity

The Series 2020 Water System Bonds maturing December 1, 2050:

<u>Year</u>	<u>Principal Amount</u>
2046	\$3,115,000
2047	3,240,000
2048	3,370,000
2049	3,505,000
2050*	3,645,000

* Final Maturity

At the option of the City, at the direction of the Board, whenever the Series 2020 Water System Bonds are purchased, or redeemed (other than pursuant to the scheduled Sinking Fund Requirements), the principal amount of Series 2020 Water System Bonds so retired will satisfy and be credited against the Sinking Fund Requirements (and the corresponding redemption requirements) for the Series 2020 Water System Bonds of the same series in such manner as the City, at the direction of the Board, determines.

Redemption Notice Provisions Applicable to the Series 2020 Bonds

Notice of Redemption. Notice of any redemption of the Series 2020 Bonds shall be given by the Bond Registrar and Paying Agent, on behalf of the Division, by mailing a copy of an official redemption notice by first class mail at least twenty (20) days and not more than sixty (60) days prior to the date fixed for redemption to the registered owner of the Series 2020 Bond or Series 2020 Bonds to be redeemed, unless such notice is waived by any such registered owner, at the address shown on the records of the Bond Registrar and Paying Agent or at such other address as is furnished in writing by such registered owner to the Bond Registrar and Paying Agent, and, with respect to the Series 2020 Bonds, to each entity authorized and approved by the SEC for the purposes of the Rule. Such notice shall include the terms and conditions prescribed by the Electric System Resolution, the Gas System Resolution and the Water System Resolution, as applicable. The City shall not be responsible for mailing notices of redemption to Direct Participants or Indirect Participants or to the Beneficial Owners of the Series 2020 Bonds. Any failure by DTC to mail such notice to any Participant will not affect the validity of such redemption. See “DESCRIPTION OF THE SERIES 2020 BONDS - Book-Entry Only System” herein.

Conditional Notice. Notwithstanding the foregoing, any notice of redemption may state that it is conditional upon the occurrence of certain events, including without limitation the receipt of certain funds by the City or MLGW or the Bond Registrar and Paying Agent or the issuance of certain bonds or other obligations by the City or MLGW. If so conditioned, the redemption will not be made unless such events occur, the notice thereof will specify such conditions and the required timing thereof and, if such conditions are not met, a notice thereof will be given by the Bond Registrar and Paying Agent to the registered owners of Series 2020 Bonds promptly after the date it is determined such conditions are not met.

Selection of the Series 2020 Bonds. If less than all of the Series 2020 Bonds of like maturity or interest rate within a maturity of any series shall be called for redemption, the particular Series 2020 Bonds, or portions of Series 2020 Bonds, to be redeemed shall be selected by lot or in such other manner as MLGW, in its discretion may deem proper. Except as may be provided otherwise in a Supplemental Resolution, the portion of any Series 2020 Bond of a denomination of more than \$5,000 to be redeemed shall be in the principal amount of \$5,000 or an integral multiple thereof, and, in selecting portions of such Series 2020 Bonds for redemption, each such Series 2020 Bond shall be treated as representing that number of Series 2020 Bonds which is obtained by dividing the principal amount of such Series 2020 Bond to be redeemed in part by \$5,000.

Effect of Notice of Redemption. From and after any redemption date, all Series 2020 Bonds called for redemption shall cease to bear interest if funds are available at the office of the Bond Registrar and Paying Agent for the payment thereof and if notice has been duly provided as set forth herein.

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CITY OF MEMPHIS, TENNESSEE

The City was incorporated as a city in 1826 and operated under a commission form of government from 1909 until January 1, 1968. At that time, a Mayor-Council form of government was established. The City is located on the east bank of the Mississippi River in the southwest corner of the State. The City is the State's largest city not having a metropolitan form of government and is the county seat of the County. The City currently occupies a land area of approximately 315 square miles and serves an estimated population of 650,618, according to the 2019 Comprehensive Annual Financial Report of the City.

The current fiscal year of the City is the 12-month period beginning on July 1 and ending on June 30. For additional information regarding the City. See “**APPENDIX D – ECONOMIC AND DEMOGRAPHIC INFORMATION REGARDING THE CITY OF MEMPHIS, TENNESSEE AND SHELBY COUNTY, TENNESSEE**” attached hereto.

MEMPHIS LIGHT, GAS AND WATER DIVISION

Organization and History

MLGW was created by an amendment to the City Charter enacted by Chapter 381 of the Private Acts of the General Assembly of Tennessee, adopted March 9, 1939, as amended (the “Private Act”). MLGW operates three separate utilities, as divisions, providing electricity, gas and water in the City and the County. Each division operates as a separate entity for accounting and financial purposes in accordance with the Private Act. For economic reasons, activities common to all three divisions are administered jointly and costs are prorated monthly among the divisions. A 1981 amendment to the City Charter permits the establishment of additional divisions to provide other energy services.

Service Area

MLGW supplies electric and gas service in the City and the County. Water service is provided by MLGW in the City and in certain other municipalities and unincorporated areas in the County. The City limits contain approximately 350.1 square miles, representing approximately 46% of the total land area of the County. The County’s 2018 and 2019 citizens’ population is estimated at 936,365 and 937,166, respectively, according to the United States Bureau of Census. For additional information about the City and the County, see “**APPENDIX D — ECONOMIC AND DEMOGRAPHIC INFORMATION REGARDING THE CITY OF MEMPHIS, TENNESSEE AND SHELBY COUNTY, TENNESSEE.**”

Management

MLGW controls the administration of its activities and business affairs. MLGW operates independently, manages its own finances and is responsible for obligations incurred in such operations, including indebtedness payable from operations of MLGW. MLGW must have the approval of the City Council before incurring certain obligations, including purchasing real estate, execution of certain contracts and exercising the right of eminent domain. MLGW’s annual budget is subject to approval by the City Council.

MLGW is managed by the Board, which consists of five (5) members nominated by the Mayor and approved by the City Council. Under the Private Act, the Board is responsible for doing all things necessary to supply MLGW’s service area with electricity, gas and water. The members of the Board serve fixed terms of three (3) years each. The Board elects its own officers. Upon the expiration of the fixed term of a Board member, such member will continue to serve until new Board members are appointed by the Mayor and approved by the City Council.

The Board is a successor to an initial Board of Water Commissioners established in 1903. In 1935, the functions of the original Board were widened to include the operation of an electric system and the Board was designated as the Board of Light and Water Commissioners. In 1939, the Private Act established MLGW as a Division of the City. In 1981, the Private Act was amended to further expand the Board's scope.

The daily operation of MLGW is managed by the President and Chief Executive Officer, who is nominated for a five-year term by the Mayor and approved by the City Council. Under the Private Act, the President and Chief Executive Officer generally supervises the operation of MLGW and all of its officers and employees.

Board of Commissioners

The following individuals are the members of the Board:

Carlee McCullough, Chair** was appointed to the Board in 2014. Her current term of office expired October 30, 2019. A native Memphian, Ms. McCullough currently serves as General Counsel of McCullough Law and was previously the Contract Compliance Officer for the City of Memphis. She has served as legal advisor for the Memphis and Shelby County Music Commission as well as the Memphis and Shelby County Film & Television Commission. A former certified public accountant, she is a graduate of Howard University School of Business and Loyola Law School in Los Angeles, California, where she received her law degree. Among her many pursuits, she also writes a weekly business column for The New Tri-State Defender Newspaper.

Mitch Graves, Vice-Chair** was appointed to the Board in 2016. His current term of office expired June 30, 2019. Mr. Graves is CEO of West Cancer Center and Research Institute, the region's comprehensive leader in adult cancer care and research. He is a member of the Economic Club of Memphis and also serves on the finance committee of the Church Health Center. He is a graduate of Christian Brothers University and recently served as Chairman of their Board of Trustees.

Steven Wishnia** was appointed to the Board in 2008. His current term of office expired November 1, 2019. As President and Managing Director of Highland Capital Management Corporation, Mr. Wishnia directs the company's management of portfolios for pension plans, profit sharing plans, endowments, and individuals. Mr. Wishnia is Trustee of the Plough Foundation, served on the Board of Directors of Methodist LeBonheur Healthcare, and is Past Chairman of the Board for LeBonheur Children's Hospital.

Leon Dickson Sr.** was appointed to the Board in 2016. His current term of office expired October 30, 2019. Mr. Dickson is owner and principal broker of BenchMark at Southwind Realtors. The Tennessee Association of Realtors recently selected Mr. Dickson as the group's first African-American president-elect for 2017. A Realtor for 27 years, he previously held the post of state secretary/treasurer for the group. He also is a past president of the Memphis Area Association of Realtors and was named its Realtor of the Year in 2012. He is currently serving as the Vice Chair for the Leadership Idea Exchange Council, for the National Association of Realtors. The native Memphian volunteers at Hope Works and Germanshire Elementary.

Mike Pohlman** was appointed to the Board in 2018. His current term of office expired July 30, 2020. He is CEO/President of Pickering Firm, Incorporated, a Memphis based, full-service engineering and architectural design firm, with offices in Tennessee, Mississippi and Arkansas. Mr. Pohlman is a 1979 Mechanical Engineering graduate from Christian Brothers University, a Tennessee Professional Engineer, and has served in various capacities at Pickering during his 40 years with the firm. He currently serves on the advisory boards for both the University of Memphis and Christian Brothers University engineering schools as

well as previously serving as President of both the American Council of Engineering Companies (ACEC) for Tennessee and the Society of American Military Engineers (S.A.M.E.).

Advisory Board Members

Dwain Kicklighter** of Bartlett was named as one of two advisory board members to MLGW's Board of Commissioners in 2017. His current term expired on July 30, 2020. Memphis Mayor Jim Strickland selected Mr. Kicklighter after input from all six Shelby County suburban mayors. He is serving a three-year term as an advisory, non-voting member. Now retired, Mr. Kicklighter worked as Bartlett's water administration manager for three and a half years. He also spent 30 years at MLGW as an accounting supervisor.

Kevin Young** of Germantown was named as one of two advisory board members to MLGW's Board of Commissioners in 2017. His current term expired on July 30, 2020. Memphis Mayor Jim Strickland selected Mr. Young after input from all six Shelby County suburban mayors. Mr. Young is serving a three-year term as an advisory, non-voting member. Mr. Young is a former operations and sales manager in the freight industry. He currently serves as chairman of the Germantown Parks and Recreation Commission and sits on the Germantown's Public Arts Commission and the Germantown Tree Board. In addition, he serves on the Methodist LeBonheur Germantown Community Advisory Board and St. George's Independent School's Athletic Advisory Board.

***** Pursuant to State law, a Commissioner or Advisory Board Member will lawfully continue to serve until a successor is duly appointed and qualified.***

Executives and Officers

The following individuals are the Executives and Officers of MLGW:

J.T. Young, President and Chief Executive Officer, is responsible for overseeing the day-to-day operations of MLGW. Mr. Young joined MLGW in 2018 and is the 11th President to lead the utility. Mr. Young's diverse utility experience includes engineering, customer service, marketing, sales, risk management, information technology, finance and supply chain management. Immediately prior to assuming his responsibilities at MLGW, he served as Gulf Power Company's Customer Service and Marketing General Manager.

Mr. Young holds a bachelor's degree in electrical engineering from the University of Florida, an MBA from the University of West Florida and he is a graduate of Harvard Business School's General Management Program.

Dana Jeanes, Senior Vice-President, Chief Financial Officer and Chief Administrative Officer (Secretary-Treasurer), is responsible for establishing, monitoring and maintaining company-wide financial and administrative objectives, policies, programs, and practices for MLGW. Mr. Jeanes joined MLGW in December 1987 and has served as Energy Engineer; Rates Engineer; Supervisor, Rates and Regulatory Affairs; Manager, Budget, Plant and Rates; Director of Analysis, Strategy, and Performance, and Controller. Mr. Jeanes received his Bachelor of Science in electrical engineering from Christian Brothers University in 1979 and a Master of Business Administration degree with emphasis on finance and accounting from the University of Memphis in 1994. He is a licensed professional engineer in Tennessee. He is a Certified Public Accountant and a member of the American Institute of Certified Public Accountants. Mr. Jeanes serves in several industry associations. He is a Board member and past President of the Tennessee Municipal Electric Power Association. He also serves on the Tennessee Valley Public Power Association Government Relations

Committee and Rates and Contracts Committee. Mr. Jeanes also serves as a Director on the Board of the Better Business Bureau of the Mid-South.

Alonzo Weaver III, Senior Vice-President and Chief Operating Officer, is responsible for managing and coordinating all engineering functions, facilities operations and loss prevention, electric substations, water pumping stations, gas regulators, and wells. Mr. Weaver joined MLGW in 1983 as an Engineering Assistant in Electric Operations and was promoted to Operations Assistant in that department in 1987. Mr. Weaver later served as Assistant Manager for the North Service Center before being promoted to Manager, Electric Operations in 1992. He was promoted to Vice President, Operations in 1997 and has served in various executive roles since that time. Mr. Weaver graduated from Rensselaer Polytechnic Institute with a B.S. in Mechanical Engineering in 1983 and attended the University of Memphis where he received an MBA in 1997. Mr. Weaver also attended Rhodes College Institute for Executive Leadership and completed the MLGW Executive Development Program in 1988. Mr. Weaver is active in several industry associations, such as the American Public Power Association, the American Public Gas Association, the American Association of Blacks in Energy, the American Gas Association and the North American Transmission Forum. He serves on the boards of the Southern Gas Association, SERC Reliability Corporation and Junior Achievement.

Cheryl W. Patterson, Vice-President and General Counsel (Compliance Officer), is responsible for advising the Board and MLGW staff concerning all legal obligations and privileges, serves as Chief Ethics Officer for MLGW, and performs other legal services for MLGW. Mrs. Patterson joined MLGW in 2008. Previously, she served as partner in the law firm of Wyatt, Tarrant & Combs, LLP, and was a member of the firm's Financial Institutions & Public Finance Service Teams. Mrs. Patterson has served as bond counsel and underwriter's counsel to municipalities and non-profits. She is a graduate of Wellesley College with a Bachelor of Arts Degree in Political Science and French and a 1984 graduate of Harvard Law School. She is a member of the American, Tennessee and Memphis Bar Associations as well as the National Association of Bond Lawyers. She is licensed to practice law in Tennessee and Pennsylvania. Mrs. Patterson is active in the Tennessee Valley Public Power Association Government Relations Committee and serves on the boards of several non-profit organizations.

Roland McElrath, Vice-President of Accounting, is responsible for directing MLGW's accounting function and departments engaged in general accounting, customer payments, payroll, and banking activities. Mr. McElrath joined MLGW in August 2012. Mr. McElrath served as the Finance Director for the City of Memphis, from 1996 through 2001 and again from 2005 through 2012. He has also held the position of Associate Superintendent of Business Operations at Memphis City Schools from 2001 through 2003 and was Chief Financial Officer at the Memphis Housing Authority from 2003 through 2005. Mr. McElrath received his bachelor's degree in accounting from the University of Tennessee at Martin in 1982 and earned a Master of Business Administration degree in Finance from the University of Memphis in 1989. He is a Certified Public Accountant and a Certified Municipal Finance Officer.

Cliff DeBerry, Jr., Vice-President of Design, Construction and Delivery, is responsible for managing and coordinating the delivery of construction and maintenance operations at Memphis Light, Gas and Water as well as Residential and Commercial Engineering Design, Lighting Services, and Builder and Developer Services. Mr. DeBerry joined MLGW in 1987 as a Level I Customer Engineer and was promoted to Assistant Manager for the Hickory Hill Service Center in 2000. He later served as Manager of Electric Engineering, Manager of Hickory Hill Service Center, and Director of Analysis, Strategy and Performance before being promoted to his current position. Mr. DeBerry graduated from Christian Brothers College (now CBU) with a B.S. in Electrical Engineering in 1987 and additionally received an MBA in Finance in 1994 from Memphis State University (now University of Memphis). He is a registered Professional Engineer licensed in the state of Tennessee. Mr. DeBerry is a Commissioner for the West Tennessee Seismic Safety Commission, Board Member for the Mid-South Food Bank, Managing Operating Committee Member for the American Gas Association and an active member of the Engineers Club of Memphis where he served on the Board of Directors. Additionally, Mr. DeBerry has served as President of the American Association of Blacks

in Energy and is a member of Alpha Phi Alpha Fraternity. He is a supporter of many community endeavors such as Junior Achievement, the United Way, the MS 150 Bike -A-Thon and Ride for Life.

Nicholas Newman, Vice-President of Engineering and Operations, is responsible for managing and coordinating all engineering and operational divisions for Memphis Light, Gas and Water. Mr. Newman joined MLGW in 1988 as a Service Engineer in the Customer Engineering Department. Mr. Newman previously served as a District Engineer; Supervisor of Engineering and Heavy Equipment; Assistant Manager and Manager of the South Service Center. Additionally, Mr. Newman served as the Project Manager for the Energy Conservation Project at NSA Mid-South. Mr. Newman is a native Memphian and graduate of Frayser High School. Mr. Newman earned his Bachelor of Science in Electrical Engineering and a MBA from the University of Memphis. Mr. Newman holds a Grade 2 Water Distribution License from the State of Tennessee. Mr. Newman is active in the American Water Works Association (AWWA), Tennessee Association of Utility Districts (TAUD) and several other associations. He is on the board of TAUD where he serves as Vice President and is the Chairperson for the legislative team. He also serves on the Tennessee Water/Wastewater Financing Board.

Von Goodloe, Vice-President of Shared Services, is responsible for managing Corporate Security, Facilities (Central Support Services), Transportation and Supply Operations, Procurement, Contracts and Supplier Diversity and Corporate Safety. Dr. Goodloe joined MLGW in 2010 as Vice President of Human Resources. Dr. Goodloe graduated from Hampton University with a B.A. in Physics in 1983, attended Trevecca Nazarene College in Nashville where he received an MEA degree in 1994, and received an EDS degree in Administration in 2009 from Union University. He also received his doctorate in education from Union University in 2011. Dr. Goodloe has his Senior Professional in Human Resources (SPHR) certification from the Society for Human Resources Management (SHRM) and Certified Labor Relations Professional (CLRP) certification from the National Public Employer Labor Relations Association (NPELRA). He is an active member of the Society for Human Resources Management (SHRM) and the National Public Employer Labor Relations Association (NPELRA). He is an active member of Alpha Phi Alpha fraternity and a supporter of community agencies such as Life Blood, The United Way, and Junior Achievement.

Lashell Vaughn, Vice-President and Chief information Officer, is responsible for information technology and services, data security, client services and enterprise resources support. Mrs. Vaughn joined MLGW in June 2011. Mrs. Vaughn previously held the position of Vice President of Information Technology with Hilton Worldwide. She has more than 35 years of experience in Information Technology, including client management, application development, data center operation, network and telecommunication, and security and compliance. Mrs. Vaughn received a Master of Science in Computer Science from Christian Brothers University and a Bachelor of Science in Computer Science from Mississippi State University. She serves on the Dean's Advisory Council for the Mississippi State University Bagley College of Engineering and is Chairman of the Board for the Greater Memphis IT Council. She is a member of the Institute of Electronics Engineers, Inc. (IEEE) and the American Society for Engineering Education (ASEE).

Jim West, Vice-President and Chief Customer Officer, is responsible for customer service, community offices, energy efficiency, metering & billing, key accounts, and customer advocacy. Mr. West joined MLGW in 2018. Previously he was the Assistant General Manager of Customer and Energy Services at Snohomish County Public Utility District in Everett, Washington where he spent nine years. Prior to joining Snohomish County PUD, Mr. West was Director of Product Management at CURRENT Group, LLC, a smart grid solutions provider based in Washington, D.C. For more than 20 years Mr. West was at the Tennessee Valley Authority in senior positions in customer service, research & technology development, and human resources. Mr. West received an MBA and a B.S. in Economics from the University of Tennessee.

Gale Jones Carson, Vice-President of Community & External Affairs, is responsible for Economic & Community Development, Regional External Affairs, local government relations, employee and public communications programs, customer communications, media and community relations, marketing

communications, crisis communications, social media, website management, graphic arts, printing, mail services and distribution operations, and the PBX (Private Branch Exchange) telephone operations. Ms. Carson rejoined MLGW in January 2007 as the Director of Corporate Communications after working as Executive Assistant and Chief Spokesperson for the City of Memphis Mayor for almost seven years. Prior to working for the Mayor, she worked in Corporate Communications at FedEx for 16 years. Ms. Carson worked in public relations for MLGW for more than six years prior to joining FedEx. A veteran of public relations, Ms. Carson has more than four decades of journalism/public relations/crisis communications and community relations experience. She also has experience in economic development. In addition to her experience at MLGW and FedEx, for many years she was a freelance writer for a couple of local weekly publications. Ms. Carson created, produced, and hosted the local cablevision program, Memphis Style Politics, for approximately 10 years. Currently, she is serving as President of the Memphis & Shelby County Film & Tape Commission. Ms. Carson serves as Vice President of the NAACP Memphis Branch's Board of Directors, is a member of the Community Foundation of Greater Memphis Board of Governors, Women's Foundation for a Greater Memphis Board of Directors, and is a member of the IWF/TWF/MWF (International Women's Forum/Tennessee Women's Forum/Memphis Women's Forum). Among the many professional, civic, and political awards she has received, her most cherished are the Memphis Business Journal's 2017 Super Women in Business Award: the Girls, Inc. "She Knows Where She's Going" award; the April 4th Foundation's H. Ralph Jackson Trailblazer Award; the NBA Grizzlies' Community Heroes Award; the Silver Star Achievers Award; Who's Who in Memphis Twitter; the Ruby R. Wharton Outstanding Women Award for Public Awareness; the 2015 Keepers of the Dream Award; the 2015 Kindle Award; the Girl Scouts Heart of the South's One Smart Cookie Award; and the University of Memphis Alumni Association Journalism and Strategic Media Outstanding Alumni Award. Ms. Carson has also received numerous professional awards related to her work. A native of Memphis, Ms. Carson is a graduate of the Leadership Memphis Class of 1998, graduate of New Memphis Leadership and of the University of Memphis where she earned a bachelor's degree in broadcast journalism.

Lesla Walton, Chief Internal Auditing Officer, is responsible for the overall operations of Internal Auditing functions to include developing, scheduling, and directing financial, operational, and administrative audit functions. This includes analyzing, reviewing and appraising the adequacy and effectiveness of system technologies and internal control for safeguarding MLGW's funds and assets. Walton joined MLGW in 2001 and has served as an Auditor, Senior Auditor, Supervisor of Management Accounting, General Auditor and most recently as Audit Director. She received her B.S. in Accounting from the University of Arkansas at Little Rock in 1992, and a Master of Professional Accountancy from Jackson State University in 1994. She received her Certified Public Accountant (CPA) designation in 1998. Walton's previous employers include TruGreen Chemlawn, a division of ServiceMaster, Inc., The Kroger Company and United American of Tennessee. She is a member of the American Institute of Certified Public Accountants (AICPA), Tennessee Society of Certified Public Accountants (TSCPA) and the Institute of Internal Auditors (IIA) where she serves as IIA Memphis Board of Governors. She is a supporter of community agencies such as The United Way, MIFA, and Junior Achievement. Walton is an active member of White Stone Missionary Baptist Church serving as Co-Chairperson of the Trustee Board, Chairperson of the Scholarship Committee and member of the Budget Committee.

Employee Relations

MLGW, which employs approximately 2,700 persons, considers its employee relations to be a cooperative working relationship. The International Brotherhood of Electrical Workers Local No. 1288 (the "IBEW") is the only union at MLGW and represents over 1,800 non-supervisory employees throughout MLGW. In November 2019, the labor negotiations proposal resulted in a new two-year agreement between MLGW and IBEW. The new agreement includes a 3.5% bargaining unit wage increase effective January 1, 2020, and a 3.5% wage increase effective January 1, 2021. In the Memorandum of Understanding ("MOU") between MLGW and IBEW, IBEW agrees that it shall not engage in, encourage or approve any strike, work stoppage, boycott or any other form of interference with continuous and peaceful operation of MLGW and

progress of the work. All issues are handled according to the Grievance and Arbitration/Mediation Procedure also stated in the MOU. MLGW attempts to resolve employee grievances without resorting to external arbitration proceedings and works with the union to prevent and resolve problems.

The MLGW Training Center gained accreditation as a corporate university in 2007 and is known as MLGW University. MLGW has developed numerous training courses for its employees including supervisory training, managerial skills, crew leader training, computer skills. The MLGW Training Center is driving change at MLGW, inspiring the future, superior customer service, leadership accountability, CPR, commercial driver's license preparation, electronic technology, business writing, blueprint reading and drafting, clerical multi-skills, typing, map and meter reading and fundamentals of gas and electricity. MLGW uses an assessment center approach to select supervisory personnel. MLGW has twelve active joint union-management apprenticeship training programs.

Insurance

MLGW maintains an all-risk property insurance policy (the "Property Policy") and a casualty reserve fund for the Electric Division, the Gas Division and the Water Division (the "Casualties Reserve Fund") to offset losses not covered by the Property Policy. The Property Policy has an aggregate liability limit of \$600,000,000, but limits liability for certain types of losses including terrorism (\$5,000,000) and flood (\$100,000,000 per year). The Property Policy has been extended to May 31, 2021.

As of December 31, 2019, there is \$21,055,289.58 currently maintained in the Electric Division's Casualties Reserve Fund, \$9,947,930.57 currently maintained in the Gas Division's Casualties Reserve Fund, and \$7,412,760.41 currently maintained in the Water Division's Casualties Reserve Fund. The Electric Division's Casualties Reserve Fund was established by the MLGW Board on December 10, 1964. The Gas Division's Casualties Reserve Fund was established by the MLGW Board on December 21, 1967. The Water Division's Casualties Reserve Fund was established by the MLGW Board on January 1, 1974. The Electric, Gas, and Water Divisions' Casualties Reserve Funds are maintained at a maximum of 4% of uninsured plant. Subsequent to that time, there have been periodic reviews of the adequacy of the reserves and funding. The Electric, Gas, and Water Divisions' Casualties Reserve Funds are maintained by transfers from working capital. If a property loss occurs, MLGW determines whether the loss will be paid from these funds or from on-going operations. There can be no assurance that the Electric, Gas or Water Divisions' Casualties Reserve Funds will be sufficient to cover all losses not covered by insurance or that it will be maintained at all in the future.

As to general liability insurance, MLGW is covered by the Tennessee Governmental Tort Liability Act, as amended (the "Tort Liability Act"). Under the Tort Liability Act, governmental entities are exempt from general liability with certain exceptions (the "Covered Claims"). The Tort Liability Act provides statutory limits for the Covered Claims. The statutory limits for bodily injury claims, including death, are \$300,000 per person and \$700,000 per accident. The Tort Liability Act allows governmental entities to purchase insurance or to self-insure for the covered Claims.

MLGW is self-insured for the Covered Claims for each divisions' workmen's compensation, third-party property damage and certain losses to plant and equipment not covered by insurance that are under \$25,000 per occurrence (the "IDI Reserve Fund"). MLGW has a Worker's Compensation Stop Loss policy with a \$1,000,000 retention, and as of December 31, 2019, there is \$5,081,623.81 currently maintained in the Electric Division's IDI Reserve Fund, \$1,547,092.46 currently maintained in the Gas Division's IDI Reserve Fund, and \$1,586,338.72 currently maintained in the Water Division's IDI Reserve Fund. MLGW funds the Electric Division's IDI Reserve Fund monthly as a percentage of revenue. MLGW's General Accounting area annually reviews the exposure and recommends adjustment of the rates, as necessary.

In addition to the Property Policy, MLGW carries other types of insurance typically carried by similar businesses. Additional policies include a group travel insurance policy for all employees, and employee crime and dishonesty coverage.

Memphis Light, Gas and Water Division Retirement and Pension System

Memphis Light, Gas and Water Division Retirement and Pension System (the “MLGW Pension Plan”) is a single-employer defined benefit pension plan administered by the MLGW Pension Board. The MLGW Pension Plan provides retirement, disability, and death benefits to participants and their beneficiaries who meet the eligibility requirements.

Substantially all permanent full-time salaried employees of MLGW participate in either of two contributory defined benefit pension plans, the 1948 Plan and the 1978 Plan. In 1988, MLGW combined the 1948 plan and the 1978 plans. The funds and assets of each plan have been integrated, and are reflected as one plan, although vested benefits to employees in the 1948 plan are protected. Retirement benefits vest after ten years of service.

At December 31, 2019, there were 5,260 pension plan members in the MLGW Pension Plan, 2,680 of whom were retirees and beneficiaries who are currently receiving benefits, 37 of whom were terminated vested employees entitled to benefits but not yet receiving same, 1,058 of whom were fully vested active employees and 1,485 of whom were non-vested active employees. As of December 31, 2019, the MLGW Pension Fund had net position of \$1,557,372,094. Total employer and employee contributions were \$21,813,428 and \$13,462,380, respectively. Benefits paid to members totaled \$107,730,602 during the same period. Approximately 57.4% of the costs associated with MLGW Pension Plan are allocable to the Electric Division, with 25.6% allocable to the Gas Division and 17% allocable to the Water Division.

A resolution was adopted by the Board on October 15, 2012, and by the City Council on November 20, 2012 to change certain benefit levels for participants hired on or after January 1, 2014. Changes in benefit levels include a change in the normal retirement age based on number of years of service, and the elimination of the subsidized 75% survivor benefit. The MLGW Pension Board has the authority to establish and amend benefit provisions of the pension plan.

MLGW annually obtains an actuarial valuation of the MLGW Pension Plan for the purpose of calculating the necessary information for accounting and reporting requirements in accordance with Government Accounting Standards Board (GASB). The contribution requirements of pension plan members and MLGW are established, and may be amended and approved, by the MLGW Board and the City Council. It is the policy of MLGW to fund its portion of the accrued pension costs, together with pension plan member contributions, to cover the normal cost and amortization of the unfunded actuarial liability over a 30-year period. Pension plan members are required to contribute 8% of their annual covered salary. MLGW contributed 12.8% and 13.1% of annual covered salary for the Fiscal Years ended December 31, 2019 and December 31, 2018, respectively.

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The table below illustrates MLGW's contributions to its retirement and pension system:

SCHEDULE OF MLGW CONTRIBUTIONS TO THE RETIREMENT AND PENSION SYSTEM

Year Ended December 31	Actuarially Determined Contribution	Contribution in Relation to the Actuarially Determined Contribution	Contribution Deficiency (Excess)	Covered- Employee Payroll	Contributions % Covered- Employee Payroll
2019	\$21,813,428	\$21,813,428	\$ -	\$170,945,709	12.8%
2018	22,174,419	22,174,419	-	169,605,389	13.1
2017	22,389,805	22,389,805	-	167,220,851	13.4
2016	21,390,060	21,390,060	-	161,925,757	13.2
2015	21,390,060	21,390,060	-	160,640,772	13.3
2014	26,812,140	26,804,170	7,970	152,367,924	17.6
2013	30,705,469	30,706,286	(817)	154,759,208	19.8
2012	30,067,184	30,062,947	4,237	154,346,706	19.5
2011	26,208,301	26,212,629	(4,328)	154,036,290	17.0
2010	27,381,023				
		27,384,615	(3,592)	153,509,072	17.8

Source: Memphis Light, Gas and Water Division Retirement and Pension System Actuarial Valuation and Review as of January 1, 2019 and Memphis Light, Gas and Water Division Retirement and Pension System Actuarial Valuation and Review as of January 1, 2018 prepared by Segal Consulting.

The table below illustrates MLGW's historic funding progress:

HISTORICAL FUNDING PROGRESS (Amounts in Thousands)

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL)(b)	Unfunded/ (Overfunded) AAL (UAAL) (b) - (a)	Funded Ratio (a) / (b)	Covered Payroll (c)	UAAL % Covered Payroll [(b) - (a)] / (c)
1/1/2010	1,191,027	1,292,791	101,764	92.1	154,057	66.1
1/1/2011	1,171,384	1,324,410	153,027	88.5	153,509	99.7
1/1/2012	1,137,615	1,350,812	213,197	84.2	154,036	138.4
1/1/2013	1,126,309	1,414,641	288,332	79.6	154,347	186.8
1/1/2014	1,220,456	1,439,010	218,555	84.8	154,759	141.2
1/1/2015	1,296,296	1,420,388	124,092	91.3	152,368	81.4
1/1/2016	1,340,922	1,459,803	118,881	91.9	160,641	74.0
1/1/2017	1,387,881	1,473,380	85,499	94.2	161,926	52.8
1/1/2018	1,445,862	1,512,777	66,915	95.6	166,379	40.2
1/1/2019	1,456,130	1,542,094	85,964	94.4	169,605	50.7

Source: Memphis Light, Gas and Water Division Retirement and Pension System Actuarial Valuation and Review as of January 1, 2019 prepared by Segal Consulting and Memphis Light, Gas and Water Division Retirement and Pension System Actuarial Valuation and Review as of January 1, 2018 prepared by Segal Consulting.

**SCHEDULE OF CHANGES IN RETIREMENT AND
PENSION SYSTEM'S NET PENSION LIABILITY**

	<u>2019</u>	<u>2018</u>
Total Pension Liability ⁽¹⁾		
Service Cost	\$ 31,635,554	\$ 31,185,071
Interest	110,927,046	108,431,791
Change of benefit terms	-	-
Differences between expected and actual experience	(5,039,880)	3,725,938
Changes of Assumptions	(174,213)	-
Benefit Payments, including refunds of employee contributions	<u>(107,730,602)</u>	<u>(113,315,849)</u>
Net Change in Total Pension Liability	29,617,905	30,026,951
Total Pension Liability – Beginning	<u>\$ 1,501,257,024</u>	<u>\$ 1,471,230,073</u>
Total Pension Liability – Ending (a)	<u>\$ 1,530,874,929</u>	<u>\$ 1,501,257,024</u>
Plan Fiduciary Net Position		
Contributions – Employer	\$ 21,813,428	\$ 22,174,419
Contributions – Employee	13,462,380	13,216,689
Net Investment Income	237,313,578	(39,995,874)
Benefit Payments, including refunds of employee contributions	(107,730,602)	(113,315,849)
Administrative Expense	<u>(931,403)</u>	<u>(871,948)</u>
Net Change in Plan Fiduciary Net Position	\$ 163,927,381	\$ (118,792,563)
Plan Fiduciary Net Position – Beginning	<u>\$1,393,444,713</u>	<u>\$ 1,512,237,276</u>
Plan Fiduciary Net Position – Ending (b)	<u>\$1,557,372,094</u>	<u>\$ 1,393,444,713</u>
System's Net Pension Liability – Ending (a) – (b)	<u>\$(26,497,165)</u>	<u>\$ 107,812,311</u>
Plan Fiduciary Net Position % Total Pension Liability	101.73%	92.82%
Covered Employee Payroll	\$170,945,709	\$ 169,605,389
System's Net Pension Liability % Covered Employee Payroll	(15.50)%	63.57%

⁽¹⁾ The annual valuation results for funding are based on an "Ultimate" Entry Age Normal Method, under which the plan provisions for new hires are immediately reflected in the normal cost for all employees, GASB 67 requires a "Traditional" Entry Age Normal Method, under which the actual benefit formula for each current employee is reflected in the normal cost. The liabilities have been adjusted for the change in cost method.

Source: Memphis Light, Gas and Water Division Retirement and Pension System Governmental Accounting Standards Board (GASB) 67 Disclosure as of December 31, 2019 prepared by Segal Consulting.

Pension Plan Reform

The Tennessee "Public Employee Defined Benefit Financial Security Act of 2014" (the "Public Employee Defined Benefit Act") was signed into law on May 22, 2014 and was codified as Title 9, Chapter 3, Part 5, Tennessee Code Annotated. In order to improve financial security of public defined benefit plans, the Public Employee Defined Benefit Act, among other things, requires each political subdivision which has established and maintains, directly or indirectly, a defined benefit pension plan for the benefit of its employees not administered by the Tennessee Consolidated Retirement System to: (a) adopt a resolution delineating a funding policy for financing the obligations under the pension plan for Fiscal Years beginning after June 15, 2015 (the "Funding Policy Resolution"); (b) utilize the level dollar amortization method for financing the unfunded accrued liability beginning no later than the plan fiscal year commencing after June 15, 2020; and (c) annually make a payment to the pension plan of no less than 100% of the actuarially determined annual required contribution that incorporates both the normal cost of benefits and the amortization of the pension plan's unfunded accrued liability (the "ADC"), provided however, the affected political subdivision may make a payment of more than 100% of the ADC. If the political subdivision fails to fund the ADC, the Public Employee Defined Benefit Act permits the State Commissioner of the Department of Finance and Administration, at the direction of the Comptroller of the Treasury, to withhold such amount or part of such amount from any state-shared taxes that are otherwise apportioned to such political subdivision.

As of December 31, 2019, the MLGW Pension Plan is in compliance with the Public Employee Defined Benefit Act and currently makes a payment of no less than 100% of the actuarially determined annual required contribution to the plan. In addition, the plan has made certain adjustments specifically related to the amortization of the plan's unfunded accrued liability in order to be fully compliant by June 15, 2020. The total actuarially determined annual required contribution was \$21,813,428 as of December 31, 2019.

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Other Postemployment Benefits

The Memphis Light, Gas and Water Division OPEB Trust (“OPEB Trust”) was established for the exclusive benefit of MLGW’s retired employees and their dependents (who meet the eligibility requirements) to fund the postemployment benefits provided through the health and welfare benefit plan (the “Plan”). Amounts contributed to the OPEB Trust by MLGW are held in trust and are irrevocable and are for the sole and exclusive purpose of funding health and welfare benefits of the eligible participants, and the cost of operating and administering the OPEB Trust. The OPEB Trust is administered by the MLGW OPEB Trust Investment Committee.

The Plan provides postemployment coverage for health care, life insurance, accidental death and dismemberment (AD&D), medical, and prescription drugs to eligible retirees and their dependents. Benefits are payable to retirees and their spouses for their lifetime. Qualified dependents continue to receive benefits as long as they are qualified under the Plan. Dental, dependent life insurance, cancer, accident, and long-term care benefits are available, but are 100% paid by the retiree.

Employees retired under the MLGW Retirement and Pension Plan or disabled with five years of service at any age or disabled in the line of duty at any age with no years of service restriction, are eligible for OPEB benefits. Health care benefits are also offered to qualifying survivors of active employees who are eligible to retire at the time of death.

Members of the Plan consisted of the following at December 31, 2017 (actuarial valuation date):

	<u>Medical</u>	<u>Life</u>
Retired members currently receiving benefits	1,977	1,977
Beneficiaries currently receiving benefits	1,719	-
Vested terminated members entitled to, but not yet receiving benefits	-	-
Active members	<u>2,639</u>	<u>2,639</u>
Total	<u>6,335</u>	<u>4,616</u>

Source: Memphis Light, Gas and Water Division.

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Net OPEB Liability and OPEB Expense

For Fiscal Year 2019, the OPEB Trust net OPEB liability was based on an actuarial valuation as of December 31, 2018. The following table illustrates the net OPEB liability and OPEB expense as of December 31, 2019 and December 31, 2018:

	<u>2019⁽¹⁾</u>	<u>2018⁽¹⁾</u>
Total OPEB Liability	\$707,219	\$673,088
Plan Fiduciary Net Position (Assets)	425,748	419,726
Net OPEB Liability	281,471	253,362
Plan Fiduciary Net Position as a percentage of Total OPEB Liability	60.20%	62.36%
OPEB Expense	3,477	(43,278)
Service Cost at Beginning of Year	15,381	19,520
Total Payroll	169,605	167,221

⁽¹⁾ Amount in thousands.

Source: Memphis Light, Gas and Water Division.

Funding Policy and Annual OPEB Contributions

The contribution requirements of plan members and MLGW are established and may be amended by the Board. Contribution rates for retired plan members and beneficiaries currently receiving benefits are periodically reset and are currently at 25% of costs for medical and drug benefits. For life insurance and AD&D, retirees contribute 40% of the cost.

The Board has set the employer contribution rate based on the Actuarially Determined Contribution (“ADC”). The ADC represents a level of funding that, if paid on an ongoing basis, is projected to cover normal costs each year and amortize any unfunded actuarial liabilities of the plan over a period not to exceed thirty years. The ADC is based on the prior year’s valuation, then adjusted forward at an assumed payroll growth rate. The following table illustrates the amount (in thousands) contributed to the MLGW OPEB Trust as of December 31, 2019 and December 31, 2018:

	<u>2019⁽¹⁾</u>	<u>2018⁽¹⁾</u>
Actuarial Determined Contributions	\$31,701	\$48,270
Actual Contributions	33,949	48,972
Contribution Excess	(2,248)	(701)
Benefit Payments	31,916	28,676

⁽¹⁾ Amount in thousands.

Source: Compiled by Memphis Light, Gas and Water Division from data provided in the Memphis Light, Gas and Water Division OPEB Plan Actuarial Valuation and Review of Other Postemployment Benefits (OPEB) as of December 31, 2019 in accordance with GASB Statement No. 74 and No. 75 prepared by Segal Consulting.

The following table illustrates MLGW's contributions to its OPEB Trust:

**MEMPHIS LIGHT, GAS AND WATER DIVISION
OTHER POST EMPLOYMENT BENEFITS TRUST
REQUIRED SUPPLEMENTARY INFORMATION
SCHEDULE OF EMPLOYER CONTRIBUTIONS
(Amounts in Thousands)**

Fiscal Year Ended December 31	Actuarially Determined Contribution (ADC)	Actual Contribution in Relation to ADC	Contribution Deficiency (Excess)	Covered Payroll	Contributions As Percentage of Covered Payroll
2019	\$31,701	\$33,949	(\$2,248)	\$170,946	19.86%
2018	48,270	48,972	(702)	169,605	28.87%
2017	46,978	45,184	1,794	167,221	27.02%
2016 *	45,289	42,496	2,793	161,926	26.24%
2015	38,187	38,438	(251)	160,641	23.93%

* Starting with 2016, contributions are shown on an accrual basis.

Source: Memphis Light, Gas and Water Division.

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SECURITY AND SOURCE OF PAYMENT FOR THE SERIES 2020 ELECTRIC SYSTEM BONDS

The Electric System

The Electric Division serves the City and the County pursuant to a franchise granted by the State in the City Charter. The City holds title to real property used in the Electric Division's operations, including easements deemed adequate by MLGW on properties not required to be held in fee simple.

For the twelve months ended December 31, 2019, operating revenues of the Electric Division totaled \$1,285,976,244 and were derived principally from the sale of electricity to an average of 432,482 customers during that period. Substantially all the Electric Division's required engineering, design, construction and operation functions are performed by MLGW personnel. As needed, the Electric Division contracts with independent contractors for certain services including street lighting and underground conduit construction. The Electric Division purchases its entire power supply from TVA.

The Electric Division's capital construction expenditures for the twelve months ended December 31, 2019 were \$63,541,693. The Electric Division has \$178,480,000 aggregate principal amount of Senior Lien Revenue Obligations and no longer has any Subordinate Lien debt outstanding as of December 31, 2019. See **"APPENDIX A – OPERATING INFORMATION REGARDING THE ELECTRIC DIVISION."**

Pledge Under the Electric System Resolution

The Series 2020A Electric System Bonds and the Series 2020B Electric System Refunding Bonds are being issued as General Revenue Obligations under the Electric System Resolution and, as such, are limited obligations of the City payable solely from and secured by a pledge of a Senior Lien on the Electric System Pledged Revenues, which is on a parity and equality of lien with respect to the Electric System Pledged Revenues with any Outstanding Electric System Senior Lien Revenue Obligations issued under the Master Electric System Resolution and any additional Senior Lien Revenue Obligations hereafter issued thereunder, and such lien is senior in lien and right of payment to any Subordinate Lien Revenue Obligations issued under the Master Electric System Resolution in the future. See **"APPENDIX F – SUMMARY OF CERTAIN PROVISIONS OF THE ELECTRIC SYSTEM RESOLUTION – Definition of Certain Terms – Pledged Revenues and Flow of Funds – Additional Obligations"** attached hereto.

The Series 2020 Bonds are not obligations of TVA or the United States and are not secured by any revenues or property of TVA or the United States.

For a more complete statement of the general covenants and provisions pursuant to which the Series 2020A Electric System Bonds and the Series 2020B Electric System Refunding Bonds are issued, see **"APPENDIX F – SUMMARY OF CERTAIN PROVISIONS OF THE ELECTRIC SYSTEM RESOLUTION"** attached hereto.

Electric System Pledged Revenues

Pursuant to the Master Electric System Resolution, the "Electric System Pledged Revenues" include all Net Revenues of the Electric System and all moneys paid or required to be paid into, and all moneys and securities on deposit from time to time in, the funds and accounts established for the Series 2020A Electric System Bonds and the Series 2020B Electric System Refunding Bonds under the Electric System Resolution, but excluding amounts in the Revenue Fund required to be used to pay Operating Expenses and any amounts required under the Master Electric System Resolution to be set aside to pay any rebate obligations to the United States government, including, but not limited to, amounts in the Rebate Fund.

THE ELECTRIC SYSTEM PLEDGED REVENUES RELATE SOLELY TO REVENUES OF THE ELECTRIC DIVISION. THE SERIES 2020A ELECTRIC DIVISION BONDS AND THE SERIES 2020B ELECTRIC SYSTEM REFUNDING BONDS ARE NOT PAYABLE FROM REVENUES OF MLGW'S GAS DIVISION OR WATER DIVISION.

Rate Covenant

MLGW covenants in the Master Electric System Resolution to, at all times, prescribe, fix, maintain, and collect rates, fees and other charges for the services and facilities furnished by the Electric System fully sufficient at all times: (a) for 100% of the Operating Expenses and for the accumulation in the Revenue Fund of a reasonable reserve therefor, in an amount, if any, as shall be determined from time to time by MLGW and (b) such that Net Revenues of the Electric System in each Fiscal Year: (i) will equal at least 120% of the Debt Service Requirement on all Senior Lien Revenue Obligations, including the Series 2020A Electric System Bonds and the Series 2020B Electric System Refunding Bonds, and 100% of the Debt Service Requirement on all other Revenue Obligations then Outstanding, including any Outstanding Subordinate Lien Revenue Obligations, for such Fiscal Year; (ii) will enable MLGW to make all required payments, if any, into the Debt Service Reserve Account and the Rebate Fund and on any Contracts or Other System Obligation; (iii) will enable MLGW to accumulate an amount to be held in the Renewal and Extension Fund, which in the judgment of MLGW is adequate to meet the costs of major renewals, replacements, repairs, additions, betterments, and improvements to the Electric System, necessary to keep the same in good operating condition or as is required by any governmental agency having jurisdiction over the Electric System; (iv) will remedy all deficiencies in required payments into any of the funds and accounts mentioned in the Master Electric System Resolution from prior Fiscal Years; and (v) will permit MLGW to comply with the terms of any agreement that MLGW has entered into to purchase, sell or generate electric power; provided for purposes of (a), (b)(i) and (ii) each category of Net Revenues of the Electric System shall be compared to the required payments with respect to, or for accounts related to, related Operating Expenses, Revenue Obligations, Contracts and Other System Obligations of the Electric System. See **"APPENDIX F – SUMMARY OF CERTAIN PROVISIONS OF THE ELECTRIC SYSTEM RESOLUTION – General Provisions - Rate Covenant"** attached hereto.

Additional Revenue Obligations

The City may issue additional Senior Lien Revenue Obligations under the Master Electric System Resolution on a parity of lien with the Outstanding Electric System Senior Lien Revenue Obligations, including the Series 2020A Electric System Bonds and the Series 2020B Electric System Refunding Bonds, upon the satisfaction of certain conditions, including a financial test indicating that:

(a) the historical related Net Revenues of the Electric System for either (i) a period of 12 consecutive months of the most recent 18 consecutive months prior to the issuance of the proposed Additional Obligations or (ii) the most recent audited Fiscal Year, were equal to at least 120% of the maximum Debt Service Requirement for any Fiscal Year commencing with the first Fiscal Year after the Fiscal Year in which the Additional Obligations are issued on all related Senior Lien Revenue Obligations which will be Outstanding immediately after the issuance of the proposed Additional Obligations and secured on a parity therewith, provided, however, (x) the report or certificate may contain pro forma adjustments to historical related Net Revenues of the Electric System equal to 100% of the increased annual amount attributable to any revision in the schedule of rates, fees, and charges for the services and facilities furnished by the Electric System, imposed prior to the date of delivery of the proposed Additional Obligations and not fully reflected in the historical related Net Revenues of the Electric System actually received during such historical period used; (y) if MLGW or the City has a contract to purchase or otherwise acquire an Acquired System that will become part of the Electric System, the historical Net Revenues of the Electric System may be adjusted to include the anticipated Net Revenues from the Acquired System; and (z) if MLGW has entered into a contract to furnish services of the Electric System that is not fully reflected in the historical Net Revenues of the

Electric System, such historical Net Revenues of the Electric System may be adjusted to include the anticipated Net Revenues of the Electric System from such contract; or

(b) the forecasted related Net Revenues of the Electric System (which forecast period can take into account (i) any planned increases in the rates, fees and charges for the services and facilities furnished by the Electric System, (ii) any revenues projected to be received from any Acquired Systems as to which the City or MLGW has entered into a contract to purchase or otherwise acquire, and (iii) any projected savings in Operating Expenses resulting from a purchase of electrical power for distribution and sale during or after the end of any Fiscal Year, to the extent not included in Operating Expenses) in each Fiscal Year during the forecast period (defined as a period beginning with the first Fiscal Year beginning after the later of (y) the Fiscal Year in which any proposed Additional Obligations are to be issued or (z) the Fiscal Year in which any project to be financed with the proceeds of any proposed Additional Obligations is, in the judgment of MLGW, expected to be completed, and ending on the last day of the fifth Fiscal Year thereafter) are expected to equal at least 120% of the Debt Service Requirement during such period on all related Senior Lien Revenue Obligations which will be Outstanding immediately after the issuance of the proposed Additional Obligations and secured on a parity therewith.

The City may also issue Additional Obligations under the Master Electric System Resolution on a lien subordinate to the Senior Lien Revenue Obligations under the Master Electric System Resolution upon the satisfaction of certain conditions. See “**APPENDIX F – SUMMARY OF CERTAIN PROVISIONS OF THE ELECTRIC SYSTEM RESOLUTION – Additional Revenue Obligations**” attached hereto.

No Debt Service Reserve

MLGW is not required under the Master Electric System Resolution to establish a subaccount of the Debt Service Reserve Account for any Revenue Obligations issued thereunder, and any such subaccount shall only be established if required by the Supplemental Resolution authorizing the issuance of such Revenue Obligations. Accordingly, the Eighth Supplemental Resolution provides that the Debt Service Reserve Requirement for the Series 2020A Electric System Bonds shall be set at \$0 and the Ninth Supplemental Resolution provides that the Debt Service Reserve Requirement for the Series 2020B Electric System Refunding Bonds shall be set at \$0.

Pursuant to the Master Electric System Resolution, Additional Obligations issued on a parity of lien with the Series 2014 Electric System Bonds, Series 2016 Electric System Bonds, the Series 2017 Electric System Bonds, the Series 2020A Electric System Bonds and the Series 2020B Electric System Refunding Bonds may be secured by one or more debt service reserve funds, which debt service reserve funds, if any, will not secure the Series 2020A Electric System Bonds or the Series 2020B Electric System Refunding Bonds.

Limited Obligations

THE SERIES 2020A ELECTRIC SYSTEM BONDS AND THE SERIES 2020B ELECTRIC SYSTEM REFUNDING BONDS DO NOT CONSTITUTE A DEBT OF THE CITY OR MLGW WITHIN THE MEANING OF ANY CONSTITUTIONAL, CITY CHARTER OR STATUTORY LIMITATION. NEITHER THE FULL FAITH AND CREDIT NOR THE TAXING POWER OF THE STATE OR ANY POLITICAL SUBDIVISION THEREOF, INCLUDING THE CITY, IS PLEDGED TO THE PAYMENT OF THE SERIES 2020A ELECTRIC SYSTEM BONDS AND THE SERIES 2020B ELECTRIC SYSTEM REFUNDING BONDS, AND NO HOLDER OF THE SERIES 2020A ELECTRIC SYSTEM BONDS OR THE SERIES 2020B ELECTRIC SYSTEM REFUNDING BONDS SHALL HAVE THE RIGHT TO COMPEL ANY EXERCISE OF THE TAXING POWERS OF THE CITY TO PAY THE SERIES 2020A ELECTRIC SYSTEM BONDS AND THE SERIES 2020B ELECTRIC SYSTEM REFUNDING BONDS, OR THE INTEREST THEREON, AND THE SERIES

2020A ELECTRIC SYSTEM BONDS AND SERIES 2020B ELECTRIC SYSTEM REFUNDING BONDS, INCLUDING THE INTEREST THEREON, ARE LIMITED OBLIGATIONS OF THE CITY AND MLGW AS PROVIDED IN THE ELECTRIC SYSTEM RESOLUTION PAYABLE SOLELY FROM THE ELECTRIC SYSTEM PLEDGED REVENUES. THE SERIES 2020A ELECTRIC SYSTEM BONDS AND THE SERIES 2020B ELECTRIC SYSTEM REFUNDING BONDS DO NOT CONSTITUTE A CHARGE, LIEN OR ENCUMBRANCE UPON ANY OTHER PROPERTY OF THE CITY EXCEPTING ONLY THE ELECTRIC SYSTEM PLEDGED REVENUES.

Outstanding Electric System Senior Lien Revenue Obligations

The Outstanding Electric System Senior Lien Revenue Obligations are comprised of the Series 2014 Electric System Bonds, the Series 2016 Electric System Bonds and the Series 2017 Electric System Bonds. See “Security and Source of Payment for the Series 2020 Bonds” herein and “**APPENDIX A – OPERATING INFORMATION REGARDING THE ELECTRIC DIVISION**” attached hereto. The Outstanding Electric Division Senior Lien Revenue Obligations are outstanding in the aggregate principal amount of \$178,480,000, as reflected in the following table below:

Senior Lien Revenue Obligations

	Original Issue Aggregate Principal Amount	Outstanding Principal Amount
Series 2014 Electric System Bonds	\$71,000,000	\$58,240,000*
Series 2016 Electric System Bonds	\$40,000,000	\$36,040,000
Series 2017 Electric System Bonds	\$90,000,000	\$84,200,000
Total Senior Lien Revenue Obligations	\$201,000,000	\$178,480,000

*On the date of issuance of the Series 2020 Bonds, proceeds of the Series 2020B Electric System Refunding Bonds are being used to advance refund \$23,865,000 in aggregate principal amount of the Series 2014 Electric System Bonds, which such refunded Series 2014 Electric System Bonds are being legally defeased and scheduled for redemption on December 1, 2024.

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**ELECTRIC DIVISION
LONG-TERM DEBT SERVICE SCHEDULE**

The following table illustrates the debt service obligations for MLGW's Electric Division as of the date of issuance of the Series 2020 Bonds:

FISCAL YEAR ENDED	AGGREGATE OUTSTANDING OBLIGATIONS			SERIES 2020A ELECTRIC SYSTEM BONDS			SERIES 2020B ELECTRIC SYSTEM REFUNDING BONDS			TOTAL ELECTRIC DIVISION DEBT SERVICE		
<u>Dec. 31</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
2020	\$ 7,295,000	\$ 7,334,775	\$ 14,629,775	\$ 0	\$ 1,134,408	\$ 1,134,408	\$ 0	\$ 93,873	\$ 93,873	\$ 7,295,000	\$ 8,563,056	15,858,056
2021	7,615,000	6,415,750	14,030,750	2,500,000	5,918,650	8,418,650	445,000	489,774	934,774	10,560,000	12,824,174	23,384,174
2022	7,970,000	6,064,200	14,034,200	2,600,000	5,818,650	8,418,650	450,000	487,860	937,860	11,020,000	12,370,710	23,390,710
2023	8,335,000	5,696,100	14,031,100	2,705,000	5,714,650	8,419,650	450,000	485,700	935,700	11,490,000	11,896,450	23,386,450
2024	8,750,000	5,279,350	14,029,350	2,840,000	5,579,400	8,419,400	455,000	483,225	938,225	12,045,000	11,341,975	23,386,975
2025	9,190,000	4,841,850	14,031,850	2,980,000	5,437,400	8,417,400	455,000	480,040	935,040	12,625,000	10,759,290	23,384,290
2026	9,645,000	4,382,350	14,027,350	3,130,000	5,288,400	8,418,400	460,000	476,059	936,059	13,235,000	10,146,809	23,381,809
2027	10,130,000	3,900,100	14,030,100	3,285,000	5,131,900	8,416,900	465,000	470,999	935,999	13,880,000	9,502,999	23,382,999
2028	10,600,000	3,432,000	14,032,000	3,450,000	4,967,650	8,417,650	470,000	465,187	935,187	14,520,000	8,864,837	23,384,837
2029	11,090,000	2,941,950	14,031,950	3,625,000	4,795,150	8,420,150	480,000	458,372	938,372	15,195,000	8,195,472	23,390,472
2030	7,280,000	2,429,000	9,709,000	3,805,000	4,613,900	8,418,900	4,805,000	450,932	5,255,932	15,890,000	7,493,832	23,383,832
2031	7,645,000	2,065,000	9,710,000	3,995,000	4,423,650	8,418,650	4,885,000	373,091	5,258,091	16,525,000	6,861,741	23,386,741
2032	7,930,000	1,785,375	9,715,375	4,195,000	4,223,900	8,418,900	4,965,000	289,069	5,254,069	17,090,000	6,298,344	23,388,344
2033	8,215,000	1,495,275	9,710,275	4,405,000	4,014,150	8,419,150	5,060,000	198,706	5,258,706	17,680,000	5,708,131	23,388,131
2034	8,515,000	1,194,700	9,709,700	4,625,000	3,793,900	8,418,900	5,155,000	101,554	5,256,554	18,295,000	5,090,154	23,385,154
2035	8,825,000	883,125	9,708,125	4,855,000	3,562,650	8,417,650				13,680,000	4,445,775	18,125,775
2036	9,150,000	560,150	9,710,150	5,000,000	3,417,000	8,417,000				14,150,000	3,977,150	18,127,150
2037	6,435,000	225,225	6,660,225	5,150,000	3,267,000	8,417,000				11,585,000	3,492,225	15,077,225
2038				5,305,000	3,112,500	8,417,500				5,305,000	3,112,500	8,417,500
2039				5,465,000	2,953,350	8,418,350				5,465,000	2,953,350	8,418,350
2040				5,630,000	2,789,400	8,419,400				5,630,000	2,789,400	8,419,400
2041				5,800,000	2,620,500	8,420,500				5,800,000	2,620,500	8,420,500
2042				5,970,000	2,446,500	8,416,500				5,970,000	2,446,500	8,416,500
2043				6,150,000	2,267,400	8,417,400				6,150,000	2,267,400	8,417,400
2044				6,400,000	2,021,400	8,421,400				6,400,000	2,021,400	8,421,400
2045				6,655,000	1,765,400	8,420,400				6,655,000	1,765,400	8,420,400
2046				6,920,000	1,499,200	8,419,200				6,920,000	1,499,200	8,419,200
2047				7,195,000	1,222,400	8,417,400				7,195,000	1,222,400	8,417,400
2048				7,485,000	934,600	8,419,600				7,485,000	934,600	8,419,600
2049				7,785,000	635,200	8,420,200				7,785,000	635,200	8,420,200
2050				8,095,000	323,800	8,418,800				8,095,000	323,800	8,418,800
TOTALS	<u>\$154,615,000</u>	<u>\$60,926,275</u>	<u>\$215,541,275</u>	<u>\$148,000,000</u>	<u>\$105,694,058</u>	<u>\$253,694,058</u>	<u>\$29,000,000</u>	<u>\$5,804,439</u>	<u>\$34,804,439</u>	<u>\$331,615,000</u>	<u>\$172,424,772</u>	<u>\$504,039,772</u>

Source: Memphis Light, Gas and Water Division.

SECURITY AND SOURCE OF PAYMENT FOR THE SERIES 2020 GAS SYSTEM BONDS

The Gas System

The Gas Division serves the City and the County pursuant to a franchise granted by the State in the City Charter. The City holds title to real property used in the Gas Division's operations, including easements deemed adequate by MLGW on properties not required to be held in fee simple.

For the Fiscal Year ended December 31, 2019, operating revenues of the Gas Division totaled \$260,627,517 and were derived principally from the sale of gas to an average of 314,213 customers during the period. The Gas Division's capital expenditures for the Fiscal Year ended December 31, 2019 were \$21,513,006.

The Gas Division had \$73,500,000 aggregate principal amount of Senior Lien Revenue Obligations outstanding as of December 31, 2019. SEE "**APPENDIX B – OPERATING INFORMATION REGARDING THE GAS DIVISION.**"

Pledge Under the Gas System Resolution

The Series 2020 Gas System Bonds are being issued as General Revenue Obligations under the Master Gas System Resolution and, as such, are limited obligations of the City payable solely from and secured by a pledge of a Senior Lien on the Gas System Pledged Revenues, which is on a parity and equality of lien with respect to the Gas System Pledged Revenues with any additional Senior Lien Revenue Obligations hereafter issued under the Master Gas System Resolution, and such lien is senior in lien and right of payment to any Subordinate Lien Revenue Obligations issued under the Master Gas System Resolution in the future. See "**APPENDIX G – SUMMARY OF CERTAIN PROVISIONS OF THE GAS SYSTEM RESOLUTION – Definition of Certain Terms – Pledged Revenues and Flow of Funds – Additional Obligations**" attached hereto.

For a more complete statement of the general covenants and provisions pursuant to which the Series 2020 Gas System Bonds are issued, see "**APPENDIX G – SUMMARY OF CERTAIN PROVISIONS OF THE GAS SYSTEM RESOLUTION**" attached hereto.

Gas System Pledged Revenues

Pursuant to the Master Gas System Resolution, the "Gas System Pledged Revenues" include all Net Revenues of the Gas System and all moneys paid or required to be paid into, and all moneys and securities on deposit from time to time in, the funds and accounts established for the Series 2020 Gas System Bonds under the Gas System Resolution, but excluding amounts in the Revenue Fund required to be used to pay Operating Expenses and any amounts required under the Master Gas System Resolution to be set aside to pay any rebate obligations to the United States government, including, but not limited to, amounts in the Rebate Fund.

THE GAS SYSTEM PLEDGED REVENUES RELATE SOLELY TO REVENUES OF THE GAS DIVISION. THE SERIES 2020 GAS DIVISION BONDS ARE NOT PAYABLE FROM REVENUES OF MLGW'S ELECTRIC DIVISION OR WATER DIVISION.

Rate Covenant

MLGW covenants in the Master Gas System Resolution to, at all times, prescribe, fix, maintain, and collect rates, fees and other charges for the services and facilities furnished by the Gas System fully sufficient at all times: (a) for 100% of the Operating Expenses and for the accumulation in the Revenue Fund of a

reasonable reserve therefor, in an amount, if any, as shall be determined from time to time by MLGW and (b) such that Net Revenues of the Gas System in each Fiscal Year: (i) will equal at least 120% of the Debt Service Requirement on all Senior Lien Revenue Obligations, including the Series 2020 Gas System Bonds, and 100% of the Debt Service Requirement on all other Revenue Obligations then Outstanding, including any Outstanding Subordinate Lien Revenue Obligations, for such Fiscal Year; (ii) will enable MLGW to make all required payments, if any, into the Debt Service Reserve Account and the Rebate Fund and on any Contracts or Other System Obligation; (iii) will enable MLGW to accumulate an amount to be held in the Renewal and Extension Fund, which in the judgment of MLGW is adequate to meet the costs of major renewals, replacements, repairs, additions, betterments, and improvements to the Gas System, necessary to keep the same in good operating condition or as is required by any governmental agency having jurisdiction over the Gas System; (iv) will remedy all deficiencies in required payments into any of the funds and accounts mentioned in the Master Gas System Resolution from prior Fiscal Years; (v) will enable MLGW to make all required City Payments when due; and (vi) will permit MLGW to comply with the terms of any agreement that MLGW has entered into to purchase, or sell gas; provided for purposes of (a), (b)(i) and (ii) each category of Net Revenues of the Gas System shall be compared to the required payments with respect to, or for accounts related to, related Operating Expenses, Revenue Obligations, Contracts and Other System Obligations of the Gas System. See “**APPENDIX G – SUMMARY OF CERTAIN PROVISIONS OF THE GAS SYSTEM RESOLUTION – General Provisions - Rate Covenant**” attached hereto.

Additional Revenue Obligations

The City may issue additional Senior Lien Revenue Obligations under the Master Gas System Resolution on a parity of lien with the Outstanding Gas System Senior Lien Revenue Obligations, including the Series 2020 Gas System Bonds, upon the satisfaction of certain conditions, including a financial test indicating that:

(a) the historical related Net Revenues of the Gas System for either (i) a period of 12 consecutive months of the most recent 18 consecutive months prior to the issuance of the proposed Additional Obligations or (ii) the most recent audited Fiscal Year, were equal to at least 120% of the maximum Debt Service Requirement for any Fiscal Year, commencing with the first Fiscal Year after the Fiscal Year in which the Additional Obligations are issued, on all Senior Lien Revenue Obligations which will be Outstanding immediately after the issuance of the proposed Additional Obligations and secured on a parity therewith, provided, however, (x) the report or certificate may contain pro forma adjustments to historical related Net Revenues of the Gas System equal to 100% of the increased annual amount attributable to any revision in the schedule of rates, fees, and charges for the services, facilities and commodities furnished by the Gas System, imposed prior to the date of delivery of the proposed Additional Obligations and not fully reflected in the historical related Net Revenues of the Gas System actually received during such historical period used; (y) if MLGW or the City has a contract to purchase or otherwise acquire an Acquired System that will become part of the Gas System, the historical Net Revenues of the Gas System may be adjusted to include the anticipated Net Revenues from the Acquired System; and (z) if MLGW has entered into a contract to furnish services of the Gas System that is not fully reflected in the historical Net Revenues of the Gas System, such historical Net Revenues of the Gas System may be adjusted to include the anticipated Net Revenues of the Gas System from such contract; or

(b) the forecasted related Net Revenues of the Gas System (which forecast can take into account (i) any planned increases in the rates, fees and charges for the services, facilities and commodities furnished by the Gas System and (ii) any revenues projected to be received from any Acquired Systems as to which the City or MLGW has entered into a contract to purchase or otherwise acquire), in each Fiscal Year during the forecast period (defined as a period beginning with the first Fiscal Year beginning after the later of (y) the Fiscal Year in which any proposed Additional Obligations are to be issued or (z) the Fiscal Year in which any project to be financed with the proceeds of any proposed Additional Obligations is, in the judgment of MLGW, expected to be completed, and ending on the last day of the fifth Fiscal Year thereafter) are expected

to equal at least 120% of the Debt Service Requirement during such period on all Senior Lien Revenue Obligations which will be Outstanding immediately after the issuance of the proposed Additional Obligations and secured on a parity therewith.

The City may also issue Additional Obligations under the Master Gas System Resolution on a parity of lien subordinate to the Senior Lien Revenue Obligations under the Master Gas System Resolution upon the satisfaction of certain conditions. See “**APPENDIX G – SUMMARY OF CERTAIN PROVISIONS OF THE GAS SYSTEM RESOLUTION – Additional Revenue Obligations**” attached hereto.

No Debt Service Reserve

MLGW is not required under the Master Gas System Resolution to establish a subaccount of the Debt Service Reserve Account for any Revenue Obligations issued thereunder, and any such subaccount shall only be established if required by the Supplemental Resolution authorizing the issuance of such Revenue Obligations. Accordingly, the Third Supplemental Resolution provides that the Debt Service Reserve Requirement for the Series 2020 Gas System Bonds shall be set at \$0.

Pursuant to the Master Gas System Resolution, Additional Obligations issued on a parity of lien with the Series 2016 Gas System Bonds, the Series 2017 Gas System Bonds and the Series 2020 Gas System Bonds may be secured by one or more debt service reserve funds, which debt service reserve funds, if any, will not secure the Series 2020 Gas System Bonds.

Limited Obligations

THE SERIES 2020 GAS SYSTEM BONDS DO NOT CONSTITUTE A DEBT OF THE CITY OR MLGW WITHIN THE MEANING OF ANY CONSTITUTIONAL, CITY CHARTER OR STATUTORY LIMITATION. NEITHER THE FULL FAITH AND CREDIT NOR THE TAXING POWER OF THE STATE OR ANY POLITICAL SUBDIVISION THEREOF, INCLUDING THE CITY, IS PLEDGED TO THE PAYMENT OF THE SERIES 2020 GAS SYSTEM BONDS, AND NO HOLDER OF THE SERIES 2020 GAS SYSTEM BONDS SHALL HAVE THE RIGHT TO COMPEL ANY EXERCISE OF THE TAXING POWERS OF THE CITY TO PAY THE SERIES 2020 GAS SYSTEM BONDS, OR THE INTEREST THEREON, AND THE SERIES 2020 GAS SYSTEM BONDS, INCLUDING THE INTEREST THEREON, ARE LIMITED OBLIGATIONS OF THE CITY AND MLGW AS PROVIDED IN THE GAS SYSTEM RESOLUTION PAYABLE SOLELY FROM THE GAS SYSTEM PLEDGED REVENUES. THE SERIES 2020 GAS SYSTEM BONDS DO NOT CONSTITUTE A CHARGE, LIEN OR ENCUMBRANCE UPON ANY OTHER PROPERTY OF THE CITY EXCEPTING ONLY THE GAS SYSTEM PLEDGED REVENUES.

Outstanding Gas System Senior Lien Revenue Obligations

The Outstanding Gas System Senior Lien Revenue Obligations are comprised of the Series 2016 Gas System Bonds and the Series 2017 Gas System Bonds, which are currently outstanding in the aggregate principal amount of \$36,040,000 and \$37,460,000, respectively as reflected in the following tables below. See “Security and Source of Payment for the Series 2020 Bonds” herein and “**APPENDIX B – OPERATING INFORMATION REGARDING THE GAS DIVISION**” attached hereto.

Senior Lien Revenue Obligations

	Original Issue Aggregate Principal Amount	Outstanding Principal Amount
Series 2016 Gas System Bonds	\$40,000,000	\$36,040,000
Series 2017 Gas System Bonds	\$40,000,000	\$37,460,000
Total Senior Lien Revenue Obligations	\$80,000,000	\$73,500,000

**GAS DIVISION
LONG-TERM DEBT SERVICE SCHEDULE**

The following table illustrates the debt service obligations for MLGW's Gas Division as of the date of issuance of the Series 2020 Bonds:

FISCAL YEAR ENDED	AGGREGATE OUTSTANDING OBLIGATIONS			SERIES 2020 GAS SYSTEM BONDS			TOTAL GAS DIVISION DEBT SERVICE		
<u>Dec. 31</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
2020	\$ 2,765,000	\$ 3,363,800	\$6,128,800	\$ 0	\$ 482,885	\$ 482,885	\$ 2,765,000	\$ 3,846,685	\$ 6,611,685
2021	2,890,000	3,239,800	6,129,800	1,065,000	2,519,400	3,584,400	3,955,000	5,759,200	9,714,200
2022	3,035,000	3,095,300	6,130,300	1,105,000	2,476,800	3,581,800	4,140,000	5,572,100	9,712,100
2023	3,185,000	2,943,550	6,128,550	1,150,000	2,432,600	3,582,600	4,335,000	5,376,150	9,711,150
2024	3,345,000	2,784,300	6,129,300	1,210,000	2,375,100	3,585,100	4,555,000	5,159,400	9,714,400
2025	3,510,000	2,617,050	6,127,050	1,270,000	2,314,600	3,584,600	4,780,000	4,931,650	9,711,650
2026	3,690,000	2,441,550	6,131,550	1,330,000	2,251,100	3,581,100	5,020,000	4,692,650	9,712,650
2027	3,870,000	2,257,050	6,127,050	1,400,000	2,184,600	3,584,600	5,270,000	4,441,650	9,711,650
2028	4,065,000	2,063,550	6,128,550	1,470,000	2,114,600	3,584,600	5,535,000	4,178,150	9,713,150
2029	4,265,000	1,860,300	6,125,300	1,540,000	2,041,100	3,581,100	5,805,000	3,901,400	9,706,400
2030	4,480,000	1,647,050	6,127,050	1,620,000	1,964,100	3,584,100	6,100,000	3,611,150	9,711,150
2031	4,705,000	1,423,050	6,128,050	1,700,000	1,883,100	3,583,100	6,405,000	3,306,150	9,711,150
2032	4,920,000	1,211,900	6,131,900	1,785,000	1,798,100	3,583,100	6,705,000	3,010,000	9,715,000
2033	5,140,000	991,000	6,131,000	1,875,000	1,708,850	3,583,850	7,015,000	2,699,850	9,714,850
2034	5,340,000	785,400	6,125,400	1,970,000	1,615,100	3,585,100	7,310,000	2,400,500	9,710,500
2035	5,555,000	571,800	6,126,800	2,065,000	1,516,600	3,581,600	7,620,000	2,088,400	9,708,400
2036	5,780,000	349,600	6,129,600	2,130,000	1,454,650	3,584,650	7,910,000	1,804,250	9,714,250
2037	2,960,000	118,400	3,078,400	2,195,000	1,390,750	3,585,750	5,155,000	1,509,150	6,664,150
2038				2,260,000	1,324,900	3,584,900	2,260,000	1,324,900	3,584,900
2039				2,325,000	1,257,100	3,582,100	2,325,000	1,257,100	3,582,100
2040				2,395,000	1,187,350	3,582,350	2,395,000	1,187,350	3,582,350
2041				2,470,000	1,115,500	3,585,500	2,470,000	1,115,500	3,585,500
2042				2,540,000	1,041,400	3,581,400	2,540,000	1,041,400	3,581,400
2043				2,620,000	965,200	3,585,200	2,620,000	965,200	3,585,200
2044				2,725,000	860,400	3,585,400	2,725,000	860,400	3,585,400
2045				2,830,000	751,400	3,581,400	2,830,000	751,400	3,581,400
2046				2,945,000	638,200	3,583,200	2,945,000	638,200	3,583,200
2047				3,065,000	520,400	3,585,400	3,065,000	520,400	3,585,400
2048				3,185,000	397,800	3,582,800	3,185,000	397,800	3,582,800
2049				3,315,000	270,400	3,585,400	3,315,000	270,400	3,585,400
2050				3,445,000	137,800	3,582,800	3,445,000	137,800	3,582,800
TOTALS	<u>\$73,500,000</u>	<u>\$33,764,450</u>	<u>\$107,264,450</u>	<u>\$63,000,000</u>	<u>\$41,991,885</u>	<u>\$107,991,885</u>	<u>\$136,500,000</u>	<u>\$78,756,335</u>	<u>\$215,256,335</u>

Source: Memphis Light, Gas and Water Division.

SECURITY AND SOURCE OF PAYMENT FOR THE SERIES 2020 WATER SYSTEM BONDS

The Water System

The Water Division designs, constructs, operates and maintains the Water System. The Water Division distributes water on an exclusive basis to residents within the city limits of Memphis, Arlington and Lakeland and the unincorporated areas of the County. The Water Division sells water to five adjacent utility districts located in the Tennessee cities of Bartlett, Collierville, Germantown, Millington and Olive Branch, Mississippi to supplement their own pumpage.

For the Fiscal Year ended December 31, 2019, operating revenues of the Water Division totaled \$105,679,359 and were derived principally from the sale of water to an average of 255,558 customers during the period. The Water Division's capital expenditures for the Fiscal Year ended December 31, 2019 were \$17,216,341.

The Water Division had \$61,860,000 aggregate principal amount of Senior Lien Revenue Obligations outstanding as of December 31, 2019. SEE “**APPENDIX C – OPERATING INFORMATION REGARDING THE WATER DIVISION.**”

Pledge Under the Water System Resolution

The Series 2020 Water System Bonds are being issued as General Revenue Obligations under the Water System Resolution and, as such, are limited obligations of the City payable solely from and secured by a pledge of a Senior Lien on the Water System Pledged Revenues, which is on a parity and equality of lien with respect to the Water System Pledged Revenues with any Outstanding Water System Senior Lien Revenue Obligations issued under the Master Water System Resolution and any additional Senior Lien Revenue Obligations hereafter issued thereunder, and such lien is senior in lien and right of payment to any Subordinate Lien Revenue Obligations issued under the Master Water System Resolution in the future. For a more complete statement of the general covenants and provisions pursuant to which the Series 2020 Water System Bonds are issued, see “**APPENDIX H – SUMMARY OF CERTAIN PROVISIONS OF THE WATER SYSTEM RESOLUTION**” attached hereto.

Water System Pledged Revenues

Pursuant to the Master Water System Resolution, the “Water System Pledged Revenues” include all Net Revenues of the Water Division and all moneys paid or required to be paid into, and all moneys and securities on deposit from time to time in, the funds and accounts established for the Series 2020 Water System Bonds under the Water System Resolution, but excluding amounts in the Revenue Fund required to be used to pay Operating Expenses and any amounts required under the Master Water System Resolution to be set aside to pay any rebate obligations to the United States government, including, but not limited to, amounts in the Rebate Fund.

THE WATER SYSTEM PLEDGED REVENUES RELATE SOLELY TO REVENUES OF THE WATER DIVISION. THE SERIES 2020 WATER SYSTEM BONDS ARE NOT PAYABLE FROM REVENUES OF MLGW'S ELECTRIC DIVISION OR GAS DIVISION.

Rate Covenant

MLGW covenants in the Master Water System Resolution to, at all times, prescribe, fix, maintain and collect, and the City shall approve rates, fees, and other charges for the services and facilities furnished by the

Water System fully sufficient at all times: (a) for 100% of the Operating Expenses and for the accumulation in the Revenue Fund of a reasonable reserve therefor, in an amount, if any, as shall be determined from time to time by MLGW and (b) such that Net Revenues of the Water System in each Fiscal Year (i) will equal at least 120% of the Debt Service Requirement on all Senior Lien Revenue Obligations, including the Series 2020 Water System Bonds and 100% of the Debt Service Requirement on all other Revenue Obligations then Outstanding for such Fiscal Year; (ii) will enable MLGW to make all required payments, if any, into the Debt Service Reserve Account and the Rebate Fund and on any Contract or Other System Obligation; (iii) will enable MLGW to accumulate an amount to be held in the Renewal and Extension Fund, if any such Renewal and Extension Fund has been established by MLGW, which in the judgment of MLGW is adequate to meet the costs of major renewals, replacements, repairs, additions, betterments, and improvements to the Water System, necessary to keep the same in good operating condition or as is required by any governmental agency having jurisdiction over the Water System; (iv) will remedy all deficiencies in required payments into any of the funds and accounts mentioned in the Master Water System Resolution from prior Fiscal Years; and (v) will enable MLGW to make all required City Payments when due; provided for purposes of (a), (b)(i) and (ii) each category of Net Revenues of the Water System shall be compared to the required payments with respect to, or for accounts related to, related Operating Expenses, Revenue Obligations, Contracts and Other System Obligations of the Water System. See “**APPENDIX H – SUMMARY OF CERTAIN PROVISIONS OF THE WATER SYSTEM RESOLUTION – General Provisions - Rate Covenant**” attached hereto.

Additional Revenue Obligations

The City may issue additional Senior Lien Revenue Obligations under the Master Water System Resolution on a parity of lien with the Series 2020 Water System Bonds upon the satisfaction of certain conditions, including a financial test indicating that:

(a) historical related Net Revenues of the Water System for either (i) a period of 12 consecutive months of the most recent 18 consecutive months prior to the issuance of the proposed Additional Obligations or (ii) the most recent audited Fiscal Year, were equal to at least 120% of the maximum Debt Service Requirement for any Fiscal Year commencing with the first Fiscal Year after the Fiscal Year in which the Additional Obligations are issued, on all related Senior Lien Revenue Obligations which will be Outstanding immediately after the issuance of the proposed Additional Obligations and secured on a parity therewith, provided, however, (x) the report or certificate may contain pro forma adjustments to historical related Net Revenues of the Water System equal to 100% of the increased annual amount attributable to any revision in the schedule of rates, fees, and charges for the services and facilities furnished by the Water System, imposed prior to the date of delivery of the proposed Additional Obligations and not fully reflected in the historical related Net Revenues of the Water System actually received during such historical period used; (y) if MLGW or the City has a contract to purchase or otherwise acquire an Acquired System that will become part of the Water System, the historical Net Revenues of the Water System may be adjusted to include the anticipated Net Revenues from the Acquired System; and (z) if MLGW has entered into a contract to furnish services of the Water System that is not fully reflected in the historical Net Revenues of the Water System, such historical Net Revenues of the Water System may be adjusted to include the anticipated Net Revenues of the Water System from such contract; or

(b) the forecasted related Net Revenues of the Water System (which forecast can take into account (i) any planned increases in the rates, fees and charges for the services and facilities furnished by the Water System and (ii) any revenues projected to be received from any Acquired Systems as to which the City or MLGW has entered into a contract to purchase or otherwise acquire), in each Fiscal Year during the forecast period (defined as a period beginning with the first Fiscal Year beginning after the later of (y) the Fiscal Year in which any proposed Additional Obligations are to be issued or (z) the Fiscal Year in which any project to be financed with the proceeds of any proposed Additional Obligations is, in the judgment of MLGW is, expected to be completed, and ending on the last day of the fifth Fiscal Year thereafter) are

Lien Revenue Obligations which will be Outstanding immediately after the issuance of the proposed Additional Obligations and secured on a parity therewith.

The City may also issue Additional Obligations under the Master Water System Resolution on a lien subordinate to the Senior Lien Revenue Obligations under the Master Water System Resolution upon the satisfaction of certain conditions. See “**APPENDIX H – SUMMARY OF CERTAIN PROVISIONS OF THE WATER SYSTEM RESOLUTION – Additional Revenue Obligations**” attached hereto.

No Debt Service Reserve

MLGW is not required under the Master Water System Resolution to establish a subaccount of the Debt Service Reserve Account for any Revenue Obligations to be issued thereunder and any such subaccount shall only be established if required by the Supplemental Resolution authorizing the issuance of such Revenue Obligations. Accordingly, the Fourth Supplemental Resolution provides that the Debt Service Reserve Requirement for the Series 2020 Water System Bonds shall be set at \$0.

Pursuant to the Master Water System Resolution, Additional Obligations issued on a parity of lien with the Series 2014 Water System Bonds, the Series 2016 Water System Bonds, the Series 2017 Water System Bonds and the Series 2020 Water System Bonds may be secured by one or more debt service reserve funds, which debt service reserve funds, if any, will not secure the Series 2020 Water System Bonds.

Limited Obligations

THE SERIES 2020 WATER SYSTEM BONDS DO NOT CONSTITUTE A DEBT OF THE CITY OR MLGW WITHIN THE MEANING OF ANY CONSTITUTIONAL, CITY CHARTER OR STATUTORY LIMITATION. NEITHER THE FULL FAITH AND CREDIT NOR THE TAXING POWER OF THE STATE OR ANY POLITICAL SUBDIVISION THEREOF, INCLUDING THE CITY, IS PLEDGED TO THE PAYMENT OF THE SERIES 2020 WATER SYSTEM BONDS, AND NO HOLDER OF THE SERIES 2020 WATER SYSTEM BONDS SHALL HAVE THE RIGHT TO COMPEL ANY EXERCISE OF THE TAXING POWERS OF THE CITY TO PAY THE SERIES 2020 WATER SYSTEM BONDS, OR THE INTEREST THEREON, AND THE SERIES 2020 WATER SYSTEM BONDS, INCLUDING THE INTEREST THEREON, ARE LIMITED OBLIGATIONS OF THE CITY AND MLGW AS PROVIDED IN THE WATER SYSTEM RESOLUTION PAYABLE SOLELY FROM THE WATER SYSTEM PLEDGED REVENUES. THE SERIES 2020 WATER SYSTEM BONDS DO NOT CONSTITUTE A CHARGE, LIEN OR ENCUMBRANCE UPON ANY OTHER PROPERTY OF THE CITY EXCEPTING ONLY THE WATER SYSTEM PLEDGED REVENUES.

Outstanding Water System Senior Lien Revenue Obligations

The Outstanding Water System Senior Lien Revenue Obligations are comprised of the Series 2014 Water System Bonds, the Series 2016 Water System Bonds and the Series 2017 Water System Bonds, which are currently outstanding in the aggregate principal amount of \$61,860,000, respectively, as reflected in the following tables below. See “Security and Source of Payment for the Series 2020 Bonds” herein and “**APPENDIX C – OPERATING INFORMATION REGARDING THE WATER DIVISION**” attached hereto.

Senior Lien Revenue Obligations	Original Issue Aggregate Principal Amount	Outstanding Principal Amount
Series 2014 Water System Bonds	\$15,000,000	\$12,090,000
Series 2016 Water System Bonds	\$30,000,000	\$26,545,000
Series 2017 Water System Bonds	\$25,000,000	\$23,225,000
Total Senior Lien Revenue Obligations	\$70,000,000	\$61,860,000

WATER DIVISION LONG-TERM DEBT SERVICE SCHEDULE

The following table illustrates the debt service obligations for MLGW's Water Division as of the date of issuance of the Series 2020 Bonds:

FISCAL YEAR ENDED	AGGREGATE OUTSTANDING OBLIGATIONS			SERIES 2020 WATER SYSTEM BONDS			TOTAL WATER DIVISION DEBT SERVICE		
<u>Dec. 31</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
2020	\$ 2,750,000	\$ 2,181,685	\$ 4,931,685	\$ 0	\$ 504,352	\$ 504,352	\$ 2,750,000	\$ 2,686,037	\$ 5,436,037
2021	2,825,000	2,099,185	4,924,185	1,160,000	2,631,400	3,791,400	3,985,000	4,730,585	8,715,585
2022	2,900,000	2,026,935	4,926,935	1,205,000	2,585,000	3,790,000	4,105,000	4,611,935	8,716,935
2023	2,995,000	1,933,385	4,928,385	1,255,000	2,536,800	3,791,800	4,250,000	4,470,185	8,720,185
2024	3,110,000	1,819,935	4,929,935	1,315,000	2,474,050	3,789,050	4,425,000	4,293,985	8,718,985
2025	3,215,000	1,716,235	4,931,235	1,380,000	2,408,300	3,788,300	4,595,000	4,124,535	8,719,535
2026	3,335,000	1,590,785	4,925,785	1,450,000	2,339,300	3,789,300	4,785,000	3,930,085	8,715,085
2027	3,445,000	1,482,385	4,927,385	1,525,000	2,266,800	3,791,800	4,970,000	3,749,185	8,719,185
2028	3,595,000	1,332,685	4,927,685	1,600,000	2,190,550	3,790,550	5,195,000	3,523,235	8,718,235
2029	3,740,000	1,188,885	4,928,885	1,680,000	2,110,550	3,790,550	5,420,000	3,299,435	8,719,435
2030	3,890,000	1,039,285	4,929,285	1,765,000	2,026,550	3,791,550	5,655,000	3,065,835	8,720,835
2031	4,045,000	883,685	4,928,685	1,850,000	1,938,300	3,788,300	5,895,000	2,821,985	8,716,985
2032	4,180,000	746,060	4,926,060	1,945,000	1,845,800	3,790,800	6,125,000	2,591,860	8,716,860
2033	4,335,000	596,510	4,931,510	2,040,000	1,748,550	3,788,550	6,375,000	2,345,060	8,720,060
2034	4,485,000	441,310	4,926,310	2,145,000	1,646,550	3,791,550	6,630,000	2,087,860	8,717,860
2035	3,570,000	286,850	3,856,850	2,250,000	1,539,300	3,789,300	5,820,000	1,826,150	7,646,150
2036	3,690,000	163,350	3,853,350	2,315,000	1,471,800	3,786,800	6,005,000	1,635,150	7,640,150
2037	1,755,000	52,650	1,807,650	2,385,000	1,402,350	3,787,350	4,140,000	1,455,000	5,595,000
2038				2,460,000	1,330,800	3,790,800	2,460,000	1,330,800	3,790,800
2039				2,530,000	1,257,000	3,787,000	2,530,000	1,257,000	3,787,000
2040				2,610,000	1,181,100	3,791,100	2,610,000	1,181,100	3,791,100
2041				2,685,000	1,102,800	3,787,800	2,685,000	1,102,800	3,787,800
2042				2,765,000	1,022,250	3,787,250	2,765,000	1,022,250	3,787,250
2043				2,850,000	939,300	3,789,300	2,850,000	939,300	3,789,300
2044				2,935,000	853,800	3,788,800	2,935,000	853,800	3,788,800
2045				3,025,000	765,750	3,790,750	3,025,000	765,750	3,790,750
2046				3,115,000	675,000	3,790,000	3,115,000	675,000	3,790,000
2047				3,240,000	550,400	3,790,400	3,240,000	550,400	3,790,400
2048				3,370,000	420,800	3,790,800	3,370,000	420,800	3,790,800
2049				3,505,000	286,000	3,791,000	3,505,000	286,000	3,791,000
2050				3,645,000	145,800	3,790,800	3,645,000	145,800	3,790,800
TOTALS	<u>\$61,860,000</u>	<u>\$21,581,800</u>	<u>\$83,441,800</u>	<u>\$68,000,00</u> <u>0</u>	<u>\$46,197,102</u>	<u>\$114,197,102</u>	<u>\$129,860,000</u>	<u>\$67,778,902</u>	<u>\$197,638,902</u>

Source: Memphis Light, Gas and Water Division.

LITIGATION

The City, like other similar bodies, is subject to a variety of suits and proceedings arising in the ordinary conduct of its affairs. There is no legal proceeding now pending or, to the knowledge of the City, threatened against the City which restrains or enjoins the issuance or delivery of the Series 2020 Bonds, the execution, delivery or performance of the Electric System Resolution, the Gas System Resolution or the Water System Resolution, the fixing or collecting of rates and charges for the services of the Electric Division, Gas Division or the Water Division, the pledge of the Electric System Pledged Revenues, the Gas System Pledged Revenues or the Water System Pledged Revenues or the use of the proceeds of the Series 2020 Bonds or which questions or contests the validity of the Series 2020 Bonds, the Electric System Resolution, the Gas System Resolution or the Water System Resolution, or the proceedings and authority under which they are to be issued, executed and delivered or the pledge of the Electric System Pledged Revenues, the Gas System Pledged Revenues or the Water System Pledged Revenues. Neither the creation, organization nor existence of the City, nor the title of the present members or other officials of the City to their respective offices, is being currently contested or questioned to the knowledge of the City.

MLGW, like other similar public bodies, is subject to a variety of lawsuits and proceedings arising in the ordinary conduct of its affairs. While the outcome of such litigation and proceedings cannot be predicted, the final resolution of these pending lawsuits, proceedings and claims and any threatened lawsuits, proceedings and claims known to the General Counsel, against MLGW and its officials in such capacity are not expected to have a material adverse effect upon the financial position or results of operations of the Electric Division, the Gas Division or, except as noted below, the Water Division after taking into consideration, our evaluation of the merits of the case, the limitations under the Tennessee Governmental Tort Liability Act, and MLGW's insurance and self-insurance arrangements. Neither the creation, organization nor existence of MLGW, nor the title of the present members or other officials of MLGW to their respective offices, is being currently contested or questioned to the knowledge of MLGW.

Mississippi Water Case. On June 6, 2014, the State of Mississippi filed a Motion for Leave to File an Original Action against the State of Tennessee, the City of Memphis and MLGW (collectively, the "Defendants") in the U.S. Supreme Court seeking a declaratory judgment establishing the State of Mississippi's ownership of, and exclusive control over the groundwater allegedly stored naturally in the Sparta Sand formation underlying Mississippi, Tennessee and Arkansas (the "Aquifer"). The State of Mississippi also seeks monetary damages in an amount equal to the value of the groundwater that it alleges Defendants have wrongfully taken from the Aquifer, plus all profits, proceeds, consequential gains, saved expenditures, and other benefits realized by Defendants, due to the alleged taking. The State of Mississippi also requests the U.S. Supreme Court to require Defendants to prospectively take all actions necessary to fund, construct and modify Memphis-MLGW's groundwater pumping systems and/or develop systems using Mississippi River water as an alternative or supplemental source of water supply for Defendants. Should the State of Mississippi be awarded the damages alleged or MLGW be required to use alternative or supplemental sources of water, the amount at issue would have a material impact on the financial condition of MLGW.

The United States Supreme Court granted Mississippi leave to file its complaint and appointed a Special Master. Defendants filed Motions for Judgment on the Pleadings. Defendants argued that the aquifer at issue was an interstate water resource, that the Supreme Court has held that the only judicial remedy for disputes between states over such resources was an action for equitable apportionment and, because Mississippi did not ask for equitable apportionment, it failed to state a claim. Mississippi opposed Defendants' Motion arguing that the aquifer at issue was not an interstate resource, and, instead, was an intrastate resource belonging to Mississippi. The Special Master's Order denied the Motions but found that the arguments presented by Mississippi did not seem to support Mississippi's position that the aquifer was not interstate. The Special Master ordered an evidentiary hearing on the threshold question of whether the aquifer at issue is an interstate resource.

The parties disclosed experts, and their experts submitted reports on June 30, 2017 and rebuttal reports on July 31, 2017. Expert depositions took place in September 2017. Defendants jointly moved for summary judgment on June 1, 2018. The Special Master issued a Memorandum of Decision on November 29, 2018 denying Defendants' motion and finding that an evidentiary hearing was required to develop a full record for the Supreme Court. The Special Master noted in his ruling, however, that he "remains convinced that Defendants present a strong case." The Special Master identified the sole issue for trial to be whether the Aquifer at issue is an interstate resource.

An evidentiary hearing was held in Nashville, Tennessee, on May 20-25, 2019. After the hearing, the parties submitted post-trial briefs and proposed findings of fact and conclusions of law. Closing arguments were held in Nashville, Tennessee, on February 25, 2020. The parties now await the Special Master's report and recommendation to the Supreme Court, which is expected to include findings of fact and conclusions of law. The Special Master has not informed the parties when his ruling might be entered.

The City and MLGW anticipate that, if they prevail at trial, the Special Master will find that the Aquifer is an interstate resource, that Mississippi's sole cause of action is one for equitable apportionment, and, because Mississippi has expressly rejected equitable apportionment, Mississippi's complaint should be dismissed with prejudice. If, however, Mississippi were to prevail and the case moves forward, Defendants will argue, among other points, that any monetary damages recovered by Mississippi are capped by the Tennessee Governmental Tort Liability Act. Defendants are defending this matter vigorously.

INVESTMENT CONSIDERATIONS

General

Set forth below are certain risks purchasers of the Series 2020 Bonds should consider when making an investment decision. All potential risks are not included; the discussion is not intended to be exhaustive.

Coronavirus Disease 2019

The Coronavirus Disease 2019 ("COVID-19") is a respiratory disease caused by a strain of the coronavirus that has had a major effect on the global health and activity and has significantly affected economies worldwide. On March 11, 2020, the World Health Organization (WHO) officially declared COVID-19 as a pandemic. According to John Hopkins University, as of August 21, 2020, there were over 22.7 million cases of COVID-19 across the globe, with over 794,274 confirmed deaths. The United States is now reporting over 5.5 million cases of COVID-19 with over 174,290 confirmed deaths.

Many state and local governments in the United States have issued "stay at home" or "shelter in place" orders and social distancing guidelines, which severely restricted the movements of residents and generally mandated they remain in their homes and, in effect, prohibited nonessential workers from working outside of their home. These governmental orders have also led to quarantine, temporary closing of nonessential businesses, and loss of employment. Additionally, several countries have effectively closed their borders by restricting entry and exit to only essential travel and/or requiring travelers to self-isolate for up to fourteen (14) days. Recently, due to a more stable containment of the virus in certain cities, some of these restrictions have been lifted by governments enabling these cities to slowly re-open through a phased approach. Since May 4, 2020, a partial re-opening phased approach has been implemented in the City and the County.

COVID-19 has altered and is continuing to alter the behavior of businesses, government, schools, and people in a manner that is having detrimental effects on global and local economies, including the State's economy. The impact of COVID-19 on MLGW, its operations, and the local, regional, national, and international economies cannot be predicted due to the dynamic nature of the pandemic, including

uncertainties relating to its duration and severity, as well as what actions may be taken by governmental authorities, businesses, schools, and other institutions in an attempt to contain or mitigate its impact. This, too, can have a negative impact on electric, gas and water usage and the financial and operational results of, and revenues generated by, MLGW.

There can be no assurance as to when the pandemic will abate, or to what extent the United States' or global economy will recover from the disruption caused by COVID-19. Investors must consider and understand the extent of the economic disruption and market volatility caused by COVID-19, which could adversely affect the performance of MLGW and could have a material adverse impact on MLGW's ability to make timely payments on the Series 2020 Bonds.

MLGW cannot predict (i) the duration or extent of COVID-19 or any other outbreak or pandemic; (ii) what effect COVID-19 or any other outbreak/pandemic-related government restrictions or warnings may have on demand for utility services, MLGW costs or revenues; (iii) whether and to what extent COVID-19 or any other outbreak or pandemic may disrupt the local or global economy, manufacturing or supply-chain, or whether any such disruption may adversely impact MLGW-related operations; (iv) the extent to which COVID-19 or any other outbreak or pandemic, may result in changes in demand for electricity, gas or water, or may have an impact on the customers of MLGW or the utility industry, generally; or (v) whether any of the foregoing may have a material adverse effect on the finances and operations of MLGW. Future outbreaks or pandemics may reduce demand for MLGW's services, which could cause a decrease in customer usage and declines in revenues generated by MLGW.

Enforceability of Remedies

The remedies available to the owners of the Series 2020 Bonds upon an event of default under the Electric System Resolution, Gas System Resolution and Water System Resolution, as applicable, are in many respects dependent upon judicial actions which are often subject to discretion and delay.

The enforceability of remedies or rights with respect to the Series 2020 Bonds may be limited by state and federal laws, rulings and decisions affecting remedies and by bankruptcy, insolvency or other laws affecting creditors' rights or remedies heretofore or hereafter enacted. Under existing constitutional and statutory law and judicial decisions, including specifically Title 11 of the United States Code (federal bankruptcy code), certain remedies specified by the Electric System Resolution, Gas System Resolution and Water System Resolution, as applicable, may not be readily available or may be limited. The various legal opinions to be delivered concurrently with the delivery of the Series 2020 Bonds will be qualified as to the enforceability of the various legal instruments by limitations imposed by bankruptcy, reorganization, insolvency or other similar laws affecting the rights of creditors generally.

Additional Obligations

The City may issue Additional Obligations in the Electric, Gas and Water Division, respectively, on a parity of lien with the Series 2020 Bonds with respect to the respective Pledged Revenues, as applicable, or subordinate to the Series 2020A Electric System Bonds, the Series 2020B Electric System Refunding Bonds, the Series 2020 Gas System Bonds and the Series 2020 Water System Bonds, respectively, in accordance with the provisions of the Master Electric System Resolution, the Master Gas System Resolution and the Master Water System Resolutions. See **"APPENDIX F – SUMMARY OF CERTAIN PROVISIONS OF THE ELECTRIC SYSTEM RESOLUTION"**; **"APPENDIX G – SUMMARY OF CERTAIN PROVISIONS OF THE GAS SYSTEM RESOLUTION"** and **"APPENDIX H – SUMMARY OF CERTAIN PROVISIONS OF THE WATER SYSTEM RESOLUTION."** Additional Obligations issued on a parity of lien with the Series 2020 Bonds may be secured by one or more debt service reserve funds, which debt service reserve funds, if any, will not secure such Series 2020 Bonds. The issuances of Additional Obligations would increase the debt service

requirements and could adversely affect debt service coverage on the Series 2020A Electric System Bonds, the Series 2020B Electric System Refunding Bonds, the Series 2020 Gas System Bonds and the Series 2020 Water System Bonds. See “**APPENDIX F – SUMMARY OF CERTAIN PROVISIONS OF THE ELECTRIC SYSTEM RESOLUTION – Additional Revenue Obligations**”; “**APPENDIX G – SUMMARY OF CERTAIN PROVISIONS OF THE GAS SYSTEM RESOLUTION – Additional Revenue Obligations**” and “**APPENDIX H – SUMMARY OF CERTAIN PROVISIONS OF THE WATER SYSTEM RESOLUTION-Additional Revenue Obligations**.”

Early Payment Prior To Maturity

The Series 2020 Bonds may be subject to optional redemption prior to maturity. See “REDEMPTION PROVISIONS FOR THE SERIES 2020 BONDS – Redemption Provisions for the Series 2020A Electric System Bonds, – Redemption Provisions for the Series 2020B Electric System Refunding Bonds, – Redemption Provisions for the Series 2020 Gas System Bonds, and – Redemption Provisions for the Series 2020 Water System Bonds” herein. A prospective investor should consider this right when making any investment decision. Following a redemption, the owners of any Series 2020 Bond that are redeemed may not be able to reinvest their funds at a comparable interest rate.

Limited Protection Against Loss of Tax Exemption

There is no provision for the redemption of any of the Series 2020 Bonds or for the payment of additional interest on any of the Series 2020 Bonds in the event that interest on any of the Series 2020 Bonds becomes includable in gross income for federal income tax purposes. In the event that interest on the Series 2020A Electric System Bonds, the Series 2020 Gas System Bonds and the Series 2020 Water System Bonds becomes includable in gross income for federal income tax purposes, the value and marketability of such Series 2020A Electric System Bonds, the Series 2020 Gas System Bonds and the Series 2020 Water System Bonds would likely be adversely affected. The City and MLGW have, however, covenanted not to do anything that would adversely affect the tax-exempt status of the Series 2020 Bonds.

The New Madrid Seismic Zone and Other Risk Factors

The City is located adjacent to the New Madrid Seismic Zone, which is the most seismically active and well-studied region in the Central and Eastern United States. The last major earthquakes located within this seismic zone, believed to have ranged between 7.0 and 7.7 in magnitude, occurred in 1811 and 1812. According to the United States Geological Survey, there is a 7-10% chance that a repeat of earthquakes of similar scale to the 1811 and 1812 earthquakes will occur within the next fifty (50) years and a 25-40% risk of a still dangerous earthquake in the low-6 magnitude. During the past twenty-five (25) years, building codes in the City and the County have been gradually upgraded to require stricter seismic construction standards. However, many older buildings, particularly in the downtown area, are masonry structures built long before seismic requirements and are believed to be highly vulnerable to shaking from an earthquake.

MLGW has implemented seismic design and mitigation programs for its Electric, Gas and Water Systems, but seismic activity in or near the City could cause significant damage to MLGW’s facilities and disrupt the activities of MLGW and its customers. In addition to the potential damage to buildings and facilities owned by the City, due to the importance of the City as a tourist destination and regional hub of commercial, retail and entertainment activity, a major earthquake may cause significant temporary and possibly long-term harm to the City's economy, tax receipts and residential and business real property values.

In the future, the following additional factors, among others, may adversely affect the operations of utility providers, including MLGW, to an extent that cannot be determined at this time:

- (1) The ability of, and costs to, MLGW to insure or otherwise protect itself against property damage and general liability claims; and
- (2) MLGW's inability to secure and provide electricity, gas and water.

Climate Change

Numerous scientific studies have detailed changing global weather patterns and the potential for increasing extreme weather events across the world. The City's location in the southern United States and next to the Mississippi River increases its vulnerability to flooding, including storm water flooding, and extreme heat. In addition to flooding and extreme heat, the City faces other threats due to climate change, including both drought and damaging wind that could become more severe and frequent. The City and the County have collaborated to develop a Climate Action Plan, which is intended to measure and lessen the City's contributions to climate change. The City cannot predict the timing, extent or severity of climate change and its impact on the City's operations and finances.

Cybersecurity

The City and MLGW utilize various computer systems and network technology to perform many of its vital operations. Such operations often include the storage and transmission of sensitive information, and as a result, the City and MLGW may be the target of cyberattacks attempting to gain access to such information. In addition to intentional attacks, information breaches may occur due to unintentional employee error. A successful cyberattack or unintentional breach may require the expenditure of an unknown amount of money or time to resolve, substantially interrupt municipal services and operations and subject the City to legal action. Neither the City nor MLGW has any knowledge of, nor historical record of, any successful cyber security breach or related attack. Attempted cyber security attacks, whether anonymous or targeted, occur on a periodic frequency that is not uncommon to organizations or agencies of similar characteristics. To mitigate against such risks, the City and MLGW have instituted various policies and procedures to protect its network infrastructure, including a cyber-security training requirement for certain departments, as well as general cyber security training and awareness for all employees. MLGW is subject to the requirements of the North American Electric Reliability Corporation (NERC) and complies with federal rules applicable to utilities owning certain types of assets on the bulk electric system. MLGW undergoes regular monitoring and compliance audits in this regard. The City also maintains insurance against cyber security incidents. Despite the City's and MLGW's measures to safeguard its network infrastructure, there are no guarantees that such measures will be successful.

Risk of Future Legislative Action and/or Court Decisions

Legislation affecting tax-exempt obligations is regularly considered by the United States Congress and may also be considered by the State legislature. Court proceedings may also be filed, the outcome of which could modify the tax treatment of obligations such as the Series 2020 Bonds. There can be no assurance that legislation enacted or proposed, or actions by a court, after the date of issuance of the Series 2020 Bonds will not have an adverse effect on the tax status of the interest on the Series 2020 Bonds or the market value or marketability of the Series 2020 Bonds. These adverse effects could result, for example, from changes to federal or state income tax rates, changes in the structure of federal or state income taxes (including replacement with another type of tax), or repeal (or reduction in the benefit) of the exclusion of interest on the Series 2020 Bonds from gross income for federal or state income tax purposes for all or certain taxpayers.

Additionally, investors in the Series 2020 Bonds should be aware that future legislative actions (including federal income tax reform) may retroactively change the treatment of all or a portion of the interest on the Series 2020 Bonds for federal income tax purposes for all or certain taxpayers. In all such events, the market value of the Series 2020 Bonds may be affected and the ability of holders to sell their Series 2020 Bonds in the secondary market may be reduced. The Series 2020 Bonds are not subject to special mandatory redemption, and the interest rates on the Series 2020 Bonds are not subject to adjustment, in the event of any such change in the tax treatment of interest on the Series 2020 Bonds.

CONTINUING DISCLOSURE UNDERTAKING

In order to provide continuing disclosure with respect to the Series 2020 Bonds and to assist the Underwriters in complying with Rule 15c2-12(b)(5) of the Securities and Exchange Commission (the "SEC") promulgated pursuant to the Securities Exchange Act of 1934, as in effect on the date hereof (the "Rule"), simultaneously with the issuance of the Series 2020 Bonds, the City and MLGW will enter into separate Continuing Disclosure Certificates for the benefit of the Beneficial Owners of the Series 2020A Electric System Bonds, the Series 2020B Electric System Refunding Bonds, the Series 2020 Gas System Bonds and the Series 2020 Water System Bonds (collectively, the "Disclosure Certificate"). Under the Disclosure Certificate, the City, as an "obligated person" under the Rule, will agree and undertake to cause MLGW to provide annually certain financial information and operating data relating to MLGW and the Series 2020 Bonds (the "Annual Report") and notices of the occurrence of certain enumerated events with respect to the Series 2020 Bonds, all as more particularly described in the Disclosure Certificate.

The Disclosure Certificate provides that designated annual financial information and operating data relating to MLGW, the Electric Division, the Gas Division and the Water Division, and notices of the occurrence of certain enumerated events will be provided under the Disclosure Certificate. The Annual Report and notices of certain enumerated events (as described in the applicable Disclosure Certificate) will be filed by MLGW, on behalf of the City, with the centralized information repository developed and operated by the Municipal Securities Rulemaking Board ("MSRB") through the Electronic Municipal Market Access ("EMMA") in an electronic format prescribed by the MSRB. These covenants have been made in order to assist the Underwriters in complying with the Rule. Such undertaking shall only apply so long as the applicable Series 2020 Bonds remain outstanding; provided, however, that the undertaking shall terminate upon the termination of the continuing disclosure requirements of the Rule by legislative, judicial or administrative action and may be amended as provided in the Disclosure Certificate.

Within the previous five years, MLGW has not failed to comply in any material respect with any previous undertaking with regards to the Rule to provide certain annual financial information and material event notices.

MLGW and the City each has a system in place for compliance with its outstanding continuing disclosure obligations under similar undertakings or certificates. See "**APPENDIX I-1 – FORM OF THE CONTINUING DISCLOSURE CERTIFICATE RELATING TO THE SERIES 2020A ELECTRIC SYSTEM BONDS**" attached hereto, "**APPENDIX I-2 – FORM OF THE CONTINUING DISCLOSURE CERTIFICATE RELATING TO THE SERIES 2020B ELECTRIC SYSTEM REFUNDING BONDS**" attached hereto, "**APPENDIX I-3 – FORM OF THE CONTINUING DISCLOSURE CERTIFICATE RELATING TO THE SERIES 2020 GAS SYSTEM BONDS**" attached hereto, and "**APPENDIX I-4 – FORM OF THE CONTINUING DISCLOSURE CERTIFICATE RELATING TO THE SERIES 2020 WATER SYSTEM BONDS**" attached hereto.

The City previously entered into continuing disclosure undertakings with its underwriters, as an "obligated person" under the Rule (the "Undertakings"). In the period beginning five years prior to the date of

this Official Statement to the dated date of this Official Statement (the "Compliance Period"), the City has, on several instances during the Compliance Period, failed to comply, in all material respects, with certain provisions of the Undertakings, including: (a) failing to provide certain required annual financial information in its annual filings; and (b) failing to file or timely file certain notices, including event notices relating to rating changes, notices of defeasance and notices of failures to submit required annual financial information before the date specified in the Undertakings. Pursuant to the hereinafter defined Order, the City posted on EMMA that certain Corrective and Voluntary Notice Regarding Certain Annual Financial Information in the Annual Filings and Notices, dated as of May 12, 2017 (the "Corrective Notice"), in order to update and provide notice of all past continuing disclosure delinquencies described above.

The following disclosure is being provided by the City for the sole purpose of complying with the hereinafter defined Order:

In March 2014, the SEC announced its Municipal Continuing Disclosure Cooperation (MCDC) Initiative, a voluntary self-reporting program, intended to address potentially widespread violations by municipal issuers and underwriters of the federal securities laws relating to continuing disclosure compliance reporting in municipal bond offering documents. The MCDC Initiative offered favorable settlement terms to issuers that self-report securities law violations, relating to material misstatements or omissions in bond documents about compliance with an issuer's prior undertakings as to continuing disclosure. After a review of its compliance record, as noted above, in November 2014, the City determined to self-report to the SEC by submitting an MCDC Questionnaire. On February 22, 2016, following discussion with the SEC staff, the City filed an Offer of Settlement.

On August 24, 2016, the SEC entered an Order Instituting Cease-and-Desist Proceedings Pursuant to Section 8A of the Securities Act of 1933, Making Findings, and Imposing Remedial Sanctions and A Cease-and-Desist Order (the "Order"). The Order contains no monetary penalties, but orders the City to cease and desist from committing or causing any violations and any future violations of Section 17(a)(2) of the Securities Act of 1933 and orders the City to comply with the following undertakings:

- (a) Establish appropriate written policies and procedures and periodic training regarding continuing disclosure obligations to effect compliance with the federal securities laws, including the designation of an individual or officer responsible for ensuring compliance with such policies and procedures and responsible for implementing and maintaining a record (including attendance) of such training;
- (b) Comply with existing continuing disclosure undertakings, including updating past delinquent filings if the City is not currently in compliance with its continuing disclosure obligations;
- (c) Disclose in a clear and conspicuous fashion the terms of the settlement in any final official statement for an offering by the City within five years from the date of the Order;
- (d) Certify, in writing, compliance with the undertakings set forth above; and
- (e) Cooperate with any subsequent investigation by the SEC regarding the false statements or material omissions, including the roles of individuals or other parties involved.

The City has undertaken all measures necessary to comply with the Order. Since the date of the Order, the City believes that it has complied, in all material respects, with its Undertakings, except that the City did not timely file certain annual financial information relating to the City's sewer collection and treatment fund for the Fiscal Year ended June 30, 2017, which failure was disclosed in a notice filed on EMMA by the City on December 27, 2017.

TAX MATTERS

Series 2020 Tax-Exempt Bonds

The Series 2020A Electric System Bonds, the Series 2020 Gas System Bonds and the Series 2020 Water System Bonds are defined in this TAX MATTERS section as the “Series 2020 Tax-Exempt Bonds.”

General Matters. In the opinion of Butler Snow LLP, Memphis, Tennessee, and The Wade Law Firm, PLLC, Memphis, Tennessee, Co-Bond Counsel, under existing laws, regulations, rulings and judicial decisions, interest on the Series 2020 Tax-Exempt Bonds (including any original issue discount properly allocable to the owner of a Series 2020 Tax-Exempt Bond) is excludable from gross income for federal income tax purposes and is excludable from federal alternative minimum taxable income as defined in Section 55(b)(2) of the Code. The opinion described above assumes the accuracy of certain representations and compliance by the City and the Division with covenants designed to satisfy the requirements of the Code that must be met subsequent to the issuance of the Series 2020 Tax-Exempt Bonds. Failure to comply with such requirements could cause interest on the Series 2020 Tax-Exempt Bonds to be included in gross income for federal income tax purposes retroactive to the date of issuance of the Series 2020 Tax-Exempt Bonds. The City and the Division have covenanted to comply with such requirements. Co-Bond Counsel has expressed no opinion regarding other federal tax consequences arising with respect to the Series 2020 Tax-Exempt Bonds.

The accrual or receipt of interest on the Series 2020 Tax-Exempt Bonds may otherwise affect the federal income tax liability of the owners of the Series 2020 Tax-Exempt Bonds. The extent of these other tax consequences will depend on such owners' particular tax status and other items of income or deduction. Co-Bond Counsel have expressed no opinion regarding any such consequences. Purchasers of the Series 2020 Tax-Exempt Bonds, particularly purchasers that are corporations (including S corporations and foreign corporations operating branches in the United States of America), property or casualty insurance companies, banks, thrifts or other financial institutions, certain recipients of social security or railroad retirement benefits, taxpayers entitled to claim the earned income credit, taxpayers entitled to claim the refundable credit in Section 36B of the Code for coverage under a qualified health plan or taxpayers who may be deemed to have incurred or continued indebtedness to purchase or carry tax-exempt obligations, should consult their tax advisors as to the tax consequences of purchasing or owning the Series 2020 Tax-Exempt Bonds.

Original Issue Discount. The Series 2020 Tax-Exempt Bonds that have an original yield above their respective interest rates, as shown on the inside cover of this Official Statement (collectively, the “Discount Bonds”), are being sold at an original issue discount. The difference between the initial public offering prices of such Discount Bonds and their stated amounts to be paid at maturity constitutes original issue discount treated in the same manner for federal income tax purposes as interest, as described above.

The amount of original issue discount that is treated as having accrued with respect to a Discount Bond or is otherwise required to be recognized in gross income is added to the cost basis of the owner of the bond in determining, for federal income tax purposes, gain or loss upon disposition of such Discount Bond (including its sale, redemption or payment at maturity). Amounts received on disposition of such Discount Bond that are attributable to accrued or otherwise recognized original issue discount will be treated as federally tax-exempt interest, rather than as taxable gain, for federal income tax purposes.

Original issue discount is treated as compounding semiannually, at a rate determined by reference to the yield to maturity of each individual Discount Bond, on days that are determined by reference to the maturity date of such Discount Bond. The amount treated as original issue discount on such Discount Bond for a particular semiannual accrual period is equal to (a) the product of (i) the yield to maturity for such Discount Bond (determined by compounding at the close of each accrual period) and (ii) the amount that would have been the tax basis of such Discount Bond at the beginning of the particular accrual period if held

by the original purchaser, less (b) the amount of any interest payable for such Discount Bond during the accrual period. The tax basis for purposes of the preceding sentence is determined by adding to the initial public offering price on such Discount Bond the sum of the amounts that have been treated as original issue discount for such purposes during all prior periods. If such Discount Bond is sold between semiannual compounding dates, original issue discount that would have been accrued for that semiannual compounding period for federal income tax purposes is to be apportioned in equal amounts among the days in such compounding period.

Owners of Discount Bonds should consult their tax advisors with respect to the determination and treatment of original issue discount accrued as of any date, with respect to when such original issue discount must be recognized as an item of gross income and with respect to the state and local tax consequences of owning a Discount Bond. Subsequent purchasers of Discount Bonds that purchase such Discount Bonds for a price that is higher or lower than the “adjusted issue price” of the Discount Bonds at the time of purchase should consult their tax advisors as to the effect on the accrual of original issue discount.

Original Issue Premium. The Series 2020 Tax-Exempt Bonds that have an original yield below their respective interest rates, as shown on the inside cover of this Official Statement (collectively, the “Premium Bonds”), are being sold at a premium. An amount equal to the excess of the issue price of a Premium Bond over its stated redemption price at maturity constitutes premium on such Premium Bond. A purchaser of a Premium Bond must amortize any premium over such Premium Bond’s term using constant yield principles, based on the purchaser’s yield to maturity (or, in the case of Premium Bonds callable prior to their maturity, generally by amortizing the premium to the call date, based on the purchaser’s yield to the call date and giving effect to any call premium). As premium is amortized, the amount of the amortization offsets a corresponding amount of interest for the period, and the purchaser’s basis in such Premium Bond is reduced by a corresponding amount resulting in an increase in the gain (or decrease in the loss) to be recognized for federal income tax purposes upon a sale or disposition of such Premium Bond prior to its maturity. Even though the purchaser’s basis may be reduced, no federal income tax deduction is allowed. Purchasers of the Premium Bonds should consult their tax advisors with respect to the determination and treatment of premium for federal income tax purposes and with respect to the state and local tax consequences of owning a Premium Bond.

Backup Withholding. As a result of the enactment of the Tax Increase Prevention and Reconciliation Act of 2005, interest on federally tax-exempt obligations such as the Series 2020 Tax-Exempt Bonds is subject to information reporting in a manner similar to interest paid on taxable obligations. Backup withholding may be imposed on payments to any owner of the Series 2020 Tax-Exempt Bonds that fail to provide certain required information including an accurate taxpayer identification number to any person required to collect such information pursuant to Section 6049 of the Code. The reporting requirement does not in and of itself affect or alter the excludability of interest on the Series 2020 Tax-Exempt Bonds from gross income for federal income tax purposes or any other federal tax consequence of purchasing, holding or selling federally tax-exempt obligations.

Series 2020B Electric System Refunding Bonds

The following is a summary of certain material federal income tax consequences of the purchase, ownership and disposition of the Series 2020B Electric System Refunding Bonds for the investors described below and is based on the advice of Co- Bond Counsel. This summary is based upon laws, regulations, rulings and decisions currently in effect, all of which are subject to change. The discussion does not deal with all federal tax consequences applicable to all categories of investors, some of which may be subject to special rules, including but not limited to, partnerships or entities treated as partnerships for federal income tax purposes, pension plans and foreign investors, except as otherwise indicated. In addition, this summary is generally limited to investors that are “U.S. holders” (as defined below) who will hold the Series 2020B Electric System Refunding Bonds as “capital assets” (generally, property held for investment) within the meaning of Section 1221 of the Code. Investors should consult their own tax advisors to determine the

federal, state, local and other tax consequences of the purchase, ownership and disposition of Series 2020B Electric System Refunding Bonds. Prospective investors should note that no rulings have been or will be sought from the Internal Revenue Service (the “Service”) with respect to any of the federal income tax consequences discussed below, and no assurance can be given that the Service will not take contrary positions.

As used herein, a “U.S. holder” is a “U.S. person” that is beneficial owner of a Series 2020B Electric System Refunding Bond. A “non-U.S. holder” is a holder (or beneficial owner) of a Series 2020B Electric System Refunding Bond that is not a U.S. person. For these purposes, a “U.S. Person” is a citizen or resident of the United States, a corporation or partnership created or organized in or under the laws of the United States or any political subdivision thereof (except, in the case of a partnership, to the extent otherwise provided in the federal tax regulations), an estate the income of which is subject to United States federal income taxation regardless of its source or a trust if (a) a United States court is able to exercise primary supervision over the trust’s administration and (b) one or more United States persons have the authority to control all of the trust’s substantial decisions.

In General. Although the Series 2020B Electric System Refunding Bonds are issued by the City, interest on the Series 2020B Electric System Refunding Bonds (including original issue discount treated as interest, if any) is not excludable from gross income for federal income tax purposes under Section 103 of the Code. Interest on the Series 2020B Electric System Refunding Bonds (including original issue discount treated as interest, if any) will be fully subject to federal income taxation. Thus, owners of the Series 2020B Electric System Refunding Bonds generally must include interest (including original issue discount treated as interest, if any) on the Series 2020B Electric System Refunding Bonds in gross income for federal income tax purposes.

To ensure compliance with Treasury Circular 230, owners of the Series 2020B Electric System Refunding Bonds should be aware and are hereby put on notice that: (a) the discussion in this Official Statement with respect to U.S. federal income tax consequences of owning the Series 2020B Electric System Refunding Bonds is not intended or written to be used, and cannot be used, by any taxpayer for the purpose of avoiding penalties that may be imposed on the taxpayer; (b) such discussion was written in connection with the promotion or marketing (within the meaning of Treasury Circular 230) of the transactions or matters addressed by such discussion; and (c) each taxpayer should seek advice based on its particular circumstances from an independent tax advisor.

Taxation of Interest Income of the Series 2020B Electric System Refunding Bonds. Payments of interest with regard to the Series 2020B Electric System Refunding Bonds will be includible as ordinary income when received or accrued by the owners thereof in accordance with their respective methods of accounting and applicable provisions of the Code. If the Series 2020B Electric System Refunding Bonds are deemed to be issued with original issue discount, Section 1272 of the Code requires the current ratable inclusion in income of original issue discount greater than a specified de minimis amount using a constant yield method of accounting. In general, original issue discount is calculated, with regard to any accrual period, by applying the instrument’s yield to its adjusted issue price at the beginning of the accrual period, reduced by any qualified stated interest (as defined in the Code) allocable to the period. The aggregate original issue discount allocable to an accrual period is allocated to each day included in such period. The owner of a debt instrument must include in income the sum of the daily portions of original issue discount attributable to the number of days the owner owned the instrument. The legislative history of the original issue discount provisions indicates that the calculation and accrual of original issue discount should be based on the prepayment assumptions used by the parties in pricing the transaction.

Payments of interest received with respect to the Series 2020B Electric System Refunding Bonds will also constitute investment income for purposes of certain limitations of the Code concerning the deductibility of investment interest expense. Potential owners of the Series 2020B Electric System Refunding Bonds

should consult their own tax advisors concerning the treatment of interest payments with regard to the Series 2020B Electric System Refunding Bonds.

A purchaser (other than a person who purchases a Series 2020B Electric System Refunding Bonds upon issuance at the issue price) who buys a Series 2020B Electric System Refunding Bonds at a discount from its principal amount (or its adjusted issue price if issued with original issue discount greater than a specified de minimis amount) will be subject to the market discount rules of the Code. In general, the market discount rules of the Code treat principal payments and gain on disposition of a debt instrument as ordinary income to the extent of accrued market discount. Each potential investor should consult his tax advisor concerning the application of the market discount rules to the Series 2020B Electric System Refunding Bonds.

Sale or Exchange of the Series 2020B Electric System Refunding Bonds. If an owner sells a Series 2020B Electric System Refunding Bond, such person will recognize gain or loss equal to the difference between the amount realized on such sale and the owner's basis in such Series 2020B Electric System Refunding Bond. Ordinarily, such gain or loss will be treated as a capital gain or loss. If the terms of a Series 2020B Electric System Refunding Bond were materially modified, in certain circumstances, a new debt obligation would be deemed created and exchanged for the prior obligation in a taxable transaction. Among the modifications which may be treated as material are those which relate to redemption provisions and, in the case of a nonrecourse obligation, those which involve the substitution of collateral. Each potential owner of a Series 2020B Electric System Refunding Bond should consult its own tax advisor concerning the circumstances in which the Series 2020B Electric System Refunding Bonds would be deemed reissued and the likely effects, if any, of such reissuance. The legal defeasance of the Series 2020B Electric System Refunding Bonds may result in a deemed sale or exchange of such Series 2020B Electric System Refunding Bonds under certain circumstances. Owners of such Series 2020B Electric System Refunding Bonds should consult their tax advisors as to the federal income tax consequences of such a defeasance.

Backup Withholding. Certain purchasers may be subject to backup withholding at the application rate determined by statute with respect to interest paid with respect to the Series 2020B Electric System Refunding Bonds if the purchasers, upon issuance, fail to supply their taxpayer identification numbers, furnish incorrect taxpayer identification numbers, fail to report interest, dividends or other "reportable payments" (as defined in the Code) properly, or, under certain circumstances, fail to provide a certified statement, under penalty of perjury, that they are not subject to backup withholding.

Tax Treatment of Original Issue Discount. The Series 2020B Electric System Refunding Bonds that have an original yield above their interest rate, as shown on the inside cover page of this Official Statement, are being sold at a discount (the "Discounted Obligations"). The difference between the initial public offering prices, as set forth on the inside cover hereof, of the Discounted Obligations and their stated amounts to be paid at maturity, constitutes original issue discount treated in the same manner for federal income tax purposes as interest, as described above.

In the case of an owner of a Discounted Obligation, the amount of original issue discount which is treated as having accrued with respect to such Discounted Obligation is added to the cost basis of the owner in determining, for federal income tax purposes, gain or loss upon disposition of a Discounted Obligation (including its sale, redemption or payment at maturity). Amounts received upon disposition of a Discounted Obligation which are attributable to accrued original issue discount will be treated as taxable interest, rather than as taxable gain, for federal income tax purposes.

Original issue discount is treated as compounding semiannually, at a rate determined by reference to the yield to maturity of each individual Discounted Obligation, on days which are determined by reference to the maturity date of such Discounted Obligation. The amount treated as original issue discount on a Discounted Obligation for a particular semiannual accrual period is equal to (a) the product of (i) the yield to maturity for such Discounted Obligation (determined by compounding at the close of each accrual period) and

(ii) the amount which would have been the tax basis of such Discounted Obligation at the beginning of the particular accrual period if held by the original purchaser, (b) less the amount of any interest payable for such Discounted Obligation during the accrual period. The tax basis is determined by adding to the initial public offering price on such Discounted Obligation the sum of the amounts which have been treated as original issue discount for such purposes during all prior periods. If a Discounted Obligation is sold between semiannual compounding dates, original issue discount which would have been accrued for that semiannual compounding period for federal income tax purposes is to be apportioned in equal amounts among the days in such compounding period.

The Code contains additional provisions relating to the accrual of original issue discount in the case of owners of a Discounted Obligation who purchase such Discounted Obligations after the initial offering. Owners of Discounted Obligations including purchasers of the Discounted Obligations in the secondary market should consult their own tax advisors with respect to the determination for federal income tax purposes of original issue discount accrued with respect to such obligations as of any date and with respect to the state and local tax consequences of owning a Discounted Obligation.

Tax Treatment of Bond Premium. The Series 2020B Electric System Refunding Bonds that have an original yield below their interest rate, as shown on the inside cover page of this Official Statement, are being sold at a premium (collectively, the “Premium Obligations”). An amount equal to the excess of the issue price of a Premium Obligation over its stated redemption price at maturity constitutes premium on such Premium Obligation. An initial purchaser of such Premium Obligation must amortize any premium over such Premium Obligation's term using constant yield principles, based on the purchaser's yield to maturity (or, in the case of Premium Obligations callable prior to their maturity, by amortizing the premium to the call date, based upon the purchaser's yield to the call date and giving effect to any call premium). As premium is amortized, it offsets the interest allocable to the corresponding payment period and the purchaser's basis in such Premium Obligation is reduced by a corresponding amount resulting in an increase in the gain (or decrease in the loss) to be recognized for federal income tax purposes upon a sale or disposition of such Premium Obligation prior to its maturity. Even though the purchaser's basis may be reduced, no federal income tax deduction is allowed. The same treatment is afforded to the Premium Obligations purchased at a premium in the secondary market. Purchasers of Premium Obligations should consult with their own tax advisors with respect to the determination and treatment of amortizable premium for federal income tax purposes and with respect to the state and local tax consequences of owning such Premium Obligations.

State, Local or Foreign Taxation. No representations are made regarding the tax consequences of purchase, ownership or disposition of the Series 2020B Electric System Refunding Bonds under the tax laws of any state, locality or foreign jurisdiction (except as provided in “State of Tennessee Taxes”). Investors considering an investment in the Series 2020B Electric System Refunding Bonds should consult their own tax advisors regarding such tax consequences.

Tax-Exempt Investors. In general, an entity which is exempt from federal income tax under the provisions of Section 501 of the Code is subject to tax on its unrelated business taxable income. An unrelated trade or business is any trade or business which is not substantially related to the purpose which forms the basis for such entity's exemption. However, under the provisions of Section 512 of the Code, interest may be excluded from the calculation of unrelated business taxable income unless the obligation which gave rise to such interest is subject to acquisition indebtedness. Therefore, except to the extent any owner of a Series 2020B Electric System Refunding Bonds incurs acquisition indebtedness with respect to a Series 2020B Electric System Refunding Bonds, interest paid or accrued with respect to such owner may be excluded by such tax-exempt owner from the calculation of unrelated business taxable income. Each potential tax-exempt owner of a Series 2020B Electric System Refunding Bonds is urged to consult its own tax advisor regarding the application of these provisions.

State of Tennessee Taxes

Co-Bond Counsel also are of the opinion that, under existing law, the Series 2020 Bonds and the income therefrom are exempt from all present state, county and municipal taxes in Tennessee except (a) inheritance, transfer and estate taxes, (b) Tennessee excise taxes on all or a portion of the interest on the Series 2020 Bonds during the period the Series 2020 Bonds are held or beneficially owned by any organization or entity other than a sole proprietorship or general partnership, doing business in the State of Tennessee, and (c) Tennessee franchise taxes by reason of the inclusion of the book value of the Series 2020 Bonds in the Tennessee franchise tax base of any organization or entity, other than a sole proprietorship or general partnership, doing business in the State of Tennessee. Ownership of the Series 2020 Bonds or interest thereon may be subject to state or local taxation in jurisdictions other than the State of Tennessee under applicable state or local laws, as to which Co-Bond Counsel express no opinion. Each prospective investor and purchaser of the Series 2020 Bonds should consult its, his or her own tax advisor regarding the status of the interest on the Series 2020 Bonds in a particular state or local jurisdiction other than Tennessee.

Changes In Federal and State Tax Law

From time to time, there are legislative proposals in the Congress and in the states that, if enacted, could alter or amend the federal and state tax matters referred to under this heading “TAX MATTERS” or adversely affect the market value of the Series 2020 Bonds. It cannot be predicted whether or in what form any such proposal might be enacted or whether if enacted it would apply to bonds issued prior to enactment. In addition, regulatory actions are from time to time announced or proposed and litigation is threatened or commenced which, if implemented or concluded in a particular manner, could adversely affect the market value of the Series 2020 Bonds. It cannot be predicted whether any such regulatory action will be implemented, how any particular litigation or judicial action will be resolved, or whether the Series 2020 Bonds or the market value thereof would be impacted thereby. Purchasers of the Series 2020 Bonds should consult their tax advisors regarding any pending or proposed legislation, regulatory initiatives or litigation. The opinions expressed by Co-Bond Counsel are based on existing legislation and regulations as interpreted by relevant judicial and regulatory authorities as of the date of issuance and delivery of the Series 2020 Bonds, and Co-Bond Counsel has expressed no opinion as of any date subsequent thereto or with respect to any pending legislation, regulatory initiatives or litigation.

PROSPECTIVE PURCHASERS OF THE SERIES 2020 BONDS ARE ADVISED TO CONSULT THEIR OWN TAX ADVISORS PRIOR TO ANY PURCHASE OF THE SERIES 2020 BONDS AS TO THE IMPACT OF THE CODE UPON THEIR ACQUISITION, HOLDING OR DISPOSITION OF THE SERIES 2020 BONDS.

APPROVAL OF LEGAL MATTERS

Certain legal matters incident to the authorization, issuance, validity, sale and delivery of the Series 2020 Bonds are subject to the approving opinions of Co-Bond Counsel, whose approving opinions will be delivered concurrently with the issuance of the Series 2020 Bonds. The legal opinions will speak only as of their dates and subsequent distribution of them by recirculation of this Official Statement or otherwise shall not create any implication that subsequent to the date of the legal opinions Co-Bond Counsel has affirmed its opinions. The proposed text of the legal opinions of Co-Bond Counsel are attached hereto as “**APPENDIX J-1 – PROPOSED FORM OF CO-BOND COUNSEL OPINIONS FOR THE SERIES 2020A ELECTRIC SYSTEM BONDS,**” “**APPENDIX J-2 – PROPOSED FORM OF CO-BOND COUNSEL OPINIONS FOR THE SERIES 2020B ELECTRIC SYSTEM REFUNDING BONDS,**” “**APPENDIX J-3 – PROPOSED FORM OF CO-BOND COUNSEL OPINIONS FOR THE SERIES 2020 GAS SYSTEM BONDS**” and “**APPENDIX J-4 – PROPOSED FORM OF CO-BOND COUNSEL OPINIONS FOR THE SERIES 2020 WATER SYSTEM BONDS.**” The actual legal opinions to be delivered may vary

from the text of **APPENDICES J-1, J-2, J-3** and **J-4**, if necessary, to reflect facts and law on the date of delivery of the Series 2020 Bonds.

Certain legal matters will be passed upon for the Underwriters by their counsel, Carpenter Law, PLLC, Memphis, Tennessee, for the City of Memphis by Jennifer A. Sink, Esquire, Chief Legal Officer/City Attorney and for MLGW by Cheryl W. Patterson, Esquire, Vice-President and General Counsel (Compliance Officer) to MLGW.

The legal opinions to be delivered concurrently with the delivery of the Series 2020 Bonds express the professional judgment of the attorneys rendering the opinions regarding the legal issues expressly addressed therein. By rendering a legal opinion, the attorneys providing such opinions do not become insurers or guarantors of the result indicated by that expression of professional judgment, of the transaction on which the opinion is rendered, or of the future performance of parties to the transaction. The rendering of an opinion does not guarantee the outcome of any legal dispute that may arise out of the transaction.

CO-FINANCIAL ADVISORS

ComCap Partners, Memphis, Tennessee and Stephens Inc., Nashville, Tennessee, are serving as Co-Financial Advisors to MLGW in connection with the issuance of the Series 2020 Bonds. ComCap Partners and Stephens Inc., in their capacity as Co-Financial Advisors have relied upon the opinions of Co-Bond Counsel and have not verified and do not assume any responsibility for the information, covenants and representations contained in any of the legal documents with respect to the federal or state income tax status of the Series 2020 Bonds or the possible impact of any present, pending or future actions taken by any legislative or judicial bodies. The information set forth herein has been obtained from MLGW and the City and other sources believed to be reliable, but has not been independently verified by the Co-Financial Advisors.

The Co-Financial Advisors' fee for services rendered with respect to the sale of the Series 2020 Bonds is contingent upon the issuance and delivery of the Series 2020 Bonds.

The Co-Financial Advisors have reviewed the information in this Official Statement in accordance with, and as part of, their responsibilities to MLGW and, as applicable, to investors under the federal securities laws as applied to the facts and circumstances of this transaction, but the Co-Financial Advisors do not guarantee the accuracy or completeness of such information.

INDEPENDENT AUDITOR

The basic financial statements of MLGW for the year ended December 31, 2019, have been audited by Mayer Hoffman McCann P.C., Memphis, Tennessee, independent auditors, and are attached hereto as **"APPENDIX E – AUDITED FINANCIAL STATEMENTS OF MLGW FOR THE FISCAL YEAR ENDED DECEMBER 31, 2019."**

VERIFICATION OF DEFEASANCE

Robert Thomas CPA, LLC, Overland Park, Kansas (the "Verification Agent"), will deliver to the MLGW, on or before the settlement date of the Series 2020B Electric System Refunding Bonds, its attestation report indicating that it has examined, in accordance with standards established by the American Institute of Certified Public Accountants, the information and assertions provided by MLGW and its representatives. Included in the scope of its examination will be a verification of the mathematical accuracy of (a) the mathematical computations of the adequacy of the cash and the maturing principal of and interest on, the Escrowed Securities in the Escrow Fund to pay, when due, the redemption prices of the Refunded Bonds on their respective redemption dates; and (b) the mathematical computations supporting the conclusion of Co-

Bond Counsel that the Series 2020B Electric System Refunding Bonds are not “arbitrage bonds” under the Code and the regulations promulgated thereunder.

The examination performed by the Verification Agent be solely based upon data, information and documents provided to the Verification Agent by MLGW and its representatives. The Verification Agent’s report of its examination will state that the Verification Agent has no obligation to update such report because of events occurring, or data or information coming to the attention of the Verification Agent subsequent to the date of the report.

RATINGS

Moody's Investors Service, Inc. (“Moody's”) and S&P Global Ratings (“S&P”) have assigned the Series 2020A Electric System Bonds the ratings of “Aa2” (with stable outlook) and “A+” (with stable outlook), respectively.

Moody’s and S&P have assigned the Series 2020B Electric System Refunding Bonds underlying ratings of “Aa2” (with stable outlook) and “A+” (with stable outlook), respectively. With respect to the Series 2020B Electric System Refunding Bonds, it is expected that S&P will assign a rating of “AA” (with stable outlook) based on the issuance of the Policy by and financial strength of AGM.

Moody’s and S&P have assigned the Series 2020 Gas System Bonds the ratings of “Aa1” and “AA-” (with stable outlook), respectively.

Moody’s and S&P have assigned the Series 2020 Water System Bonds the ratings of “Aa1” and “AAA” (with stable outlook), respectively.

The ratings reflect only the respective views of such organizations, and the City makes no representation as to the appropriateness of the ratings. Any explanation of the significance of the ratings may be obtained only from the respective rating agency furnishing the same at the following addresses: Moody’s Investors Services, Inc., 7 World Trade Center at 250 Greenwich Street, New York, New York 10007; S&P Global Ratings, 55 Water Street, New York, New York 10041. The City furnished to each rating agency certain information and materials, some of which may not have been included in this Official Statement, relating to the City, MLGW and its outstanding debt. Generally, rating agencies base their ratings upon such information and materials and upon investigations, studies and assumptions by the ratings agencies. There is no assurance that such ratings will continue for any given period of time or that they will not be revised downward or withdrawn entirely by any or all of such rating companies, if in the judgment of any or all companies, circumstances so warrant. Any such downward revision or withdrawal of such ratings, or any of them, may have an adverse effect on the market price of the Series 2020 Bonds. Neither the City nor MLGW undertake any responsibility to oppose any such revision or withdrawal.

UNDERWRITING

Raymond James & Associates, Inc. (the “Representative”) has entered into separate Bond Purchase Agreements among the Representative, on behalf of itself and the other underwriters listed in the front cover page of this Official Statement as underwriters for the Series 2020 Bonds (collectively, the “Underwriters”), the City and MLGW pursuant to which the Underwriters have agreed to jointly and severally purchase the Series 2020 Bonds as follows:

A. Electric System Bond Purchase Agreement at a price equal to \$175,322,020.65 (representing the principal amount of the Series 2020A Electric System Bonds of \$148,000,000.00, less an underwriting discount of \$481,000.00, plus a bond premium of \$27,803,020.65); and

B. Electric System Refunding Bond Purchase Agreement at a price equal to \$28,913,000.00 (representing the principal amount of the Series 2020B Electric System Refunding Bonds of \$29,000,000.00, less an underwriting discount of \$87,000.00; and

C. Gas System Bond Purchase Agreement at a price equal to \$74,940,919.30 (representing the principal amount of the Series 2020 Gas System Bonds of \$63,000,000.00, less an underwriting discount of \$204,750.00, plus a bond premium of \$12,145,669.30; and

D. Water System Bond Purchase Agreement at a price equal to \$80,267,748.80 (representing the principal amount of the Series 2020 Water System Bonds of \$68,000,000.00, less an underwriting discount of \$221,000.00, plus a bond premium of \$12,488,748.80.)

The Electric System Bond Purchase Agreement, the Electric System Refunding Bond Purchase Agreement, the Gas System Bond Purchase Agreement and the Water System Bond Purchase Agreement (collectively, the “Bond Purchase Agreements”) provide that the obligations of the Underwriters to accept delivery of each of the Series 2020A Electric System Bonds, the Series 2020B Electric System Refunding Bonds, the Series 2020 Gas System Bonds and the Series 2020 Water System Bonds are subject to various conditions set forth in the applicable Bond Purchase Agreements, but the Underwriters will be obligated to purchase all of the Series 2020A Electric System Bonds, the Series 2020B Electric System Refunding Bonds, the Series 2020 Gas System Bonds and the Series 2020 Water System Bonds, respectively, if any are purchased. The Underwriters reserve the right to join with dealers and other underwriters in offering the Series 2020 Bonds to the public.

The prices and other terms with respect to the offering and sale of the Series 2020 Bonds may be changed from time to time by the Underwriters after such Series 2020 Bonds are released for sale, and the Series 2020 Bonds may be offered and sold at prices other than the initial offering prices, including sales to dealers who may sell the Series 2020 Bonds into investment accounts.

FHN Financial Capital Markets is a division of First Horizon Bank and First Horizon Advisors, Inc., is a wholly owned subsidiary of First Horizon Bank. FHN Financial Capital Markets has entered into a distribution agreement with First Horizon Advisors, Inc., for the distribution of the offered Series 2020 Bonds at the original issue prices. Such arrangement generally provides that FHN Financial Capital Markets will share a portion of its underwriting compensation or selling concession with First Horizon Advisors, Inc.

A Siebert Williams Shank & Co., LLC (“Siebert”) affiliate (“Affiliate”), which is a registered investment advisor, has three sub-advisory agreements with PFM Asset Management LLC, which is an investment advisor affiliate of PFM Financial Advisors LLC. The sub-advisory agreements do not relate to the City or MLGW. Affiliate’s business is separate from Siebert’s business and the employees of Siebert who cover the City and MLGW are not involved in the activities of Affiliate.

MISCELLANEOUS

The references, excerpts and summaries of all documents referred to herein do not purport to be complete statements of the provisions of such documents and reference is directed to all such documents for full and complete statements of all matters of fact relating to the Series 2020 Bonds, the security for and the source for repayment for the Series 2020 Bonds and the rights and obligations of the bondholders.

The information contained in this Official Statement, including in the appendices, has been obtained from representatives of the City, MLGW, the Underwriters and from public documents, records and other sources considered to be reliable. The Underwriters have reviewed the information in this Official Statement in accordance with, and as part of, its responsibilities to investors under the federal securities laws as applied

to the facts and circumstances of this transaction, but the Underwriters do not guarantee the accuracy or completeness of such information.

Neither this Official Statement nor any statement which may have been made orally or in writing is to be construed as a contract with the owners of the Series 2020 Bonds.

[Signatures on Following Page]

**AUTHORIZATION OF AND CERTIFICATION
REGARDING THE OFFICIAL STATEMENT**

The execution and delivery of this Official Statement, and its distribution and use by the Underwriters, have been duly authorized and approved by the City and MLGW.

CITY OF MEMPHIS, TENNESSEE

By: /s/ Jim Strickland
Jim Strickland
Mayor

**MEMPHIS LIGHT, GAS AND WATER
DIVISION**, on behalf of the City of Memphis,
Tennessee

By: /s/ Jarl T. Young
Jarl T. Young
President and Chief Executive Officer

APPENDIX A

OPERATING INFORMATION REGARDING THE ELECTRIC DIVISION

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ELECTRIC SYSTEM

General

The Electric Division serves the City of Memphis, Tennessee (the “City”) and the County of Shelby, Tennessee (“Shelby County”) pursuant to a franchise granted by the State of Tennessee in the City Charter. The City holds title to real property used in the Electric Division's operations, including easements deemed adequate by MLGW on properties not required to be held in fee simple.

For the twelve months ended December 31, 2019, operating revenues of the Electric Division totaled \$1,285,976,244 and were derived principally from the sale of electricity to an average of 432,482 customers during that period. Substantially, all the Electric Division’s required engineering, design, construction and operation functions are performed by MLGW personnel. As needed, the Electric Division contracts with independent contractors for certain services such as street lighting, underground conduit construction and pole replacements. The Electric Division purchases its entire power supply from the Tennessee Valley Authority (“TVA”).

Source of Electric Power

The Electric Division does not generate any electric power but purchases its entire supply from TVA pursuant to a power contract among the City, MLGW and TVA effective January 1, 1985, as amended (the “Power Contract”). The Power Contract is subject to automatic one-year extensions on January 1st of each year. Except as provided in the Supplemental Contract, MLGW has the right to terminate the Power Contract upon not less than five years written notice to TVA, and TVA has the right to terminate the Power Contract upon not less than ten years’ prior written notice to MLGW (or five years if TVA’s discretionary wholesale rate-setting authority has been removed by any statute). MLGW shall not be limited to fully exercise any rights arising pursuant to contract, Act of Congress, executive order, court decision or regulatory action, or any other right or opportunity under any program offered by TVA to reduce the level of purchases from TVA and become a partial requirements customer of TVA. In the event the Power Contract is terminated, the Power Contract provides that TVA may not seek to recover “stranded costs” from MLGW for any period after September 30, 2007.

The power sold to the Electric Division is supplied from the entire TVA system and not from a specific generating facility. While there can be no assurance that TVA can or will meet the future power demands of its customers, including the Electric Division, MLGW believes that TVA projections indicate sufficient capacity to meet such demands for the foreseeable future. The Electric Division is TVA’s largest customer. The Power Contract provides that the Electric Division may sell power to all customers in its service area, except certain federal installations and large consumers, which TVA may serve directly. The Naval Support Activity at Millington, Tennessee, the Nucor Steel Plant and Praxair Incorporated are the only such installations or consumers in MLGW’s service area currently served directly by TVA.

The cost and availability of power to the Electric Distribution System may be affected by, among other things, factors relating to TVA’s nuclear program, fuel supply, environmental considerations such as future legislation regulating the use of fossil fuel and addressing potential climate change, the construction and financing of future generating and transmission facilities, and other factors relating to TVA’s ability to supply the power demands of its customers including the Board.

Integrated Resource Plan—Electric Power Supplier

In June 2019, the MLGW Board with the assistance from consultant Siemens Industry Incorporated (“Siemens”), conducted an Integrated Resource Plan (the “IRP”) to evaluate options related to wholesale electric power supply. The IRP, which was finalized in July 2020, is a comprehensive, long-term plan that provides direction on how MLGW can meet the energy needs of its customers in the most reliable, cost-effective manner over the next 20 years. The IRP study presents various portfolios such as retaining TVA, supplying MLGW’s own power supply needs with a combination of local generation Purchased Power Agreements (PPA) and Mid-Continent Independent System Operator (“MISO”) located generation resource PPAs along with MISO market purchases. Each portfolio, other than retaining TVA, would require significant transmission investments to access the power in the MISO market. The MLGW Board is currently considering these possible portfolios for MLGW’s future power supply. MLGW is in the process of hiring a consultant to assist in the next step of issuing a request for proposals for power supply in 2021. To learn more about the IRP process, visit <http://www.mlgw.com/about/powersupply>.

Rates

MLGW may change its retail rate level only upon application by MLGW and approval of the City Council. If the rates and charges provided in the retail rate schedule applied for by MLGW and approved by the City Council do not produce Electric Revenues sufficient to provide for the operation and maintenance of the Electric Division on a self-supporting and financially sound basis, including requirements for interest and principal payments on indebtedness, the Power Contract provides that the City and the Board shall put into effect promptly such changes in rates and charges as will provide the increased Electric Revenues necessary to place the Electric Division upon a self-supporting and financially sound basis. If the rates and charges in effect at any time produce Electric Revenues which TVA finds are more than sufficient for such purposes, TVA, the City and MLGW shall agree upon a reduction in the rates and charges. Changes in wholesale rates by TVA are required by the Power Contract to be automatically passed on to the Electric Division's customers, with no requirement of approval by the City Council. Electric rates are not subject to regulation by state or federal commissions.

Pursuant to the 1990 Supplement to the Power Contract, TVA allows to MLGW a “transmission credit” on its wholesale bill, beginning April 1990 and retroactive to November 1988, calculated by applying specified percentage rates to the original installed cost of certain substation, transmission line and communication facilities owned by the City. This “transmission credit” provides additional operating revenue to MLGW. For the last five-year period 2015-2019 the transmission credit has increased the Electric Division’s operating revenues by \$32,564,985 in 2015, \$33,344,289 in 2016, \$33,989,261.32 in 2017, \$35,118,004.24 in 2018 and \$35,737,459.20 in 2019.

Additionally, the billing of streetlight fees was transferred from the City to MLGW. MLGW has always maintained and repaired more than 100,000 streetlights in the County and billed the City directly for energy and other costs related to street lighting inside the City. A City ordinance passed in June 2013 that now allows Memphis Light, Gas and Water to bill streetlight fees to utility customers within the City limits.

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The Electric Division's Retail rates have changed and/or have been approved by the City Council to be changed 13 times in the years between 2011 to 2022 because of changes in TVA's wholesale rates and rate actions by MLGW. The following chart illustrates the rate changes for MLGW's Electric Division from 2011-2022:

**ELECTRIC DIVISION
RATE CHART HISTORY
For the Years 2011-2022**

<u>DATE</u>	<u>RATE CHANGES</u>	<u>REASONS FOR CHANGES</u>
09/30/2011	3.08%	TVA Purchased Power ⁽¹⁾
10/01/2013	2.00%	TVA Purchased Power ⁽¹⁾
10/01/2014	1.94%	TVA Purchased Power ⁽¹⁾
10/01/2015	1.90%	TVA Purchased Power ⁽¹⁾
01/04/2016	-1.41%	MLGW Operating Expenses
09/30/2016	1.92%	TVA Purchased Power ⁽¹⁾
09/29/2017	2.02%	TVA Purchased Power ⁽¹⁾
07/02/2018	2.00%	MLGW Operating Expenses
10/01/2018	2.11%	TVA Purchased Power ⁽¹⁾
01/03/2019	1.20%	Expiration of the TVA Prepaid Energy Credit
07/02/2020 ⁽²⁾	3.00%	MLGW Operating Expenses
01/04/2021 ⁽²⁾	2.70%	MLGW Operating Expenses
01/01/2022 ⁽²⁾	1.50%	MLGW Operating Expenses

⁽¹⁾ Pursuant to the Power Contract entered into among MLGW, the City and TVA, there is an automatic pass-through for TVA wholesale rate increases.

⁽²⁾ With the approval of the 2020 Budget and Five-Year Service Improvement Plan approval, rate increases were approved of 3.00% on July 2, 2020; including rate increases approved by the City Council to become effective on January 2021 of 2.70%, and 1.50% for the January 2022 revenue month.

Source: Memphis Light, Gas and Water Division.

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The following table illustrates a comparison of the Electric Division's average monthly residential bill with the average monthly residential electric bill in selected other United States cities:

**MONTHLY RESIDENTIAL ELECTRIC BILLS IN SELECTED MAJOR
UNITED STATES CITIES**

<u>City</u>	<u>Monthly Bill</u> ⁽¹⁾
Boston, MA	\$241.13
New York, NY	\$222.53
Los Angeles, CA	\$219.50
Detroit, MI	\$167.41
Milwaukee, WI	\$153.55
Phoenix, AZ	\$148.62
Philadelphia, PA	\$145.04
Houston, TX	\$145.00
Dallas, TX	\$135.00
Birmingham, AL	\$134.36
Chicago, IL	\$130.18
Seattle, WA	\$122.45
Baltimore, MD	\$121.08
Nashville, TN	\$120.54
Jacksonville, FL	\$114.63
Jackson, MS	\$114.51
Jackson, TN	\$114.30
Little Rock, AR	\$112.36
Louisville, KY	\$112.14
Chattanooga, TN	\$112.09
Atlanta, GA	\$111.92
Indianapolis, IN	\$111.74
Knoxville, TN	\$110.76
Salt Lake City, UT	\$110.10
New Orleans, LA	\$109.77
Orlando, FL	\$109.50
Washington, D.C.	\$109.44
Omaha, NE	\$107.63
Charlotte, NC	\$107.31
Memphis, TN	\$105.93
Las Vegas, NV	\$105.08
Huntsville, AL	\$104.12
Austin, TX	\$103.21
Denver, CO	\$101.79
San Antonio, TX	\$ 97.57
Miami, FL	\$ 93.64
Springfield, MO	\$ 93.24
Oklahoma City, OK	\$ 88.01
St. Louis, MO	\$ 86.95

⁽¹⁾ Based upon an assumed consumption of 1,000 kilowatt hours.

Source: Memphis Light, Gas and Water Division, 2020 Utility Bill Comparisons for Selected United States Cities.

Payments in Lieu of Taxes

Consistent with its agreements with TVA, the authority of the City to cause to be paid from its electric system revenues for each Fiscal Year amounts for payments in lieu of taxes, referred to as “tax equivalents”, on its electric system and electric operations is controlled by Municipal Electric System Tax Equivalent Law of 1987 (the “Electric Law”). Pursuant to the Electric Law, the City Council may require payment of tax equivalents from Electric System revenues in such amounts to all taxing jurisdictions in Shelby County, which, in the judgment of the City Council, shall represent the fair share cost of government property to be borne by the Electric System, except that the total amount so paid in the aggregate as tax equivalents for each Fiscal Year shall not exceed a maximum amount equal to the sum of the following:

(a) With respect to each of the respective taxing jurisdictions in which the electric system is located, the equalized property tax rate, determined as provided in this section, for the taxing jurisdiction as of the beginning of such Fiscal Year, multiplied by the net plant value of the electric system and the book value of materials and supplies within the taxing jurisdiction as of the beginning of such Fiscal Year, multiplied by the assessment ratio in effect as of the beginning of such Fiscal Year; and

(b) Four percent (4%) of the average of revenue less power costs from electric operations for the preceding three (3) Fiscal Years.

The Electric Law also provides that such tax equivalent payments shall be made only from electric system revenues remaining after payment of, or making reasonable provision for payment of:

(i) Current electric system operating expenses, including salaries, wages, cost of materials and supplies, power at wholesale and insurance;

(ii) Current payments of interest on indebtedness incurred or assumed by the municipality for the acquisition, extension, or improvement of the electric system, and the payment of principal amounts of such indebtedness, including sinking fund payments, when due;

(iii) Reasonable reserves for renewals, replacements and contingencies; and

(iv) Cash working capital adequate to cover operating expenses for a reasonable number of weeks;

For the year 2019, the Electric Division accrued \$44.9 million, which represents a 7.2% decrease from the amount paid for 2018.

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Substations and Transmission System

The Electric Division is connected to the TVA system through three 500/161 kV bulk power substations. One substation with two 500/161 kV transformer banks each rated at 1,243 MVA is located in Cordova, in eastern Shelby County. The second bulk power substation is in the northern Shelby County, northeast of Millington. The nameplate rating of the two 500/161 kV transformer banks at this substation is 1,325 MVA. The third substation has two 500/161 kV transformer banks rated at 1,200 MVA and is located in the southern part of Shelby County, on the Tennessee-Mississippi border. The 500 kV grid into Shelby County consists of three 500 kV lines from the TVA system and two 500 kV interconnections with the South-Central Electric Power Pool to the west into Arkansas. An additional source of power into the Electric Division is the TVA-owned Allen Generating Station units in the southwest corner of Shelby County. The new Allen Generating Station along with remaining combustion turbines at the old Allen site can produce 1,562 MW of summer net power capability.

Power supplied by TVA at the four interconnection points flows into the Electric Division through 64 substations interconnected by a total of 625 miles of 161kV and 115 kV transmission lines. Most MLGW customers are served from distribution substations at voltages of 23 kV or 12.47 kV. Several larger industry customers opt to be served at transmission voltage: One customer at 115 kV, and five customers at 161 kV.

Distribution System

Approximately 487 distribution circuits, inclusive of network circuits, operating at 23 kV and 12.47 kV originate at the distribution substations and are routed throughout Shelby County to the Electric Division's customers.

An underground distribution network serves the downtown area of the City. Outside the downtown area, MLGW's distribution lines are primarily overhead, but MLGW is continuing to install new electric distribution lines underground where economically feasible.

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**CAPITAL IMPROVEMENT PROGRAM OF THE
ELECTRIC DIVISION AND SOURCES OF FUNDING**

The Electric Division had capital expenditures of \$63.5 million for the Fiscal Year ended December 31, 2019. The Electric Division regularly develops a five-year master plan for major improvements and annually estimates and budgets capital improvements for the then current and following Fiscal Year (the "Electric Division Master Plan"). The Electric Division has developed a detailed projection of improvements and additions for the Fiscal Years 2020 through 2024 (the "Electric Division Capital Program"), the projected annual cost of which is set forth below:

**ELECTRIC DIVISION
FORECASTED CAPITAL PROGRAM ⁽¹⁾
(Amounts in Thousands of Dollars)**

<u>Year</u>	<u>Substation and Transmission</u>	<u>Distribution System</u>	<u>General Plant</u>	<u>Total</u>
2020	\$21,228	\$53,453	\$35,293	\$109,974
2021	30,291	62,712	27,484	120,487
2022	33,307	69,259	53,746	156,312
2023	35,675	73,890	34,005	143,570
2024	24,524	70,278	12,857	107,659

⁽¹⁾ Capital Plans are based on the combination of annual Master Plan, historical reviews, rate increase expectations, and growth rate projections.

Source: Memphis Light, Gas and Water Division.

MLGW anticipates financing the Electric Division's Capital Program during the 2020-2024 periods from current and accumulated revenues of the Electric Division and bond proceeds. The forecasted sources of funding for the Electric Division's Capital Program for the years 2020-2024 are set forth below:

**ELECTRIC DIVISION
CAPITAL PROGRAM FUNDING PLAN ⁽¹⁾
(Amounts in Thousands of Dollars)**

<u>Fiscal Year</u>	<u>Current Revenues</u>	<u>Bond Proceeds</u>	<u>Total</u>
2020	\$ 2,895	\$107,079	\$109,974
2021	67,566	52,921	120,487
2022	-	156,312	156,312
2023	133,882	9,688	143,570
2024	107,659	-	107,659

⁽¹⁾ Capital Plans are based on the combination of annual Master Plan, historical reviews, rate increase expectations, and growth rate projections.

Source: Memphis Light, Gas and Water Division.

Historical and Forecasted System Use

The Electric Division's sales are relatively flat, as shown below. Future growth of the Electric Division's sales is forecasted on the basis of population growth studies and land-use projections by the Memphis Area Chamber of Commerce and analyses done by the Electrical Engineering Department.

The following table shows historical figures for Shelby County's population, the Electric Division's average number of customers, electric load and electric sales, as well as projections for such figures for the year 2024 developed by MLGW:

ELECTRIC DIVISION HISTORICAL AND FORECASTED ELECTRICAL SYSTEM USE

Year	Shelby County Population ⁽¹⁾	Average Number of Customers ⁽⁴⁾	Peak Billing Demand ⁽²⁾⁽⁵⁾	Total Sales ⁽³⁾⁽⁶⁾
2010	927,644	422,844	3,421.8	14,750.0
2011	934,405	420,979	3,484.2	14,291.4
2012	940,764	421,726	3,234.6	14,057.5
2013	944,463	423,479	3,174.2	13,926.1
2014	936,872	425,462	3,041.8	13,765.4
2015	945,757	427,789	3,205.3	13,756.0
2016	957,457	426,816	3,134.4	13,721.8
2017	962,436	431,502	3,066.4	13,308.2
2018	953,993	429,499	3,076.9	13,993.0
2019	945,094	432,482	3,161.3	13,486.9
2024	957,227	435,735	3,121.1	13,588.4

⁽¹⁾ United States Census Bureau, except for 2016, 2017, 2018, 2019 & 2024. The 2016, 2017, 2018, 2019 & 2024 population figures were retrieved from demographic data contained on the Memphis Chamber Website, <https://memphischamber.com/select-memphis/data-center/>.

⁽²⁾ In thousands of kW.

⁽³⁾ In thousands of Mwh.

⁽⁴⁾ Number of customers for 2024 was derived from linear regression forecasting models which results in a ten-year compound growth rate of 0.15%.

⁽⁵⁾ Peak demand based on hourly total sales divided by annual historic load factor of 49.7%. Annual growth rate is 0.15%.

⁽⁶⁾ Annual total sales for 2024 derived from linear regression forecasts models with an annual growth rate of 0.15%.

Source: Memphis Light, Gas and Water Division.

The following tables show the energy usage of the Electric Division's ten largest customers for the twelve months ended December 31, 2019, the average number of Electric Division customers for the years 2010-2019, the megawatt hours of electricity sold annually during the years 2010-2019, the peak billing demand and total sales for the years 2010-2019 and the forecasted peak billing demand and total sales for 2020-2024.

**ELECTRIC DIVISION
TEN LARGEST ELECTRIC CUSTOMERS
For the Fiscal Year Ended December 31, 2019**

Rank⁽¹⁾	Name	Energy Sales to Customers ⁽²⁾ (kWh)	Sales to Customers as a % of Total Division Sales	Revenue from Customers⁽⁶⁾	Revenue from Customers as a % of Total Division Sales Revenue ⁽³⁾
1	Premcor Refining Group	539,816,606	4.003%	\$28,435,924	2.250%
2	KTG (USA) L.P.	216,349,458	1.604%	\$11,375,586	0.900%
3	Chemours (E.I. Dupont)	191,741,173	1.422%	\$10,798,448	0.855%
4	Solae, LLC	114,999,315	0.853%	\$ 6,997,599	0.554%
5	Federal Express - Sprankel	93,565,201	0.694%	\$ 8,000,595	0.633%
6	City of Memphis Public Works ⁽⁵⁾	67,071,873	0.497%	\$ 4,625,315	0.366%
7	Memphis Cellulose, LLC	64,938,416	0.481%	\$ 5,034,549	0.398%
8	City of Memphis Public Works ⁽⁴⁾	59,717,252	0.443%	\$ 4,269,322	0.338%
9	Kellogg Corporation	54,907,365	0.407%	\$ 3,444,370	0.273%
10	Praxair, Inc.	52,711,332	0.391%	\$ 2,528,552	0.200%
TOTALS:		1,455,817,991	10.794%	\$85,510,264	6.767%

⁽¹⁾ Customers ranked by Energy Sales. Excludes customers served directly by TVA.

⁽²⁾ Total Electric Division sales of energy for 12 months ending December 31, 2019 were 13,486,943,462 kWh.

⁽³⁾ Total Electric Division sales revenue for 12 months ending December 31, 2019 was \$1,263,663,807.

⁽⁴⁾ T.E. Maxson South Wastewater Treatment Plant.

⁽⁵⁾ M.C. Stiles North Wastewater Treatment Plant.

⁽⁶⁾ Amounts may not total due to rounding.

Source: Memphis Light, Gas and Water Division.

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ELECTRIC DIVISION
AVERAGE NUMBER OF ELECTRIC CUSTOMERS
For the Fiscal Years Ended December 31, 2010 through December 31, 2019

Year	Residential	Commercial	Industrial	Other ⁽¹⁾	Total
2010	362,104	43,493	145	17,102	422,844
2011	360,353	43,467	145	17,014	420,979
2012	361,029	43,499	142	17,056	421,726
2013	362,687	43,553	155	17,084	423,479
2014	364,624	43,589	154	17,095	425,462
2015	366,721	43,761	152	17,155	427,789
2016	366,265	43,373	133	17,045	426,816
2017	370,693	43,469	118	17,222	431,502
2018	368,848	43,319	118	17,214	429,499
2019	371,771	43,392	112	17,207	432,482

⁽¹⁾ Includes outdoor lighting, traffic signals and interdepartmental customers.

Source: Memphis Light, Gas and Water Division.

ELECTRIC DIVISION
MEGAWATT HOURS OF ELECTRICITY SOLD
For the Fiscal Years Ended December 31, 2010 through December 31, 2019

Year	Residential	Commercial	Industrial	Other ⁽¹⁾	Total
2010	5,875,646	6,796,034	1,791,856	286,500	14,750,036
2011	5,523,696	6,601,025	1,893,117	273,597	14,291,435
2012	5,326,644	6,521,467	1,930,759	278,653	14,057,523
2013	5,245,511	6,326,233	2,082,289	272,055	13,926,088
2014	5,221,001	6,212,068	2,053,626	278,744	13,765,439
2015	5,295,187	6,326,434	1,866,238	268,149	13,756,008
2016	5,322,901	6,286,966	1,859,280	252,696	13,721,843
2017	5,042,850	6,138,759	1,870,301	256,271	13,308,181
2018	5,596,144	6,264,086	1,865,158	267,701	13,993,089
2019	5,359,163	6,076,707	1,785,888	265,185	13,486,943

⁽¹⁾ Includes outdoor lighting, traffic signals and interdepartmental customers.

Source: Memphis Light, Gas and Water Division.

ELECTRIC DIVISION
HISTORICAL POWER AND ENERGY REQUIREMENTS
For the Fiscal Years Ended December 31, 2010 through December 31, 2019

Year	Peak Demand (In kW)	Change	Total Sales (In MWh)	Change	Annual Load Factor ⁽¹⁾
2010	3,421,785	4.77%	14,750,036	7.51%	49.2%
2011	3,484,158	1.82%	14,291,435	-3.11%	46.8%
2012	3,234,558	-7.16%	14,057,523	-1.64%	49.6%
2013	3,174,168	-1.87%	13,926,088	-0.93%	50.1%
2014	3,041,762	-4.17%	13,765,439	-1.15%	51.7%
2015	3,205,270	5.38%	13,756,008	-0.07%	49.0%
2016	3,134,387	-2.21%	13,721,843	-0.25%	50.0%
2017	3,066,440	-2.17%	13,308,181	-3.01%	49.5%
2018	3,076,912	0.34%	13,993,089	5.15%	51.9%
2019	3,161,252	2.74%	13,486,943	-3.62%	48.7%

⁽¹⁾ Annual Load Factor equals average hourly purchases divided by Peak Billing Demand.

Source: Memphis Light, Gas and Water Division Financial Reports and Statistics.

ELECTRIC DIVISION
FORECASTED POWER AND ENERGY REQUIREMENTS

Year	Peak Demand (In kW)⁽¹⁾	Total Sales (In MWh)⁽²⁾	Annual Load Factor⁽³⁾
2020	3,102,400	13,507,100	49.7%
2021	3,107,100	13,527,400	49.7%
2022	3,111,800	13,547,700	49.7%
2023	3,116,400	13,568,000	49.7%
2024	3,121,100	13,588,400	49.7%

⁽¹⁾ Peak demand based on hourly sales divided by annual historic load factor of 49.7%. Annual growth rate is 0.15%.

⁽²⁾ Annual sales derived from linear regression forecasts models with an annual growth rate of 0.15%.

⁽³⁾ Annual Load Factor equals average hourly purchases divided by Peak Billing Demand.

Source: Memphis Light, Gas and Water Division

ELECTRIC DIVISION
CONDENSED STATEMENT OF REVENUES, EXPENSES AND CHANGE IN NET POSITION ⁽¹⁾
Years to Date Ended June 30, 2020 and June 30, 2019
(Amounts in Thousands)

	YEAR TO DATE THIS YEAR	YEAR TO DATE LAST YEAR	YEAR TO DATE VARIANCE
Sales Revenue	\$538,395	\$578,762	(\$40,367)
Accrued Unbilled Revenue	6,381	10,825	(4,444)
Forfeited Discounts	2,445	5,288	(2,843)
Miscellaneous Revenue	5,729	6,210	(481)
Revenue Adjustment for Uncollectibles	(3,229)	(2,664)	(565)
TOTAL OPERATING REVENUE	549,721	598,421	(48,700)
Power Cost	437,999	471,073	(33,074)
OPERATING MARGIN	111,722	127,348	(15,626)
Operations Expense	50,474	60,141	(9,667)
Maintenance Expense	19,468	23,692	(4,224)
Other Operating Expense	53,708	56,490	(2,782)
TOTAL OPERATING EXPENSE (Excluding Power Cost)	123,650	140,323	(16,673)
Operating Income (Loss)	(11,928)	(12,975)	1,047
Other Income	22,218	22,809	(591)
Reduction of Plant Cost Recovered Through CIAC	4,577	10,362	(5,785)
NET INCOME(LOSS) BEFORE DEBT EXPENSE	5,713	(528)	6,241
Amortization of Debt Discount & Expense	(1,060)	(1,095)	35
Interest on Long Term Debt	3,966	4,093	(127)
Total Debt Expense	2,906	2,998	(92)
Net Income (Loss) After Debt Expense	2,807	(3,526)	6,333
Contributions in Aid of Construction	4,577	10,362	(5,785)
INCREASE (DECREASE) IN NET POSITION	<u>\$7,384</u>	<u>\$6,836</u>	<u>\$548</u>

STATISTICAL HIGHLIGHTS	YEAR TO DATE THIS YEAR	YEAR TO DATE LAST YEAR	YEAR TO DATE VARIANCE
Electric Metered Services (<i>All Customers</i>)	435,497 *	432,036 *	3,461
Electric Total Sales (<i>MWH In Thousands</i>)	5,846,176	6,148,389	(302,213)
Average Purchased Power Cost per MWH	\$71.21	\$73.72	(\$2.51)

WEATHER HIGHLIGHTS	YEAR TO DATE THIS YEAR	YEAR TO DATE LAST YEAR	YEAR TO DATE VARIANCE
Heating Degree Days (HDD)	36,607	41,061	(4,454)
Cooling Degree Days (CDD)	10,108	11,791	(1,683)

CAPITAL EXPENDITURES HIGHLIGHTS	YEAR TO DATE THIS YEAR	YEAR TO DATE LAST YEAR	YEAR TO DATE VARIANCE
Capital Expenditures (<i>In Thousands</i>)	\$35,762	\$28,101	\$7,661

⁽¹⁾ Unaudited, preliminary financial statements.

* Average metered services (all customers).

Source: Memphis Light, Gas and Water Division.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF THE ELECTRIC DIVISION (YEARS TO DATE ENDED JUNE 30, 2020 AND JUNE 30, 2019) ⁽¹⁾

Revenues

Years to Date Ended June 30, 2020 and June 30, 2019: Total operating revenues were \$549.7 million at June 2020, a decrease of \$48.7 million, or 8.1%, from June 2019, due to a decrease in sales revenue of \$40.4 million, accrued/unbilled revenue of \$4.4 million, forfeited discounts (late fees) of \$2.8 million, miscellaneous revenue of \$0.5 million and an increase in revenue adjustment for uncollectible accounts of \$0.6 million.

Total electric sales are 5,846,176 MWH, down 302,213 MWH or 4.9% from 6,148,389 MWH at June 2019, due in part to a decrease in commercial electric sales of 224,607 MWH (7.9%) and residential electric sales of 93,443 MWH (4.1%). Total electricity sales were lower than the prior period due primarily to lower cooling degree days and the effects of the Coronavirus Disease 2019 ("COVID-19") pandemic on sales. Cooling degree days were 14.3% lower than the same period last year.

Expenses

Years to Date Ended June 30, 2020 and June 30, 2019: As of June 2020, total operating expenses were \$561.6 million, an 8.14%, or \$49.7 million decrease from June 2019 total expenses. This resulted from a decrease in power cost of \$33.1 million, primarily due to lower power purchases, operations and maintenance expenses ("O&M expenses") of \$13.9 million primarily driven by lower labor and benefit expenses and outside contracting, and other operating expense of \$2.8 million, primarily due to a decrease in payment in lieu of taxes of \$3.4 million, offset by an increase in depreciation and amortization expense of \$0.6 million.

Change in Net Position

Years to Date Ended June 30, 2020 and June 30, 2019: The change in net position is \$7.4 million, up \$0.5 million from \$6.8 million at June 2019. This increase is primarily due to a decrease in O&M expenses of \$13.9 million and payment in lieu of taxes \$3.4 million, offset by a decrease in operating margin (operating revenue less power cost) of \$15.6 million, other income of \$0.6 million and an increase in depreciation and amortization expense of \$0.6 million.

On March 11, 2020, the World Health Organization declared the novel strain of coronavirus (COVID-19) a global health pandemic and recommended containment and mitigation measures worldwide. On March 23, 2020, the Mayor of the City of Memphis issued Executive Order No. 03-2020 proclaiming a civil emergency in the City and ordering citizens and businesses to follow specific measures designed to contain the spread of COVID-19.

The impact of the COVID-19 pandemic has had a relatively modest impact on the Electric Division's change in net position (financial position) and results of operations as of second quarter 2020. Currently, the pandemic has affected revenues from electric usage (primarily from the commercial customer segment), forfeited discounts and connect/reconnect fees. MLGW temporarily suspended service disconnections and late fee charges in mid-March and is currently evaluating the timing of resumption of disconnections and late fee charges. In addition, age of receivables has increased as a result of the suspension of disconnects.

MLGW has taken actions to protect the health and safety of their employees and customers and will continue to monitor and assess their financial condition. At this time, MLGW cannot reasonably predict the extent to which the disruption may impact their business operations or financial position over the long-term.

⁽¹⁾ Unaudited, preliminary financial data.

HISTORICAL AND FORECASTED FINANCIAL RESULTS

Debt Service Coverage

The management of MLGW has prepared the forecasted financial information set forth below to present the forecasted debt service coverage for the Electric Division after issuance of the Series 2020 Bonds. The prospective financial information was not prepared with a view toward public disclosure or with a view towards complying with the guidelines established by the American Institute of Certified Public Accountants with respect to prospective financial information, but, in the view of MLGW management, was prepared on a reasonable basis, reflects the best currently available estimates and judgments and presents, to the best of management's knowledge and belief, the expected course of action and the expected future financial performance of MLGW. However, this information is not fact and should not be relied upon as necessarily indicative of future results, and readers of this Official Statement are cautioned not to place undue reliance on the forecasted financial information. Neither MLGW's independent auditors, nor any other independent accountants or financial advisors, have compiled, examined, or performed any procedures with respect to the prospective financial information contained herein, nor have they expressed any opinion or any form of assurance on such information or its achievability, and assume no responsibility for, and disclaim any association with, the prospective financial information.

The assumptions and estimates underlying the prospective financial information are inherently uncertain and, though considered reasonable by the management of MLGW as of the date hereof, are subject to a wide variety of significant business, economic and competitive risks and uncertainties that could cause actual results to differ materially from those forecasted.

Accordingly, there can be no assurance that forecasted results are indicative of the future performance of MLGW or that actual results will not be materially higher or lower than those forecasted. Inclusion of the prospective financial information in this Official Statement should not be regarded as a representation by any person that the forecasted results will be achieved.

MLGW does not generally publish its business plans and strategies or make external forecasts of its anticipated financial position or results of operations. Accordingly, MLGW does not intend to update or otherwise revise the prospective financial information to reflect circumstances existing since its preparation or to reflect the occurrence of unanticipated events, even in the event that any or all of the underlying assumptions are shown to be in error. Furthermore, MLGW does not intend to update or revise the prospective financial information to reflect changes in general economic or industry conditions.

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The following tables illustrate data on historical and projected debt service coverage for the Electric Division:

ELECTRIC DIVISION
HISTORICAL DEBT SERVICE COVERAGE
For the Fiscal Years Ended December 31, 2015 through December 31, 2019
(Amounts in Thousands of Dollars)

	2015	2016	2017	2018	2019
Operating Revenues	\$1,268,561	\$1,249,535	\$1,234,074	\$1,289,906	\$1,285,976
Interest and Other Income ⁽¹⁾	52,939	50,222	47,353	47,951	43,535
Amortization of Prepay Credit	113,538	117,078	119,695	112,822	-
Total Income	\$1,435,038	\$1,416,835	\$1,401,121	\$1,450,679	\$1,329,511
Operating and Maintenance Expense ⁽²⁾	\$1,185,855	\$1,199,187	\$1,176,238	\$1,236,042	\$1,217,212
Net Revenues Available for Debt Service	\$249,183	\$217,648	\$224,883	\$214,637	\$112,299
Debt Service on Outstanding					
Senior Lien Bonds	5,514	6,209	9,781	15,219	15,226
Debt Service Coverage on Outstanding					
Senior Lien Bonds ⁽³⁾	45.19x	35.06x	22.98x	14.10x	7.38x
Debt Service on Outstanding					
Subordinate Lien Revenue Obligations	130,184	129,974	126,336	115,566	0
Total Debt Service Coverage on Outstanding					
Subordinate Lien Revenue Obligations	1.84x	1.60x	1.65x	1.64x	7.38x

⁽¹⁾ Includes other income, other income-transmission credit and prepay credit amortization.

⁽²⁾ Includes Total Operating Expense and Total Maintenance Expense per the Statements of Income and Expenses and excludes depreciation, amortization, and payments in lieu of taxes.

⁽³⁾ Pursuant to the Master Electric System Resolution, MLGW is required to impose and the City shall approve rates and other charges fully sufficient at all times such that Net Revenues of the Electric System in each Fiscal Year will at least equal 1.20 times the Debt Service Requirement on all Senior Lien Revenue Obligations and 1.00 times the Debt Service Requirement on all other Revenue Obligations then Outstanding, including the Outstanding Subordinate Lien Revenue Obligations.

Source: Memphis Light, Gas and Water Division.

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ELECTRIC DIVISION
PROJECTED DEBT SERVICE COVERAGE ⁽¹⁾
For the Fiscal Years Ended December 31, 2020 through December 31, 2024
(Amounts in Thousands of Dollars)

The projected information for the years 2020 through 2024 set forth below has been prepared by MLGW and has not been examined or compiled by MLGW's independent auditors or any other independent accountant or financial advisor. The forecasted information is based on the following assumptions:

Fiscal Year	2020	2021	2022	2023	2024
Operating Revenues ⁽²⁾	\$1,287,185	\$1,358,744	\$1,380,923	\$1,382,969	1,385,018
Interest and Other Income	43,126	42,703	43,058	43,416	43,778
Total Income	\$1,330,311	\$1,401,447	\$1,423,981	\$1,426,385	\$1,428,796
Operating and Maintenance Expense ⁽³⁾	\$1,226,473	\$1,254,670	\$1,258,031	\$1,262,815	\$1,263,236
Net Revenues Available for Debt Service	\$103,838	\$146,777	\$165,950	\$163,571	\$165,560
Debt Service on Proposed Series 2020 Senior Lien Bonds	1,228	9,353	9,357	9,355	9,358
Debt Service on Outstanding Bonds	14,630	14,031	14,034	14,031	14,029
Total Debt Service on Senior Lien Bonds	15,858	23,384	23,391	23,386	23,387
Coverage for Debt Service on the Senior Lien Bonds	6.55x	6.28x	7.09x	6.99x	7.08x
Debt Service on Future Senior Lien Bonds	-	-	8,469	8,469	8,469
Total Existing and Future Senior Lien Debt Service	15,858	23,384	31,860	31,856	31,856
Coverage for Debt Service on Projected Senior Lien Bonds	6.55x	6.28x	5.21x	5.13x	5.20x

⁽¹⁾ Includes revenues, expenses, and debt service. Numbers have been adjusted to reflect the impact of COVID-19.

⁽²⁾ With the approval of the 2020 Budget and Five-Year Service Improvement Plan approval, rate increases were approved of 3.00% on July 2, 2020; including rate increases approved by the City Council to become effective on January 2021 of 2.70%, and 1.50% for the January 2022 revenue month.

⁽³⁾ Assumes projected MLGW (including power cost) average O&M expense growth rate of 0.3% per year through 2024 relative to the 2020 Budget. Excludes depreciation, amortization, and payment in lieu of taxes.

Source: Memphis Light, Gas and Water Division.

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ELECTRIC DIVISION
STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET POSITION
For the Fiscal Years Ended December 31, 2015 through December 31, 2019
(Amounts in Thousands of Dollars)

	2015	2016	2017	2018	2019
OPERATING REVENUE					
Electric Sales Revenue	\$1,244,661	\$1,226,415	\$1,210,566	\$1,265,827	\$1,263,664
Forfeited Discounts	12,259	11,496	11,367	12,304	11,988
Miscellaneous Service Revenue	11,684	11,848	10,231	8,871	8,373
Rent from Electric Property	5,270	5,256	6,138	6,253	4,647
Other Electric Revenue	1,253	1,349	1,321	1,388	1,418
Revenue Adjustment for Uncollectible	(6,565)	(6,828)	(5,549)	(4,736)	(4,114)
Total Operating Revenue	\$1,268,562	\$1,249,536	\$1,234,074	\$1,289,907	\$1,285,976
OPERATING EXPENSE					
Power Cost	\$1,015,978	\$1,018,157	\$991,526	\$1,035,898	\$1,036,442
Distribution	35,179	35,598	36,730	38,467	36,220
Transmission	5,445	5,797	6,391	6,407	6,610
Customer Accounts	14,478	14,556	15,200	15,209	14,929
Sales	704	711	874	955	1,383
Administrative and General	52,279	54,488	47,587	47,890	40,386
Pension Expense ⁽¹⁾	8,424	14,422	17,758	3,814	18,166
Other Post-Employment Benefits ⁽²⁾	6,562	7,827	10,656	(28,416)	389
Customer Service and Information	1,700	1,814	1,717	1,678	1,712
Total Operating Expense	\$1,140,749	\$1,153,370	\$1,128,439	\$1,121,902	\$1,156,237
MAINTENANCE EXPENSE					
Transmission	\$3,422	\$3,316	\$2,955	\$2,824	\$2,615
Distribution	36,089	36,897	38,812	44,338	43,149
Administrative and General	4,140	4,061	4,404	3,173	2,982
Total Maintenance Expense	\$43,651	\$44,274	\$46,171	\$50,335	\$48,746
OTHER OPERATING EXPENSE					
Depreciation	\$47,898	\$50,042	\$52,416	\$53,928	\$54,584
Amortization	879	860	1,208	1,208	1,208
Regulatory Debits - Amortization of Legacy Meters	-	-	524	707	807
Payment in Lieu of Taxes	44,525	46,892	48,104	48,410	44,904
FICA Taxes	1,456	1,543	1,628	1,666	1,655
Total Other Operating Expense	\$94,758	\$99,337	\$103,880	\$105,919	\$103,158
Total Operating & Maintenance Expense	\$1,279,158	\$1,296,981	\$1,278,490	\$1,278,156	\$1,308,141
OPERATING INCOME (LOSS)	(\$10,596)	(\$47,445)	(\$44,416)	\$11,751	(\$22,165)
OTHER INCOME (EXPENSE)					
Other Income	\$20,600	\$16,879	\$13,364	\$12,832	\$7,790
Other Income - Transmission Credit	32,565	33,344	33,989	35,118	35,738
Contributions in Aid of Construction	13,837	10,445	27,553	17,315	17,243
Reductions of Plant Costs Recovered through Contributions in Aid of Construction	(13,837)	(10,445)	(27,553)	(17,315)	(17,243)
Net Income Before Debt Expense	\$42,569	\$2,778	\$2,937	\$59,701	\$21,363
DEBT EXPENSE					
Interest on Long-Term Debt	\$25,064	\$20,247	\$16,647	\$13,631	\$8,165
Amortization of Debt Discount, Expense and Premium	(6,053)	(4,755)	(3,615)	(3,274)	(2,184)
Total Debt Expense	\$19,011	\$15,492	\$13,032	\$10,357	\$5,981
INCREASE (DECREASE) IN NET POSITION	<u>\$23,558</u>	<u>(\$12,714)</u>	<u>(\$10,095)</u>	<u>\$49,344</u>	<u>\$15,382</u>

⁽¹⁾ Fiscal Year 2015 implemented GASB Statement No. 68, *Accounting and Financial Reporting for Pensions – an Amendment of GASB Statement No. 27*.

⁽²⁾ Fiscal Year 2018 implemented GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*.

Source: Memphis Light, Gas and Water Division.

ELECTRIC DIVISION
SELECTED STATEMENT OF NET POSITION DATA
As of December 31, 2015, through December 31, 2019
(Amounts in Thousands of Dollars)

	2015	2016	2017	2018	2019
ASSETS					
Utility Plant (Net)	\$1,041,753	\$1,079,463	\$1,109,598	\$1,129,626	\$1,131,047
Restricted Funds	64,361	67,923	104,747	66,423	70,583
Current Assets	524,914	487,560	494,833	428,680	367,660
Deferred Outflows of Resources	15,820	54,199	43,575	68,224	144,036
Other Non-Current Assets	236,842	124,031	13,987	38,584	17,090
Total Assets And Deferred Outflows of Resources	<u>\$1,883,690</u>	<u>\$1,813,176</u>	<u>\$1,766,740</u>	<u>\$1,731,537</u>	<u>\$1,730,416</u>
LIABILITIES AND NET POSITION					
Net Position	1,175,276	1,162,562	1,152,467	911,581	926,962
Long-Term Debt	325,747	243,701	213,179	202,189	192,580
Current Liabilities	334,457	310,047	307,250	246,788	201,766
Deferred Inflows of Resources	18,654	14,911	21,684	187,373	144,801
Other Non-Current Liabilities	29,556	81,955	72,160	183,606	264,306
Total Liabilities, Deferred Inflows of Resources and Net Position	<u>\$1,883,690</u>	<u>\$1,813,176</u>	<u>\$1,766,740</u>	<u>\$1,731,537</u>	<u>\$1,730,416</u>

Source: Memphis Light, Gas and Water Division.

FACTORS AFFECTING THE ELECTRIC UTILITY INDUSTRY AND TVA

General

The electric utility industry has been and will continue to be affected by a number of factors that will have an impact on the business, operations and financial conditions of both public and private electric utilities, including MLGW. These include deregulation, compliance with electric reliability standards of the North American Electric Reliability Corporation (“NERC”) and Smart Grid initiatives.

In the past, one of these factors was the efforts at both the national and local levels to restructure the electric utility industry from a heavily regulated monopoly to an industry in which there is more (or open) competition for power supply service at both the wholesale and retail levels. Historically, electric utilities have operated as monopolies within their service territories, subject to certain exceptions. Under this arrangement, utilities have generally been able to charge rates primarily determined by their costs of service, rather than by competitive forces. There has been little activity regarding deregulation in recent years due to the perception of rapid escalation of electric rates in areas that have been deregulated. MLGW is the sole provider of electric distribution services in its service area with the exception of certain large users served directly by TVA. There can be no assurance that this arrangement will continue for MLGW, and MLGW is already subject to certain competitive forces and other factors as described below.

Competitive Environment in Tennessee

In the late 1990s and early 2000s, various regulatory and legislative bodies in the State considered a wide range of issues associated with the advisability of retail competition in the electric utility industry. None of these groups recommended that the State actively pursue full retail competition at that time, and there are no currently pending State legislative or regulatory initiatives to provide for retail competition in the State at this time.

Transmission Access to Wholesale Power

MLGW's ability to access the wholesale power markets is limited, and TVA currently enjoys substantial insulation from wholesale competition. TVA operates under the Tennessee Valley Authority Act of 1933 (the "TVA Act"). Under the TVA Act, subject to certain minor exceptions, TVA may not currently enter into contracts that would have the effect of making it or MLGW and other distributors a source of TVA power supply outside a statutorily-specified area. However, under a special provision of the Energy Policy Act of 1992, TVA is not required to provide its competitors with access to its transmission system to transmit power for consumption within the area that TVA or MLGW and other distributors of TVA's power may serve. Thus, while TVA may not sell power outside its current service area, except for certain pre-existing arrangements, its competitors are not allowed to obtain transmission service from TVA to sell power within TVA's service areas under present law. Pending and future legislative and regulatory actions could impact MLGW's ability to access the wholesale market, and modification of TVA's historically protected service area could adversely affect TVA's financial and operating condition. See "Integrated Resource Plan—Electric Power Supplier" above.

Federal Energy Policy Act of 2005

The Energy Policy Act of 2005 ("2005 Energy Policy Act") authorizes the Federal Energy Regulatory Commission ("FERC") to require "unregulated transmitting utilities" to provide open access to their transmission systems on comparable terms and conditions as those "unregulated transmitting utilities" provide transmission service to themselves. While MLGW meets the minimum kilowatt-hour sales threshold to be an "unregulated transmission utility" under Section 201(f) of the Federal Power Act, it is unclear the extent to which, if any, MLGW's facilities would be considered subject to these requirements.

The 2005 Energy Policy Act provides certain "load serving entities" holding firm transmission rights the ability to continue to use those rights to serve their customers, and one provision of the 2005 Energy Policy Act purports to provide these rights to wholesale customers of TVA like MLGW. It is currently unclear whether these or other provisions of the 2005 Energy Policy Act will fundamentally change MLGW's power supply arrangements with TVA or MLGW's ability to access the wholesale generation markets at a future point in time.

The 2005 Energy Policy Act also subjected electric utilities like MLGW to certain amendments to the Public Utility Regulatory Policies Act of 1978 ("PURPA"). The purposes of PURPA in 1978 were, and continue to be, to help the nation facilitate the conservation of energy, optimize efficiency, and provide for the establishment of equitable rates. As originally enacted, PURPA required certain utilities to consider and, if appropriate, adopt certain service practice and rate standards. As amended, PURPA now requires consideration of five new standards: (a) Net Metering; (b) Fuel Source Diversity; (c) Fossil Fuel Generation Efficiency; (d) Smart Metering (time-based metering and communications); and (e) Interconnection Standards for Independent Power Producers. Under the revised PURPA standards, the TVA Board is MLGW's regulatory authority for purposes of PURPA.

NERC Electric Reliability Standards Compliance

With the passage of the Energy Policy Act of 2005, Congress authorized FERC to establish an Electric Reliability Organization (“ERO”) to protect the reliability of the bulk electric power system in the United States. NERC was certified by FERC as the ERO. NERC intends to comprehensively and thoroughly protect the reliability of the U.S. power grid, and owners, operators, and users of the bulk power system are required to register in their respective roles. Based on NERC's “functional model,” MLGW has registered with NERC as a “Distribution Provider” (DP), “Transmission Owner” (TO), “Transmission Planner” (TP), and “Transmission Operator” (TO).

MLGW operates an Internal Compliance Program to ensure compliance with all applicable NERC Reliability Standards and related regulations. In executing its “culture of compliance,” MLGW has established an organizational structure and a robust program of activity focused on ensuring the reliability of the Bulk Power System and the continuous improvement of its operations, testing, and training in support of this goal.

Smart Grid Initiatives

MLGW's Smart Grid initiative involves a combination of equipment, communications and processes to enhance internal operations and customer service. MLGW's initiative includes deployment of smart meters and telecommunications infrastructure throughout MLGW's territory, so that customers can benefit from smart meter technology and the enhanced services it enables. Full deployment began May 2016 and is nearing completion. This technology is enabling MLGW to reduce operating costs, increase customer service, lower many customer service fees, improve outage management and restoration times, and provide customers with access to more detailed information about utility usage.

MLGW expects to be completed with the full implementation by the end of 2020. Currently, approximately 96% of the meters have been installed. MLGW is currently working to improve outage management processes, utilizing data from smart meters.

TVA and General Industry Risk Factors

Because MLGW purchases all of its electric power from TVA, any risk factors affecting or potentially affecting the business operations of TVA may also affect MLGW. TVA may mitigate some of these risks by increasing the rates it charges for its power. A discussion of the risk factors affecting TVA's operations can be found in “Item 1A. Risk Factors” and “Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations” in TVA's Annual Report. TVA's Annual Report is available to the public from the SEC's website at www.sec.gov and from the TVA's website at www.tva.gov.

In addition to the risks discussed above, the electric utility industry in general has been, or in the future may be, affected by a number of other factors which could impact the financial condition of MLGW. Such factors include, among others, the following: (a) effects of compliance with rapidly changing environmental, safety, licensing, regulatory and legislative requirements other than those described elsewhere in this Official Statement; (b) changes resulting from conservation and load management programs on the timing and use of electric energy; (c) changes in national, regional or state energy policy; (d) competition from other utilities, independent power producers, marketers and brokers; (e) competition with customer-owned generation, such as “self-generation” or “distributed generation,” which might include microturbines, fuel cells, and other generation resources; (f) shifts in the availability and relative costs of different fuels, whether such fuels are competitive alternatives to electricity or are used in the generation of electricity; (g) other federal, state or local legislative or regulatory changes; (h) loss of large industrial or commercial

customers; and (i) changes in the economy. Any of these factors (as well as other factors) could have an adverse effect on the financial condition of any electric utility and will likely affect individual utilities in different ways.

MLGW is unable to predict what impact any of the foregoing factors will have on its operations and financial conditions, but the impact could be significant. This Official Statement includes a brief discussion of certain of these factors. This discussion does not purport to be comprehensive or definitive, and these matters are subject to change subsequent to the date of this Official Statement. Extensive information on the electric utility industry is available in the public domain, and potential purchasers of the Series 2020A Electric System Bonds and the Series 2020B Electric System Refunding Bonds should obtain and review such information.

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APPENDIX B

OPERATING INFORMATION REGARDING THE GAS DIVISION

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GAS SYSTEM

General

The Gas Division serves the City and Shelby County pursuant to a franchise granted by the State of Tennessee in the City Charter. The City holds title to real property used in the Gas Division's operations, including easements deemed adequate by MLGW on properties not required to be held in fee simple.

For the twelve months ended December 31, 2019, operating revenues of the Gas Division totaled \$260,627,517 and were derived principally from the sale of gas to an average of 314,213 customers during the period. With certain exceptions, the Gas Division constructs, operates, and maintains its gas properties and systems with MLGW personnel. The Gas Division purchases its gas requirements on the open market from various gas suppliers.

Source of Gas Distributed

The Gas Division's contracts are negotiated with national gas pipeline suppliers to provide the flexibility required to meet customer needs under expected operating situations. Current pipeline contracts are held with Texas Gas, Trunkline Gas Company and ANR Pipeline Company Interstate Pipeline. In addition, MLGW has entered into several long-term gas purchase agreements, which allow MLGW to purchase gas at market price less a discount resulting in almost nine million dollars in annual savings relative to index prices. For additional information regarding the long-term gas purchase agreements, see **APPENDIX E – AUDITED FINANCIAL STATEMENTS OF MLGW FOR THE FISCAL YEAR ENDED DECEMBER 31, 2019.**

Rates

MLGW may change its retail rate level only upon application by MLGW and approval of the City Council. If the rates and charges provided in the retail rate schedule applied for by MLGW and approved by the City Council do not produce Gas Revenues sufficient to provide for the operation and maintenance of the Gas Division on a self-supporting and financially sound basis, including requirements for interest and principal payments on indebtedness, based on terms defined in the Rate Covenant, the City and the Board shall put into effect promptly such changes in rates and charges as will provide the increased Gas Revenues necessary to place the Gas Division upon a self-supporting and financially sound basis.

The Gas Division Retail Rates have changed and/or have been approved by the City Council to be changed three times in the years between 2013 to 2022 because of rate actions by MLGW. The following chart illustrates the rate changes for MLGW's Gas Division from 2013-2022:

GAS DIVISION RATE CHART HISTORY For the Years 2013-2022

<u>DATE</u>	<u>RATE CHANGES</u>	<u>REASONS FOR CHANGES</u>
01/02/2013	-2.31%	Temporary Decrease That Ended on April 2, 2013
07/02/2018	2.00%	MLGW Operating Expenses
01/01/2022 ⁽¹⁾	2.00%	MLGW Operating Expenses

⁽¹⁾ With the approval of the 2020 Budget and Five-Year Service Improvement Plan approval, a rate increase of 2.0% was approved by the City Council to become effective for the January 2022 revenue month.

Source: Memphis Light, Gas and Water Division.

The following table illustrates a comparison of the Gas Division's average monthly residential bill with the average monthly residential gas bill in selected other United States cities:

**MONTHLY RESIDENTIAL GAS BILLS IN SELECTED MAJOR
UNITED STATES CITIES**

<u>City</u>	<u>Monthly Bill</u> ⁽¹⁾
New York, NY	\$375.37
Baltimore, MD	\$339.50
Boston, MA	\$328.02
Los Angeles, CA	\$311.66
Miami, FL	\$286.54
Jacksonville, FL	\$279.24
Orlando, FL	\$279.24
Birmingham, AL	\$265.66
Washington, D.C.	\$214.60
Little Rock, AR	\$208.23
Charlotte, NC	\$204.51
Phoenix, AZ	\$199.14
Jackson, MS	\$196.31
Huntsville, AL	\$189.20
Seattle, WA	\$188.19
Knoxville, TN	\$186.97
Las Vegas, NV	\$177.78
Philadelphia, PA	\$173.92
Louisville, KY	\$173.01
Nashville, TN	\$171.78
St. Louis, MO	\$158.26
Jackson, TN	\$157.37
Chattanooga, TN	\$155.99
Salt Lake City, UT	\$152.99
Chicago, IL	\$150.25
New Orleans, LA	\$150.23
Atlanta, GA	\$141.75
Detroit, MI	\$141.27
Dallas, TX	\$139.98
Springfield, MO	\$139.84
Houston, TX	\$132.56
Indianapolis, IN	\$121.80
San Antonio, TX	\$115.15
Milwaukee, WI	\$111.97
Austin, TX	\$111.31
Omaha, NE	\$106.47
Memphis, TN	\$101.82
Denver, CO	\$100.25
Oklahoma City, OK	\$ 97.94

⁽¹⁾ Based upon an assumed consumption of 200 ccf.

Source: Memphis Light, Gas and Water Division, 2020 Utility Bill Comparisons for Selected United States Cities

Payments in Lieu of Taxes

Consistent with the Tennessee Revenue Bond Law, the authority of the City to cause to be paid from its gas system revenues for each Fiscal Year amounts for payments in lieu of taxes, referred to as “tax equivalents”, on its gas system and gas operations is controlled by Municipal Gas System Tax Equivalent Law of 1987 (the “Gas Law”). Pursuant to the Gas Law, the City Council may require payments of tax equivalents from Gas System revenues in such amounts to all taxing jurisdictions in Shelby County, which, in the judgment of the City Council, shall represent the fair share cost of government property to be borne by the Gas System, except that the total amount so paid in the aggregate as tax equivalents for each Fiscal Year shall not exceed a maximum amount equal to the sum of the following:

(a) With respect to each of the respective taxing jurisdictions in which the gas system is located, the equalized property tax rate, determined as provided in this section, for the taxing jurisdiction as of the beginning of such Fiscal Year, multiplied by the net plant value of the gas system and the book value of materials and supplies within each such taxing jurisdiction as of the beginning of such Fiscal Year, multiplied by the assessment ratio in effect as of the beginning of such Fiscal Year; and

(b) Four percent (4%) of the average of revenue less cost of gas from gas operations for the preceding three (3) Fiscal Years.

The Gas Law also provides that such tax equivalent payments shall be made only from gas system revenues remaining after payment of, or making reasonable provision for payment of:

(i) Current gas system operating expenses, including salaries, wages, cost of materials and supplies, power at wholesale, and insurance;

(ii) Current payments of interest on indebtedness incurred or assumed by a municipality for the acquisition, extension, or improvement of the gas system, and the payment of principal amounts of such indebtedness, including sinking fund payments, when due;

(iii) Reasonable reserves for renewals, replacements, and contingencies; and

(iv) Cash working capital adequate to cover operating expenses for a reasonable number of weeks.

For the year 2019, the Gas Division paid \$19 million, which represents a 6.2 percent decrease from the amount paid for 2018.

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Gas Gate Stations and Transmission

The Gas Division is supplied by three national gas pipeline companies that have connections among eight city gate stations. Texas Gas Transmission, LLC is the most utilized pipeline with connections at Weaver, Airways, Outland, Ridgeway, and Germantown Gate Stations.

The ANR Pipeline Company supplements the needs of the MLGW gas system with a connection at the Collierville Gate Station. Trunkline Gas Company is connected to the MLGW gas system at Piperton Gate Station and Seward Gate Station, both located in Fayette County.

The Gas Division has 178 miles of gas transmission pipeline to transport gas from the gate stations to district regulator stations, and some large industrial customers.

Distribution System

The Gas Division operates 106 gas regulator stations to reduce pressure from transmission pressures to safe distribution pressures. The Gas Division has over 4,800 miles of gas distribution main to distribute gas from the regulator stations to the individual addresses of customers in Shelby County.

Liquefied and Compressed Natural Gas

The Gas Division owns and operates the Capleville LNG Plant in south Shelby County. The plant has a storage tank sized to store 1 billion standard cubic feet of liquefied natural gas (“LNG”). The plant has the capacity to liquefy 5.5 million standard cubic feet per day of natural gas, and to vaporize 150 MMSCFD of LNG. The plant was placed in service in 1997 and outfitted to deliver LNG to external markets by truck in 2012. The plant is used for peak shaving, occasional supplementation during severely cold weather, and sale to external markets.

The Gas Division owns and operates two compressed natural gas (“CNG”) fueling stations that are used to refuel company vehicles and to sell CNG to the commercial fleets and the general public. The Choctaw CNG Station was originally installed in 1996. It has a four stage CNG compressor that has a capacity to compress 2.52 gge of CNG. The original storage capacity was for 232 gge, and 289 gge of storage capacity was added in 2013, along with a dispenser upgrade.

The second CNG fueling Station was installed at the South Service Center in 2015, with a compressor capacity of 4 gge, and a storage capacity of 289 gge. It was upgraded in 2016, with the addition of another 4 gge compressor, and an additional 289 gge of CNG storage.

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CAPITAL IMPROVEMENT PROGRAM OF THE GAS DIVISION AND SOURCES OF FUNDING

The Gas Division had capital expenditures of \$21.5 million for the Fiscal Year ended December 31, 2019. The Gas Division regularly develops a five-year master plan for major improvements and annually estimates and budgets capital improvements for the then current and following Fiscal Year (the “Gas Division Master Plan”). The Gas Division has developed a detailed projection of improvements and additions for the Fiscal Years 2020 through 2024 (the “Gas Division Capital Improvement Program”), the projected annual cost of which is set forth below:

GAS DIVISION FORECASTED CAPITAL PROGRAM ⁽¹⁾ (Amounts in Thousands of Dollars)

<u>Year</u>	<u>Production</u>	<u>Distribution</u>		<u>Total</u>
		<u>System</u>	<u>General Plant</u>	
2020	\$138	\$16,472	\$ 7,468	\$24,078
2021	111	11,137	11,351	22,599
2022	400	15,957	7,338	23,695
2023	140	14,331	10,270	24,741
2024	140	22,052	19,511	41,703

⁽¹⁾ Capital Plans are based on the combination of annual Master Plan, historical reviews, rate increase expectations, and growth rate projections.

Source: Memphis Light, Gas and Water Division.

MLGW anticipates financing the Gas Division’s Capital Program during the 2020-2024 periods from current and accumulated revenues of the Gas Division and bond proceeds. The forecasted sources of funding for the Gas Division's Capital Program for the years 2020-2024 is set forth below:

GAS DIVISION CAPITAL PROGRAM FUNDING PLAN ⁽¹⁾ (Amounts in Thousands of Dollars)

<u>Fiscal Year</u>	<u>Current Revenues</u>	<u>Bond Proceeds</u>	<u>Total</u>
2020	\$ 2,118	\$21,960	\$24,078
2021	-	22,599	22,599
2022	-	23,695	23,695
2023	22,995	1,746	24,741
2024	41,703	-	41,703

⁽¹⁾ Capital Plans are based on the combination of annual Master Plan, historical reviews, rate increase expectations, and growth rate projections.

Source: Memphis Light, Gas and Water Division.

FACTORS AFFECTING THE GAS INDUSTRY

The Gas System, which provides natural gas to residential, commercial, and industrial customers throughout Shelby County, must be operated in compliance with local, state and federal regulations. Local regulations entail adherence to the guidance and direction of a five-member Board of Commissioners and the thirteen-member Memphis City Council. The aforementioned entities insure budgetary and rate setting matters are managed in the best interest of the rate paying stakeholders. State regulations for the natural gas industry entail compliance with the Tennessee Regulatory Authority (“TRA”) which is responsible for insuring the safe and reliable operation of MLGW’s Transmission and Distribution pipelines. Federal compliance involves meeting the requirements of the Department of Transportation (“DOT”) and Pipeline and Hazardous Materials Safety Administration (“PHMSA”) aimed with the mission of protecting people and the environment.

Operation and Reliability of the Gas System is subject to the same local, state and federal laws and regulations. Key areas covered by these regulations include: an annual operations and capital budget that insures infrastructure needs are met; customer service and value-based engineering that insures the delivery and metering of natural gas via current design, material, and installation standards; safe and reliable operation of the gas system via annual state inspections of the Transmission Integrity Management, Distribution Integrity Management, Operator Qualification, Operation and Maintenance, and Tennessee 811 call before you dig notification programs. Failure to comply with these regulations could have material adverse effects, including, the imposition of civil liability or fines by regulatory agencies or liability to private parties.

Customer-base and alternative fueling projects continue to impact the growth of the Gas Division and must be identified, defined and implemented. The Gas Division continues to work on initiatives in the LNG and CNG transportation industry.

Security of the Gas System remains a primary responsibility of the Security Automation area of MLGW, and the Gas Division’s Emergency Response Plan. Security of personnel and property continues to be evaluated and enhanced additionally by DOT and PHMSA.

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Historical and Forecasted System Use

The following table illustrates historical and forecasted figures for Shelby County's population for Gas System use:

GAS DIVISION HISTORICAL AND FORECASTED GAS SYSTEM USE

Fiscal Year	Shelby County Population ⁽¹⁾	Average Number of Customers ⁽²⁾	Peak Demand (MCF) ⁽³⁾	Total Sales (MCF) ⁽⁴⁾
2010	927,644	314,615	514,704	38,724,710
2011	934,405	313,419	489,226	33,886,160
2012	940,764	312,616	405,082	26,569,503
2013	944,463	312,540	434,986	34,281,931
2014	936,872	313,352	550,149	38,792,218
2015	945,757	314,316	543,944	35,004,808
2016	957,457	311,615	471,770	29,007,122
2017	962,436	314,086	503,850	27,632,148
2018	953,993	312,945	568,880	37,324,530
2019	945,094	314,213	456,723	35,161,919
2024	957,227	316,577	497,647	35,426,426

⁽¹⁾ United States Census Bureau, except for 2016, 2017, 2018, 2019 & 2024. The 2016, 2017, 2018, 2019 & 2024 population figures were retrieved from demographic data contained on the Memphis Chamber Website, <https://memphischamber.com/select-memphis/data-center/>.

⁽²⁾ Average Number of Customers for 2024 was derived from linear regression forecasting models which results in a ten-year compound growth rate of 0.15%

⁽³⁾ Peak Demand for 2024 was derived from linear regression forecasting models which results in a ten-year compound growth rate of 0.15% applied to the average peak of 2010 - 2019.

⁽⁴⁾ Total Sales for 2024 was derived from linear regression forecasting models which results in a ten-year compound growth rate of 0.15%

Source: Memphis Light, Gas and Water Division.

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The following tables illustrate (i) the energy usage of the Gas Division's ten largest customers for the Fiscal Years ended December 31, 2019, (ii) the average number of Gas Division customers for the years 2010-2019, (iii) the cubic feet (ccf) of gas sold annually during the years 2010-2019, (iv) the peak billing demand and total sales for the years 2010-2019 and the forecasted peak billing demand and total sales for 2020-2024.

**GAS DIVISION
TEN LARGEST GAS SALES CUSTOMERS
For the Fiscal Year Ended December 31, 2019**

Rank⁽¹⁾	Name	Gas Sales to Customers CCF	Gas Sales to Customers as a % of Total Division Gas Sales⁽²⁾	Revenue from Customers	Revenue from Customers as a % of Total Division Sales Revenue⁽³⁾
1	BioEnergy Development Group	3,011,965	0.872%	\$1,118,223	0.489%
2	Blues City Brewery, LLC	2,786,831	0.807%	\$1,045,933	0.457%
3	St. Jude Children's Research Hosp.	2,025,699	0.586%	\$ 831,239	0.363%
4	Methodist LeBonheur Healthcare	1,841,775	0.533%	\$ 740,096	0.324%
5	AMISUB (SFH), Inc	1,703,727	0.493%	\$ 746,840	0.327%
6	Regional Medical Center	1,313,151	0.380%	\$ 533,728	0.233%
7	Federal Express - Hub	1,229,168	0.356%	\$ 719,669	0.315%
8	Veterans Hospital	1,211,785	0.351%	\$ 471,685	0.206%
9	Leman Roberts Company	1,195,869	0.346%	\$ 445,878	0.195%
10	University of Memphis	1,068,902	0.309%	\$ 431,890	0.189%
TOTALS:		17,388,872	5.034%	\$7,085,181	3.098%

⁽¹⁾ Customers ranked by Gas Sales (account based).

⁽²⁾ Total Gas Division sales for 12 months ending December 31, 2019 were 345,407,000 ccf. Does not include CNG and LNG sales

⁽³⁾ Total Gas Division sales revenue, not including transport revenues, for 12 months ending December 31, 2019 was \$228,709,716.

Source: Memphis Light, Gas and Water Division.

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GAS DIVISION
TEN LARGEST TRANSPORT GAS CUSTOMERS
For the Fiscal Year Ended December 31, 2019

Rank ⁽¹⁾	Name	Gas Transported by Customers (ccf)	Revenue from Customers ⁽³⁾	Revenue from Customers as a % of Total Division Sales Revenue ⁽²⁾
1	Tennessee Valley Authority	365,680,538	\$3,884,707	1.610%
2	Chemours (E.I. Dupont)	62,842,757	1,261,669	0.523%
3	Premcor Refinery Group	25,879,390	\$882,762	0.366%
4	Valero Refining Company	20,961,689	\$361,813	0.150%
5	Solae, LLC	19,755,392	\$404,417	0.168%
6	PMC Biogenix, Inc.	19,041,141	\$541,129	0.224%
7	KTG (USA) L.P.	13,864,949	\$371,752	0.154%
8	Nucor Steel Memphis, Inc.	12,416,300	\$188,682	0.078%
9	Penn A Kem, LLC	6,668,815	\$276,967	0.115%
10	Memphis Cellulose, LLC	6,529,785	\$160,854	0.067%
TOTALS:		553,640,756	\$8,334,756	3.454%

⁽¹⁾ Customers purchase their own gas and MLGW transports it. Customers ranked by Gas Transported (account based).

⁽²⁾ Total Gas Division sales revenue, including transport revenue, for 12 months ending December 31, 2019 was \$241,280,930.

⁽³⁾ Amounts may not total due to rounding.

Source: Memphis Light, Gas and Water Division.

GAS DIVISION
AVERAGE NUMBER OF GAS CUSTOMERS
For the Fiscal Years Ended December 31, 2010 through December 31, 2019

Year	Residential	Commercial ⁽¹⁾	Industrial	Other ⁽²⁾	Total
2010	291,983	22,471	37	124	314,615
2011	290,866	22,390	38	125	313,419
2012	290,147	22,306	35	128	312,616
2013	290,254	22,113	34	139	312,540
2014	290,690	21,931	34	697	313,352
2015	291,448	21,943	32	893	314,316
2016	289,592	21,646	31	346	311,615
2017	292,019	21,633	30	404	314,086
2018	290,918	21,539	33	455	312,945
2019	292,017	21,570	31	595	314,213

⁽¹⁾ Includes Interdepartmental customers.

⁽²⁾ Includes Transportation and Spot customers. Compressed Natural Gas (CNG) and Liquefied Natural Gas (LNG added in 2014 through 2019 figures).

Source: Memphis Light, Gas and Water Division.

GAS DIVISION
THOUSANDS OF CUBIC FEET OF GAS SOLD
For the Fiscal Years Ended December 31, 2010 through December 31, 2019

Year	Residential	Commercial ⁽¹⁾	Industrial	Other ⁽²⁾	Total
2010	21,646,835	11,704,163	1,176,810	4,196,902	38,724,710
2011	19,673,047	11,030,391	1,140,890	2,041,832	33,886,160
2012	15,251,029	8,939,842	736,980	1,641,652	26,569,503
2013	20,998,068	10,938,495	506,209	2,033,317	34,476,089
2014	23,403,113	11,947,410	587,953	2,853,742	38,792,218
2015	20,326,974	11,009,018	544,046	3,124,770	35,004,808
2016	16,713,964	9,344,499	405,442	2,543,217	29,007,122
2017	15,824,781	9,143,995	370,190	2,293,182	27,632,148
2018	22,439,731	11,675,911	423,747	2,785,141	37,324,530
2019	20,779,764	11,275,449	368,249	2,738,457	35,161,919

⁽¹⁾ Includes Interdepartmental.

⁽²⁾ Spot customers. Compressed Natural Gas (CNG) and Liquefied Natural Gas (LNG) added in 2013 through 2019.

Source: Memphis Light, Gas and Water Division, Financial Reports and Statistics.

GAS DIVISION
HISTORICAL GAS DEMAND AND SALES REQUIREMENTS
For the Fiscal Years Ended December 31, 2010 through December 31, 2019

Year	Peak Demand (In MCF)	Change	Total Sales (In MCF)	Change
2010	514,704	6.68%	38,724,710	2.90%
2011	489,226	-4.95%	33,886,160	-12.49%
2012	405,082	-17.20%	26,569,503	-21.59%
2013	434,986	7.38%	34,281,931	29.03%
2014	550,149	26.48%	38,792,218	13.16%
2015	543,944	-1.13%	35,004,808	-9.76%
2016	471,770	-13.27%	29,007,122	-17.13%
2017	503,850	6.80%	27,632,148	-4.74%
2018	568,880	12.91%	37,324,530	35.08%
2019	456,723	-19.72%	35,161,919	-5.79%

Source: Memphis Light, Gas and Water Division, Financial Reports and Statistics.

The following table illustrates forecasted demand and sales requirements of the Gas System for each of the years 2020 through 2024:

**GAS DIVISION
FORECASTED GAS DEMAND AND SALES REQUIREMENTS**

Year	Peak Demand (In MCF)⁽¹⁾	Total Sales (In MCF)⁽²⁾
2020	494,672	35,214,662
2021	495,414	35,267,484
2022	496,157	35,320,385
2023	496,902	35,373,366
2024	497,647	35,426,426

⁽¹⁾ Growth based on an annual growth rate of 0.15% applied to the last 10-year average peak 2010-2019.

⁽²⁾ Derived from linear regression forecasts models with an annual growth rate of 0.15%.

Source: Memphis Light, Gas and Water Division.

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GAS DIVISION
CONDENSED STATEMENT OF REVENUES, EXPENSES AND CHANGE IN NET POSITION ⁽¹⁾
Years to Date Ended June 30, 2020 and June 30, 2019
(Amounts in Thousands)

	YEAR TO DATE THIS YEAR	YEAR TO DATE LAST YEAR	YEAR TO DATE VARIANCE
Sales Revenue	\$105,426	\$150,732	(\$45,306)
Accrued Unbilled Revenue	(10,579)	(15,758)	5,179
Forfeited Discounts	1,041	2,300	(1,259)
Miscellaneous Revenue	8,146	8,749	(603)
Transported Gas	5,768	6,230	(462)
Revenue Adjustment for Uncollectibles	(879)	(1,239)	360
TOTAL OPERATING REVENUE	108,923	151,014	(42,091)
Gas Cost	39,974	70,104	(30,130)
OPERATING MARGIN	68,949	80,910	(11,961)
Operations Expense	29,759	35,851	(6,092)
Maintenance Expense	4,179	3,696	483
Other Operating Expense	21,860	22,856	(996)
TOTAL OPERATING EXPENSE (Excluding Gas Cost)	55,798	62,403	(6,605)
Operating Income (Loss)	13,151	18,507	(5,356)
Other Income	891	820	71
Reduction of Plant Cost Recovered Through CIAC	298	280	18
NET INCOME(LOSS) BEFORE DEBT EXPENSE	13,744	19,047	(5,303)
Amortization of Debt Discount & Expense	(545)	(562)	17
Interest on Long Term Debt	1,682	1,735	(53)
Total Debt Expense	1,137	1,173	(36)
Net Income (Loss) After Debt Expense	12,607	17,874	(5,267)
Contributions in Aid of Construction	298	280	18
INCREASE (DECREASE) IN NET POSITION	<u>\$12,905</u>	<u>\$18,154</u>	<u>(\$5,249)</u>

STATISTICAL HIGHLIGHTS	YEAR TO DATE THIS YEAR	YEAR TO DATE LAST YEAR	YEAR TO DATE VARIANCE
Customers:			
Gas Metered Services (<i>All Customers</i>)	314,999 *	313,983 *	1,016
LNG	10 *	7 *	3
CNG (<i>Sales Transactions</i>)	103 *	466 *	(363)
Sales (MCF)			
Gas (<i>Excludes Transport Volumes</i>)	20,416,843	22,273,615	(1,856,772)
LNG	243,814	320,990	(77,176)
CNG	1,186	12,310	(11,124)
Average Purchased Gas Cost per MCF	\$2.09	\$3.27	(\$1.18)

WEATHER HIGHLIGHTS	YEAR TO DATE THIS YEAR	YEAR TO DATE LAST YEAR	YEAR TO DATE VARIANCE
Heating Degree Days (HDD)	36,607	41,061	(4,454)

CAPITAL EXPENDITURES HIGHLIGHTS	YEAR TO DATE THIS YEAR	YEAR TO DATE LAST YEAR	YEAR TO DATE VARIANCE
Capital Expenditures (<i>In Thousands</i>)	\$9,405	\$8,570	\$835

⁽¹⁾ Unaudited, preliminary financial statements.

* Average metered services (all customers).

Source: Memphis Light, Gas and Water Division.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF THE GAS DIVISION (YEARS TO DATE ENDED JUNE 30, 2020 AND JUNE 30, 2019) ⁽¹⁾

Revenues

Years to Date Ended June 30, 2020 and June 30, 2019: Total operating revenues were \$108.9 million at June 2020, a decrease of \$42.1 million or 27.9% from June 2019, due to a decrease in sales revenue of \$45.3 million, forfeited discounts (late fees) of \$1.3 million, miscellaneous revenue of \$0.6 million, transported gas revenue of \$0.5 million, offset in part by an increase in accrued/unbilled revenue of \$5.2 million and lower revenue adjustment for uncollectible accounts of \$0.4 million.

Total gas sales are 20,416,843 MCF, down 1,856,772 MCF or 8.34% from 22,273,615 MCF at June 2019, due in part to a decrease in residential gas sales of 1,213,585 MCF (8.8%) and commercial gas sales of 637,975 MCF (8.9%). Total gas sales were lower than the prior period due primarily to lower heating degree days and the effects of the Coronavirus Disease 2019 ("COVID-19") pandemic on sales. Heating degree days were 10.9% lower than the same period last year.

Expenses

Years to Date Ended June 30, 2020 and June 30, 2019: As of June 2020, total operating expenses were \$95.8 million, a 27.7%, or \$36.7 million decrease from June 2019. This resulted from a decrease in gas cost of \$30.1 million, primarily due to lower natural gas purchases, operations and maintenance expenses ("O&M expenses") of \$5.6 million primarily driven by lower labor and benefit expenses, and other operating expense of \$1.0 million, primarily due to a decrease in payment in lieu of taxes of \$1.1 million.

Change in Net Position

Years to Date Ended June 30, 2020 and June 30, 2019: The change in net position is \$12.9 million, down \$5.2 million from \$18.2 million at June 2019. This decrease is primarily due to a decrease in operating margin (operating revenue less gas cost) of \$12.0 million, offset by a decrease in O&M expenses of \$5.6 million, payment in lieu of taxes of \$1.1 million.

On March 11, 2020, the World Health Organization declared the novel strain of coronavirus (COVID-19) a global health pandemic and recommended containment and mitigation measures worldwide. On March 23, 2020, the Mayor of the City of Memphis issued Executive Order No. 03-2020 proclaiming a civil emergency in the City and ordering citizens and businesses to follow specific measures designed to contain the spread of COVID-19.

The impact of the COVID-19 pandemic has had a relatively modest impact on the Gas Division's change in net position (financial position) and results of operations as of second quarter 2020. Currently, the pandemic has affected revenues from gas usage (primarily from residential and commercial customer segments), forfeited discounts and connect/reconnect fees. MLGW temporarily suspended service disconnections and late fee charges in mid-March and is currently evaluating the timing of resumption of disconnections and late fee charges. In addition, age of receivables has increased as a result of the suspension of disconnects.

MLGW has taken actions to protect the health and safety of their employees and customers and continue to monitor and assess their financial condition. At this time, MLGW cannot reasonably predict the extent to which the disruption may impact their business operations or financial position over the long-term.

⁽¹⁾ Unaudited, preliminary financial data.

HISTORICAL AND FORECASTED FINANCIAL RESULTS

Debt Service Coverage

The management of MLGW has prepared the forecasted financial information set forth below to present the forecasted debt service coverage for the Gas Division after issuance of the Series 2020 Bonds. The prospective financial information was not prepared with a view toward public disclosure or with a view towards complying with the guidelines established by the American Institute of Certified Public Accountants with respect to prospective financial information, but, in the view of MLGW management, was prepared on a reasonable basis, reflects the best currently available estimates and judgments and presents, to the best of management's knowledge and belief, the expected course of action and the expected future financial performance of MLGW. However, this information is not fact and should not be relied upon as necessarily indicative of future results, and readers of this Official Statement are cautioned not to place undue reliance on the forecasted financial information. Neither MLGW's independent auditors, nor any other independent accountants or financial advisors, have compiled, examined, or performed any procedures with respect to the prospective financial information contained herein, nor have they expressed any opinion or any form of assurance on such information or its achievability, and assume no responsibility for, and disclaim any association with, the prospective financial information.

The assumptions and estimates underlying the prospective financial information are inherently uncertain and, though considered reasonable by the management of MLGW as of the date hereof, are subject to a wide variety of significant business, economic and competitive risks and uncertainties that could cause actual results to differ materially from those forecasted.

Accordingly, there can be no assurance that forecasted results are indicative of the future performance of MLGW or that actual results will not be materially higher or lower than those forecasted. Inclusion of the prospective financial information in this Official Statement should not be regarded as a representation by any person that the forecasted results will be achieved.

MLGW does not generally publish its business plans and strategies or make external forecasts of its anticipated financial position or results of operations. Accordingly, MLGW does not intend to update or otherwise revise the prospective financial information to reflect circumstances existing since its preparation or to reflect the occurrence of unanticipated events, even in the event that any or all of the underlying assumptions are shown to be in error. Furthermore, MLGW does not intend to update or revise the prospective financial information to reflect changes in general economic or industry conditions.

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The following tables illustrate data on historical and projected debt service coverage for the Gas Division:

GAS DIVISION
HISTORICAL DEBT SERVICE COVERAGE
For the Fiscal Years Ended December 31, 2015 through December 31, 2019
(Amounts in Thousands of Dollars)

	2015	2016	2017	2018	2019
Operating Revenues	249,905	205,876	226,403	274,188	260,628
Interest and Other Income	326	99	(186)	899	1,327
Total Income	\$250,231	\$205,975	\$226,217	\$275,087	\$261,955
Operating and Maintenance Expense	\$211,136	\$185,253	\$199,432	\$225,680	\$189,438
Net Revenues Available for Debt Service	\$39,095	\$20,722	\$26,785	\$49,407	\$72,517
Debt Service on Outstanding Series 2016 Gas System Bonds	-	697	3,049	3,050	3,053
Debt Service on Outstanding Series 2017 Gas System Bonds	0	0	576	3,075	3,077
Total Debt Service Coverage on Gas System Bonds Obligations	0	29.71x	7.39x	8.07x	11.83x

⁽¹⁾ Includes revenues, expenses and debt service.

Source: Memphis Light, Gas and Water Division.

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GAS DIVISION
PROJECTED DEBT SERVICE COVERAGE ⁽¹⁾
For the Fiscal Years Ended December 31, 2020 through December 31, 2024
(Amounts in Thousands of Dollars)

Fiscal Year	2020	2021	2022	2023	2024
Operating Revenues ⁽²⁾	\$238,837	\$244,169	\$248,886	\$249,221	249,559
Interest and Other Income	1,647	1,028	1,028	1,028	1,028
Total Income	\$240,484	\$245,197	\$249,914	\$250,249	\$250,587
Operating and Maintenance Expense ⁽³⁾	\$190,251	\$201,692	\$202,836	\$204,573	\$204,307
Net Revenues Available for Debt Service	\$50,233	\$43,505	\$47,078	\$45,676	\$46,280
Debt Service on Proposed Series 2020 Senior Lien Bonds	483	3,584	3,582	3,583	3,585
Debt Service on Outstanding Bonds	6,129	6,130	6,130	6,129	6,129
Total Debt Service on Senior Lien Bonds	6,612	9,714	9,712	9,711	9,714
Coverage for Debt Service on the Senior Lien Bonds	7.60x	4.48x	4.85x	4.70x	4.76x

⁽¹⁾ Includes revenues, expenses, and debt service. Numbers have been adjusted to reflect the impact of COVID-19.

⁽²⁾ With the approval of the 2020 Budget and Five-Year Service Improvement Plan approval, a rate increase of 2.0% was approved by the City Council to become effective for the January 2022 revenue month.

⁽³⁾ Assumes projected MLGW (excluding gas cost) average O&M expense growth rate of 0.6% per year through 2024 relative to the 2020 Budget. Excludes depreciation, amortization, and payment in lieu of taxes.

Source: Memphis Light, Gas and Water Division.

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GAS DIVISION
STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET POSITION
For the Fiscal Years Ended December 31, 2015 through December 31, 2019
(Amounts in Thousands of Dollars)

	2015	2016	2017	2018	2019
OPERATING REVENUE					
Gas Sales Revenue	\$226,696	\$186,279	\$202,428	\$242,807	\$228,710
Forfeited Discounts	3,438	2,571	2,793	3,343	3,255
Miscellaneous Service Revenue	2,812	3,058	2,849	2,592	2,153
Rent from Water Property	3,121	3,270	6,645	8,591	10,019
Transported Gas	6,380	6,945	8,315	11,119	12,571
Liquefied Natural Gas (LNG)	7,892	4,572	4,469	6,303	4,338
Compressed Natural Gas (CNG)	400	108	158	263	193
Other Gas Revenue	474	478	495	517	546
Revenue Adjustment for Uncollectible	(1,308)	(1,405)	(1,749)	(1,347)	(1,157)
Total Operating Revenue	\$249,905	\$205,876	\$226,403	\$274,188	\$260,628
OPERATING EXPENSE					
Production	\$2,325	\$1,939	\$1,512	\$1,447	\$1,263
Gas Cost	122,973	92,183	105,729	138,107	110,555
Distribution	26,423	27,611	28,107	23,743	24,180
Customer Accounts	9,317	9,849	10,145	10,102	10,447
Sales	455	458	391	433	338
Administrative and General	27,341	28,589	27,921	26,515	21,537
Pension Expense ⁽¹⁾	4,179	7,155	8,595	1,890	7,386
Other Post-Employment Benefits ⁽²⁾	3,256	3,883	5,315	(9,954)	800
Customer Service and Information	1,321	1,324	1,371	1,418	1,361
Total Operating Expense	\$197,590	\$172,991	\$189,086	\$193,701	\$177,867
MAINTENANCE EXPENSE					
Production	\$560	\$673	\$629	\$503	\$319
Distribution	11,317	9,961	8,332	6,800	6,452
Administrative and General	1,111	1,037	761	217	112
Total Maintenance Expense	\$12,988	\$11,671	\$9,722	\$7,520	\$6,883
OTHER OPERATING EXPENSE					
Depreciation	\$14,457	\$15,144	\$17,676	\$16,872	\$17,594
Amortization	204	107	-	\$3,702	\$3,812
Regulatory Debits - Amortization of Legacy Meters	-	-	444	909	1,094
Payment in Lieu of Taxes	17,511	19,158	19,433	20,320	19,063
FICA Taxes	558	592	624	639	635
Total Other Operating Expense	\$32,730	\$35,001	\$38,177	\$42,442	\$42,198
Total Operating & Maintenance Expense	\$243,308	\$219,663	\$236,985	\$243,663	\$226,948
OPERATING INCOME (LOSS)	\$6,597	(\$13,787)	(\$10,582)	\$30,525	\$33,680
OTHER INCOME (EXPENSE)					
Other Income	\$326	\$99	(\$186)	\$900	\$1,336
Contributions in Aid of Construction	2,317	38,119	3,833	3,018	1,518
Reductions of Plant Costs Recovered through Contributions in Aid of Construction	(2,317)	(38,119)	(3,833)	(3,018)	(1,518)
Net Income (Loss) Before Debt Expense	\$6,923	(\$13,688)	(\$10,768)	\$31,425	\$35,016
DEBT EXPENSE					
Interest on Long-Term Debt	-	\$591	\$2,242	\$3,553	\$3,461
Amortization of Debt Discount, Expense and Premium	-	(212)	(772)	(1,152)	(1,122)
Total Debt Expense	-	\$379	\$1,470	\$2,401	\$2,339
INCREASE (DECREASE) IN NET POSITION	<u>\$6,923</u>	<u>(\$14,067)</u>	<u>(\$12,238)</u>	<u>\$29,024</u>	<u>\$32,677</u>

⁽¹⁾ Fiscal Year 2015 implemented GASB Statement No. 68, *Accounting and Financial Reporting for Pensions – an Amendment of GASB Statement No. 27*.

⁽²⁾ Fiscal Year 2018 implemented GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*.

Source: Memphis Light, Gas and Water Division.

GAS DIVISION
SELECTED STATEMENT OF NET POSITION DATA
As of December 21, 2015 through December 31, 2019
(Amounts in Thousands of Dollars)

	2015	2016	2017	2018	2019
ASSETS					
Utility Plant	\$363,741	\$383,630	\$400,150	\$421,246	\$415,522
Restricted Funds	22,122	49,261	30,991	22,904	25,019
Current Assets	160,636	136,737	152,994	162,398	160,192
Deferred Outflows of Resources	6,090	23,504	19,331	26,153	55,214
Other Non-Current Assets	745	10,478	17,575	29,288	23,731
Total Assets and Deferred Outflows of Resources	<u>\$553,334</u>	<u>\$603,610</u>	<u>\$621,041</u>	<u>\$661,989</u>	<u>\$679,678</u>
LIABILITIES AND NET POSITION					
Net Position	\$469,528	\$455,461	\$443,223	\$361,066	\$393,743
Long-Term Debt	-	46,591	89,988	86,111	82,161
Current Liabilities	66,869	60,665	49,417	72,883	44,701
Deferred Inflows of Resources	8,319	6,659	9,689	73,372	57,138
Other Non-Current Liabilities	8,618	34,234	28,724	68,557	101,935
Total Liabilities, Deferred Inflows of Resources and Net Position	<u>\$553,334</u>	<u>\$603,610</u>	<u>\$621,041</u>	<u>\$661,989</u>	<u>\$679,678</u>

Source: Memphis Light, Gas and Water Division.

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APPENDIX C

OPERATING INFORMATION REGARDING THE WATER DIVISION

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WATER SYSTEM

General

The Water Division designs, constructs, operates and maintains the Water System. The Water Division distributes water on an exclusive basis to residents within the city limits of Memphis, Arlington and Lakeland and the unincorporated areas of the County. The Water Division sells water to five adjacent utility districts located in the Tennessee cities of Bartlett, Collierville, Germantown and Millington and Olive Branch, MS to supplement their own pumpage.

For the Fiscal Year ended December 31, 2019, operating revenues of the Water Division totaled \$105,679,359 and were derived principally from the sale of water to an average of 255,558 customers during the period. The City has owned and operated the water system, which is the principal asset and source of revenue of the Water Division, through MLGW and predecessor organizations since 1903.

Source of Water

The aquifer system is one of Memphis' greatest natural resources, providing an abundant supply of pure water. Four water-bearing layers of sand and gravel are situated from 50 to 2,600 feet below the Memphis ground surface. These layers are separated and held under pressure by alternating layers of almost impermeable clay. The Water Division's water supply is drawn from the second layer of sand at depths that range from 350 to 1,100 feet. Memphis is the largest city in the world to rely solely on artesian wells for its water supply. The Water Division focuses on the supply, treatment, transmission, and distribution of water from the aquifer system.

Rates

MLGW may change its retail rate level upon application by MLGW and approval of the City Council. If the rates and charges provided in the retail rate schedule applied for by MLGW and approved by the City Council do not produce Water Revenues sufficient to provide for the operation and maintenance of the Water Division on a self-supporting and financially sound basis, including requirements for interest and principal payments on indebtedness, the Master Water System Resolution essentially requires that the City shall put into effect promptly such changes in rates and charges as will provide the increased revenues necessary to place the Water Division upon a self-supporting and financially sound basis. In the event the Water Division experiences two consecutive years of negative net income, the State of Tennessee's Water and Waste Water Financing Board shall put into effect promptly such changes in rates and charges as will provide the increased Water Revenues necessary to place the Water Division upon a self-supporting and financially sound basis.

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The Water Division's Retail rates have changed and/or have been approved by the City Council to be changed nine times in the years between 2011 to 2022 because of rate actions by MLGW. The following chart illustrates the rate changes for MLGW's Water Division from 2011-2022:

**WATER DIVISION
RATE CHART HISTORY
For the Years 2011-2022**

<u>DATE</u>	<u>RATE CHANGES</u>	<u>REASONS FOR CHANGES</u>
01/03/2011	5.00%	MLGW Operating Expenses
01/02/2013	7.10%	MLGW Operating Expenses
01/02/2014	2.13%	MLGW Operating Expenses
01/04/2016	22.00%	MLGW Operating Expenses
01/31/2018	1.05%	Aquifer Research Funding
03/04/2019	3.00%	Temporary Increase That Ended March 3, 2020
07/02/2020 ⁽¹⁾	15.00%	MLGW Operating Expenses
01/04/2021 ⁽¹⁾	7.00%	MLGW Operating Expenses
01/01/2022 ⁽¹⁾	5.00%	MLGW Operating Expenses

⁽¹⁾ With the approval of the 2020 Budget and Five-Year Service Improvement Plan approval, rate increases were approved of 15.00% on July 2, 2020; including rate increases approved by the City Council to become effective on January 4, 2021 of 7.00%, and 5.00% for the January 2022 revenue month.

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The following table illustrates a comparison of the Water Division's average monthly residential and commercial bills with the average monthly residential and commercial water bills in selected other United States cities:

**MONTHLY RESIDENTIAL AND COMMERCIAL WATER BILLS
IN SELECTED MAJOR U.S. CITIES**

<u>Residential</u> ⁽¹⁾	<u>Monthly Bill</u>	<u>Commercial</u> ⁽²⁾	<u>Monthly Bill</u>
Seattle, WA	\$72.45	Miami, FL	\$3,775.21
New Orleans, LA	\$70.31	Boston, MA	\$3,488.79
Los Angeles, CA	\$63.29	Atlanta, GA	\$3,073.36
Birmingham, AL	\$58.31	New Orleans, LA	\$2,945.73
Austin, TX	\$56.10	Los Angeles, CA	\$2,729.50
Boston, MA	\$55.36	Seattle, WA	\$2,719.00
Atlanta, GA	\$54.96	Washington, D.C.	\$2,489.23
Washington, D.C.	\$54.00	Austin, TX	\$2,155.31
Philadelphia, PA	\$50.72	Knoxville, TN	\$2,101.30
Chattanooga, TN	\$47.07	Las Vegas, NV	\$2,065.56
Springfield, MO	\$46.80	Birmingham, AL	\$2,053.09
San Antonio, TX	\$46.02	Phoenix, AZ	\$2,013.62
Indianapolis, IN	\$45.42	New York, NY	\$1,995.00
Baltimore, MD	\$42.72	Philadelphia, PA	\$1,982.68
Oklahoma City, OK	\$42.08	San Antonio, TX	\$1,955.80
Knoxville, TN	\$41.20	Houston, TX	\$1,705.10
Las Vegas, NV	\$41.03	Oklahoma City, OK	\$1,644.58
Houston, TX	\$40.90	Jackson, MS	\$1,605.00
New York, NY	\$39.90	Baltimore, MD	\$1,550.08
Louisville, KY	\$36.57	Dallas, TX	\$1,522.28
Jackson, TN	\$36.50	Chattanooga, TN	\$1,514.39
Omaha, NE	\$32.74	Louisville, KY	\$1,488.93
Denver, CO	\$32.65	Chicago, IL	\$1,486.50
Detroit, MI	\$32.65	Charlotte, NC	\$1,412.82
Jackson, MS	\$32.10	Springfield, MO	\$1,344.00
Charlotte, NC	\$30.59	Detroit, MI	\$1,278.61
Chicago, IL	\$29.73	Indianapolis, IN	\$1,148.36
Miami, FL	\$27.72	Milwaukee, WI	\$1,095.16
Milwaukee, WI	\$27.57	Nashville, TN	\$1,087.23
St. Louis, MO	\$25.65	Denver, CO	\$1,021.30
Jacksonville, FL	\$25.54	Jackson, TN	\$1,016.38
Dallas, TX	\$24.77	Orlando, FL	\$ 897.02
Huntsville, AL	\$24.29	Little Rock, AR	\$ 811.21
Salt Lake City, UT	\$22.98	St. Louis, MO	\$ 799.24
Nashville, TN	\$21.77	Memphis, TN	\$ 770.38
Little Rock, AR	\$21.53	Jacksonville, FL	\$ 748.95
Orlando, FL	\$21.32	Huntsville, AL	\$ 745.38
Memphis, TN	\$19.13	Omaha, NE	\$ 734.61
Phoenix, AZ	\$18.66	Salt Lake City, UT	\$ 694.28

⁽¹⁾ Residential rates are based upon an assumed consumption of 10 CCF/Month.

⁽²⁾ Commercial rates are based upon an assumed consumption of 500 CCF/Month.

Source: Memphis Light, Gas and Water 2020 Utility Bill Comparisons for Selected United States Cities.

Payment in Lieu of Taxes

As authorized by Tennessee law and the City's charter, the City may require the Water System to make payments in lieu of ad valorem property taxes, referred to as "tax equivalents", on its water system and water operations within the corporate limits of the City. Pursuant to the Tennessee Revenue Bond Law and the City's charter, the City Council may require payments of tax equivalents to be made each year from Water System revenues not to exceed the amount of ad valorem taxes payable on privately owned property of similar nature within the City. The Tennessee Revenue Bond Law and the City's charter also provides that such tax equivalent payments shall be made only from Water System revenues remaining after payment of, or making reasonable provision for payment of:

- a. All operating expenses of the Water System for the year.
- b. Interest accruals and sinking fund accruals on bonds or mortgages issued for the benefit of the Water System.
- c. Cash payments to a working capital reserve, a renewals and replacements reserve, and a casualties reserve, for the benefit of the Water System. Said cash payments to said reserves to be in such amounts as the Board of Light, Gas and Water Commissioners think proper and by resolution elect to set up from time to time.

The amount of tax equivalents payable from to the City from Water System revenues each year is provided for (i) in that certain PILOT Agreement dated as of June 1, 2001, by and between the City and MLGW, (ii) in that certain Resolution adopted by the Council on April 16, 2013 and in (iii) that certain Resolution adopted by the Board on May 17, 2013. For Fiscal Year 2019, the Water Division paid \$2.5 million in tax equivalents to the City, which represents no percentage increase or decrease over the amount paid in Fiscal Year 2018.

Production

The Water Production/Treatment process involves MLGW's Water Pumping Stations and each associated well field. Each Water Pumping Station, also referred to as Water Treatment Plant, has associated Water Production Wells within a 3-mile radius. MLGW's Water Production Wells pumps nearly 98% of Memphis's water from the Memphis Sand Aquifer, which lies 350 to 1100 feet below ground level. It is estimated that this aquifer holds over one hundred trillion gallons of cool water. The other 2% is pumped from the Fort Pillow Sand aquifer.

The aquifer system contains alternating layers of water bearing sand and impermeable clay. It stretches from the Tennessee River to the Arkansas Black River. Memphis is one of the largest cities in the world to rely solely on this type water source. Other aquifers located beneath the Memphis Sand Aquifer are the Fort Pillow Sand, McNairy Sand and Coffee Sand. Water in each aquifer varies slightly in quality, mineral content and taste.

The Water Division has 172 Water Production Wells situated throughout 11 well fields in Shelby County, Tennessee. The Mallory Pumping Station serves the Downtown, Midtown, North County, and Westward Communities within the I-240 Loop and has a treatment capacity of 35 million gallons per day. The Sheahan Pumping Station serves communities inside the I-240 Loop of East Memphis and has a treatment capacity of 35 million gallons per day. The Allen Pumping Station also serves Downtown, in addition to South Memphis, President Island, and Westward Communities inside the I-240 Loop and has a treatment capacity of 30 million gallons per day. The McCord Pumping Station serves Northeast Shelby County, East Shelby County, and communities south outside of the I-240 loop and has a treatment capacity of

35 million gallons per day. Lichterman Pumping Station serves the Hickory Hill and East Memphis area, south to Stateline Road and has a treatment capacity of 30 million gallons per day. Davis Pumping Station serves the West County, Pidgeon Industrial Park, and Whitehaven areas and has a treatment capacity of 30 million gallons per day. Morton Pumping Station serves North County, Northeast East County, and Northward communities outside the I-240 Loop and has a treatment capacity of 30 million gallons per day. Shaw Pumping Station serves the East County, Northeast County, Lakeland, and Arlington areas and has a treatment capacity of 30 million gallons per day. The Palmer and LNG-Arlington pumping stations serve the Whitehaven and the Northeast County areas respectively with pumping capacity of 5.5 and 1.1 million gallons per day, respectively. The Arlington Pumping Station serves the Arlington area but is not currently in use for water treatment. Each Water Treatment Plant is designated by the amount of water it is permitted to treat (filter) per the Tennessee Department of Environment and Conservation.

Distribution

MLGW's 11 water pumping stations are interconnected via the water distribution system. MLGW's water undergoes a three-phase water treatment process which includes aeration, filtration and chemical addition. This treatment process oxidizes various elements, increases pH, removes impurities and fortifies water with chlorine, fluoride and phosphate. Once treated, the water is distributed to more than 253,000 residential, commercial and industrial customers throughout Shelby County. This interconnectivity allows for stations to share load and shed load, if needed. MLGW's water distribution system is comprised of over 3,700 miles of main, 19 water booster stations, 15 elevated water storage tanks, over 120 million gallons of underground reservoir storage, and 33 pressure check points throughout the water distribution system.

The Water Division relies on a team of professional chemists and water experts to constantly monitor the quality of the water at MLGW's Water Quality Assurance Laboratory. Samples of water are routinely taken from sites throughout the city and county. The Laboratory conducts more than 40,000 tests per year. The State of Tennessee and the Environmental Protection Agency require the Water Division to test and report on the water quality to ensure public safety. The Water Division consistently meets all of these regulatory requirements.

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CAPITAL IMPROVEMENT PROGRAM OF THE WATER DIVISION AND SOURCES OF FUNDING

The Water Division's capital expenditures were \$17.2 million for the Fiscal Year ended December 31, 2019. The Water Division regularly develops a five-year master plan for major improvements and annually estimates and budgets capital improvements for the then current and following Fiscal Year (the "Water Division Master Plan"). The Water Division has developed a detailed projection of improvements and additions for the Fiscal Years 2020 through 2024 (the "Water Division Capital Improvement Program"), the projected annual cost of which is set forth below:

WATER DIVISION FORECASTED CAPITAL PROGRAM ⁽¹⁾ (Amounts in Thousands of Dollars)

<u>Year</u>	<u>Production</u>	<u>Distribution</u> <u>System</u>	<u>General Plant</u>	<u>Total</u>
2020	\$14,162	\$13,599	\$2,864	\$30,625
2021	15,328	12,441	1,976	29,745
2022	34,485	12,318	1,907	48,710
2023	26,560	12,410	1,786	40,756
2024	22,153	12,510	1,838	36,501

⁽¹⁾ Capital Plans are based on the combination of annual Master Plan, historical reviews, rate increase expectations, and growth rate projections.

Source: Memphis Light, Gas and Water Division.

MLGW anticipates financing the Water Division's Capital Program during the 2020-2024 periods from current and accumulated revenues of the Water Division and bond proceeds. The forecasted sources of funding for the Water Division's Capital Program for the years 2020-2024 is set forth below:

WATER DIVISION CAPITAL PROGRAM FUNDING PLAN ⁽¹⁾ (Amounts in Thousands of Dollars)

<u>Fiscal</u> <u>Year</u>	<u>Current</u> <u>Revenues</u>	<u>Bond</u> <u>Proceeds</u>	<u>Total</u>
2020	\$ 1,689	\$28,936	\$30,625
2021	-	29,745	29,745
2022	2,391	46,319	48,710
2023	40,756	-	40,756
2024	36,501	-	36,501

⁽¹⁾ Capital Plans are based on the combination of annual Master Plan, historical reviews, rate increase expectations, and growth rate projections.

Source: Memphis Light, Gas and Water Division.

FACTORS AFFECTING THE WATER INDUSTRY

The Water System, which provides potable water to residential, commercial, and industrial customers, must be operated in compliance with local, state and federal regulations. Local regulations entail compliance with storm water discharge, air quality, sanitary sewer discharge, and chemical addition. State regulations entail compliance with chemical additions, storm water discharge, chemical safety guidelines, safety for employees, safety of water production and distribution. Federal compliance involves meeting the requirements of the Federal Safe Drinking Water Act, as well as the regulations implemented pursuant to the Tennessee Safe Drinking Water Act. The Water Division's water supply is drawn from the aquifer system which provides an abundant supply of pure water to accommodate demand growth in the Water System.

Operation of the Water System is subject to several local, federal and state environmental laws and regulations. Some of the key areas covered by these regulations include: the quality and safety of drinking water; standards and limitations on water and air pollutants to the environment; availability of water as a resource; handling and disposal of solid waste; and health and safety standards for personnel. Compliance with these laws and regulations in the ordinary course of operations requires significant operating and capital expenditures. Failure to comply with these regulations also could have material adverse effects, including, among others, the imposition of civil liability or fines by regulatory agencies or liability to private parties. The applicable regulatory requirements are administered by the Tennessee Department of Environment and Conservation ("TDEC") with oversight by the U.S. Environmental Protection Agency (the "USEPA"). The Water System is subject to a biennial inspection by TDEC entitled the Sanitary Survey. The score obtained on the Sanitary Survey places a water system in one of three categories: "Approved" (95% to 100%), "Provisionally Approved" (90% to 94%), and "Unsatisfactory" (0 to 89%). The Water System had its last Sanitary Survey from September 27 through September 2018 and received a score of 99%.

The water treated and delivered by the Water System meets or exceeds all drinking water standards established by the USEPA and no Maximum Contaminant Level has been exceeded. The Water Division consistently meets all of these regulatory requirements and has never been cited for a water quality violation.

The Water Division as part of the MLGW Way Forward Initiative, had a cursory condition assessment of the water infrastructure conducted in 2019. Based on the results of the assessment, the Water Division will seek to enter into a Request for Qualifications for an Engineering Firm to assist in enhancing the MLGW Water Model, conduct a more detail infrastructure assessment, and help to modify the Five-Year Water Capital Improvement Plan. Nevertheless, the Water Division still has much flexibility to determine which capital projects are best able to maximize continued compliance.

System Security

By direction of the USEPA and in compliance with the America's Water Infrastructure Act of 2018 (AWIA), a Risk and Resilience Assessment of the Water Division's drinking water supply, treatment and distribution was completed in 2020. This assessment included malevolent acts, natural hazards, critical assets, physical and cybersecurity. This assessment will be used in the evaluation of capital and operational needs for the Five-Year Water Capital Improvement Plan. Also, in compliance with AWIA, the MLGW will complete an update to the Water Division's Emergency Response Plan by September 30, 2020. The Water Division continues with its concentrated efforts on preventing contamination events via an improved Cross Connection Control Program.

The following table shows historical figures for Shelby County's population, the Water Division's average number of customers, water pumpage and water sales, as well as forecasts for such figures for the year 2021 developed by MLGW. Future growth of Water Division sales is forecasted on the basis of population growth studies by the United States Census Bureau and analyses performed by the Water Engineering Department.

**WATER DIVISION
HISTORICAL AND FORECASTED WATER SYSTEM USE
For the Years 2010-2024**

Fiscal Year	Shelby County Population ⁽¹⁾	Average Number of Customers ⁽²⁾	Total Water Pumped (ccf) ⁽³⁾	Total Sales ⁽⁴⁾
2010	927,644	255,300	71,826,576	59,508,444
2011	934,405	254,254	69,227,921	55,907,704
2012	940,764	253,838	67,997,665	56,449,005
2013	944,463	254,142	63,714,945	52,507,255
2014	936,872	254,176	64,481,092	52,067,462
2015	945,757	254,740	61,074,063	50,094,962
2016	957,457	253,109	60,451,559	48,731,410
2017	962,436	255,319	57,387,711	47,540,616
2018	953,993	254,222	58,226,591	49,442,513
2019	945,094	255,558	56,973,723	49,788,726
2024	957,227	257,480	59,265,225	50,163,263

⁽¹⁾ United States Census Bureau, except for 2016, 2017, 2018, 2019 & 2024. The 2016, 2017, 2018, 2019 & 2024 population figures were retrieved from demographic data contained on the Memphis Chamber Website, <https://memphischamber.com/select-memphis/data-center/>.

⁽²⁾ Division Financial Reports and Statistics, except for 2024 which was derived from linear regression forecasting models which results in a ten-year compound growth rate of 0.15%

⁽³⁾ Division Financial Reports and Statistics, except for 2024 which was derived from linear regression forecasting models which results in a ten-year compound growth rate of 0.15% applied to the 2015 - 2019 average of Total Water Pumped.

⁽⁴⁾ Division Financial Reports and Statistics, except for 2024 which was derived from linear regression forecasting models which results in a ten-year compound growth rate of 0.15%

Source: Memphis Light, Gas and Water Division.

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The following table shows (i) the Water Division's ten largest customers for the twelve months ended December 31, 2019, based on water sales to customers by cubic feet, percentage of total Water Division sales revenue, revenue from such customers and by revenue from customers as a percentage of total Water Division sales revenue, (ii) the average number of Water Division customers for the years 2010-2019; (iii) the water sales by customer class during the years 2010-2019; (iv) the historical pumpage requirements for the years 2010-2019; and (v) the forecasted pumpage requirements and sales for 2020-2024:

**WATER DIVISION
TEN LARGEST WATER CUSTOMERS
For the Fiscal Year Ended December 31, 2019**

Rank⁽¹⁾	Customers	Water Sales to Customers (ccf)	Sales to Customers as a % of Total Division Sales ⁽²⁾	Revenue from Customers ⁽⁶⁾	Revenue from Customers as a % of Total Water Division Revenue ⁽³⁾
1	Tennessee Valley Authority	2,120,488	4.259%	\$2,146,441	2.118%
2	City of Memphis Public Works ⁽⁴⁾	614,164	1.234%	\$ 627,061	0.619%
3	Kellogg Corporation	504,545	1.013%	\$ 520,129	0.513%
4	Premcor Refinery Group	472,940	0.950%	\$ 505,259	0.499%
5	PMC Biogenix, Inc	466,172	0.936%	\$ 477,250	0.471%
6	City of Memphis Public Works ⁽⁵⁾	398,580	0.801%	\$ 408,595	0.403%
7	City of Memphis Zoo	253,744	0.510%	\$ 269,404	0.266%
8	Cascades Tissue Group	253,730	0.510%	\$ 261,535	0.258%
9	Riviana Foods, Inc.	247,052	0.496%	\$ 264,570	0.261%
10	Valero Refining Company	230,128	0.462%	\$ 243,139	0.240%
TOTALS:		5,561,543	11.170%	\$5,723,386	5.648%

⁽¹⁾ Customers ranked by Water Sales.

⁽²⁾ Total Water Division sales for 12 months ending December 31, 2019 were 49,788,726 ccf.

⁽³⁾ Total Water Division sales revenue for 12 months ending December 31, 2019 was \$101,328,539.

⁽⁴⁾ T.E. Maxson South Wastewater Treatment Plant.

⁽⁵⁾ M.C. Stiles North Wastewater Treatment Plant.

⁽⁶⁾ Amounts may not total due to rounding.

Source: Memphis Light, Gas and Water Division.

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WATER DIVISION
AVERAGE NUMBER OF WATER CUSTOMERS
For the Fiscal Years Ended December 31, 2010 through December 31, 2019

Year	Residential	Commercial	Other ^(1, 2)	Total
2010	229,429	20,317	5,554	255,300
2011	228,424	20,265	5,565	254,254
2012	227,961	20,313	5,564	253,838
2013	228,047	20,823	5,272	254,142
2014	228,147	20,792	5,237	254,176
2015	228,562	20,844	5,334	254,740
2016	227,171	20,580	5,358	253,109
2017	229,285	20,625	5,409	255,319
2018	228,471	20,422	5,329	254,222
2019	229,683	20,484	5,391	255,558

⁽¹⁾ Includes Free Water and Fire Protection Accounts.

⁽²⁾ Free Water was eliminated and combined into the commercial category in 2013.

Source: Memphis Light, Gas and Water Division.

WATER DIVISION
WATER SALES BY CUSTOMER CLASS
HUNDRED CUBIC FEET OF WATER SOLD
For the Fiscal Years Ended December 31, 2010 through December 31, 2019

Year	Residential	Commercial	Other ⁽¹⁾⁽²⁾	Total
2010	28,039,007	29,073,734	2,395,702	59,508,443
2011	25,813,028	27,925,614	2,169,062	55,907,704
2012	25,647,247	28,609,765	2,191,993	56,449,005
2013	23,707,028	28,325,038	475,189	52,507,255
2014	23,208,066	28,355,246	504,150	52,067,462
2015	22,853,763	26,712,414	528,785	50,094,962
2016	22,442,729	26,146,652	142,029	48,731,410
2017	21,419,459	26,029,425	91,732	47,540,616
2018	22,596,541	26,806,056	39,916	49,442,513
2019	21,670,184	28,076,862	41,680	49,788,726

⁽¹⁾ Includes Free Water and Fire Protection Accounts.

⁽²⁾ Free Water was eliminated and combined with Commercial beginning in 2013.

Source: Memphis Light, Gas and Water Division, Financial Reports and Statistics.

WATER DIVISION
HISTORICAL PUMPAGE REQUIREMENTS
For the Fiscal Years Ended December 31, 2010 through December 31, 2019

Year	Maximum Day (In MG)	Percent Annual Change	Total Sales (In ccf)	Percent Annual Change	Annual Pumpage (In ccf)
2010	190.6	0.58%	59,508,443	8.27%	71,826,576
2011	187.8	-1.47%	55,907,704	-6.05%	69,227,921
2012	195.1	3.89%	56,449,005	0.97%	67,997,665
2013	172.2	-11.74%	52,507,255	-6.98%	63,714,945
2014	172.6	0.23%	52,067,462	-0.84%	64,481,092
2015	162.4	-5.91%	50,094,962	-3.79%	61,074,063
2016	144.0	-11.33%	48,731,410	-2.72%	60,451,559
2017	152.0	5.56%	47,540,616	-2.44%	57,387,711
2018	153.3	0.86%	49,442,513	4.00%	58,226,591
2019	144.8	-5.54%	49,788,726	0.70%	56,973,723

Source: Memphis Light, Gas and Water Division, Financial Reports and Statistics.

WATER DIVISION
FORECASTED PUMPAGE REQUIREMENTS
For the Years 2020-2024

Year	Maximum Day (In MG) ⁽¹⁾	Total Sales (In CCF) ⁽²⁾	Annual Pumpage (In CCF) ⁽³⁾
2020	148.7	49,863,409	58,910,963
2021	149.0	49,938,204	58,999,330
2022	149.2	50,013,112	59,087,829
2023	149.4	50,088,131	59,176,461
2024	149.6	50,163,263	59,265,225

⁽¹⁾ Growth based on an annual growth rate of 0.15% applied to the last 4-year average 2016-2019.

⁽²⁾ Derived from linear regression forecasts models with an annual growth rate of 0.15%.

⁽³⁾ Derived from linear regression forecasts models with an annual growth rate of 0.15%.

Source: Memphis Light, Gas and Water Division, Financial Reports and Statistics.

WATER DIVISION
CONDENSED STATEMENT OF REVENUES, EXPENSES AND CHANGE IN NET POSITION⁽¹⁾
Years to Date Ended June 30, 2020 and June 30, 2019
(Amounts in Thousands)

	YEAR TO DATE THIS YEAR	YEAR TO DATE LAST YEAR	YEAR TO DATE VARIANCE
Sales Revenue	\$47,292	\$47,180	\$112
Accrued Unbilled Revenue	(1,011)	370	(1,381)
Forfeited Discounts	312	684	(372)
Miscellaneous Revenue	1,742	1,665	77
Revenue Adjustment for Uncollectibles	(487)	(481)	(6)
TOTAL OPERATING REVENUE/MARGIN	47,848	49,418	(1,570)
Operations Expense	25,381	28,780	(3,399)
Maintenance Expense	6,829	6,911	(82)
Other Operating Expense	7,170	7,490	(320)
TOTAL OPERATING EXPENSE	39,380	43,181	(3,801)
Operating Income (Loss)	8,468	6,237	2,231
Other Income	768	629	139
Reduction of Plant Cost Recovered Through CIAC	1,665	1,391	274
NET INCOME (LOSS) BEFORE DEBT EXPENSE	7,571	5,475	2,096
Amortization of Debt Discount & Expense	(205)	(211)	6
Interest on Long Term Debt	1,091	1,124	(33)
Total Debt Expense	886	913	(27)
Net Income (Loss) After Debt Expense	6,685	4,562	2,123
Contributions in Aid of Construction	1,665	1,391	274
INCREASE (DECREASE) IN NET POSITION	<u>\$8,350</u>	<u>\$5,953</u>	<u>\$2,397</u>

STATISTICAL HIGHLIGHTS	YEAR TO DATE THIS YEAR	YEAR TO DATE LAST YEAR	YEAR TO DATE VARIANCE
Water Metered Services (<i>All Customers</i>)	257,319 *	255,548 *	1,771
Water Total Sales (<i>CCF</i>)	22,642,228	22,553,412	88,816

WEATHER HIGHLIGHTS	YEAR TO DATE THIS YEAR	YEAR TO DATE LAST YEAR	YEAR TO DATE VARIANCE
Rainfall	33.09	40.22	(7.13)

CAPITAL EXPENDITURES HIGHLIGHTS	YEAR TO DATE THIS YEAR	YEAR TO DATE LAST YEAR	YEAR TO DATE VARIANCE
Capital Expenditures (<i>In Thousands</i>)	\$7,686	\$7,918	(\$232)

⁽¹⁾ Unaudited, preliminary financial statements.

* Average metered services (all customers).

Source: Memphis Light, Gas and Water Division.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF THE WATER DIVISION (YEARS TO DATE ENDED JUNE 30, 2020 AND JUNE 30, 2019) ⁽¹⁾

Revenues

Years to Date Ended June 30, 2020 and June 30, 2019: Total operating revenues were \$47.8 million at June 2020, a decrease of \$1.6 million or 3.2% compared to June 2019, due to a decrease in accrued/unbilled revenue of \$1.4 million and forfeited discounts (late fees) of \$0.4 million, offset by an increase in sales revenue of \$0.1 million.

Total water sales are 2,264,223 MCF, up 8,882 MCF or 0.40% from 2,255,341 MCF at June 2019, due in part to an increase in residential water sales of 27,765 MCF (2.8%), offset by a decrease in commercial water sales of 19,893 MCF (1.7%).

Expenses

Years to Date Ended June 30, 2020 and June 30, 2019: As of June 2020, total operating expenses were \$39.4 million, an 8.8%, or \$3.8 million decrease from June 2019. This resulted from a decrease in operations and maintenance expenses ("O&M expenses") of \$3.5 million primarily driven by lower labor and benefit expenses, and other operating expense of \$0.3 million, due in part to a decrease in payment in lieu of taxes of \$1.0 million, offset by an increase in depreciation and amortization expense of \$0.6 million.

Change in Net Position

Years to Date Ended June 30, 2020 and June 30, 2019: The change in net position is \$8.4 million, up \$2.4 million from \$6.0 million at June 2019. This increase is due to a decrease in O&M expenses of \$3.5 million, payment in lieu of taxes of \$1.0 million and an increase in other income of \$0.1 million, offset by a decrease in unbilled revenue of \$1.4 million, forfeited discounts of \$0.4 million and an increase in depreciation and amortization expense of \$0.6 million.

On March 11, 2020, the World Health Organization declared the novel strain of coronavirus ("COVID-19") a global health pandemic and recommended containment and mitigation measures worldwide. On March 23, 2020, the Mayor of the City of Memphis issued Executive Order No. 03-2020 proclaiming a civil emergency in the City and ordering citizens and businesses to follow specific measures designed to contain the spread of COVID-19.

The impact of the COVID-19 pandemic has had a relatively modest impact on the Water Division's change in net position (financial position) and results of operations as of second quarter 2020. Currently, the pandemic has affected revenues from water usage (primarily in the commercial customer segment), forfeited discounts and connect/reconnect fees. MLGW temporarily suspended service disconnections and late fee charges in mid-March and is currently evaluating the timing of resumption of disconnections and late fee charges. In addition, age of receivables has increased as a result of the suspension disconnects.

MLGW has taken actions to protect the health and safety of their employees and customers and will continue to monitor and assess their financial condition. At this time, MLGW cannot reasonably predict the extent to which the disruption may impact their business operations or financial position over the long-term.

⁽¹⁾ Unaudited, preliminary financial data.

HISTORICAL AND FORECASTED FINANCIAL RESULTS

Debt Service Coverage

The management of MLGW has prepared the forecasted financial information set forth below to present the forecasted debt service coverage for the Water Division after issuance of the Series 2020 Bonds. The prospective financial information was not prepared with a view toward public disclosure or with a view towards complying with the guidelines established by the American Institute of Certified Public Accountants with respect to prospective financial information, but, in the view of MLGW management, was prepared on a reasonable basis, reflects the best currently available estimates and judgments and presents, to the best of management's knowledge and belief, the expected course of action and the expected future financial performance of MLGW. However, this information is not fact and should not be relied upon as necessarily indicative of future results, and readers of this Official Statement are cautioned not to place undue reliance on the forecasted financial information. Neither MLGW's independent auditors, nor any other independent accountants or financial advisors, have compiled, examined, or performed any procedures with respect to the prospective financial information contained herein, nor have they expressed any opinion or any form of assurance on such information or its achievability, and assume no responsibility for, and disclaim any association with, the prospective financial information.

The assumptions and estimates underlying the prospective financial information are inherently uncertain and, though considered reasonable by the management of MLGW as of the date hereof, are subject to a wide variety of significant business, economic and competitive risks and uncertainties that could cause actual results to differ materially from those forecasted.

Accordingly, there can be no assurance that forecasted results are indicative of the future performance of MLGW or that actual results will not be materially higher or lower than those forecasted. Inclusion of the prospective financial information in this Official Statement should not be regarded as a representation by any person that the forecasted results will be achieved.

MLGW does not generally publish its business plans and strategies or make external forecasts of its anticipated financial position or results of operations. Accordingly, MLGW does not intend to update or otherwise revise the prospective financial information to reflect circumstances existing since its preparation or to reflect the occurrence of unanticipated events, even in the event that any or all of the underlying assumptions are shown to be in error. Furthermore, MLGW does not intend to update or revise the prospective financial information to reflect changes in general economic or industry conditions.

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The following tables illustrate data on historical and projected debt service coverage for the Water Division:

WATER DIVISION
HISTORICAL DEBT SERVICE COVERAGE
For the Fiscal Years Ended December 31, 2015 through December 31, 2019
(Amounts in Thousands of Dollars)

	2015	2016	2017	2018	2019
Operating Revenues	84,491	99,848	99,513	103,140	105,679
Interest and Other Income ⁽¹⁾	674	740	1,000	1,177	1,057
Total Income	\$85,165	\$100,588	\$100,513	\$104,317	\$106,736
Operating & Maintenance Expense ⁽²⁾	\$74,604	\$77,612	\$81,353	\$82,724	\$73,295
Net Revenues Available for Debt Service	\$10,561	\$22,976	\$19,160	\$21,593	\$33,441
Debt Service on Outstanding Series 2014 Water System Bonds	1,075	1,074	1,073	1,076	1,073
Debt Service on Outstanding Series 2016 Water System Bonds	-	401	2,044	2,045	2,047
Debt Service on Outstanding Series 2017 Water System Bonds	-	-	313	1,808	1,807
Total Debt Service Coverage on Outstanding Water System Bonds ⁽³⁾	9.82x	15.58x	5.59x	4.38x	6.79x

⁽¹⁾ Includes other income, other income-transmission credit and prepay credit amortization.

⁽²⁾ Includes Total Operating Expense and Total Maintenance Expense per the Statements of Income and Expenses and excludes depreciation, amortization, and payments in lieu of taxes.

⁽³⁾ Pursuant to the Master Water System Resolution, MLGW is required to impose and the City shall approve rates and other charges fully sufficient at all times such that Net Revenues of the Water System in each Fiscal Year will at least equal 1.20 times the Debt Service Requirement on all Senior Lien Revenue Obligations, including the Series 2020 Water System Bonds, and 1.00 times the Debt Service Requirement on all other Revenue Obligations then Outstanding.

Source: Memphis Light, Gas and Water Division, Financial Reports and Statistics.

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WATER DIVISION
PROJECTED DEBT SERVICE COVERAGE ⁽¹⁾
For the Fiscal Years Ended December 31, 2020 through December 31, 2024
(Amounts in Thousands of Dollars)

Fiscal Year	2020	2021	2022	2023	2024
Operating Revenues ⁽²⁾	\$104,820	\$119,838	\$125,852	\$126,057	126,270
Interest and Other Income	1,492	1,055	1,055	1,055	1,055
Total Income	\$106,312	\$120,893	\$126,907	\$127,112	\$127,325
Operating and Maintenance Expense ⁽³⁾	\$78,579	\$91,048	\$91,969	\$93,879	\$94,502
Net Revenues Available for Debt Service	\$27,733	\$29,844	\$34,938	\$33,233	\$32,823
Debt Service on Proposed Series 2020					
Senior Lien Bonds	504	3,791	3,790	3,792	3,789
Debt Service on Outstanding Bonds	4,931	4,924	4,927	4,929	4,930
Total Debt Service on Senior Lien Bonds	5,435	8,716	8,717	8,720	8,719
Coverage for Debt Service on the					
Senior Lien Bonds	5.10x	3.42x	4.01x	3.81x	3.76x
Debt Service on Future Senior Lien Bonds	-	-	1,531	1,531	1,531
Total Existing and Future Senior Lien Debt Service	5,435	8,716	10,248	10,251	10,250
Coverage for Debt Service on Projected					
Senior Lien Bonds	5.10x	3.42x	3.41x	3.24x	3.20x

⁽¹⁾ Includes revenues, expenses, and debt service. Numbers have been adjusted to reflect the impact of COVID-19.

⁽²⁾ With the approval of the 2020 Budget and Five-Year Service Improvement Plan approval, rate increases were approved of 15.00% on July 2, 2020; including rate increases approved by the City Council to become effective on January 4, 2021 of 7.00%, and 5.00% for the January 2022 revenue month.

⁽³⁾ Assumes projected MLGW (including power cost for pumping) average O&M expense growth rate of 2.3% per year through 2024 relative to the 2020 Budget. Excludes depreciation, amortization, and payment in lieu of taxes.

Source: Memphis Light, Gas and Water Division.

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WATER DIVISION
STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION
For the Fiscal Years Ended December 31, 2015 through December 31, 2019
(Amounts in Thousands of Dollars)

	2015	2016	2017	2018	2019
OPERATING REVENUE					
Water Sales Revenue	\$81,424	\$ 97,332	\$ 95,701	\$98,577	\$101,328
Forfeited Discounts	1,240	1,429	1,428	1,458	1,413
Miscellaneous Service Revenue	1,607	1,669	2,854	3,453	3,164
Rent from Water Property	547	160	168	169	219
Other Water Revenue	350	353	366	382	403
Revenue Adjustment for Uncollectible	(676)	(1,096)	(1,004)	(900)	(848)
Total Operating Revenue	\$84,492	\$99,847	\$99,513	\$103,139	\$105,679
OPERATING EXPENSE					
Production	\$12,511	\$12,491	\$12,051	\$11,883	\$13,020
Distribution	14,481	14,285	14,742	13,948	11,959
Customer Accounts	6,909	7,246	7,192	7,065	7,333
Sales	366	368	418	422	323
Administrative and General	21,821	21,318	20,908	22,251	17,298
Pension Expense ⁽¹⁾	2,775	4,751	5,643	1,397	5,459
Other Post-Employment Benefits ⁽²⁾	2,162	2,579	3,493	(7,357)	591
Customer Service and Information	703	760	874	963	954
Total Operating Expense	\$61,728	\$63,798	\$ 65,321	\$50,572	\$ 56,937
MAINTENANCE EXPENSE					
Production	\$3,075	\$3,268	\$2,662	2,475	\$1,899
Distribution	8,070	8,775	10,723	8,330	8,038
Administrative and General	1,319	1,333	2,185	3,269	2,956
Total Maintenance Expense	\$12,464	\$13,376	\$15,570	\$14,074	\$12,893
OTHER OPERATING EXPENSE					
Depreciation	\$8,243	\$8,951	\$9,258	\$10,399	\$10,862
Amortization	(964)	(964)	(964)	(964)	(482)
Regulatory Debits - Amortization of Legacy Meters	-	-	110	218	256
Payment in Lieu of Taxes	4,400	4,400	4,400	2,500	2,500
FICA Taxes	413	437	461	472	469
Total Other Operating Expense	\$12,092	\$12,824	\$13,265	\$12,625	\$13,605
Total Operating & Maintenance Expense	\$86,284	\$89,998	\$94,156	\$77,271	\$83,435
OPERATING INCOME (LOSS)	(\$1,792)	\$9,849	\$5,357	\$25,868	\$22,244
OTHER INCOME (EXPENSE)					
Other Income	\$677	\$740	\$1,000	\$1,177	\$1,055
Contributions in Aid of Construction	3,128	3,533	3,576	4,364	3,345
Reductions of Plant Costs Recovered through Contributions in Aid of Construction	(3,128)	(3,533)	(3,576)	(4,364)	(3,345)
Net Income (Loss) Before Debt Expense	(\$1,115)	\$10,589	\$6,357	\$27,045	\$23,299
DEBT EXPENSE					
Interest on Long-Term Debt	\$514	\$811	\$1,652	\$2,295	\$2,242
Amortization of Debt Discount, Expense and Premium	(58)	(119)	(294)	(432)	(422)
Total Debt Expense	456	692	1,358	1,863	1,820
INCREASE (DECREASE) IN NET POSITION	<u>(\$1,571)</u>	<u>\$9,897</u>	<u>\$4,999</u>	<u>\$25,182</u>	<u>\$21,479</u>

⁽¹⁾ Fiscal Year 2015 implemented GASB Statement No. 68, *Accounting and Financial Reporting for Pensions – an Amendment of GASB Statement No. 27*.

⁽²⁾ Fiscal Year 2018 implemented GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*.

Source: Memphis Light, Gas and Water Division.

WATER DIVISION
SELECTED STATEMENT OF NET POSITION DATA
As of December 31, 2015, through December 31, 2019
(Amounts in Thousands of Dollars)

	2015	2016	2017	2018	2019
ASSETS					
Utility Plant (Net)	\$270,988	\$292,880	\$327,788	\$349,254	\$354,205
Restricted Funds	13,986	29,756	13,395	16,211	17,239
Current Assets	43,790	46,901	56,200	40,305	44,287
Deferred Outflows of Resources	3,634	15,608	12,801	19,329	40,812
Other Non-Current Assets	2,693	4,012	4,935	12,335	6,230
Total Assets And Deferred Outflows of Resources	<u>\$335,090</u>	<u>\$389,156</u>	<u>\$415,118</u>	<u>\$437,433</u>	<u>\$462,772</u>
LIABILITIES AND NET POSITION					
Net Position	\$283,170	\$293,067	\$298,066	\$241,032	\$262,511
Long-Term Debt	14,739	45,501	70,219	67,040	63,803
Current Liabilities	25,190	25,185	21,955	26,594	22,782
Deferred Inflows of Resources	5,526	4,416	6,422	53,089	41,028
Other Non-Current Liabilities	6,466	20,988	18,457	49,679	72,649
Total Liabilities, Deferred Inflows of Resources and Net Position	<u>\$335,090</u>	<u>\$389,156</u>	<u>\$415,118</u>	<u>\$437,433</u>	<u>\$462,772</u>

Source: Memphis Light, Gas and Water Division.

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APPENDIX D

ECONOMIC AND DEMOGRAPHIC INFORMATION REGARDING THE CITY OF MEMPHIS, TENNESSEE AND SHELBY COUNTY, TENNESSEE

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ECONOMIC AND DEMOGRAPHIC INFORMATION REGARDING THE CITY OF MEMPHIS, TENNESSEE AND SHELBY COUNTY, TENNESSEE

In addition to the information provided in the Official Statement, the City of Memphis, Tennessee (the “City”) and the County of Shelby, Tennessee (the “County”) have provided the following general information regarding the City and the County. A complete review of this **APPENDIX D**, together with the body of the Official Statement and all other appendices attached thereto, are essential to the making of an informed investment decision by any purchaser of the Series 2020 Bonds. In the making of an informed investment decision relating to the Series 2020 Bonds, a potential purchaser should not conclude that the presentation of information in this **APPENDIX D**, versus a presentation of the same in the body of the Official Statement, denotes that the information provided in this **APPENDIX D** is of less relevance or importance than the information set forth in the body of the Official Statement.

Neither the City nor the County have authorized anyone to give any information or to make any representations not contained herein or supplemental hereto and, if given or made, such other information or representations must not be relied upon as having been authorized. All the following information estimates and expressions of opinion are subject to change without notice. The delivery by the City and the County of the information contained herein shall not, under any circumstances, create any implication that there has been no material change in the affairs of the City or the County since the date of the Official Statement.

Although the economic and demographic information provided below has been collected from sources that the City and the County consider to be reliable, neither the City nor the County have made any independent verification of the information provided by non-City and non-County sources, and neither the City nor the County take any responsibility for the completeness or accuracy thereof. The current state of the economy of the City, the County, the State of Tennessee (the “State”), and the United States of America may not be reflected in the data discussed below, because the information below generally reflects annual data for comparative purposes. Such information is generally in relation to dates and periods prior to the economic impact of the Coronavirus Disease 2019 (“COVID-19”) pandemic and the resulting measures instituted to slow it. This information is provided only as general background. Due to the ongoing COVID-19 pandemic, there has been a significant deterioration in domestic and global economic conditions, which has caused negative effects on the economy of the City, the County, the State of Tennessee, and the United States of America.

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TABLE OF CONTENTS

	Pages
ECONOMIC AND DEMOGRAPHIC INFORMATION	D-3
Population Data.....	D-3
Per Capita Personal Income	D-3
Employment	D-4
Top 25 Largest Memphis Area Employers	D-5
Top 25 Largest Memphis Area Manufacturers	D-6
Building Permits	D-7
THE ECONOMY	D-8
General	D-8
Trade Area.....	D-8
Agribusiness.....	D-8
Leisure and Hospitality	D-9
TRANSPORTATION	D-12
Air	D-12
Highway	D-14
Rail.....	D-14
Public Transit	D-14
Interstate Bus Lines.....	D-14
Water	D-14
EDUCATION	D-16
LIBRARIES	D-16
HEALTHCARE AND BIOSCIENCE	D-17

ECONOMIC AND DEMOGRAPHIC INFORMATION

Population Data

The following table presents population data for the City, the County, the State and the United States for calendar years 2015 through 2019.

Population Data ⁽¹⁾
Calendar Years 2015-2019
(Amounts in Thousands)

	2015	2016	2017	2018	2019
Memphis	654	653	651	651	651
Shelby County	938	937	935	936	937
Tennessee	6,591	6,646	6,709	6,772	6,829
United States	320,635	322,941	324,986	326,688	328,240

⁽¹⁾ From time to time, the United States Census Bureau revises its population estimates.

Source: United States Census Bureau, Annual Estimates of Resident Population, as of July 1, 2019.

Per Capita Personal Income

The following table presents per capita income for the City, the County, the State and the United States for calendar years 2014 through 2018.

Per Capita Personal Income
Calendar Years 2014-2018 ⁽¹⁾

	2014	2015	2016	2017	2018
Memphis ⁽²⁾	\$41,200	\$42,588	\$43,694	\$44,958	\$46,620
Shelby County	43,920	45,324	46,321	47,655	49,465
Tennessee	40,977	42,810	43,932	45,517	48,995
United States	47,025	48,940	49,831	51,640	54,501

⁽¹⁾ From time to time, the United States Bureau of Economic Analysis may revise its income data.

⁽²⁾ Includes the Memphis Metropolitan Statistical Area.

Source: United States Bureau of Economic Analysis, as of January 30, 2020.

Employment

Due to the COVID-19 pandemic, the unemployment rates have drastically been affected since the end of calendar year 2019. As of May 2020, as estimated by the United States Bureau of Labor Statistics, the unemployment rates for the City and the County were 13.2% and 11.6%, respectively. The unemployment rates for the State and the United States were 11.0% and 13.0%, respectively. During this time there is no reasonable method of predicting whether unemployment rates will decrease or increase in the short or long-term period.

Prior to the COVID-19 pandemic, the unemployment rates were steadily decreasing from previous calendar years. According to the United States Bureau of Labor Statistics, the unemployment rates for the City and the County were 4.4% and 4.0%, respectively, in 2019. The following table presents annual employment and unemployment trends in the City, the County, the State and the United States for calendar years 2010 to 2019.

**Labor Force Trends ⁽¹⁾
Calendar Years 2010-2019**

Calendar Year	Shelby County ⁽²⁾		Unemployment Percentages			
	Employed	Unemployed	City of Memphis	Shelby County	Tennessee	USA
2019	431.9	18.1	4.4%	4.0%	3.4%	3.7%
2018	424.0	18.4	4.6	4.2	3.5	3.9
2017	417.7	19.1	4.8	4.4	3.8	4.4
2016	411.9	23.8	5.3	5.5	4.8	4.9
2015	401.5	26.5	6.2	6.1	5.6	5.3
2014	394.0	33.6	7.6	7.9	6.5	6.2
2013	401.9	39.4	9.3	8.9	7.8	7.4
2012	409.1	38.7	9.1	8.6	7.9	8.1
2011	409.0	43.1	10.1	9.5	9.0	8.9
2010	405.0	43.8	10.1	9.8	9.7	9.6

⁽¹⁾ From time to time, the United States Bureau of Labor Statistics may revise its employment data.

⁽²⁾ In thousands.

Source: United States Bureau of Labor Statistics, as of June 2020.

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Top 25 Largest Memphis Area Employers

The following table from the *Memphis Business Journal: Book of Lists 2019-2020* illustrates the top 25 largest Memphis Area Employers (ranked by local full-time employees).

Memphis Area Top 25 Employers ⁽¹⁾

	Company	Local Employees	Type of Business
1	Federal Express Corporation	30,000	Transportation, e-commerce & business services
2	Shelby County Schools	15,500	Government
3	Tennessee State Department	15,400	Government
4	United States Government	13,400	Government
5	Methodist Le Bonheur Healthcare ⁽²⁾	13,183	Health services
6	City of Memphis	8,200	Government
7	Baptist Memorial Health Care Corp.	7,313	Health services
8	Naval Support Activity Mid-South	6,500	Government
9	Wal-Mart Stores, Inc.	6,280	Trade, transportation, and utilities
10	The Kroger Co.	6,198	Trade, transportation, and utilities
11	Shelby County Government	5,031	Government
12	St. Jude Children's Research Hospital	4,898	Health services
13	Desoto County School District	4,302	Government
14	Technicolor	3,500	Trade, transportation, and utilities
15	University of Tennessee Health Science Center	3,487	Government
16	Nike Inc.	3,200	Trade, transportation, and utilities
17	University of Memphis	2,858	Education
18	Memphis Light, Gas & Water	2,700	Trade, transportation, and utilities
19	First Horizon National Corp.	2,680	Financial Services, Banking, Wealth Management
20	Regional One Health	2,627	Health services
21	XPO Logistics Supply Chain	2,540	Trade, transportation, and utilities
22	Veterans Affairs Medical Center	2,447	Health services
23	Saint Francis Healthcare ⁽²⁾	2,430	Health services
24	International Paper Co.	2,400	Manufacturing
25	Smith & Nephew Inc.	2,300	Manufacturing

⁽¹⁾ Estimated.

⁽²⁾ In 2020, as a subsequent event, Methodist Le Bonheur Healthcare purchased Saint Francis Healthcare, creating a merger of these two healthcare entities.

Source: *Memphis Business Journal: Book of Lists 2019-2020*.

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Top 25 Largest Memphis Area Manufacturers

The following table from the *Memphis Business Journal: Book of Lists 2019-2020* illustrates the top 25 largest manufacturers in the Memphis area (ranked by local full-time employees).

Memphis Area Manufacturing Companies ⁽¹⁾

	Company	Local Employees	Products
1	Smith & Nephew Inc.	2,300	Joint Reconstruction and Trauma Devices
2	UTC-Carrier Corp.	1,600	Split System Condensing Units
3	ABB Electrification Products	800	Electrical Connectors and Components
3	Hino Motors Manufacturing USA	800	Rear Axle for Trucks; Front End Suspension
5	Unilever	700	Ice Cream, Klondike Bars, Popsicles
6	MicroPort Orthopedics Inc.	554	Orthopedic Products, Implants
7	Electrolux	530	Stoves, Ovens and Freestanding Ranges
8	K.T.G. (USA) Inc.	490	Bathroom and Facial Tissue and Paper Towels
9	Nucor Steel of Memphis Inc.	450	Steel
10	The Hershey Co.	400	Candy, Mints and Gum
11	Wright Medical Group N.V.	395	Orthopedic Implants
12	Competition Cams Inc.	375	Automotive Performance Aftermarket
13	Cummins Inc.	373	Diesel Components and Engines
14	Bryce Corp.	356	Flexible Packaging
15	Kellogg Co.	350	Cereal
16	Olympus Surgical Technologies of America	324	Ear Nose and Throat Implants
17	Buckman	320	Specialty Industrial Chemicals
17	Mueller Industries Inc.	320	Tubular Products, Fittings and Valves
19	Valero Energy Corp.	311	Gasoline, Fuel, Petrochemicals
20	Charms, Division of Tootsie Roll Industries	300	Hard Candy
20	ThyssenKrupp Elevator Manufacturing Inc.	300	Elevators & Industrial Lifting Equipment
22	Barr Brands International Inc.	285	Heavy Duty Cleaning
23	DuPont Nutrition & Health	280	Soy Protein
24	Kellogg Co.	250	Waffles
25	Brother Industries (USA) Inc.	235	Office Products; Manufacturing Services

⁽¹⁾ Estimated.

Source: *Memphis Business Journal: Book of Lists 2019-2020*.

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Building Permits

The following table presents annual data on the number of building permits granted and the value of related construction between Fiscal Years 2015-2019 for both the County and the City.

Building Permits Fiscal Years 2015-2019

Fiscal Year	Shelby County ⁽¹⁾		City of Memphis		City as a % of Shelby County
	Total Number Issued	Valuation ⁽²⁾	Total Number Issued	Valuation ⁽²⁾	
2015	6,600	1,197,691	4,901	869,444	72.6%
2016	6,458	1,120,594	4,704	864,921	77.2
2017	6,968	1,315,647	4,884	935,446	71.1
2018	6,907	1,276,982	4,973	926,505	72.6
2019	6,637	2,169,484	4,662	1,696,732 ⁽³⁾	78.2

⁽¹⁾ Includes all incorporated and unincorporated areas of the County except the Cities of Bartlett and Collierville.

⁽²⁾ In thousands of dollars.

⁽³⁾ Increase in valuation due to large construction projects, including projects for St. Jude Children's Research Hospital and the City's Downtown Convention Center.

Source: Shelby County, Tennessee Building Department.

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THE ECONOMY

General

In recent years, the economy of the City has experienced notable success in attracting new businesses along with the continued growth of existing businesses. This success is due in large part to the City's location near the geographic center of the nation, combined with excellent transportation facilities. Also, the City benefits from serving as the trade center for the surrounding area.

Trade Area

Trade and retail facilities in the City serve a trade area of 76 counties, with a radius of roughly 200 miles east and west and a longer radius paralleling the Mississippi River approximately 300 miles north and south. This trade territory includes 13 counties in Arkansas, one county in Kentucky, 41 counties in Mississippi, two counties in Missouri and 19 counties in Tennessee.

The Memphis International Airport, the Port of Memphis (which is located along the Mississippi River and is the fifth largest inland port in the U.S.), railroads (which make Memphis one of four U.S. cities served by five Class I railroads), four U.S. interstate systems, and its central location in the United States, all contribute to the City's unique geographical position. In addition, the City is located less than 500 miles from the mean center of the U.S. population; therefore, 75% of the U.S. population can be reached within a 20-hour drive from the City. Its logistics and transportation services allow customer orders to be placed late in the day for next morning delivery. Accordingly, transportation and distribution play a major role in the economy of the City and the County.

Agribusiness

The Mid-South area, encompassing the Mississippi River Delta, is one of the richest agricultural areas in the nation. Farming is a major occupation of the region and has developed into major agribusiness activities. The 200-day growing season and favorable climate encourage the production of a variety of products. There is a major emphasis on soybeans, cotton and cattle, with additional interest in rice, corn, peaches, apples and a variety of vegetables.

The City is a leading spot cotton market and the nation's second largest processor of soybeans, third largest meat processor and third largest total food processor. Also, agricultural processors, packers, shippers, distributors and merchants are becoming increasingly visible contributors to the growth of the City and its economy.

An international agricultural market center, Agricenter International, was established in 1985 and is located in the eastern part of the City, approximately 30 minutes from downtown Memphis. The 140,000-square-foot exhibition center provides a forum for manufacturers, researchers and agribusiness organizations and producers from across the country. Its facilities include a 1,000-acre demonstration farm, both indoor and outdoor exhibition space, a fishing lake and an auditorium with

seating capacity of 500. The Agricenter is operated by a nonprofit entity pursuant to a management contract with the Shelby County Agricenter Commission.

Indigo Ag, a high-tech agricultural company, announced in December 2018 its plans to locate its North American headquarters in the City's downtown. The company is expected to occupy approximately 60,000 square feet of office space downtown. Founded in 2014, Indigo Ag primarily focuses on coating crop seeds with beneficial microbes that are intended to protect crops from disease and drought.

In 2019, the Mississippi River Delta area experienced significant flooding, including the flooding of hundreds of thousands of acres of farmland. Flooding in the area has become more frequent with recent patterns of increasing rainfall. It is unknown how long it will take for such flooded areas to recover or how increasing rainfall patterns may affect Delta communities, the area's farming business and the area's larger economy in the future.

Leisure and Hospitality

The City's tourism industry has shown considerable growth since 1990. Some of the principal reasons for the growth include the investment of public funds into tourism development projects, the area's music culture and industry and the development of casino gaming in nearby Northern Mississippi. According to the Memphis Convention and Visitors Bureau, tourism contributed approximately \$3.65 billion in direct, indirect and induced spending to the State's economy in 2018. The following are some examples of tourism attractions that can be enjoyed in the City:

BassPro Shop – In 2015, BassPro Shops opened a retail store and tourist attraction in the Pyramid building located in downtown Memphis on the banks of the Mississippi River. In addition to its retail store, the 220,000 square foot facility includes a hotel, a bowling alley, restaurants, an aquarium, an indoor shooting range, a duck aviary and an alligator pit.

Beale Street Historic District – The Beale Street Historic District, filled with rich music heritage, is located in Downtown Memphis and on an annual basis attracts approximately four million patrons, both tourists and residents. Entertainment in this District focuses on the Blues, which developed on Beale Street throughout the early and middle part of the 20th century.

Graceland Memphis – The other large music-related attraction is Graceland, the home of the late Elvis Presley, which serves as a museum honoring the early rock-and-roll pioneer. Graceland attracts an annual average of more than 750,000 people, many of whom make Graceland the primary reason for their visit to the City.

Liberty Park – The City has rebranded its Fairgrounds Campus and named it “Liberty Park”. Within Liberty Park, the City is proposing to develop a (i) 22-acre Youth Sports and Event Complex encompassed with a play area, outdoor track with soccer and football fields, and a large building space containing basketball and volleyball courts; and (ii) an over 13-acre space to be transformed into a mixed-use area focused on hospitality, commercial retail, family entertainment, office space use, and market-rate housing located at the City's Fairgrounds Campus. The City

intends to issue Tourism Development Zone Bonds for this project in the 2nd quarter of 2021. Liberty Park is expected to open sometime in 2022.

Memphis Grizzlies' Basketball Arena – In 2001, the NBA Vancouver Grizzlies were refranchised and relocated to Memphis. An arena, the FedEx Forum, was constructed just south of Beale Street for the Grizzlies' use. The construction of the FedEx Forum, an approximately 18,200 seat multipurpose sports, entertainment and public assembly facility with suites, lounge boxes and other premium seating, was completed in September 2004 and opened for the 2004-2005 NBA season. It is the home of the Memphis Grizzlies of the NBA, the University of Memphis men's basketball team and various concerts and other events. As a result of the COVID-19 pandemic, the 2019-2020 NBA season was suspended in March 2020, as were most major entertainment events scheduled for 2020. The 2019-2020 NBA season has resumed in Orlando, Florida, and it is unclear when the NBA will resume play in the City of Memphis. It is further unclear how other entertainment events at the FedEx Forum will be impacted by the pandemic in ensuing years.

Memphis Redbirds/Memphis 901FC and AutoZone Park – In 2000, Memphis became the home of the Memphis Redbirds, a minor league baseball team, and constructed a new stadium, AutoZone Park, in the heart of downtown. The Memphis Redbirds (the AAA farm club of the St. Louis Cardinals) play at the AutoZone Park, a baseball stadium in downtown Memphis containing approximately 10,000 seats and two upper decks with 48 luxury Club suites. AutoZone Park provides grass berm seating down both the left field line and the right field line and has a family-oriented games and amusement area.

In 2018 Memphis welcomed Memphis 901FC, as a professional franchise in the USL Championship (United Soccer League), which will use AutoZone Park as its home. The USL Championship includes a membership of more than 30 clubs across the United States and Canada. In 2019, the Memphis 901 Football Club, a professional soccer team affiliated with the United Soccer League ("USL"), began play with home games hosted at AutoZone Park. As a result of the COVID-19 pandemic, the 2020 USL season was suspended, and the 2020 AAA baseball season was cancelled. Though the USL resumed play in July 2020, it is unclear whether future seasons of the USL will be impacted. It is further unclear if future AAA baseball seasons will be impacted as well.

National Civil Rights Museum – The National Civil Rights Museum is a complex of museums and historic buildings in the City; its exhibits trace the history of the Civil Rights Movement in the United States from the 17th century to the present. The museum is built around the former Lorraine Motel, which was the site of the assassination of civil rights activist Martin Luther King Jr. on April 4, 1968. Two other buildings and their adjacent property, also connected with the King assassination, have been acquired as part of the museum complex. The museum reopened in 2014 after renovations that increased the number of multi-media and interactive exhibits, including numerous short movies to enhance features.

The Renasant Convention Center – The Renasant Convention Center (the "Convention Center") offers 300,000-square-feet of space designed especially for conventions, tradeshow and performing arts. The Convention Center is located in the downtown convention district on the Trolley Line, convenient to hotels, attractions, shopping and entertainment, and is only 12 miles from the Memphis International Airport. The Convention Center has had over 500,000 visitors

annually. The Convention Center includes a 125,000-square-foot exhibition hall, a 35,000-square-foot secondary exhibit hall, a 28,000-square-foot ballroom, 31 meeting rooms and the Cannon Center for the Performing Arts, which seats 2,100 people and is the permanent home of the Memphis Symphony Orchestra. The City of Memphis is currently in the process of a \$175 million-plus renovation and expansion of the Convention Center, a portion of which was financed with general obligation bond proceeds of the City of Memphis. The renovation and expansion are expected to be completed by the fall of 2020 and are designed to both modernize the facility and increase meeting space, including the addition of a new exterior concourse and pre-function space. As a result of the COVID-19 pandemic, the Convention Center bookings during the remainder of 2020 have been significantly reduced. It is unclear if and when bookings will return to historic levels.

Many other features enhance the City's ability to attract visitors. These include Shelby Farms, the City's 4,500-acre park system which is one of the largest urban park systems in the United States, as well as the Memphis Zoo and Aquarium, a number of fine art galleries, the Overton Square entertainment district, the 62,000-seat Liberty Bowl Memorial stadium and the Memphis International Raceway. There are approximately 241 hotels and 22,353 hotel rooms in the City and Shelby County, including the historic Peabody Hotel, the Memphis Marriott Downtown Hotel, the Westin Hotel and other facilities located downtown, and there are currently more than 2,000 new hotel rooms in various stages of development for the downtown and midtown areas. Additionally, there are a number of large hotels in the eastern part of the City and Shelby County.

As a result of the COVID-19 pandemic, several popular tourist attractions in the City and Shelby County, including but not limited to the Beale Street Historic District and Graceland, are operating at reduced capacity or are closed. These closures and capacity modifications are anticipated to be temporary, though it is unknown when these changes will cease or whether increased restrictions or additional closures will be necessary.

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TRANSPORTATION

Air

Memphis-Shelby County Airport Authority

The Memphis-Shelby County Airport Authority (the “Authority”) was created in 1969 pursuant to the Metropolitan Airport Authority Act and is body politic and corporate of the State of Tennessee. The Authority is governed by a seven-member Board of Commissioners (the “Board”), five of whom are appointed by the Mayor of the City and two by the Mayor of the County. The City Council confirms these appointments for seven-year staggered terms. A member of the Board may be removed from office by a two-thirds vote of the City Council, but only after notice of cause for the removal has been served and the member has been granted an opportunity for a public hearing on the matter.

Memphis International Airport

The Memphis International Airport (“MEM”) is located in Shelby County, approximately ten miles southeast of Downtown Memphis and 3.5 miles north of the Tennessee-Mississippi state line and occupies approximately 5,100 acres of land. Access to MEM is provided predominately via Interstate 240 (I-240), Plough Boulevard, and Tchulahoma Road. I-240 is the southern half of the Memphis beltway connecting Interstate 40 and Interstate 55. MEM has four 150-foot wide runways, all of which are equipped with precision instrument landing systems and are suitable for use by large air carrier aircraft. MEM’s other existing facilities include a 3.5 million square foot sorting and handling facility operated by Federal Express Corporation; a Ground Transportation Center, which houses rental car operations and 4,541 economy public parking spaces; a three level 2,654 space parking garage; fueling facilities; an industrial park; and various airport and aircraft support services.

The Authority owns and operates two general aviation reliever airports; the General DeWitt Spain Airport and the Charles W. Baker Airport, each located on approximately 400 acres of land in the County. There are approximately 220 based general aviation aircraft at the Charles W. Baker Airport and the General DeWitt Spain Airport. Both airports have automated fueling systems, aircraft maintenance services, hangars and tie downs, aircraft rentals and charter services for general aviation. Runway 18-36 at Charles W. Baker Airport is 3,500 feet in length and Runway 16-34 at the General DeWitt Spain Airport is 3,800 feet in length. Both runways are 75 feet wide with asphalt surfaces.

Concourse B Modernization Project

The Concourse B Modernization Project completely redesigns, reconstructs, and expands the spine and southeast leg of Concourse B to provide a more efficient facility with additional passenger amenities such as higher ceilings, increased natural lighting, wider corridors, larger gate areas, new concessions, moving walkways, additional seating, children’s play area, military lounge, and charging stations. Demolition has been completed for the Concourse B Modernization Project. Structural steel columns and roof structure, including most of the decking is nearly complete and

column installation is underway. Structural foundations and electrical infrastructure to support new jet bridges is also underway. Utility improvements are nearing completion in the utility tunnel under this Concourse. In the rotunda, the interior framing and terrazzo floor installation has begun. The Concourse B Modernization Project is anticipated to be completed sometime in late 2021.

Passenger Aviation Activity

As of June 2020, MEM had scheduled passenger service provided by six United States passenger carriers and one foreign flag carrier.

The following table presents MEM activity for calendar years 2015 through 2019.

Memphis International Airport Aviation Activities Calendar Years 2015-2019

	2019	2018	2017	2016	2015
Enplaned Passengers by Airline Type					
Major / National	1,628,720	1,532,435	1,452,157	1,308,932	1,128,865
Regional/Commuter	667,555	655,217	631,403	687,785	736,788
Non-Scheduled	<u>3,530</u>	<u>964</u>	<u>887</u>	<u>478</u>	<u>7,340</u>
Total	<u>2,299,805</u>	<u>2,188,616</u>	<u>2,084,447</u>	<u>1,997,195</u>	<u>1,872,993</u>
Aircraft Total Movements ⁽¹⁾	199,172	194,682	190,662	191,260	186,218
Aircraft Landed Weight (in thousand pound units)	27,204,622	27,058,742	26,484,421	26,333,844	24,921,008
Per Thousand Pounds of Cargo Handled 2019:	Domestic	International	Air Mail	Total	
Cargo – Enplaned	4,210,953.1	675,081.9	9,279.5	4,895,314.5	
Cargo – Deplaned	3,873,708.3	752,107.8	10,509.9	4,636,326.0	
Total Cargo Handled 2019	<u>8,084,661.4</u>	<u>1,427,189.8</u>	<u>19,789.4</u>	<u>9,531,640.5</u>	
Total Cargo Handled 2018	<u>8,137,304.8</u>	<u>1,404,052.1</u>	<u>21,180.9</u>	<u>9,562,537.7</u>	
Increase (Decrease) (2019 vs. 2018)	(52,463.4)	23,137.6	(1,391.5)	(30,897.2)	
Percent Increase (Decrease)	(0.65%)	1.65%	(6.57%)	(0.32%)	

⁽¹⁾ Excludes Military and General Aviation activity.

Source: Memphis-Shelby County Airport Authority, Calendar Year Statistics, <http://www.flymemphis.com>

Federal Express Corporation

Federal Express Corporation (“FedEx”), an all-cargo air carrier, has its world headquarters in Memphis, Tennessee, and operates its Super Hub at MEM (the “FedEx SuperHub”). The FedEx SuperHub is the primary sorting facility for FedEx and serves as the center of its global hub-and-spoke system. FedEx has been headquartered in the City since its inception in 1973. The FedEx SuperHub operates 24 hours a day and 365 days per year. The FedEx SuperHub occupies approximately 945 acres and includes 3.6 million square-feet of sorting and handling facilities, that are capable of processing 484,000 packages per hour, aircraft hangars, aircraft ramp areas, vehicle parking areas, flight training and fuel facilities, administrative offices and warehouse space. The

FedEx SuperHub has the capacity to park more than 165 aircraft at a time, which equates to one aircraft landing every 40 seconds during peak operations. FedEx accounts for approximately 150 arrivals at MEM during its night sort operations and 100 during its day sort operations. FedEx also executed a public-private sole source contract with the United States Postal Service in 2001 that extends through 2024.

Highway

The City is connected to the rest of the nation by four interstate highway systems. These highways combined with a circumferential expressway and two highway bridges crossing the Mississippi River make all parts of Memphis readily accessible to its surrounding communities.

Rail

The City is the third largest rail center in the United States behind Chicago, Illinois and St. Louis, Missouri. Five Class One railroads operate out of the County with competitive freight service to all principal cities in the U.S. and direct, on-line service to 35 states. Serving the County area are the Norfolk Southern Railroad, Burlington Northern, Canadian National & CSX, and the Union Pacific System. Eighteen other rail carriers maintain off-duty offices in the County for the development and coordination of traffic over their lines. The rail lines offer a variety of modern, specialized equipment and services, including piggy-back and containerized freight.

Public Transit

The Memphis Area Transit Authority ("MATA") provides public mass transportation within the City and parts of the County on fixed-route buses, paratransit vehicles and rubber-tired and vintage rail trolleys. MATA provides fixed-route bus and paratransit services throughout its service area, which consists of 280 square miles. In fiscal year 2018, MATA ridership (all modes) consisted of approximately 6.6 million passenger trips. The fixed-route bus system operates about 6 million revenue miles annually on approximately 33 routes. Service is available 365 days per year.

Interstate Bus Lines

Trailways / Greyhound Bus Lines is the major interstate bus line serving the City and County, offering bus service from its Memphis area terminals to the continental United States and Canada. Trailways / Greyhound Bus is supported by three smaller lines: Bridge Transit Corp., Great Southern Coaches, and Gulf Transport Co.

Water

The Mississippi River ranks third in length, fourth in drainage area and fifth in volume in the world. Among the world's ten largest rivers, reaching from the Gulf of Mexico deep into the heartlands of the United States, the Mississippi River system encompasses about 8,900 miles of navigable inland waterways. This system has also helped make Memphis a close neighbor of the agricultural Midwest and the industrial East and West Coasts. The waterways allow for barge service to New Orleans and other Gulf Ports along the Gulf Intercoastal Waterway. This intracoastal

waterways system of approximately 1,173 miles connects Florida and Texas and has offered unprecedented growth opportunities to industry in Memphis. In addition, regular service is available to Europe and Asia via the waterway system.

In terms of freight handled, the Port of Memphis (the "Port") is the fourth largest shallow draft river port in the United States and second largest inland shallow draft river port on the Mississippi River. The Port handles approximately 12 million tons of barge driven cargo each year. The navigation channel is maintained by the United States Army Corps of Engineers. Favorable climatic conditions typically permit year-round availability of water transportation. The Port's operations have an estimated economic impact of \$7.1 billion annually and support more than 19,900 jobs throughout the County.

The following table presents total tonnage shipped through the Port of Memphis for calendar years 2009 through 2018:

**Total Tonnage
Port of Memphis
Calendar Years 2009-2018**

Calendar Year	Total Tonnage
2009	13,980,433
2010	12,155,049
2011	12,611,541
2012	13,564,063
2013	14,243,251
2014	14,748,636
2015	12,025,514
2016	12,184,332
2017	11,536,737
2018	11,055,740

Source: Waterborne Commerce Statistics of the United States.

Two still-water harbors in the Memphis area provide shelter from the river current – the Port and Wolf River Harbor. Wolf River Harbor, the City's original harbor and located in north Memphis and McKellar Lake, is a \$50 million, man-made harbor just south of the Central Business District in the City. Public facilities include three public terminals; LASH service; roll-on, roll-off service; bulk loading facilities to barges; bulk sacking facilities; chemical fertilizer storage tanks; heavy lifts up to 100 tons (CBI Nuclear heavy lift to 1200T); two boat/barge repair facilities; and six grain elevators.

Most major common carrier barge lines provide service to the Port, including American Commercial Barge Lines, Federal Barge Lines, Ohio Barge Lines, Sioux City and New Orleans Barge Lines, DRAVO-Mechling Corporation, Riverway Barge Corporation and Valley Barge Lines.

EDUCATION

Shelby County Schools

Shelby County Schools ("SCS") provides public education for school-age children in Shelby County, including the City. SCS is governed by the seven-member Shelby County Board of Education and is the largest school system in Tennessee and among the top 25 in the nation. SCS serves approximately 106,000 students at approximately 200 schools. The following table presents the historical enrollment and attendance for SCS for the past five school years.

Historical Enrollment and Attendance Shelby County School System

<u>Shelby County Schools ⁽¹⁾</u>		
<u>School Year</u>	<u>Average Daily Enrollment</u>	<u>Average Daily Attendance</u>
2017-2018	104,515	99,855
2016-2017	103,703	97,957
2015-2016	106,455	100,469
2014-2015	110,807 ⁽¹⁾	104,305
2013-2014	144,338	136,150

⁽¹⁾ In August 2014, six new municipal school districts began operation in the County: Arlington Community Schools, Bartlett City Schools, Collierville Municipal School District, Germantown Municipal School District, Lakeland School System and Millington Municipal Schools. Approximately 32,000 students are enrolled in the municipal school districts.

Source: State of Tennessee Department of Education Report Card, 2018 Annual Statistics Report.

Post-Secondary Institutions

The Memphis area is home to numerous post-secondary institutions, notably including: the University of Memphis; Christian Brothers University; Rhodes College; Lemoyne-Owen College; Baptist Memorial College of Health Sciences; and the University of Tennessee Health Science Center – Memphis.

LIBRARIES

The Library System has 18 branches throughout the area, and an annual circulation of about four million books. The Memphis library system houses five million volumes. The Benjamin L. Hooks Central Library serves as the flagship information hub of the Mid-South. Situated in the middle of the City, the 330,000 square-foot facility is larger and more accessible to all residents.

HEALTHCARE AND BIOSCIENCE

The Memphis area is home to several hospitals, including St. Jude Children's Research Hospital, Baptist Memorial Hospital, Methodist Le Bonheur Healthcare, and Region One Health.

St. Jude Children's Research Hospital – St. Jude Children's Research Hospital ("St. Jude") is the world's leading childhood cancer research center and one of the only institutions devoted solely to the study of catastrophic childhood illnesses, with its primary focus on leukemia and solid tumors. American Lebanese Syrian Associated Charities (ALSAC) is the fundraising and awareness organization for St. Jude and is responsible for raising 75% of the funds necessary to operate St. Jude. In 2017, St. Jude announced their plans for their \$1 billion capital expansion of the Downtown campus, which will be one of the largest capital projects in Memphis history. Within this development, St. Jude will erect a \$412 million Advanced Research Center which anticipated to be complete in 2021. St. Jude also is planning a new outpatient facility, two parking garages and an additional office building, estimated to cost approximately \$300 million.

Baptist Memorial HealthCare Corporation – Baptist Memorial Healthcare Corporation ("Baptist") is a multi-facility health care system serving the regional communities of the Mid-South. Facilities owned and operated by Baptist in Shelby County include Baptist Memphis, Baptist Collierville, and Baptist Women's and Children's Hospital.

Methodist LeBonheur Healthcare – Methodist LeBonheur Healthcare ("Methodist"), one of Tennessee's largest healthcare providers, is an integrated delivery system providing a broad spectrum of inpatient and outpatient care services to patients from over 60 counties in Tennessee, Mississippi, Arkansas and Missouri. Methodist dedicated a new \$275 million tower in late 2018 which included a state-of-the-art transplant institute which consolidated patient services into a single location.

Regional One Health Hospital – Regional One Health Hospital ("Regional One") is a private hospital owned by a not-for-profit corporation, which receives annual appropriations from the County. Regional One's Centers of Excellence include the Elvis Presley Memorial Trauma Center, which is the only Level 1 trauma center in the region and the third busiest in the nation; the Firefighters Regional Burn Center, the only full-service center in a 150-mile radius; the Sheldon B. Korones Newborn Center (an intensive care unit for premature and distressed newborns), the only Level IV center in West Tennessee; the Wound Care Center, which specializes in the treatment of chronic non-healing wounds; and High Risk Obstetrics.

The Memphis area is also a leading medical and bioscience center. It is the second largest orthopedic device manufacturing center in the United States and is home to the divisional or corporate headquarters of the following orthopedic and medical device leaders: Medtronic, MicroPort Orthopedics, Smith & Nephew and Wright Medical. In addition, the University of Tennessee Health Science Center ("UTHSC") is a staple of the Memphis community and has trained and employed some of the nation's top health-care professionals. UTHSC is estimated to have had a \$3 billion impact to the Memphis-area economy.

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APPENDIX E

**AUDITED FINANCIAL STATEMENTS OF MLGW FOR THE
FISCAL YEAR ENDED DECEMBER 31, 2019**

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APPENDIX E

FINANCIAL STATEMENTS

Audited Financial Statements of the Memphis Light, Gas and Water Division (“MLGW”) and supplementary information as of and for the fiscal year ending December 31, 2019, together with the independent auditors' report from Mayer Hoffman McCann P.C., Memphis, Tennessee, are hereby incorporated by reference as part of this **APPENDIX E**. To the extent there are any differences between the electronically posted financial statements of MLGW and the printed financial statements of MLGW, the printed version shall control.

The electronic link to view the 2019 Audited Financial Statements of MLGW can be found at <http://www.mlgw.com/images/content/files/pdf/AnnualReport2019.pdf>.

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Moving forward to a brighter future

2019 Annual Report
Memphis Light, Gas and Water Division



Table of Contents

About MLGW	2
Our Suppliers	2
Our Leaders	3
President's Letter	4

OUR PROGRESS

80 years of service	5
MLGW: A timeline	6
MLGW Mission, Vision and Values	7
The MLGW Way.	8
Memphis: 10 years among lowest winter utility bills	10
Water rate increase approved	10

OUR PRESENT

A new MLGW.com	11
Flipping the switch on solar power	11
Improving Downtown	12
MLGW employees play vital role in blood donations.	13
"The MAGIC of Safety" survey winners	14
MLGW adopts Craigmont Middle	15
MLGW raises funds for Mid-South Food Bank	15
Two sistahs dedicated to serving others	16
MLGW finishes work on 350 homes in Share The Pennies Program	17

OUR FUTURE

Power supply alternatives	19
Finding greater efficiencies.	19
Letter of Transmittal	L-1
Financial Highlights	H-1

FINANCIAL SECTION

Independent Auditor's Report.	A-1
Management's Discussion and Analysis	M-1

FINANCIAL STATEMENTS

Statements of Net Position	F-1
Statements of Revenues, Expenses and Changes in Net Position	F-4
Statements of Cash Flows.	F-5
Notes to Financial Statements	N-1
Required Supplementary Information	R-1
Supplemental Information	S-1
Report on Internal Control over Financial	
Reporting and on Compliance and Other Matters Based on	
Audits of Financial Statements Performed in Accordance with	
Government Auditing Standards	Z-1
Schedule of Prior Year Audit Findings	Z-3

About MLGW

The responsibility to provide excellent service to the citizens of Memphis and Shelby County inspires us every day, infusing our purpose, principles and direction. Founded in 1939, Memphis Light, Gas and Water Division is the nation's largest full-service municipal utility company; our services of Electric, Gas and Water are the foundation to the quality of life that more than 433,000 customers enjoy. Each day, we strive to exceed expectations because "Serving You Is What We Do."

Our Suppliers

The Tennessee Valley Authority (TVA) provides MLGW with wholesale electricity. MLGW is TVA's largest customer, representing about 11 percent of TVA's total load. MLGW buys its natural gas from a variety of suppliers. It is transported by three pipeline companies – Texas Gas Transmission Corp., Trunkline Gas Co. and ANR Pipeline Co. Memphis and Shelby County receives its water from the Memphis Sand and Fort Pillow aquifers which is one of the largest artesian water systems in the world.



Our Leaders

The president and a seven-member Board of Commissioners leads MLGW. Board members serve staggered terms. Two board members, who live outside of Memphis but within Shelby County, serve in an advisory, non-voting capacity. The Memphis Mayor appoints the President and the Board members with the approval of the Memphis City Council.

MLGW Board of Commissioners

Michael E. Pohlmann

Leon Dickson Sr.

Carlee McCullough, Chair

Steven Wishnia

Mitch Graves, Vice Chair



Advisory Board Members

Kevin Young

Dwain Kicklighter

MLGW Senior Leadership Council

Jarl "J.T." Young, President and CEO

Dana Jeanes, SVP, CFO & CAO Secretary - Treasurer

Alonzo Weaver, SVP & COO

Jim West, VP and Chief Customer Officer

Gale Jones Carson, VP of Community and External Affairs

Cliff DeBerry Jr., VP of Design, Construction and Delivery

Von Goodloe, VP of Shared Services

Nick Newman, VP of Engineering and Operations

Cheryl Patterson, VP and General Counsel

Lashell Vaughn, VP and CIO

Lesa Walton, Chief Internal Auditing Officer

Roland McElrath, VP of Accounting

President's Letter

In the 80 years of service provided by Memphis Light, Gas and Water Division, there has never been a year quite like 2019. I'm excited to discuss the challenges we overcame as well as a bright forecast for the utility, its employees, customers and communities served.

In 2019, as the largest three-service utility in the United States, with more than 433,000 customers in Memphis and Shelby County, we re-formulated the reason why we exist (our mission statement) and where we are headed (our vision statement). Our mission is to safely deliver services that create and sustain superior customer experiences and our vision is to be the trusted provider of exceptional customer value in the communities that we are privileged to serve.

As we anticipated, challenges materialized because of our inability to secure rate and budget approvals required to make some much needed changes and improvements to our system. For instance, we knew more customers would experience outages and those outages would likely last longer than in 2018. In 2019, an average of 68,442 customers per month experienced an outage – an increase of 4% compared to 2018. Those outages lasted an average of 204 minutes per customer, a 22.2% increase from 2018. That equates to 167.3 million minutes of service interruption for MLGW customers, an increase of 27.3% from 2018.

Yet, MLGW employees persisted. Specifically, I recall the tornado that struck our service territory in late October, knocking out service to 43,000 customers. The damage was significant but most customers had their power restored the same day – just like in the aftermath of the other major outages. The consistency and efficiency of MLGW crews stood out as further evidence that MLGW's investments in employees, infrastructure and our communities have proven true.

Our safety culture has taken root. Our values, the MLGW Way, are blossoming; the core principles of safety, integrity, ownership, inclusion and compassionate service guide us to do more for our customers. For example, beyond offering some of the lowest rates in the nation, we enhanced mlgw.com to give customers a better mobile experience. We're involved with economic development projects that will alter downtown Memphis. Through programs like Share The Pennies, we have weatherized 350 homes and counting.

In 2019, we hosted several public meetings to gather input from customers and other stakeholders on our Integrated Resource Plan (IRP), a process that examines our future electric load and how MLGW should source its wholesale electric power supply in the future. We had an in-depth study to discover efficiencies within our operations. And given the approval of our first-ever, multi-year rate plan, we are fully equipped to improve our services.

The future is bright.

Jarl "J.T." Young, *President and CEO*



OUR PROGRESS

80 years of service

In 2019, Memphis Light, Gas and Water is proud to celebrate a significant milestone – 80 years of providing utility services to the residents of Memphis and Shelby County. MLGW was officially chartered as the city’s utility company in 1939. Eighty years later, MLGW is the nation’s largest three-service municipal utility with some of the lowest combined rates of any utility in the country.

MLGW began as a dream of prominent Memphians, such as Shelby County political leader and former Memphis Mayor E.H. Crump, to have all the utilities in the city owned and operated by the city government and free of interference from far-off companies and non-local interests.

When the Tennessee Valley Authority was formed in 1933, many felt the opportunity had arrived for Memphis to obtain cheap electric power. The unified Memphis Light and Water Division was formed in 1935 to oversee power and water systems and a contract with TVA was also signed that year. After three years of litigation and negotiations, a sale agreement for purchase of Memphis Power and Light was reached. On March 9, 1939, the governor of Tennessee signed an amendment to the Memphis charter creating Memphis Light, Gas and Water Division.

Since 1939, the Division has strived to improve the quality of life of Memphis and Shelby County customers through efficient and safe delivery of electricity, natural gas and water. The slogan found on the first MLGW logo still resonates with the Division today: “Public Service—Publicly Owned.”



MLGW: A timeline

- During the 1940s, many of the Division's employees temporarily left their jobs to serve their country during World War II.
- In 1950, MLGW crews responded to a crippling ice storm on Jan. 5 and 6, which interrupted power and caused \$567,000 in property damage. Permanent repairs continued for nine months.
- Work began in 1967 on the new MLGW Administration Building at 220 South Main Street. With the move in 1969 to a new location came a new logo as well, symbolizing MLGW's advances as a modern utility.
- During the 1970s, MLGW promoted the Gold Medallion all-electric houses as the homes of the future, focusing on energy efficiency.
- In 1986, MLGW joined forces with the University of Memphis to create a community-based consortium known as Energy Vision.
- MLGW's electric distribution system sustained nearly \$15 million in damages when the city was hit with a devastating ice storm in 1994. MLGW employees worked around the clock to restore power to 250,000 customers.



OUR MISSION

To safely deliver services that create and sustain superior customer experiences.

OUR VISION

To be the trusted provider of exceptional customer value in the communities we are privileged to serve.

OUR VALUES

Safety – We make working safely paramount... it is the most important thing we do. We seek to create and maintain a safe work environment for our people.

Integrity – We seek to do the right things for the right reasons. We build trust among our people and with all of our stakeholders through honesty and ethical behavior.

Ownership – We care about the MLGW enterprise and we act like owners. We treat the MLGW enterprise as we would our own and we operate with MLGW's long-term success in mind. We pursue excellence and innovation and we are accountable for our decisions and behaviors.

Inclusion – We serve customers who represent a variety of backgrounds. We are committed to including and developing a similar diversity among our teams and among those from whom we purchase products and services.

Compassionate Service – We are committed to providing superior customer and people experiences. We do so with empathy, courtesy and efficiency and we serve our community with a similar passion.



The MLGW Way

In 2019, Memphis Light, Gas and Water Division's updated mission statement is to safely deliver services that create and sustain superior customer experiences. The daily objective is to deliver great experiences for customers whether it is electric, gas or water. MLGW President and CEO J.T. Young wanted to inspire employees with a clear understanding of where the utility is headed and the core principles that are essential to providing exceptional service.

President Young said the vision — where MLGW is headed — is to be the trusted provider of exceptional customer value in the communities that the utility is privileged to serve. MLGW wants to be entrusted with the confidence of those customers that we serve. That's why it is important for MLGW to remain engrossed and engaged in the communities that we serve and MLGW will do this by holding onto its "non-negotiable" values of safety, integrity, ownership, inclusion and compassionate service. These values will dictate how MLGW employees engage and serve customers as well as each other.





Memphis: 10 years among lowest winter utility bills

MLGW continues to provide electricity, gas and water to Memphis and Shelby County at some of the lowest rates in America, according to the utility's annual Rates Survey. MLGW's typical winter residential bill was the third lowest among the U.S. cities surveyed. Only Oklahoma City and San Antonio posted lower rates than MLGW. We survey more than 40 cities, including many that are geographically close to Memphis, as well as utilities that are similar in size. All costs covered in this survey are based on published rates effective January 2019. Memphis continues to outperform many cities in terms of what customers pay for electricity, natural gas and water services.



Water rate increase approved

In 2019, the Memphis City Council approved an increase in water rates. The increase took effect March 2019 and will last through February 2020. The measure will raise roughly \$2.5 million and help cover a projected 2019 deficit in the utility's Water Division.



OUR PRESENT

A new MLGW.com

In 2019, Memphis Light, Gas and Water launched a new, improved mlgw.com. Among the many improvements, the new site is focused on giving our customers an enhanced mobile experience. The website design adapts its display to the user's screen size, making it more user-friendly. Recent research shows that mobile users accounted for 50 percent of all visitors to mlgw.com. PC users accounted for 45 percent, while tablet users were five percent. The updated site also gives customers quicker access to what they need, such as My Account, Bill Pay, information about assistance programs, important phone numbers, payment options, and online interaction through MLGW's social media and web chat.



Flipping the switch on solar power

In April 2019, MLGW participated in the “Flip the Switch” ceremony in Millington, TN for what is now the largest solar farm in the state.

Public-private partners for the \$100 million project include the city of Millington, the U.S. Navy, the Millington Industrial Development Board (MIDB), the Tennessee Valley Authority (TVA), Memphis Light, Gas and Water Division and the land owner, Silicon Ranch Corp.



It took 300 people eight months to assemble the solar farm consisting of 580,000 sun-tracking photovoltaic panels. The farm, which sits on about 390 acres of land, will generate 53 megawatts of energy or enough to power 7,500 homes annually to the benefit of the Millington Navy Base and surrounding community.

Improving Downtown

MLGW is making improvements to the reliability of the Downtown network by replacing substation assets at its Front Street Substation No. 4. Originally energized in December of 1939, the substation feeds a major portion of the Downtown network. MLGW is replacing power transformers and circuit breakers that have been in service since 1951. These upgrades, along with others planned in the future, should help to improve the reliability of the network and reduce customer outages. The project began in December 2018 and is expected to be completed during the first quarter of 2020. These improvements are being made while the substation is operating and will not cause a disruption in service.



MLGW is also currently involved with several projects that are helping to revitalize the Downtown area. Ongoing projects include:

- New Loew's convention center hotel across from City Hall.
- New hotel at B.B. King Boulevard and Union Avenue, across from AutoZone Park.
- New Hyatt hotel at Front and Beale Streets.
- New apartments, restaurant and garage as a part of One Beale.
- \$950 million Union Row project.
- \$1 billion investment project in the Pinch District.

OUTAGE MINUTES

	Average Number of Customers Out/Month	Average Outage Minutes /Customer	Total Minutes Out (in millions)
2019	68,442	204	167.3
2018	65,783	167	131.4



MLGW employees play vital role in blood donations

MLGW donors collectively gave 648 units of blood during the 2019 Vitalant Blood drives (formerly Lifeblood), touching the lives of up to 1,944 individuals and their families.

In order to serve the local community, Vitalant must collect 350 units of blood per day, meaning MLGW employees gave enough blood to supply nearly two days' worth of need. Founded in 1943, Vitalant is one of the nation's oldest and largest nonprofit transfusion medicine organizations. Comprised of a network of more than 125 community blood centers, each with its own rich history and legacy, Vitalant provides blood and special services to patients in more than 1,000 hospitals across 40 states. Each year, nearly 5 million Americans need blood transfusions. Blood helps trauma and burn patients, premature infants, heart surgery patients, organ transplant recipients and those fighting cancer, among others.



“The MAGIC of Safety” survey winners

Many new safety initiatives, processes and information-sharing projects were implemented in 2019. Corporate Safety Day for Customer Service Week in October was the perfect opportunity to get employee feedback. Corporate Safety challenged all areas across the Division to select which new safety initiative is making the most positive impact and to explain why. Congratulations to the employees of the Construction Services and Facilities Location area, Todd Carr, Supervisor and Gregg Deaton, Manager, for the winning safety survey entry. When asked “which new MLGW safety initiative do you feel has had (or will eventually have) the most positive safety impact on the Division,” 61% of survey participants selected “The overall increased awareness at every level of the enterprise.” However, in response to, “why”, the Construction Services and Facilities Location Area said the choice was obvious since it covers everybody in every department. Todd Carr said. “...It seems that the new safety culture being incorporated at MLGW is already beginning to take hold in our department. Safety is most effective when everyone at every level makes it a priority.”



MLGW adopts Craigmont Middle

Beverly Perkins, Corporate Social Responsibility, and Genevieve Thomas, Human Performance, met with the Principal Veda Turner and her staff of Craigmont Middle, our new adopt-a-school on Oct. 28. Perkins said MLGW selected Craigmont Middle because the school at 3455 Covington Pike is close to two MLGW facilities —

MLGW University and also Systems Operations. MLGW gave the school about a half-dozen boxes filled with tissues, hand wipes and hand sanitizer that MLGW employees collected during its, “School’s In, Germs Out” drive.



MLGW raises funds for Mid-South Food Bank

MLGW employee donations and fundraising activities hit a new all-time high for the Mid-South Food Bank. For 2019, MLGW employees raised \$43,149 — more than any other company in the Memphis area. In addition to garnering first place among large corporations, MLGW’s contribution totaled 52% of the \$82,773 that was collected during the 2019 food drive. MLGW raised \$41,300 in 2018 and \$37,888 in 2017 for the agency. “I know some people call us Memphis Light, Gas and Robbery, but I don’t think they know about this part,” MLGW President and CEO J.T. Young said, referencing MLGW’s strong community involvement during the MLGW

Operation Feed Recognition program. Organizers held the recognition program at the new Mid-South Food Bank operations at 3865 S. Perkins Rd. This year, MLGW saw 100% participation among 31 departments. Arnisa Price-Davis, GIS EAM and Materials Systems, and Vice-President and CIO Lashell Vaughn tied for top point giver for 2019. Among departments that were recognized: Client Services was named the Top Area and Design, Construction and Delivery was named as the Top Department based on the number of points donated by its employees. Also, Geographic Information Systems, Enterprise Asset Management and Material Systems won first place among small areas with 39 employees or less. Residential Resource Center topped the list among medium-sized areas with 40 to 69 employees. Construction Services and Facilities won the Large Areas with more than 70 employee category. After the program, MLGW workers toured the new \$12.9 million office and warehouse space. The Food Bank is using about 150,000 square feet of the building to store donated food for its partner agencies in 31 counties in Arkansas, Tennessee and Mississippi. Vice President of Design, Construction and Delivery Cliff DeBerry served as the Food Drive’s executive sponsor, along with co-chairwomen Liz Williams, Client Services, and Sharika Hollingsworth, Treasury Management.





Two sistahs dedicated to serving others

Since the summer of 2019, two employees from the Purchasing Department of Memphis Light, Gas and Water Division have taken upon themselves to meet the needs of the homeless.

Every Friday, on their lunch break and using their own funds, Demetria Bowers-Adair and Camela Mitchell – or the “Two Sistahs” as they have become known – load their carts and hit the streets of downtown Memphis. They started with bottled water and have evolved to a variety of full lunches.

“Our motto is, ‘if they can live out here, we can serve out here,’” Demetria Bowers-Adair told a local TV station. “We try to make them feel special.”



They walk until they run out of supplies. Rain, snow, sun or whatever, they serve because the people being helped are living in those conditions.

“Camela and I are sisters in Christ, and we’re sisters at work and sisters outside of work so two sisters who are just trying to help,” said Bowers-Adair, though she and Mitchell are not related.

Serving others is what they do, building strong relationships with every act of kindness.

MLGW finishes work on 350 homes in Share The Pennies Program

Founded in 2018, Share the Pennies came to fruition after the work of MLGW, the MLGW Board of Commissioners, Councilwoman Patrice Robinson and other Memphis City Council Members who supported a grass-roots effort to create sustainable funding to address low-income energy-efficiency and weatherization in Memphis and Shelby County.

The Share the Pennies program rounds up customer utility bills and then provides grants to low-income homeowners to make energy-efficiency and

weatherization repairs to their homes. At the beginning of the program, MLGW formed a key partnership with TVA that expanded the program's capacity and to ensure a successful launch. As part of the partnership, TVA provided \$1 million in supplemental funding; 100 percent of the funding went towards the completion of homes – contract labor, materials, mechanical equipment, etc.

TVA also provided additional



funding to pay for technical assistance and additional personnel to complement and support the MLGW Share the Pennies staff. As a result of this partnership and shared resources, TVA helped fund the completion of 350 homes and counting in Memphis and Shelby County.

“I couldn’t afford to do these things,” said Murlene Beauregard, a recipient of Share The Pennies work and who is 67 and legally blind. With the repairs finished, she added, “This is going to really take a lot of stress off us.” Anthony Jackson with Jackson General Contractors of Memphis and his crew installed two new heat pumps and air conditioning units, patched gaping holes in the ceiling, walls and floors, repaired a sewer leak under the house and leveled sagging floors. Beauregard babysits her five grandchildren while her daughter works.

Regarding the Share the Pennies program, Jackson said, “Most of the time, I’m a person who doesn’t like (spare) change. I either lose it or it falls between the seats. Change is always being disregarded. This program puts it in perspective what those pennies actually can do and who they can help.”



OUR FUTURE

On power supply alternatives

At MLGW, we strive to provide the most reliable and affordable services for our customers. TVA has been a great partner for the past 80 years and we are thankful for their service to our company and our community, however, we must weigh our options for other power sources to determine if our current arrangement is optimal. The Integrated Resource Plan process is an industry standard approach for utilities to assess optimal resources needed for the long-term electricity supply to meet the needs of their customers. It is important to note that MLGW has never engaged in this process before due to our ability to take reliable, full requirements electric service from TVA. Siemens Industry was hired to work with Memphis Light, Gas and Water Division as an energy power consultant to produce an IRP. The evaluation will help us make an objective decision regarding our energy future, including if we should generate some power locally and if we should stay with our current power supplier, TVA.

Finding greater efficiencies

In 2019, MLGW hired Baker Tilly of Chicago to take a critical look at its operations and gauge the condition and needs of MLGW's infrastructure. "We are going to have to do things differently moving forward than we have done in the past," President and CEO J.T. Young said. "We have to be more agile and nimble."





Baker Tilly's report recommendations included:

- **Reducing staff by 300-350 employees over the next five years**

Although MLGW benefits are in line with the industry, MLGW has 11-13% more staff than comparable utility companies. The reduction likely would come through attrition as roughly 100 employees retire annually. By reducing staffing numbers, MLGW could save a total of \$30-35 million. Baker Tilly did not annualize the reduction.

- **Over the next five years**

By closing the Millington, North-Summer, Whitehaven offices and potentially the Lamar office over five years, MLGW could save from \$540,000 to \$4.9 million. The Downtown community office would remain open and Lamar would remain open for now, but would require further study.

- **Changing the procurement process to avoid carrying excessive inventory**

Currently, the Memphis City Council must approve expenses in excess of \$50,000. Baker Tilly suggested raising that amount to \$500,000. "If your procurement process is broken, then your inventory process is broken," Humrickhouse said. She said MLGW should stockpile only items which are critical and hard to stock.

- **Modernizing our water system**

If a new industry located in Memphis, it would tax the existing water system. About 43% of MLGW's active wells are older than the typical time when wells are abandoned and new ones are built. MLGW needs 35-40 new wells. One well costs about \$1.4 million. MLGW's customer revenue for water, operational and maintenance expenses and capital investments are lower than five comparable water utility companies.

- **Returning to a three-year vegetation and tree trimming cycle for power lines**

Back lots may need additional funding to catch up with the three-year cycle trim. Vegetation "is the leading cause of outages," Tippey said.

MLGW officials will continue studying the 91-page Baker Tilly report as well as the 44-page infrastructure report. We will continue to update both our customers as well as our employees as we consider making changes.

Letter of Transmittal

MEMPHIS LIGHT, GAS AND WATER DIVISION



To the Board of Commissioners and Valued Stakeholders:

We are pleased to submit the Annual Report of Memphis Light, Gas and Water Division (MLGW) for the fiscal year ending on December 31, 2019, as required by the Charter Provisions of the City of Memphis (City) creating Memphis Light, Gas and Water Division. This report has been prepared in conformity with accounting principles generally accepted in the United States of America (GAAP) for proprietary funds of governmental entities.

Responsibility for the accuracy and presentation of the information provided is the full responsibility of the management of MLGW. Disclosures necessary to assist the reader in understanding of the financial statements have been included.

MLGW's financial statements have been audited by Mayer Hoffman McCann P.C., licensed certified public accountants. The goal of the independent audit was to provide reasonable assurance that the financial statements of MLGW for the fiscal year ending on December 31, 2019 are free from material misstatement. The audit involved performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements; evaluating the appropriateness of accounting policies used and the reasonableness of significant estimates made by management; and evaluating the overall financial statement presentation.



The independent auditors concluded, based upon the audit, that there was a reasonable basis for rendering an unmodified opinion that MLGW's financial statements for the fiscal year ending on December 31, 2019 are fairly presented in conformity with GAAP. The independent auditor's report is presented as the first component of the financial section of the report.

GAAP requires that management provide a narrative introduction, overview and analysis to accompany the basic financial statements in the form of a Management's Discussion and Analysis (MD&A). This letter of transmittal is designed to complement the MD&A and should be read in conjunction with it. MLGW's MD&A can be found immediately following the auditor's report.

Profile of the Government—MLGW was created by an amendment to the City Charter by Chapter 381 of the Private Acts of the General Assembly of Tennessee, adopted March 9, 1939, as amended (the "Private Act"). 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 in accordance with the Private Act. For economic reasons, activities common to all three divisions are administered jointly and costs are prorated monthly among the divisions. A 1981 amendment to the City Charter permits forming additional divisions to provide other energy services.

MLGW controls the administration of its activities and business affairs. It operates independently, manages its own finances and is responsible for obligations incurred in such operations, including indebtedness payable from operations of the Division. MLGW must have the City Council's approval for its annual budget and also before incurring certain obligations, including purchasing real estate and exercising the right of eminent domain.


MLGW is managed by a Board of Commissioners, which consists of five members nominated by the Mayor and approved by the City Council and two advisory, non-voting members which were added in 2017. The Board is responsible for supplying the Division's service areas with electricity, gas and water. Board members serve staggered terms of three years each. Every two years, the Board elects a Chairman and a Vice Chair, whose terms begin January 1. Board members continue to serve until a new board member is appointed by the Mayor and confirmed by the City Council.

The daily operations of MLGW are managed by the President and Chief Executive Officer, who is nominated for a five-year term by the Mayor and approved by the City Council. Under the Private Act, the President generally supervises MLGW's operations and its officers and employees.

Local Economy – Memphis sits on the banks of the Mississippi River in the southwestern corner of Tennessee. The Bluff City ranks as the second largest city in the state and, with a population of 662,038, is the hub of the 43rd largest metropolitan statistical area in the nation. According to the Greater Memphis Chamber, in 2019, the city landed 26 major projects, retained 1,787 jobs and created nearly 2,500 more jobs. More than \$467 million in investments were made in 2019. Three Fortune 500 world headquarters – FedEx, International Paper and AutoZone – call Memphis home. In addition, Nike, Hilton, Coca-Cola and Medtronic have major offices or distribution facilities in Memphis. Memphis was recently named as the Number 1 city in America for black businesses.



MLGW has a major impact on the local economy. Of the \$192 million the Division spent in 2019 for goods, supplies and services, 25 percent – or \$48 million – went to companies owned by minorities and women or local small businesses. For 28 years, Memphis customers have spent less for winter utility bills than their counterparts in many metro areas, capturing the top ranking 16 times since 1992. All three Divisions hold good credit ratings from Standard and Poor's and Moody's.



National Economy – According to the Bureau of Economic Analysis, a division of the U.S. Department of Commerce, real gross domestic product (GDP), a key indicator of economic growth, increased 2.3 percent for all of 2019. Increases in healthy consumer spending levels, including significant, nonresidential fixed investment, federal government spending, state and local government spending, and private inventory investments offset by a negative contribution from residential fixed investments, contributed to the GDP’s growth in 2019.

Financial Policies and Major Initiatives – MLGW maintains a comprehensive cash flow model which assesses the growth of the separate divisions and determines future rate increase and debt issuance requirements. MLGW also incorporates a five-year capital plan in its budgeting process. MLGW’s Electric, Gas and Water Engineering Departments develop detail technical master plans for their respective systems which are then correlated with the financial plan.

In 2019, MLGW invested over \$102.2 million in capital assets and system infrastructure. The smart meter project is a major continuing initiative which is moving ahead of the 2020 schedule. All residential electric smart meters have been installed, and the commercial and industrial continue to be installed. As a part of the smart meter program, MLGW began to offer prepayment options for customers which provides an alternative to receive and pay for utility services.

MLGW continues to invest in the infrastructure with focuses on reliability and infrastructure improvements, including substation and transmission improvements as well as distribution improvements. The MLGW Way Forward includes opportunities to help move our community forward with Smart-Cities initiatives, LED street-lighting, and converting overhead lines to underground where feasible.

The Gas Division maintained progress on its 30-year cast iron pipe replacement program. Gas smart meter deployment continues to be a primary focus. The residential smart meter installations for the Gas Division are planned to be completed by the end of 2020.


For the Water Division, work included major rehabilitation to the Mallory, Sheahan, and Allen pumping stations. MLGW is committed to removing lead service lines from the distribution system. The installation of residential water smart meters is scheduled to be completed by the end of 2020.

Acknowledgements – The preparation of this report was made possible by the overall dedication of MLGW’s Finance Division. We would like to express our appreciation to all Finance Division members who helped prepare this report. Special thanks must also be given to Mayer Hoffman McCann P.C. and Jones & Tuggle PLLC for their efficient and timely completion of this year’s audit.

Respectfully submitted,



Jarl “J.T.” Young,
President and CEO



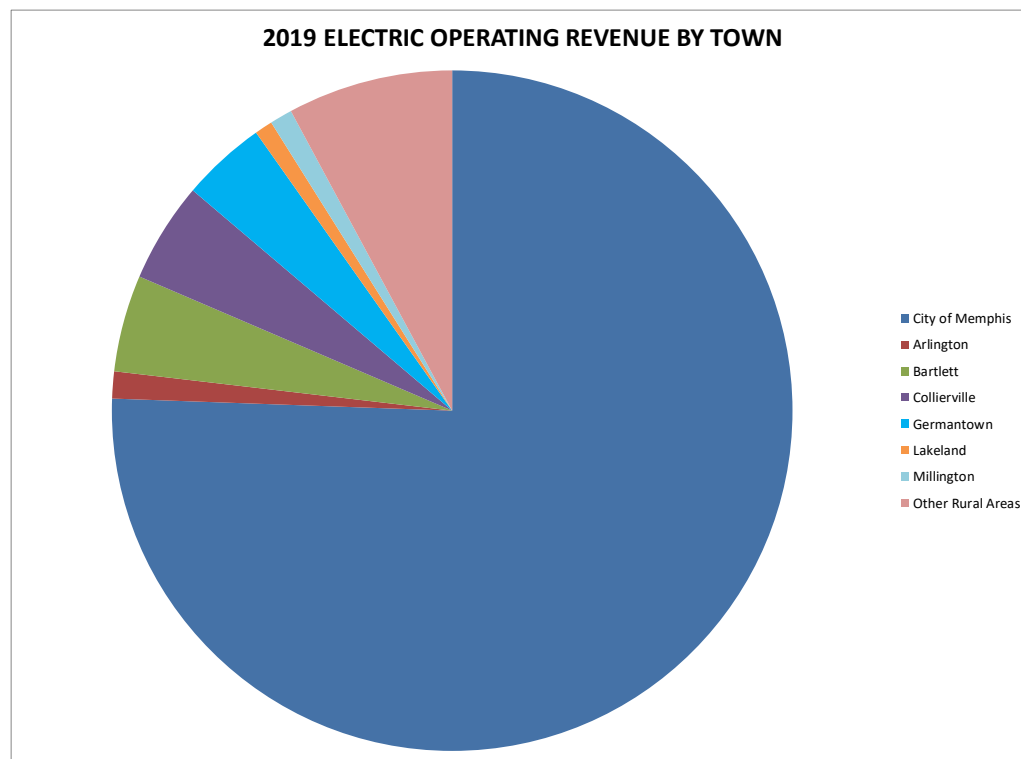
Dana J. Jeanes
Senior Vice President, CFO & CAO (Secretary-Treasurer)

**FINANCIAL HIGHLIGHTS
FOR THE YEARS ENDED
DECEMBER 31, 2019, 2018, AND 2017
(dollars and consumption in thousands)**



Operating Statistics by Towns:

	ELECTRIC AMOUNT			ELECTRIC KWH		
	2019	2018	2017	2019	2018	2017
City of Memphis	\$ 971,766	\$ 976,456	\$ 941,590	10,208,674	10,604,732	10,154,668
Arlington	16,474	15,915	14,859	172,251	173,569	161,287
Bartlett	59,155	59,161	54,997	582,052	604,446	560,817
Collierville	61,211	60,549	57,100	627,717	641,313	600,718
Germantown	51,645	51,230	47,985	520,145	535,716	499,700
Lakeland	10,954	10,943	10,073	109,790	113,885	104,400
Millington	13,709	13,722	12,733	134,109	138,915	129,112
Other Rural Areas	101,062	101,931	94,737	1,132,205	1,180,513	1,097,479
Total	\$ 1,285,976	\$ 1,289,907	\$ 1,234,074	13,486,943	13,993,089	13,308,181

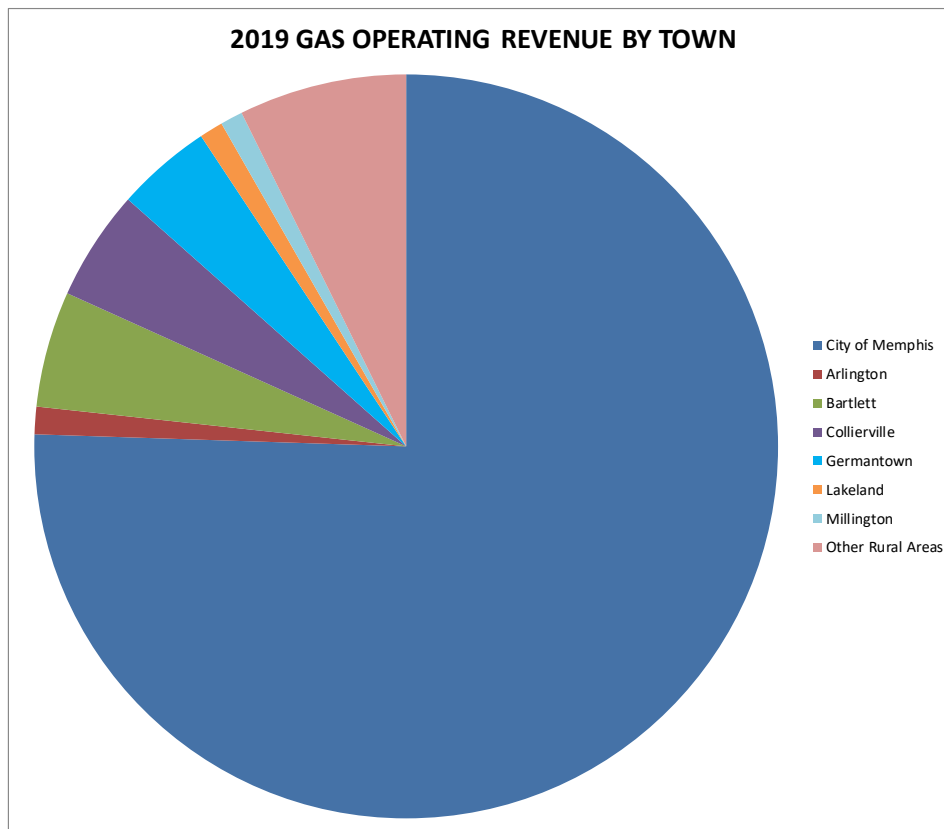


**FINANCIAL HIGHLIGHTS
FOR THE YEARS ENDED
DECEMBER 31, 2019, 2018, AND 2017
(dollars and consumption in thousands)**



Operating Statistics by Towns:

	GAS AMOUNT			GAS MCF		
	2019	2018	2017	2019	2018	2017
City of Memphis	\$ 196,820	\$ 206,081	\$ 174,012	25,466	26,731	20,122
Arlington	3,106	3,284	2,481	446	474	331
Bartlett	13,142	14,137	10,705	1,818	1,969	1,361
Collierville	12,513	13,233	10,259	1,818	1,929	1,400
Germantown	10,809	11,610	8,953	1,609	1,726	1,247
Lakeland	2,677	2,829	2,265	380	404	300
Millington	2,540	2,723	2,216	366	390	305
Other Rural Areas	19,021	20,291	15,512	2,638	2,834	1,976
Total	\$ 260,628	\$ 274,188	\$ 226,403	34,541	36,457	27,042

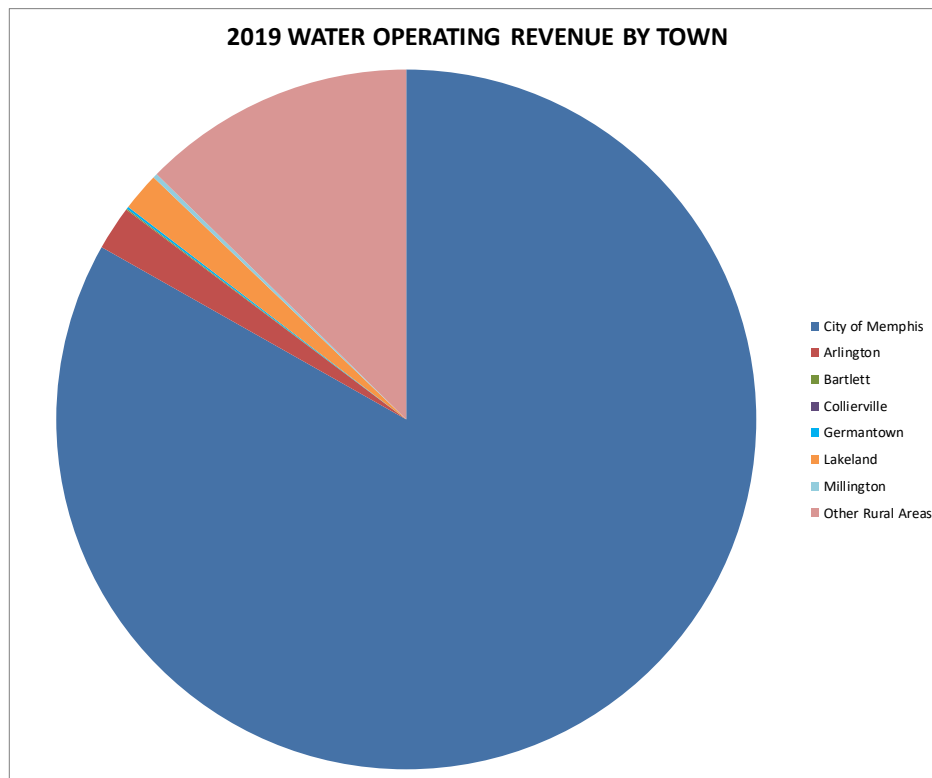


**FINANCIAL HIGHLIGHTS
FOR THE YEARS ENDED
DECEMBER 31, 2019, 2018, AND 2017
(dollars and consumption in thousands)**



Operating Statistics by Towns:

	WATER AMOUNT			WATER CCF		
	2019	2018	2017	2019	2018	2017
City of Memphis	\$ 87,921	\$ 85,851	\$ 83,144	44,460	44,103	42,499
Resale to Other Municipalities:						
Arlington	2,162	2,054	1,849	646	640	566
Bartlett	51	49	49	3	3	3
Collierville	3	1	-	-	-	-
Germantown	108	99	111	27	24	32
Lakeland	1,869	1,789	1,700	563	553	525
Millington	215	206	184	57	56	51
Other Rural Areas	13,355	13,091	12,476	4,033	4,064	3,865
Total	<u>\$ 105,684</u>	<u>\$ 103,140</u>	<u>\$ 99,513</u>	<u>49,789</u>	<u>49,443</u>	<u>47,541</u>



Financial Section

Memphis Light, Gas and
Water Division



MLGW

SERVING YOU IS
WHAT WE DO







5100 Poplar Ave., 30th Floor ■ Memphis, TN 38137
Main: 901.685.5575 ■ Fax: 901.685.5583 ■ www.mhmcpa.com

Independent Auditor's Report

To the Board of Commissioners and Management
Memphis Light, Gas and Water Division
Memphis, Tennessee

Report on the Financial Statements

We have audited the accompanying financial statements of the Electric, Gas and Water Divisions (the "Divisions") of Memphis Light, Gas and Water Division, enterprise funds of the City of Memphis, Tennessee, as of and for the years ended December 31, 2019 and 2018, and the related notes to the financial statements, which collectively comprise the Divisions' basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

The Divisions' management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express opinions on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Divisions' preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Opinions

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Electric, Gas and Water Divisions of Memphis Light, Gas and Water Division as of December 31, 2019 and 2018, and the changes in their financial position and cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Emphasis of Matter

As discussed in note 1, the financial statements present only the Electric, Gas and Water Divisions of Memphis Light, Gas and Water Division, and do not purport to, and do not, present fairly the financial position of the City of Memphis, Tennessee, as of December 31, 2019 and 2018, and the changes in its financial position, or, where applicable, its cash flows for the years then ended in conformity with accounting principles generally accepted in the United States of America.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that management's discussion and analysis; schedule of changes in net pension liability (asset); schedule of employer contributions - pension; schedule of changes in net OPEB liability; and the schedule of employer contributions - OPEB, on the pages listed in the table of contents, be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audits of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Information

Our audits were conducted for the purpose of forming opinions on the basic financial statements of each Division. The introductory section and supplemental information on the pages listed in the table of contents are presented for purposes of additional analysis and are not a required part of the basic financial statements. The schedule of bonds, principal and interest requirements; schedule of current utility rates; non-revenue water; and schedule of insurance are required by the State of Tennessee Comptroller of the Treasury's *Audit Manual*.

The supplementary information shown as the schedule of bonds, principal and interest requirements and the schedule of additions and retirements to utility plant is the responsibility of management and was derived from and relate directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures

applied in the audits of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, this supplementary information is fairly stated, in all material respects in relation to the basic financial statements as a whole.

The introductory section and supplementary information shown as the schedule of current utility rates, non-revenue water, and schedule of insurance have not been subjected to the auditing procedures applied in the audit of the basic financial statements, and accordingly, we do not express an opinion or provide any assurance on them.

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated June 3, 2020, on our consideration of the Divisions' internal control over financial reporting and on our tests of their compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the Divisions' internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Divisions' internal control over financial reporting and compliance.

Mayer Hoffman McCann P.C.

Memphis, Tennessee
June 3, 2020

**MANAGEMENT'S DISCUSSION AND ANALYSIS
FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018
(Dollars in Thousands)**



The following management discussion and analysis (“MD&A”) for the Electric, Gas, and Water Divisions of Memphis Light, Gas and Water Division (“MLGW”) is intended as an introduction and should be read in conjunction with the financial statements and the notes that follow this section.

Highlights

- ❖ In 2019, President and CEO J.T. Young revealed the new mission, vision, and values for the Division, weaving safety deeply into the fabric of the messaging. Mission is “to safely deliver services that create and sustain superior customer experiences.” Vision is “to be the trusted provider of exceptional customer value in the communities we are privileged to serve.” The MLGW way is compassionate service, safety, integrity, ownership, and inclusion.
- ❖ Founded on March 9, 1939, MLGW celebrated a golden anniversary with 80 years of service.
- ❖ In 2019, MLGW commissioned a study by GDS Associates, Inc. to evaluate long-term power supply alternatives, including a proposal by Nuclear Development LLC. Also, as part of weighing out power source options, MLGW engaged Siemens Industry Inc. to assist in developing its first Integrated Resource Plan (IRP) and created a 21-member Power Supply Advisory Team (PSAT) to provide input on deciding the most effective and reliable options for the next 20 years or longer.
- ❖ MLGW did not issue any debt in 2019, but does continue to hold strong credit ratings. The Electric Division’s bonds continue to maintain an Aa2 by Moody’s Investors Service (“Moody’s”) and AA- by Standard & Poor’s Ratings Services (“S&P”). The Gas Division’s bonds continue to maintain an Aa1 by Moody’s and AA- by S&P. The Water Division’s bonds continue to maintain an Aa1 by Moody’s and AAA by S&P. The AAA rating is the highest rating given by S&P.
- ❖ MLGW partnered with the city of Millington, the U.S. Navy, the Millington Industrial Development Board, the Tennessee Valley Authority, and the land owner, Silicon Ranch Corporation to build the largest solar farm, 390 acres, in the state of Tennessee that will generate 53 megawatts of energy or enough to power 7,500 homes annually to benefit the Millington Navy Base and the surrounding community.
- ❖ MLGW released its annual Rates Survey which surveyed more than 40 cities, including many that are geographically close to Memphis, as well as utilities that are similar in size. MLGW continues to provide relatively low rates and outperforms many cities in terms of what customers pay for electricity, natural gas, and water services.
- ❖ MLGW was ranked seventh in the utilities category in Security Magazine’s 2019 Ratings in November 2019.
- ❖ MLGW continues to be intentional in its efforts to encourage the growth of minority, women, and locally owned small business enterprises by providing opportunities for MWBE/LSBs to furnish goods and services through MLGW’s Supplier Diversity Program. MLGW spent \$48.0 million with MWBE/LSBs during 2019.

Overview of the Financial Statements

MLGW's financial statements are comprised of the Statements of Net Position; the Statements of Revenues, Expenses and Changes in Net Position; the Statements of Cash Flows; and the accompanying Notes. This report also contains required and supplemental information in addition to the basic financial statements.

The Statements of Net Position report the assets and deferred outflows of resources less liabilities and deferred inflows of resources, with the difference being the net position. Net position will be displayed in three components: net investment in capital assets, restricted, and unrestricted. Over time, increases or decreases in net position may serve as an indicator of whether the financial position of the organization is improving or declining. The Statements of Revenues, Expenses and Changes in Net Position show how net position changed during each year based on revenues and expenses. All changes in net position are reported as soon as the underlying event giving rise to the change occurs, regardless of the timing of related cash flows. The Statements of Cash Flows report changes in cash and cash equivalents summarized by net changes from operating, capital and related financing and investing activities. The Notes provide additional detailed information to support the financial statements. The statements present the current year and preceding year for comparison. The report also includes Statistical Highlights: these highlights convey significant data that afford the reader a better historical perspective and assist in assessing the current financial status and trends of MLGW. The highlights present a three-year comparison encompassing the current year and the preceding two years for the Electric, Gas, and Water Divisions.

MLGW comprises the utility operations of the City of Memphis. Pursuant to the Memphis City Charter, MLGW is required to maintain separate books and accounts of the electric, gas, and water operations, so that said books and accounts reflect the financial condition of each division separately, to the end that each division shall be self-sustaining.

Costs are allocated to the three divisions in a manner that ensures results of operations and changes in financial position are presented fairly and consistently from year to year.

MLGW's financial statements are provided to the City of Memphis and reformatted to conform to the City's format for enterprise funds. The City of Memphis incorporates MLGW's statements ending December 31 into its statements ending June 30.

**MANAGEMENT'S DISCUSSION AND ANALYSIS
FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018
(Continued)**



STATISTICAL HIGHLIGHTS-ELECTRIC DIVISION

Years Ended December 31

CATEGORIES	2019	2018	2017
OPERATING REVENUE			
Residential	\$ 537,759,445	\$ 540,654,354	\$ 490,018,631
Commercial - General Service	599,341,312	597,183,375	585,741,219
Industrial	93,352,160	94,610,010	98,508,276
Outdoor Lighting and Traffic Signals	11,888,094	11,616,880	11,410,983
Street Lighting Billing	13,380,628	13,296,087	13,180,372
Interdepartmental	9,108,399	8,879,495	8,244,320
Green Power	(256,569)	(273,991)	(240,957)
Miscellaneous	27,674,100	35,180,634	28,895,434
Accrued Unbilled Revenue	(2,157,405)	(6,504,269)	3,864,761
Revenue Adjustment for Uncollectibles	(4,113,919)	(4,736,014)	(5,549,465)
TOTAL OPERATING REVENUE	\$ 1,285,976,245	\$ 1,289,906,561	\$ 1,234,073,574

CUSTOMERS (See Note at page M-5)

Residential	371,771	368,848	370,693
Commercial - General Service	43,392	43,319	43,469
Industrial	112	118	118
Outdoor Lighting and Traffic Signals	17,166	17,171	17,186
Interdepartmental	41	43	36
Total Customers	432,482	429,499	431,502

KWH SALES (THOUSANDS)

Residential	5,359,163	5,596,144	5,042,850
Commercial - General Service	6,076,707	6,264,086	6,138,759
Industrial	1,785,888	1,865,158	1,870,301
Outdoor Lighting and Traffic Signals	89,241	88,940	89,244
Street Lighting Billing	77,233	76,823	76,117
Interdepartmental	98,711	101,938	90,910
Total KWH Sales (Thousands)	13,486,943	13,993,089	13,308,181

OPERATING REVENUE/CUSTOMER

Residential	\$ 1,446.48	\$ 1,465.79	\$ 1,321.90
Commercial - General Service	13,812.25	13,785.71	13,474.92
Industrial	833,501.43	801,779.75	834,815.90
Outdoor Lighting and Traffic Signals	692.54	676.54	663.97
Interdepartmental	222,156.06	206,499.87	229,008.89

OPERATING REVENUE/KWH*

Residential	\$ 0.100	\$ 0.097	\$ 0.097
Commercial - General Service	0.099	0.095	0.096
Industrial	0.052	0.051	0.053
Outdoor Lighting and Traffic Signals	0.133	0.131	0.128
Street Lighting Billing	0.173	0.173	0.173
Interdepartmental	0.092	0.087	0.091

KWH/CUSTOMER

Residential	14,415.23	15,171.95	13,603.84
Commercial - General Service	140,042.12	144,603.66	141,221.54
Industrial	15,945,428.57	15,806,423.73	15,850,008.47
Outdoor Lighting and Traffic Signals	5,198.71	5,179.66	5,192.83
Interdepartmental	2,407,585.37	2,370,651.16	2,525,277.78

*See graph on M-6.

**MANAGEMENT'S DISCUSSION AND ANALYSIS
FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018
(Continued)**



STATISTICAL HIGHLIGHTS-GAS DIVISION

Years Ended December 31

CATEGORIES	2019	2018	2017
OPERATING REVENUE			
Residential	\$ 153,114,037	\$ 163,500,978	\$ 126,870,403
Commercial - General Service	69,686,174	74,766,266	59,846,939
Industrial	1,713,205	2,051,696	1,699,136
Interdepartmental	242,423	202,083	238,872
Transported Gas	12,037,019	10,002,561	7,765,697
Spot Gas	8,327,329	7,711,270	7,125,396
Liquefied Natural Gas (LNG)	4,337,503	6,302,664	4,469,127
Compressed Natural Gas (CNG)	192,880	263,091	158,607
Miscellaneous	18,489,374	13,668,952	15,508,704
Accrued Unbilled Revenue	(6,355,767)	(2,935,049)	4,469,213
Revenue Adjustment for Uncollectibles	(1,156,659)	(1,346,852)	(1,749,310)
TOTAL OPERATING REVENUE	\$ 260,627,518	\$ 274,187,660	\$ 226,402,784
CUSTOMERS (See Note at page M-5)			
Residential	292,017	290,918	292,019
Commercial - General Service	21,556	21,525	21,621
Industrial	31	33	30
Interdepartmental	14	14	12
Transported Gas	40	41	81
Spot Gas	21	21	23
Subtotal	313,679	312,552	313,786
LNG	6	5	3
CNG (Sales Transactions)	528	388	297
Total Customers	314,213	312,945	314,086
MCF SALES			
Residential	20,779,764	22,439,731	15,824,781
Commercial - General Service	11,232,469	11,640,262	9,099,362
Industrial	368,249	423,747	370,190
Interdepartmental	42,980	35,649	44,633
Spot Gas	2,117,238	1,917,677	1,703,336
Subtotal	34,540,700	36,457,066	27,042,302
LNG	601,804	847,645	574,294
CNG	19,415	19,819	15,552
Total MCF Sales	35,161,919	37,324,530	27,632,148
OPERATING REVENUE/CUSTOMER			
Residential	\$ 524.33	\$ 562.02	\$ 434.46
Commercial - General Service	3,232.80	3,473.46	2,768.00
Industrial	55,264.66	62,172.61	56,637.87
Interdepartmental	17,315.90	14,434.47	19,906.01
Transported Gas	300,925.46	243,964.90	95,872.80
Spot Gas	396,539.48	367,203.35	309,799.81
OPERATING REVENUE/MCF*			
Residential	\$ 7.370	\$ 7.290	\$ 8.017
Commercial - General Service	6.200	6.420	6.577
Industrial	4.650	4.840	4.590
Interdepartmental	5.640	5.670	5.352
Spot Gas	3.930	4.020	4.183
MCF/CUSTOMER			
Residential	71.16	77.13	54.19
Commercial - General Service	521.08	540.78	420.86
Industrial	11,879.00	12,840.82	12,339.68
Interdepartmental	3,070.00	2,546.36	3,719.42
Spot Gas	100,820.86	91,317.95	74,058.09

*See graph on M-6.

**MANAGEMENT'S DISCUSSION AND ANALYSIS
FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018
(Continued)**



STATISTICAL HIGHLIGHTS-WATER DIVISION

Years Ended December 31

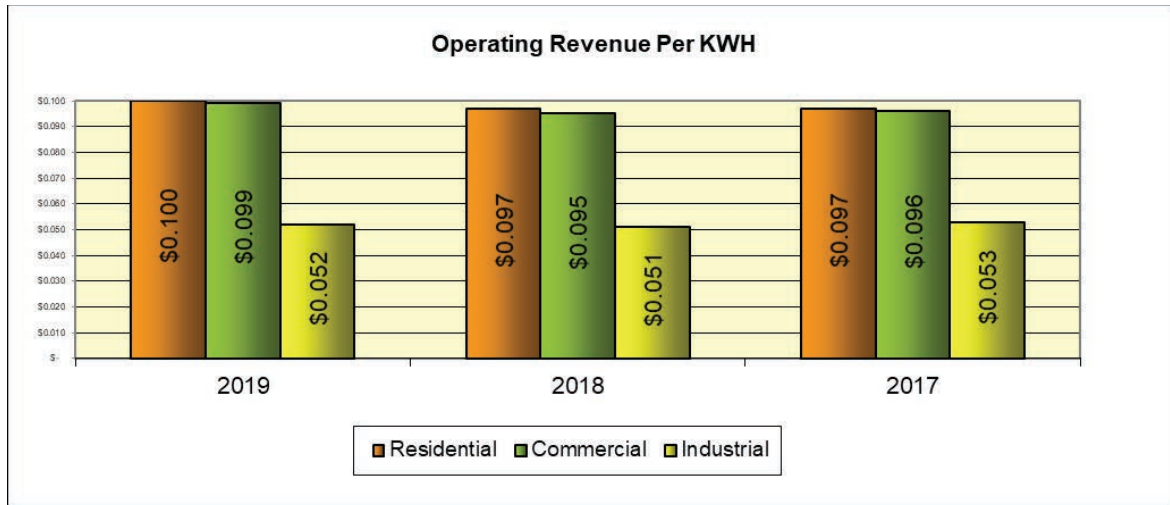
CATEGORIES	2019	2018	2017
OPERATING REVENUE			
Residential	\$ 49,915,645	\$ 50,118,689	\$ 48,029,486
Commercial - General Service	45,732,682	43,511,198	42,060,419
Resale	137,683	133,409	133,360
Fire Protection	5,427,009	5,221,165	5,102,740
Interdepartmental	71,923	66,316	118,612
Miscellaneous	5,198,870	5,462,018	4,815,982
Accrued Unbilled Revenue	43,598	(473,184)	256,154
Revenue Adjustment for Uncollectibles	(848,050)	(899,523)	(1,003,826)
TOTAL OPERATING REVENUE	\$ 105,679,360	\$ 103,140,088	\$ 99,512,927
CUSTOMERS (See Note below)			
Residential	229,683	228,471	229,285
Commercial - General Service	20,484	20,422	20,625
Resale	12	11	12
Fire Protection	5,322	5,263	5,347
Interdepartmental	57	55	50
Total Customers	255,558	254,222	255,319
METERED WATER (CCF)			
Residential	21,670,184	22,596,541	21,419,459
Commercial - General Service	28,076,862	26,806,056	26,029,425
Resale	14,085	14,736	14,896
Interdepartmental	27,595	25,180	76,836
Total CCF Sales	49,788,726	49,442,513	47,540,616
OPERATING REVENUE/CUSTOMER			
Residential	\$ 217.32	\$ 219.37	\$ 209.48
Commercial - General Service	2,232.61	2,130.60	2,039.29
Resale	11,473.58	12,128.13	11,113.30
Fire Protection	1,019.73	992.05	954.32
Interdepartmental	1,261.80	1,205.74	2,372.24
OPERATING REVENUE/CCF*			
Residential	\$ 2.303	\$ 2.218	\$ 2.242
Commercial - General Service	1.629	1.623	1.616
Resale	9.775	9.053	8.953
Interdepartmental	2.606	2.634	1.544
CCF/CUSTOMER			
Residential	94.35	98.90	93.42
Commercial - General Service	1,370.67	1,312.61	1,262.03
Resale	1,173.75	1,339.64	1,241.33
Interdepartmental	484.12	457.82	1,536.72

*See graph on M-7.

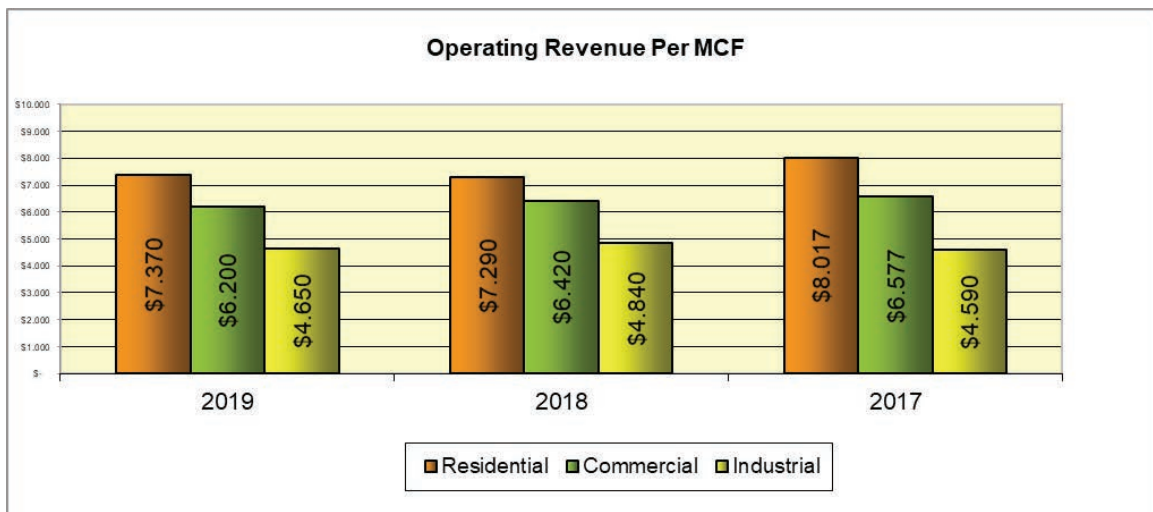
Note: In September 2018, MLGW introduced a more accurate method of counting customers which decreased the reported customer totals. Under the old method certain customers who received multiple bills in a billing month were counted more than once. Under the new method customers who receive multiple bills in a billing month are counted only once.

GRAPHS

Electric Division



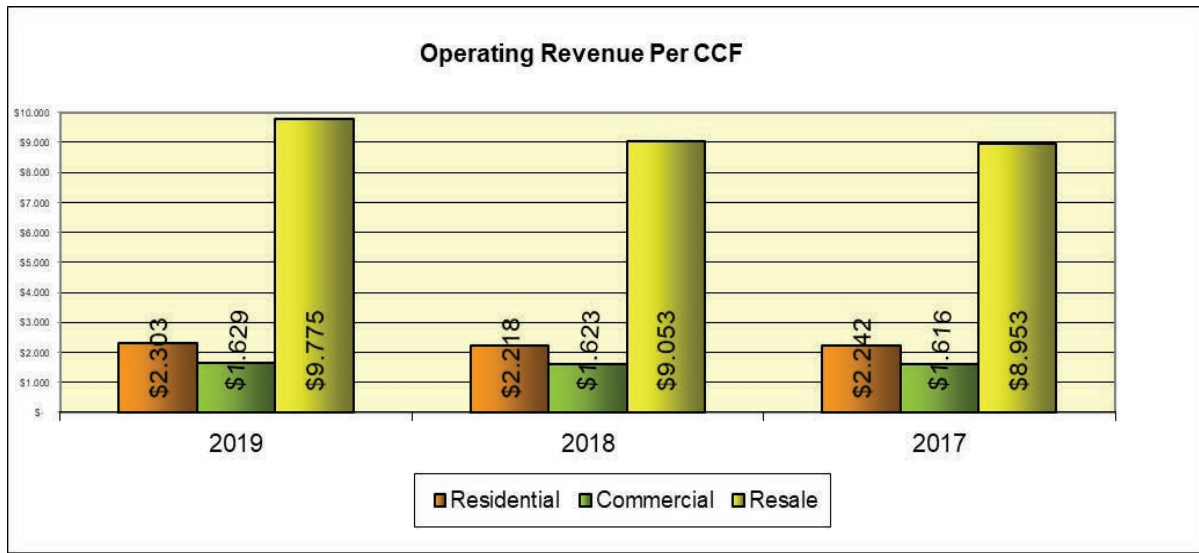
Gas Division



MANAGEMENT'S DISCUSSION AND ANALYSIS
FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018
(Continued)



Water Division



Bond Ratings

MLGW's Electric Division, Gas Division and Water Division continue to maintain strong bond ratings. In March of 2019, Moody's completed a periodic review of the Electric Division which involved a portfolio review in which Moody's reassessed the appropriateness of the ratings assigned.

The Electric Division has total debt outstanding of \$178,480 as of December 31, 2019. MLGW's debt service coverage is 7.38. This coverage is well above the 1.2 required by the Electric Division bond covenant for the senior lien debt.

The Gas Division has total debt outstanding of \$73,500 as of December 31, 2019. The Gas Division's debt service coverage is 11.83. This coverage is well above the 1.2 required by the Gas Division bond covenant.

The Water Division has debt outstanding of \$61,860 as of December 31, 2019. The Water Division's debt service coverage is 6.79. This coverage is well above the 1.2 required by the Water Division bond covenant.

Figure 1: Bond Ratings and Debt Administration for the Electric, Gas and Water Divisions

MLGW Bond Ratings			Debt Administration (In Thousands)		
	S&P	Moody's		Outstanding Balance	Coverage
Electric Series			Electric	\$178,480	7.38
2014	AA-	Aa2			
2016	AA-	Aa2			
2017	AA-	Aa2			
Gas Series			Gas	\$73,500	11.83
2016	AA-	Aa1			
2017	AA-	Aa1			
Water Series			Water	\$61,860	6.79
2014	AAA	Aa1			
2016	AAA	Aa1			
2017	AAA	Aa1			

**MANAGEMENT'S DISCUSSION AND ANALYSIS
FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018
(Continued)**



Analysis of the Electric Division's Statements of Net Position

Condensed financial information comparing the Electric Division's net position for the past three fiscal years is presented below:

Table 1 Electric Division Condensed Statements of Net Position December 31 (In Thousands)					
	<u>2019</u>	<u>2018</u>	<u>FY19 - FY18 Percentage Change</u>	<u>2017</u>	<u>FY18 - FY17 Percentage Change</u>
Current assets (excluding restricted funds)	\$ 367,660	\$ 428,680	-14.2%	\$ 494,833	-13.4%
Restricted assets	70,583	66,423	6.3%	104,747	-36.6%
Other assets	17,090	38,584	-55.7%	13,987	175.9%
Utility plant	1,131,047	1,129,626	0.1%	1,109,598	1.8%
Total assets	1,586,380	1,663,313	-4.6%	1,723,165	-3.5%
Deferred outflows of resources					
Employer pension contribution	13,088	13,305	-1.6%	12,790	4.0%
Employer OPEB contribution	20,370	29,383	-30.7%	-	-
Pension liability experience	4,281	3,137	36.5%	870	260.6%
OPEB liability experience	1,470	1,837	-20.0%	-	-
Pension investment earnings experience	82,501	20,562	301.2%	29,506	-30.3%
OPEB investment earnings experience	22,326	-	-	-	-
Unamortized balance of refunded debt	-	-	-	409	-
Total assets and deferred outflows	1,730,416	1,731,537	-0.1%	1,766,740	-2.0%
Current liabilities payable from current assets	176,528	217,830	-19.0%	271,737	-19.8%
Current liabilities payable from restricted assets	25,238	28,958	-12.8%	35,513	-18.5%
Long-term debt	192,580	202,189	-4.8%	213,179	-5.2%
Non-current liabilities	264,306	183,606	44.0%	72,160	154.4%
Total liabilities	658,652	632,583	4.1%	592,589	6.7%
Deferred inflows of resources					
Pension liability experience	5,023	7,787	-35.5%	10,093	-22.8%
OPEB liability experience	1,567	-	-	-	-
Pension changes of assumptions	2,211	4,422	-50.0%	6,346	-30.3%
OPEB changes of assumptions	80,148	100,185	-20.0%	-	-
Pension investment earnings experience	44,654	60,048	-25.6%	5,245	1044.9%
OPEB investment earnings experience	11,198	14,931	-25.0%	-	-
Total liabilities and deferred inflows	803,453	819,956	-2.0%	614,273	33.5%
Net position:					
Net investment in capital assets	932,380	921,736	1.2%	892,669	3.3%
Restricted	27,893	20,400	36.7%	52,963	-61.5%
Unrestricted	(33,310)	(30,555)	-9.0%	206,835	-114.8%
Total Net position	\$ 926,963	\$ 911,581	1.7%	\$ 1,152,467	-20.9%

Assets

2019 Compared to 2018

As of December 31, 2019, total assets and deferred outflows were \$1.73 billion, a decrease of \$1.1 million, or 0.1%, compared to December 31, 2018. This decrease is primarily due to a decrease in current assets of \$61.0 million, a decrease in other assets of \$21.5 million, a decrease in employer OPEB contribution of \$9.0 million, partially offset by an increase in deferred outflows related to pension investment earnings of \$61.9 million and an increase in OPEB investment earnings experience of \$22.3 million. The decrease in current assets is due, in part, to a decrease in cash and cash equivalents of \$53.7 million, a decrease in investments of \$13.4 million, partially offset by an increase in inventories of \$9.9 million.

2018 Compared to 2017:

As of December 31, 2018, total assets and deferred outflows were \$1.73 billion, a decrease of \$35.2 million, or 2.0%, compared to December 31, 2017. This decrease is primarily due to a decrease in current assets of \$66.2 million, a decrease in restricted assets of \$38.3 million due primarily to the utilization of the proceeds of the Series 2017 revenue bonds of \$33.1 million, and a decrease in pension investment earnings experience of \$8.9 million, partially offset by an increase in Employer OPEB contribution of \$29.4 million, an increase in other assets of \$24.6 million, and an increase in net utility plant of \$20.0 million. The decrease in current assets is due, in part, to a decrease in prepaid power cost (long-term) of \$112.8 million (see Note 12), offset by an increase in cash and cash equivalents of \$33.0 million and an increase in investments of \$15.2 million.

Capital Assets and Construction Activities

2019 Compared to 2018:

The Electric Division's utility plant assets, net of accumulated depreciation were \$1.13 billion as of December 31, 2019, an increase of 0.1% over fiscal year 2018. During 2019, the Electric Division expended \$63.5 million on construction activities and capital purchases, a decrease of \$20.3 million or 24.2% compared to fiscal year 2018. Major Electric Division construction expenditures include routine maintenance of the electric distribution system (\$9.2 million), storm restoration (\$8.2 million), extensions to serve new customers (\$7.9 million), substation and transmission projects (\$7.7 million), the purchase of transportation and power operated equipment (\$4.5 million), new circuits out of substations (\$3.9 million), purchase of meters and metering equipment (\$3.9 million), purchase of distribution transformers (\$3.8 million), street light maintenance and installation (\$3.2 million), information technology upgrades (\$2.0 million), line reconstruction (\$2.0 million), replacement of feeder and defective cable (\$2.0 million), building upgrades (\$1.0 million), relocation of extensions (\$1.3 million), telecommunication communication and communication tower projects (\$1.1 million), and security automation (\$2.0 million).

**MANAGEMENT'S DISCUSSION AND ANALYSIS
FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018
(Continued)**



2018 Compared to 2017:

The Electric Division's utility plant assets, net of accumulated depreciation totaled \$1.13 billion as of December 31, 2018, an increase of 1.8% over fiscal year 2017. During 2018, the Electric Division expended \$83.8 million on construction activities and capital purchases, a decrease of \$17.5 million or 17.3% compared to fiscal year 2017. Major Electric Division construction activities included substation and transmission projects (\$19.9 million), extensions to serve new customers (\$11.5 million), the purchase of meters and metering equipment (\$10.4 million), data processing equipment and upgrades (\$7.8 million), the purchase of distribution and network transformers (\$6.4 million), purchase of transportation and power operated equipment (\$5.9 million), and street and leased outdoor lighting (\$4.2 million). Other significant Electric Division capital expenditures consisted of new circuits out of substations (\$2.6 million), the replacement of feeder and defective cable (\$2.3 million), and relocation of extensions requested by customers (\$2.2 million).

Liabilities

2019 Compared to 2018:

As of December 31, 2019, total liabilities and deferred inflows were \$803.0 million, a decrease of \$16.5 million, or 2.0% compared to December 31, 2018. These decreases are due to the decrease in current liabilities payable from current assets of \$41.3 million, a decrease in OPEB changes of assumptions of \$20.0 million, a decrease in pension investment earnings experience of \$15.4 million, and a decrease in long-term debt of \$9.6 million, offset in part by an increase in non-current liabilities of \$80.7 million. The decrease in current liabilities payable from current assets is due to the decrease of taxes accrued in lieu of tax payments to city of \$39.8 million.

2018 Compared to 2017:

As of December 31, 2018, total liabilities and deferred inflows were \$820.0 million, an increase of \$205.7 million, or 33.5% compared to December 31, 2017. These increases are due to the increase in non-current liabilities of \$111.4 million, an increase of OPEB changes of assumptions of \$100.2 million, and an increase in pension investment earnings experience of \$54.8 million, offset in part by a decrease in current liabilities payable from current assets of \$53.9 million. The increase in non-current liabilities is due to the increase of net OPEB liability of \$152.0 million and a decrease of net pension liability of \$39.8 million.

Net Position

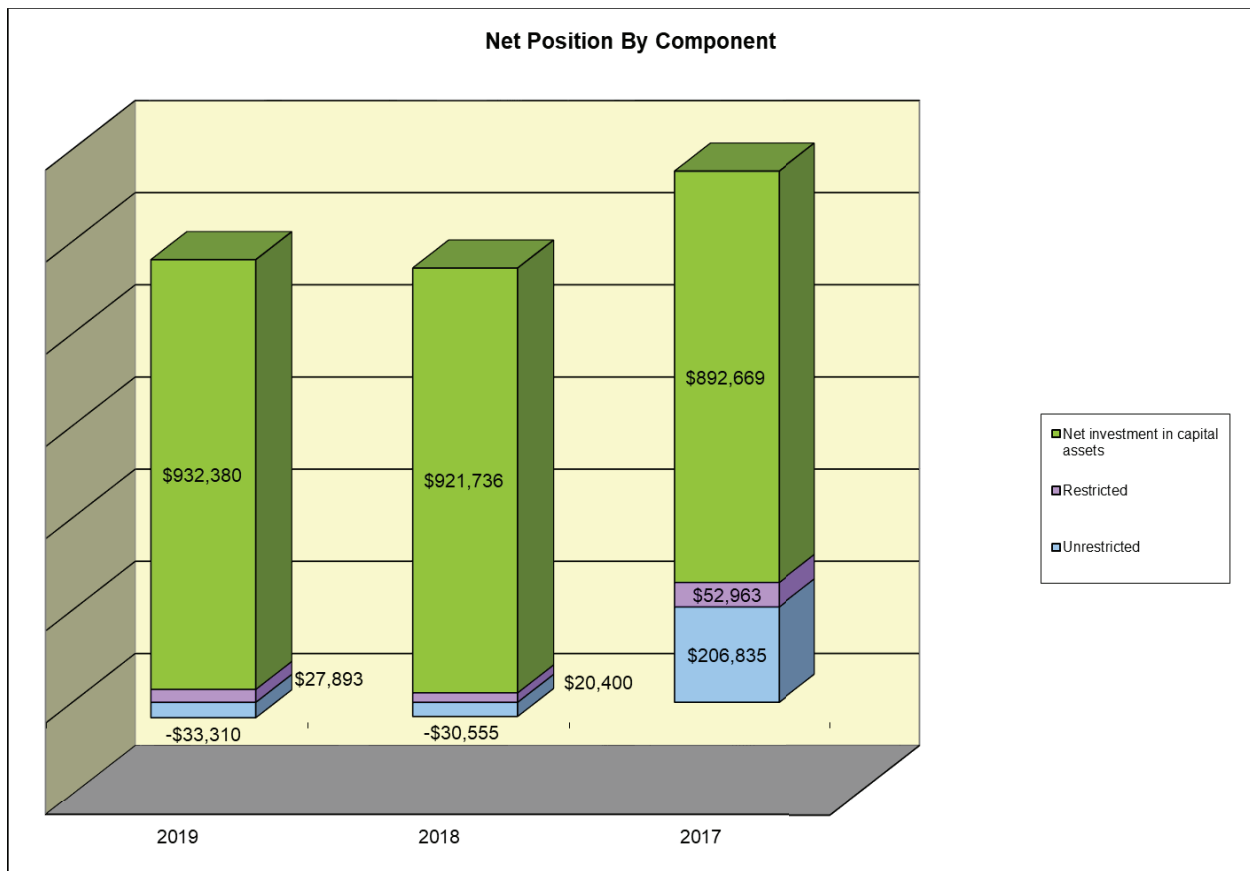
2019 Compared to 2018:

As of December 31, 2019 the Electric Division's total net position (total assets and deferred outflows of resources less total liabilities and deferred inflows of resources) was \$927.0 million, an increase of \$15.4 million, or 1.7%, compared to December 31, 2018. The increase was due to an increase in net investment in capital assets of \$10.6 million due to the retirement of long-term debt issued for capital projects and an increase of \$7.5 million in restricted net position due primarily to an increase in restricted assets, offset by a decrease in unrestricted net position of \$2.7 million. One hundred and one percent of the net position was related to net investment in capital assets.

2018 Compared to 2017:

As of December 31, 2018 the Electric Division's total net position (total assets and deferred outflows of resources less total liabilities and deferred inflows of resources) was \$911.6 million, a decrease of \$240.9 million, or 20.9%, compared to December 31, 2017. The decrease was due to a decrease in unrestricted net position of \$237.4 million as a result of the cumulative impact of implementing GASB Statement No. 75 – *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions* ("GASB 75") and a decrease in restricted net position of \$32.6 million due to a reduction in the proceeds of the Series 2017 Bonds, partially offset by an increase in net investment in capital assets of \$29.1 million. One hundred and one percent of the net position was related to net investment in capital assets.

Figure 2: Electric Division's Net Position (in thousands):



Analysis of the Electric Division's Statements of Revenues, Expenses and Changes in Net Position

Condensed financial information comparing the Electric Division's revenues, expenses and changes in net position for the past three fiscal years is presented below:

Table 2 Electric Division Condensed Statements of Revenues, Expenses and Changes in Net Position Years Ended December 31, 2019, 2018, and 2017					
	<u>2019</u>	<u>2018</u>	<u>FY19 - FY18 Percentage Change</u>	<u>2017</u>	<u>FY18 - FY17 Percentage Change</u>
Revenues:					
Operating revenues	\$ 1,285,976	\$ 1,289,906	-0.3%	\$ 1,234,074	4.5%
Non-operating revenues	43,528	47,951	-9.2%	47,353	1.3%
Total revenues	<u>1,329,504</u>	<u>1,337,857</u>	<u>-0.6%</u>	<u>1,281,427</u>	<u>4.4%</u>
Expenses:					
Depreciation expense	56,599	55,844	1.4%	54,148	3.1%
Purchased power	1,036,442	1,035,898	0.1%	991,526	4.5%
Other operating expense	176,692	146,021	21.0%	191,135	-23.6%
Non-operating expense	5,981	10,357	-42.3%	13,032	-20.5%
Total expenses	<u>1,275,714</u>	<u>1,248,120</u>	<u>2.2%</u>	<u>1,249,841</u>	<u>-0.1%</u>
Income before contributions in aid of construction and transfers	53,790	89,737	-40.1%	31,586	184.1%
Contributions in aid of construction	17,243	17,315	-0.4%	27,553	-37.2%
Reduction of plant costs recovered through contributions in aid of construction	(17,243)	(17,315)	0.4%	(27,553)	37.2%
Transfers to City of Memphis	(38,408)	(40,393)	4.9%	(41,681)	3.1%
Change in net position	<u>\$ 15,382</u>	<u>\$ 49,344</u>	<u>-68.8%</u>	<u>\$ (10,095)</u>	<u>588.8%</u>
Net position, beginning of year	\$ 911,581	\$ 1,152,467	-20.9%	\$ 1,162,562	-0.9%
Change in method of accounting for OPEB	-	(290,230)		-	
Change in net position	15,382	49,344	-68.8%	(10,095)	588.8%
Net position, end of year	<u>\$ 926,963</u>	<u>\$ 911,581</u>	<u>1.7%</u>	<u>\$ 1,152,467</u>	<u>-20.9%</u>

Change in Net Position

2019 compared to 2018:

The change in net position is \$15.4 million, down \$34.0 million from \$49.3 million at December 31, 2018. This decrease is primarily due to an increase in operations maintenance expense of \$33.8 million, primarily due to an increase in non-cash OPEB expenses, a decrease in operating margin (operating revenue less power cost) of \$4.5 million, offset in part by a decrease in interest on long-term debt of \$5.5 million.

**MANAGEMENT'S DISCUSSION AND ANALYSIS
FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018
(Continued)**



2018 Compared to 2017:

The change in net position is \$49.3 million, up \$59.4 million from a loss of \$10.1 million at December 31, 2017. This increase is primarily due to an increase in operating margin (operating revenue less power cost) of \$11.5 million, a decrease in other operating expense of \$45.1 million and a decrease in Transfers to the City of Memphis of \$1.3 million, offset in part by an increase in depreciation expense of \$1.7 million.

Revenues

2019 Compared to 2018:

Total revenues were \$1.33 billion for fiscal year 2019, a decrease of \$8.4 million, or 0.6%, from fiscal year 2018. Operating revenues were \$1.29 billion in 2019, a decrease of \$3.9 million from 2018. The decrease in operating revenue is due primarily to sales volume decreasing by 3.6% compared to 2018. There was an increase in purchased power cost of \$0.4 million driven primarily by higher power cost due to the loss of the prepay credit and the October 2018 TVA rate increase. Non-operating revenue decreased \$4.4 million to \$43.5 million in 2019 as a result of a decrease in other income TVA prepay credit of \$4.4 million, and offset by an increase in other income TVA transmission credit of \$0.6 million.

2018 Compared to 2017:

Total revenues were \$1.34 billion for fiscal year 2018, a decrease of \$56.4 million, or 4.4%, from fiscal year 2017. Operating revenues were \$1.29 billion in 2018, an increase of \$55.8 million from 2017. The increase in operating revenue is due primarily to higher sales volume and the Tennessee Valley Authority ("TVA") 1.5% rate increase effective in October 2018. There was an increase in purchased power cost of \$44.4 million due to an increase in purchase volumes and the TVA rate increase, offset by the lower fuel cost adjustor. Non-operating revenue increased \$0.6 million to \$47.9 million in 2018 as a result of an increase in investment and other income of \$4.1 million and an increase in other income TVA transmission credit of \$1.1 million, offset by a decrease in other income prepay credit, related to the Electric TVA Prepay Bonds of \$4.5 million.

Expenses

2019 Compared to 2018:

For fiscal year 2019, total expenses were \$1.28 billion, a 2.2%, or \$27.6 million increase from fiscal year 2018 total expenses. This increase is primarily due to other operating expense of \$30.7 million offset by a decrease in non-operating expense of \$4.4 million. The increased in other operating expense is due to cumulative impact of the implementation of GASB No. 75 – *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions* ("GASB 75") in 2018. The decrease in non-operating expense is primarily related to retiring of Series 2008 and 2010 Bonds. The increase in purchased power is primarily due to higher power costs, as a result of the loss of the prepay credit and the October 2018 TVA rate increase.

**MANAGEMENT'S DISCUSSION AND ANALYSIS
FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018
(Continued)**



2018 Compared to 2017:

For fiscal year 2018, total expenses were \$1.25 billion, a 0.1%, or \$1.7 million decrease from fiscal year 2017 total expenses. This decrease was a result of a decrease in other operating expenses of \$45.1 million and a decrease in non-operating expenses of \$2.7 million, offset in part by an increase in purchased power of \$44.4 million and an increase in depreciation expense of \$1.7 million. The decrease in other operating expense is due primarily to the implementation of GASB 75 in 2018. The decrease in non-operating expense is primarily the result of lower interest expense associated with the Series 2010 Bonds, offset, in part, by higher interest expense associated with the Series 2016 Bonds. The increase in purchased power is due to the increase in purchases and higher power costs.

Contributions in aid of construction

2019 Compared to 2018:

Contributions in aid of construction ("CIAC") were \$17.2 million for fiscal year 2019, a decrease of \$0.07 million (0.4%) from fiscal year 2018. This decrease was mainly the result of decreases in donated easements of \$2.1 million and claims of \$0.13 million, offset by increases in construction contributions of \$2.2 million and cancelled contracts of \$0.02 million.

2018 Compared to 2017:

Contributions in aid of construction ("CIAC") were \$17.3 million for fiscal year 2018, a decrease of \$10.2 million (37.2%) from fiscal year 2017. This decrease was mainly the result of decreases in grant funds of \$9.8 million, cancelled contracts of \$0.45 million, and claims of \$2.2 million, offset by an increase in construction contributions of \$0.63 million and donated easements of \$1.6 million.

Transfers to the City of Memphis

2019 Compared to 2018:

MLGW's transfer to the City of Memphis is based on the formula provided by the May 29, 1987 TVA Power Contract Amendment (Supp. No. 8). The formula includes a maximum property tax equivalency calculation plus 4% of operating revenue less power costs (three-year average). Transfers to the City represent the Electric Division's in lieu of tax payment. The 2019 transfer decreased by \$2.0 million as a result of a decrease in the assessment ratio.

2018 Compared to 2017:

MLGW's transfer to the City of Memphis is based on the formula provided by the May 29, 1987 TVA Power Contract Amendment (Supp. No. 8). The formula includes a maximum property tax equivalency calculation plus 4% of operating revenue less power costs (three-year average). Transfers to the City represent the Electric Division's in lieu of tax payment. The 2018 transfer decreased by \$1.3 million compared to 2017.

**MANAGEMENT'S DISCUSSION AND ANALYSIS
FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018
(Continued)**



Analysis of the Gas Division's Statements of Net Position

Condensed financial information comparing the Gas Division's net position for the past three fiscal years is presented below:

Table 3 Gas Division Condensed Statements of Net Position December 31 <i>(In Thousands)</i>					
	<u>2019</u>	<u>2018</u>	<u>FY19 - FY18 Percentage Change</u>	<u>2017</u>	<u>FY18 - FY17 Percentage Change</u>
Current assets (excluding restricted funds)	\$ 160,192	\$ 162,398	-1.4%	\$ 152,994	6.1%
Restricted assets	25,019	22,904	9.2%	30,991	-26.1%
Other assets	23,731	29,288	-19.0%	17,575	66.6%
Utility plant	415,522	421,246	-1.4%	400,150	5.3%
Total assets	624,464	635,836	-1.8%	601,710	5.7%
Deferred outflows of resources					
Employer pension contribution	5,017	5,100	-1.6%	5,784	-11.8%
Employer OPEB contribution	7,808	11,264	-30.7%	-	
Pension liability experience	1,642	1,203	36.5%	388	210.1%
OPEB liability experience	564	704	-19.9%	-	
Pension investment earnings experience	31,625	7,882	301.2%	13,159	-40.1%
OPEB investment earnings experience	8,558	-		-	
Total assets and deferred outflows	679,678	661,989	2.7%	621,041	6.6%
Current liabilities payable from current assets	36,931	63,335	-41.7%	41,439	52.8%
Current liabilities payable from restricted assets	7,770	9,548	-18.6%	7,978	19.7%
Long-term debt	82,161	86,111	-4.6%	89,988	-4.3%
Non-current liabilities	101,935	68,557	48.7%	28,724	138.7%
Total liabilities	228,797	227,551	0.5%	168,129	35.3%
Deferred inflows of resources					
Pension liability experience	1,926	2,985	-35.5%	4,502	-33.7%
OPEB liability experience	601	-		-	
Pension changes of assumptions	848	1,695	-50.0%	2,830	-40.1%
OPEB changes of assumptions	30,723	38,404	-20.0%	-	
Pension investment earnings experience	17,117	23,018	-25.6%	2,339	884.1%
OPEB investment earnings experience	4,293	5,724	-25.0%	-	
Accumulated decrease in fair value of hedging derivatives	1,630	1,546	5.4%	18	8488.9%
Total liabilities and deferred inflows	285,935	300,923	-5.0%	177,818	69.2%
Net position:					
Net investment in capital assets	331,206	333,148	-0.6%	308,334	8.0%
Restricted	13,057	9,760	33.8%	19,662	-50.4%
Unrestricted	49,480	18,158	172.5%	115,227	-84.2%
Total Net position	\$ 393,743	\$ 361,066	9.1%	\$ 443,223	-18.5%

Assets

2019 Compared to 2018:

As of December 31, 2019 total assets and deferred outflows were \$679.7 million, an increase of \$17.7 million, or 2.7%, compared to December 31, 2018. This increase is due, in part, to increases in pension investment earnings experience of \$23.7 million and OPEB investment earnings experience of \$8.6 million, offset, in part, by decreases in other assets of \$5.6 million, net utility plant of \$5.7 million, employer OPEB contribution – annual funding of \$3.5 million and current assets less restricted funds of \$2.1 million. Other assets decreased due to net pension asset-long term of \$9.4 million as a result of the impact of GASB 68, offset by an increase in meter replacement-long term of \$3.3 million. Current assets (excluding restricted funds) decreased due to decrease in net accounts receivable-MLGW services of \$6.0 million and unbilled revenues of \$6.4 million, offset by an increase in investments of \$10.2 million.

2018 Compared to 2017:

As of December 31, 2018 total assets and deferred outflows were \$662.0 million, an increase of \$41.0 million, or 6.6%, compared to December 31, 2017. This increase is due, in part, to increases in net utility plant of \$21.1 million, other assets of \$11.7 million, employer OPEB contribution of \$11.3 million, current assets (excluding restricted funds) of \$9.4 million and, offset, in part, by a decrease in restricted assets of \$8.1 million and a decrease in pension investment earnings experience of \$5.3 million. Current assets increased due, in part, to increases in accounts receivable (less allowance for doubtful accounts) of \$9.2 million, inventories of \$2.3 million, and other current assets of \$1.6 million, offset by a decrease in investments of \$3.4 million and unbilled revenues of \$2.9 million. The decrease in restricted assets is due to depleting the Series 2016 revenue bond proceeds used for capital expenditures.

Capital Assets and Construction Activities

2019 Compared to 2018:

The Gas Division's utility plant assets, net of accumulated depreciation were \$415.5 million as of December 31, 2019, a decrease of 1.4% over fiscal 2018. During 2019, the Gas Division expended \$21.5 million on construction activities and equipment purchases, a decrease of \$26.5 million or 55.15% compared to fiscal year 2018. Major Gas Division expenditures include the purchase of gas meters (\$9.6 million), gas main service replacement (\$4.1 million), routine maintenance of the gas distribution system (\$4.3 million), extensions to serve new customers (\$2.5 million), and the purchase of transportation equipment (\$1.1 million).

2018 Compared to 2017:

The Gas Division's utility plant assets, net of accumulated depreciation totaled \$421.2 million as of December 31, 2018, an increase of 5.3% over fiscal 2017. During 2018, the Gas Division expended \$48.0 million on construction activities and equipment purchases, an increase of \$0.9 million or 2.0% compared to fiscal year 2017. Major Gas Division construction activities included the purchase of meters and metering equipment (\$24.5 million), gas main service replacements (\$5.6 million), planned maintenance (\$5.1 million), and the purchase of transportation and power operated equipment (\$4.2 million). Other significant Gas Division expenditures included information systems and technology upgrades (\$3.8 million) and maintenance of transmission pipelines and facilities (\$1.4 million).

Liabilities

2019 Compared to 2018:

At December 31, 2019, total liabilities and deferred inflows were \$285.9 million, representing a decrease of \$15.0 million, or 5.0%, compared to \$300.9 million at December 31, 2018. This decrease is due, in part, to decreases in current liabilities payable from current assets of \$26.4 million due to accounts payable-purchased gas of \$12.3 million and accrued PILOT in 2018 of \$15.1 million, deferred inflows related to OPEB changes of assumptions of \$7.7 million, pension investment earnings experience of \$5.9 million, long-term debt of \$3.9 million, and current liabilities payable from restricted assets of \$1.8 million, offset in part, by increases in non-current liabilities of \$33.4 million due to net pension liability-long term of \$24.8 million and net OPEB liability-long term of \$6.5 million.

2018 Compared to 2017:

At December 31, 2018, total liabilities and deferred inflows were \$300.9 million, representing a \$123.1 million (69.2%) increase compared to \$177.8 million at December 31, 2017. This increase is due, in part, to increases in non-current liabilities of \$39.8 million, OPEB changes of assumptions due to the implementation of GASB 75 of \$38.4 million, current liabilities payable from current assets of \$21.9 million, and pension investment earnings experience of \$20.7 million, offset by decreases in long – term debt of \$3.9 million, pension liability experience of \$1.5 million, and pension changes of assumptions of \$1.1 million.

Net Position

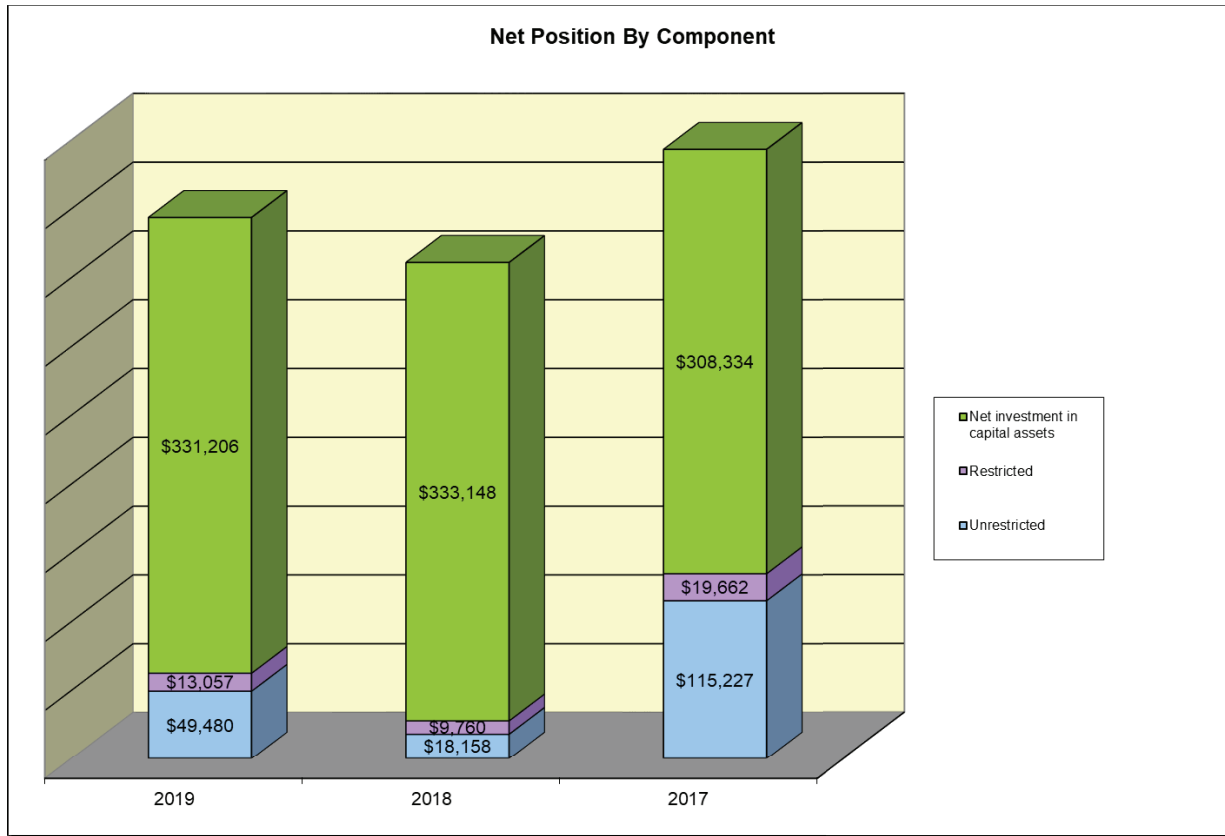
2019 Compared to 2018:

As of December 31, 2019, the Gas Division's total net position (total assets and deferred outflows of resources less total liabilities and deferred inflows of resources) was \$393.7 million, an increase of \$32.7 million, or 9.1%, from December 31, 2018. The increase is due, in part, to an increase in unrestricted net position of \$31.3 million and an increase in restricted net position of \$3.3 million due primarily to an increase in restricted assets. Eighty-four percent of the net position was related to net investment in capital assets.

2018 Compared to 2017:

As of December 31, 2018, the Gas Division's total net position (total assets and deferred outflows of resources less total liabilities and deferred inflows of resources) was \$361.1 million, a decrease of \$82.2 million, or 18.5%, from December 31, 2017. The decrease is due, in part, to a decrease in unrestricted net position of \$97.1 million as a result of the cumulative impact of implementing GASB Statement No. 75 and a decrease in restricted net position of \$9.9 million due to the disbursement of the proceeds of the Series 2017 Bonds, offset, in part by an increase in investments in capital assets of \$24.8 million. Ninety-two percent of the net position was related to net investment in capital assets.

Figure 3: Gas Division's Net Position (in thousands):



Analysis of the Gas Division's Statements of Revenues, Expenses and Changes in Net Position

Condensed financial information comparing the Gas Division's revenues, expenses and changes in net position for the past three fiscal years is presented below:

Table 4 Gas Division Condensed Statements of Revenues, Expenses and Changes in Net Position Years Ended December 31, 2019, 2018, and 2017 <i>(In Thousands)</i>					
	<u>2019</u>	<u>2018</u>	<u>FY19 - FY18 Percentage Change</u>	<u>2017</u>	<u>FY18 - FY17 Percentage Change</u>
Revenues:					
Sales, service and other operating revenues	\$ 248,056	\$ 263,069	-5.7%	\$ 218,088	20.6%
Transported gas revenue	12,571	11,119	13.1%	8,315	33.7%
Non-operating revenues	1,336	899	48.6%	(186)	583.3%
Total revenues	<u>261,963</u>	<u>275,087</u>	<u>-4.8%</u>	<u>226,217</u>	<u>21.6%</u>
Expenses:					
Depreciation expense	22,500	21,483	4.7%	18,121	18.6%
Purchased gas	110,555	138,107	-19.9%	105,729	30.6%
Other operating expense	75,890	64,921	16.9%	94,811	-31.5%
Non-operating expense	2,339	2,400	-2.5%	1,469	63.4%
Total expenses	<u>211,284</u>	<u>226,911</u>	<u>-6.9%</u>	<u>220,130</u>	<u>3.1%</u>
Income before contributions in aid of construction and transfers	50,679	48,176	5.2%	6,087	691.5%
Contributions in aid of construction	1,518	3,018	-49.7%	3,833	-21.3%
Reduction of plant costs recovered through contributions in aid of construction	(1,518)	(3,018)	49.7%	(3,833)	21.3%
Transfers to City of Memphis	(18,002)	(19,152)	6.0%	(18,325)	-4.5%
Change in net position	<u>\$ 32,677</u>	<u>\$ 29,024</u>	<u>12.6%</u>	<u>\$ (12,238)</u>	<u>337.2%</u>
Net position, beginning of year	\$ 361,066	\$ 443,223	-18.5%	\$ 455,461	-2.7%
Change in method of accounting for OPEB	-	(111,181)	-	-	-
Change in net position	<u>32,677</u>	<u>29,024</u>	<u>12.6%</u>	<u>(12,238)</u>	<u>337.2%</u>
Net position, end of year	<u>\$ 393,743</u>	<u>\$ 361,066</u>	<u>9.1%</u>	<u>\$ 443,223</u>	<u>-18.5%</u>

Change in Net Position

2019 Compared to 2018:

The change in net position is \$32.7 million, up \$3.7 million from December 31, 2018. This increase is primarily due to an increase in operating margin (operating revenue less gas cost) of \$14.0 million, offset, in part, by an increase in other operating expenses of \$11.0 million. The increase in other operating expenses relates primarily to an increase in OPEB expenses of \$10.0 million.

**MANAGEMENT'S DISCUSSION AND ANALYSIS
FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018
(Continued)**



2018 Compared to 2017:

The change in net position is \$29.0 million, up \$41.3 million from December 31, 2017. This increase is primarily due to an increase in operating margin (operating revenue less gas cost) of \$15.4 million and an increase in other revenues of \$4.2 million, in addition to a decrease in administrative and general operating expenses of \$27.7 million due to the implementation of GASB Statement No. 75 which required a change in the method of accounting for OPEB.

Revenues

2019 Compared to 2018:

Total revenues were \$262.0 million for fiscal year 2019, a decrease of \$13.1 million or 4.8% from fiscal year 2018. Sales, service and other operating revenues were \$248.1 million, a decrease of \$15.0 million, or 5.7%, from 2018 due to a decrease in sales volume, offset by a 2% retail rate increase effective July 2018. Purchased gas cost decreased \$27.6 million, or 19.9%, due to lower gas sales volume and lower unit cost. Transported gas revenues increased \$1.5 million, or 13.1%, and non-operating revenue increased \$0.4 million, compared to fiscal year 2018.

2018 Compared to 2017:

Total revenues were \$275.0 million for fiscal year 2018, an increase of \$48.9 million or 21.6% from fiscal year 2017. Sales, service and other operating revenues were \$263.1 million, an increase of \$45.0 million, or 20.6%, from 2017. There was a corresponding increase in purchased gas cost of \$32.4 million, or 30.6%, due to higher gas sales volume, offset in part by lower unit cost. Transported gas revenues increased \$2.8 million, or 33.7%, and non-operating revenue increased \$1.1 million, compared to fiscal year 2017.

Expenses

2019 Compared to 2018:

For fiscal year 2019, total expenses were \$211.3 million at December 31, 2019, a decrease of 15.6 million versus fiscal year 2018 expenses of \$226.9 million. Purchased gas cost was \$110.6 million, down 19.9%, or \$27.6 million from \$138.1 million at December 31, 2018, as a result of lower gas sales volume and lower gas costs per unit than 2018. Other operating expense was \$75.9 million at December 31, 2019, an increase of \$11.0 million, or 16.9%, due to the OPEB expenses determined by the actuarial valuation. Depreciation expense was \$22.5 million at December 31, 2019, up \$1.0 million, or 4.7%, from \$21.5 million at December 31, 2018 and non-operating expense was \$2.3 million at December 31, 2019, a decrease of \$0.6 million due to lower interest expense associated with the Series 2016 Bonds.

2018 Compared to 2017:

For fiscal year 2018, total expenses were \$226.9 million at December 31, 2018, an increase of 3.1% over fiscal year 2017 expenses of \$220.1 million. Purchased gas cost was \$138.1 million, up 30.6%, from \$105.7 million at December 31, 2017, as a result of higher gas sales volume, offset in part by lower gas costs per unit than 2017. Depreciation expense was \$21.5 million at December 31, 2018, up \$3.4 million, or 18.6%, from \$18.1 million at December 31, 2017 and non-operating expense was \$2.4 million at December 31, 2018, an increase of \$0.9 million due to higher interest expense associated with the Series 2017 Bonds.

**MANAGEMENT'S DISCUSSION AND ANALYSIS
FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018
(Continued)**



Contributions in aid of construction

2019 Compared to 2018:

Contributions in aid of construction ("CIAC") were \$1.5 million for fiscal year 2019, a decrease of \$1.5 million (49.7%) from fiscal year 2018. This decrease was mainly the result of a decrease in donated easements of \$1.6 million, offset by increases in construction contributions of \$0.08 million and cancelled contracts of \$0.02 million.

2018 Compared to 2017:

Contributions in aid of construction ("CIAC") were \$3.0 million for fiscal year 2018, a decrease of \$0.8 million (21.3%) from fiscal year 2017. This decrease was mainly the result of decreases in construction contributions of \$0.2 million, \$1.7 million of economic development contributions, and \$0.1 million in cancelled contracts, offset by an increase in donated easements of \$1.2 million.

Transfers to the City of Memphis

2019 Compared to 2018:

MLGW's transfer to the City of Memphis is based on the formula provided by the State of Tennessee Municipal Gas System Tax Equivalent Law of 1987. The formula includes a maximum property tax equivalency calculation plus 4% of operating revenue less power costs (three-year average). Transfers to the City represent the Gas Division's in lieu of tax payment. The 2019 transfer decreased by \$1.2 million as a result of a decrease in the assessment ratio.

2018 Compared to 2017:

MLGW's transfer to the City of Memphis is based on the formula provided by the State of Tennessee Municipal Gas System Tax Equivalent Law of 1987. The formula includes a maximum property tax equivalency calculation plus 4% of operating revenue less power costs (three-year average). Transfers to the City represent the Gas Division's in lieu of tax payment. The 2018 transfer increased by \$0.8 million as a result of an increase in net plant investment.

**MANAGEMENT'S DISCUSSION AND ANALYSIS
FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018
(Continued)**



Analysis of the Water Division's Statements of Net Position

Condensed financial information comparing the Water Division's net position for the past three fiscal years is presented below:

Table 5 Water Division Condensed Statements of Net Position December 31 <i>(In Thousands)</i>					
	<u>2019</u>	<u>2018</u>	<u>FY19 - FY18 Percentage Change</u>	<u>2017</u>	<u>FY18 - FY17 Percentage Change</u>
Current assets (excluding restricted assets)	\$ 44,287	\$ 40,305	9.9%	\$ 56,200	-28.3%
Restricted assets	17,239	16,211	6.3%	13,395	21.0%
Other assets	6,230	12,335	-49.5%	4,935	149.9%
Utility plant	354,205	349,254	1.4%	327,788	6.5%
Total assets	<u>421,961</u>	<u>418,105</u>	<u>0.9%</u>	<u>402,318</u>	<u>3.9%</u>
Deferred outflows of resources					
Employer pension contribution	3,708	3,769	-1.6%	3,804	-0.9%
Employer OPEB contribution	5,771	8,325	-30.7%	-	
Pension liability experience	1,215	889	36.7%	258	244.6%
OPEB liability experience	417	520	-19.8%	-	
Pension investment earnings experience	23,375	5,826	301.2%	8,739	-33.3%
OPEB investment earnings experience	6,326	-		-	
Total assets and deferred outflows	<u>462,773</u>	<u>437,434</u>	<u>5.8%</u>	<u>415,119</u>	<u>5.4%</u>
Current liabilities payable from current assets	17,607	19,928	-11.6%	16,977	17.4%
Current liabilities payable from restricted assets	5,175	6,666	-22.4%	4,978	33.9%
Long-term debt	63,803	67,040	-4.8%	70,219	-4.5%
Non-current liabilities	72,649	49,679	46.2%	18,457	169.2%
Total liabilities	<u>159,234</u>	<u>143,313</u>	<u>11.1%</u>	<u>110,631</u>	<u>29.5%</u>
Deferred inflows of resources					
Pension liability experience	1,423	2,206	-35.5%	2,989	-26.2%
OPEB liability experience	444	-		-	
Pension changes of assumptions	627	1,253	-50.0%	1,880	-33.4%
OPEB changes of assumptions	22,709	28,386	-20.0%	-	
Pension investment earnings experience	12,652	17,014	-25.6%	1,553	995.6%
OPEB investment earnings experience	3,173	4,230	-25.0%	-	
Total liabilities and deferred inflows	<u>200,262</u>	<u>196,402</u>	<u>2.0%</u>	<u>117,053</u>	<u>67.8%</u>
Net position:					
Net investment in capital assets	288,272	280,220	2.9%	255,420	9.7%
Restricted	10,698	8,194	30.6%	7,122	15.1%
Unrestricted	(36,459)	(47,382)	23.1%	35,524	-233.4%
Total Net position	<u>\$ 262,511</u>	<u>\$ 241,032</u>	<u>8.9%</u>	<u>\$ 298,066</u>	<u>-19.1%</u>

Assets

2019 Compared to 2018:

As of December 31, 2019, total assets and deferred outflows were \$462.8 million, an increase of \$25.3 million compared to December 31, 2018. The increase is due, in part, to an increase in net utility plant of \$5.0 million, current assets of \$4.0 million, restricted assets of \$1 million, pension investment earnings of \$17.5 million, OPEB investment earnings of \$6.3 million, offset in part by a decrease in other assets of \$6.0 million and a decrease in employer OPEB contributions of \$2.5 million.

2018 Compared to 2017:

As of December 31, 2018, total assets and deferred outflows were \$437.4 million, an increase of \$22.3 million compared to December 31, 2017. The increase is due, in part, to increases in net utility plant of \$21.5 million, other assets of \$7.4 million, and employer OPEB contribution of \$8.3 million, offset, in part by a decrease in cash and cash equivalents of \$9.7 million, and a decrease in the pension investment earnings experience of \$2.9 million.

Capital Assets and Construction Activities

2019 Compared to 2018:

The Water Division's utility plant assets, net of accumulated depreciation were \$354.2 million as of December 31, 2019, an increase of 1.4% as compared to December 31, 2018. During 2019, the Water Division expended \$17.2 million on construction activities and equipment purchases, a decrease of \$15.1 million or 46.8% compared to fiscal year 2018. Major Water Division construction expenditures include extensions to serve new customers (\$3.9 million), planned improvements of the water distribution system (\$2.8 million), the purchase of water meters (\$2.8 million), rehabilitation of various pumping stations (\$2.8 million), the maintenances and construction of various production wells (\$1.3 million), the installation of water main (\$1.1 million), water production building upgrades (\$1.0 million), and street improvements (\$0.7 million).

2018 Compared to 2017:

The Water Division's utility plant assets, net of accumulated depreciation totaled \$349.3 million as of December 31, 2018, an increase of 6.5% as compared to December 31, 2017. During 2018, the Water Division expended \$32.3 million on construction activities and equipment purchases, a decrease of \$12.7 million or 28.2% compared to fiscal year 2017. Major Water Division construction activities included the purchase of meters (\$11.8 million), maintenance and construction of water production wells (\$3.4 million), extensions to serve new customers (\$3.3 million), installation of new water mains (\$3.2 million), building upgrades and rehabilitation of various pumping stations and other MLGW buildings (\$3.0 million). Other significant expenditures include the maintenance and installation of overhead storage tanks (\$1.8 million), and the purchase of transportation and power operated equipment (\$1.3 million).

Liabilities

2019 Compared to 2018:

As of December 31, 2019, total liabilities and deferred inflows were \$200.3 million, representing an increase of \$3.9 million, or 2.0%, compared to December 31, 2018. This increase is due in part to an increase in non-current liabilities of \$23.0 million (due largely to increases in net pension liability and net OPEB liability), offset in part by a decrease in long-term debt of \$3.2 million, decreases in current liabilities of \$3.8 million, a decrease in OPEB changes in assumptions of \$5.7 million, a decrease in pension investment earnings of \$4.4 million, a decrease of OPEB investment earnings of \$1.1 million, and a decrease in pension changes of assumptions of \$0.6 million.

2018 Compared to 2017:

As of December 31, 2018, total liabilities and deferred inflows were \$196.4 million, representing an increase of \$79.3 million, or 67.8%, compared to December 31, 2017. This increase is due in part to increases in non-current liabilities of \$31.2 million, OPEB changes of assumptions of \$28.4 million, and pension investment earnings experience of \$15.5 million, offset by decreases in long-term debt of \$3.2 million and pension liability experience of \$0.8 million. The increase in non-current liabilities is due to an increase in net OPEB liability of \$43.1 million offset by a decrease in net pension liability of \$11.8 million.

Net Position

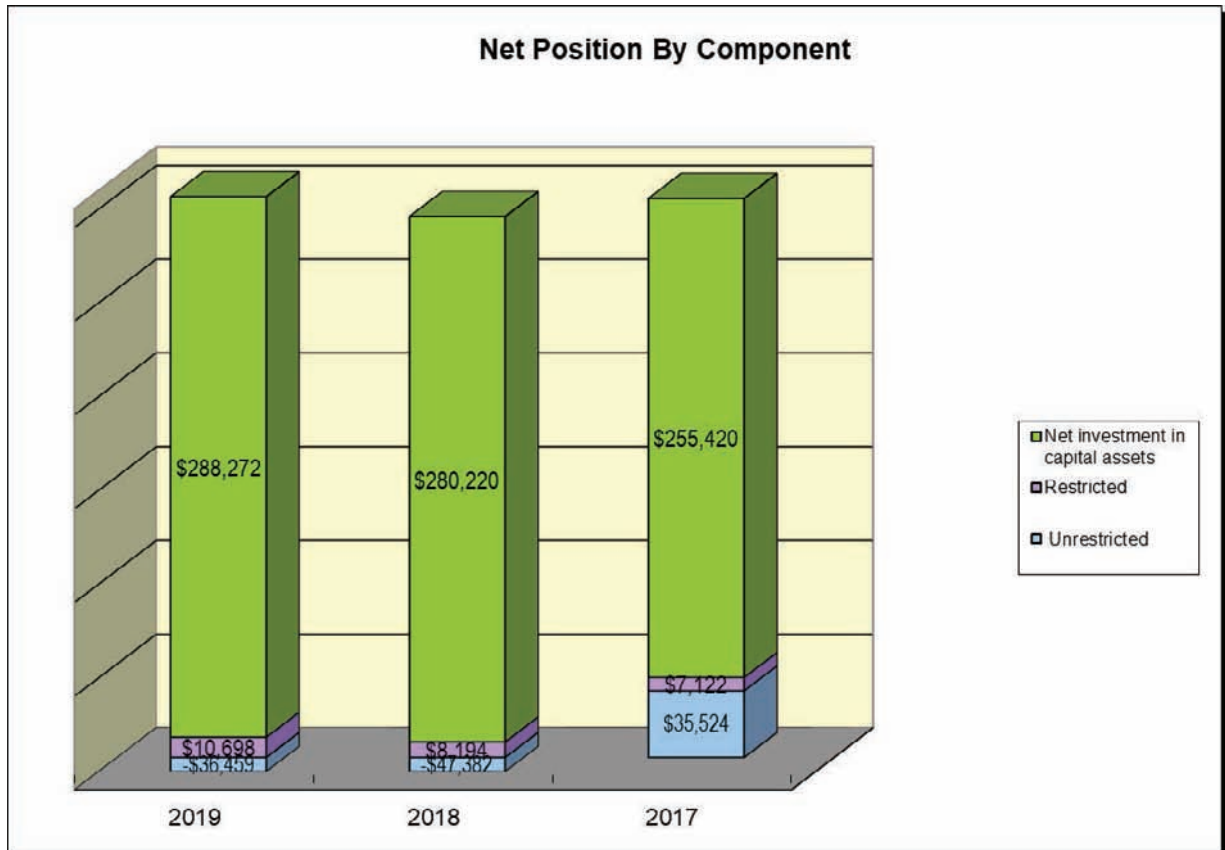
2019 Compared to 2018:

As of December 31, 2019, the Water Division's total net position (total assets and deferred outflows of resources less total liabilities and deferred inflows of resources) was \$263.0 million, an increase of \$21.5 million, or 8.9%, from December 31, 2018. The increase is due primarily to an increase in unrestricted net position of \$10.9 million, an increase in net investment in capital assets of \$8.1 million, and an increase in restricted net position of \$2.5 million. One hundred and ten percent of the net position was related to net investment in capital assets.

2018 Compared to 2017:

As of December 31, 2018, the Water Division's total net position (total assets and deferred outflows of resources less total liabilities and deferred inflows of resources) was \$241.0 million, a decrease of \$57.0 million, or 19.1%, from December 31, 2017. The decrease is due primarily to a decrease in unrestricted net position of \$82.9 million as a result of cumulative impact of implementing GASB Statement No. 75, offset in part by an increase in net investment in capital assets of \$24.8 million and an increase in restricted net position of \$1.1 million. One hundred and sixteen percent of the net position was related to net investment in capital assets.

Figure 4: Water Division's Net Position (in thousands):



Analysis of the Water Division's Statements of Revenues, Expenses and Changes in Net Position

Condensed financial information comparing the Water Division's revenues, expenses and changes in net position for the past three fiscal years is presented below:

Table 6 Water Division Condensed Statements of Revenues, Expenses and Changes in Net Position Years Ended December 31, 2019, 2018, and 2017 <i>(In Thousands)</i>					
	<u>2019</u>	<u>2018</u>	<u>FY19 - FY18 Percentage Change</u>	<u>2017</u>	<u>FY18 - FY17 Percentage Change</u>
Revenues:					
Operating revenues	\$ 105,679	\$ 103,140	2.5%	\$ 99,513	3.6%
Non-operating revenues	1,054	1,177	-10.5%	1,000	17.7%
Total revenues	<u>106,733</u>	<u>104,317</u>	<u>2.3%</u>	<u>100,513</u>	<u>3.8%</u>
Expenses:					
Depreciation expense	10,635	9,653	10.2%	8,404	14.9%
Other operating expense	70,299	65,118	8.0%	81,352	-20.0%
Non-operating expense	1,820	1,864	-2.4%	1,358	37.3%
Total expenses	<u>82,754</u>	<u>76,635</u>	<u>8.0%</u>	<u>91,114</u>	<u>-15.9%</u>
Income before contributions in aid of construction and transfers	23,979	27,682	-13.4%	9,399	194.5%
Contributions in aid of construction	3,345	4,364	-23.4%	3,576	22.0%
Reduction of plant costs recovered through contributions in aid of construction	(3,345)	(4,364)	23.4%	(3,576)	-22.0%
Transfers to City of Memphis	(2,500)	(2,500)	-	(4,400)	43.2%
Change in net position	<u>\$ 21,479</u>	<u>\$ 25,182</u>	<u>-14.7%</u>	<u>\$ 4,999</u>	<u>403.7%</u>
Net position, beginning of year	\$ 241,032	\$ 298,066	-19.1%	\$ 293,067	1.7%
Change in method of accounting for OPEB	-	(82,216)	-	-	-
Change in net position	<u>21,479</u>	<u>25,182</u>	<u>-14.7%</u>	<u>4,999</u>	<u>403.7%</u>
Net position, end of year	<u>\$ 262,511</u>	<u>\$ 241,032</u>	<u>8.9%</u>	<u>\$ 298,066</u>	<u>-19.1%</u>

Change in Net Position

2019 Compared to 2018:

As of December 31, 2019, the change in net position is \$21.5 million, down \$3.7 million from \$25.2 million at December 31, 2018. This decrease is due to an increase in other operating expenses of \$5.2 million, and an increase in depreciation expense of \$1.0 million, offset by increases in operating revenues of \$2.5 million.

**MANAGEMENT'S DISCUSSION AND ANALYSIS
FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018
(Continued)**



2018 Compared to 2017:

As of December 31, 2018, the change in net position is \$25.2 million, up \$20.2 million from \$5.0 million at December 31, 2017. This increase is due to a decrease in other operating expenses of \$16.2 million, and increase in operating revenues of \$3.6 million due to higher sales volumes, a decrease in Transfers to the City of Memphis of \$1.9 million, offset by increases in depreciation expense of \$1.2 million and non-operating expenses of \$0.5 million.

Revenues

2019 Compared to 2018:

Total revenues were \$106.7 million for fiscal year 2019, an increase of \$2.4 million compared to fiscal year 2018. This increase is due to an increase in sales and service revenues of \$2.8 million due primarily to an overall 3% rate increase implemented in March 2019, offset in part by a decrease in other revenues of \$0.3 million.

2018 Compared to 2017:

Total revenues were \$104.3 million for fiscal year 2018, an increase of \$3.8 million compared to fiscal year 2017. This increase is due to increases in operating revenues of \$3.6 million due primarily to higher sales volume and non-operating revenues of \$0.2 million.

Expenses

2019 Compared to 2018:

As of December 31, 2019, total expenses for the Water Division were \$82.8 million, an increase of \$6.1 million, or 8.0%, compared to fiscal year 2018. This resulted from an increase in operating expense of \$5.2 million and an increase in depreciation expense of \$0.9 million.

2018 Compared to 2017:

As of December 31, 2018, total expenses for the Water Division were \$76.6 million, a decrease of \$14.5 million, or 15.9%, compared to fiscal year 2017. This resulted from a decrease in operating expense of \$16.2 million, offset in part by an increase in depreciation expense of \$1.3 million.

Transfers to the City decreased by \$1.9 million due to the expiration of an Agreement with the City. This Agreement specified additional payments to the City of \$1.9 million per year from 2014-2017.

Contributions in aid of construction

2019 Compared to 2018:

Contributions in aid of construction ("CIAC") were \$3.3 million for fiscal year 2019, a decrease of \$1.0 million (23.4%) from fiscal year 2018. This decrease was mainly the result of a decrease in donated easements of \$1.2 million, offset by an increase in construction contributions of \$0.2 million.

**MANAGEMENT'S DISCUSSION AND ANALYSIS
FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018
(Continued)**



2018 Compared to 2017:

Contributions in aid of construction (“CIAC”) were \$4.4 million for fiscal year 2018, an increase of \$0.8 million (22%) from fiscal year 2017. This increase was mainly the result of an increase of \$0.9 million in donated easements, offset by a decrease in construction contributions of \$0.1 million.

Transfers to the City of Memphis

2019 compared to 2018

The Water Division through an agreement with the City, transfers a payment in the amount of \$2.5 million per year. The agreement is effective through the year 2028.

2018 compared to 2017

The Water Division through an agreement with the City, transfers a payment in the amount of \$2.5 million per year. The agreement is effective through the year 2028. During 2014 the Water Division was authorized and directed by City Council, per City resolution, to make an additional annual \$1.9 million transfer payment through fiscal year 2017. The Water Division did not make this additional \$1,900 transfer in 2018 per the expiration date in the City Resolution.

Additional Financial Information

This discussion is designed to provide MLGW’s customers, investors and other interested parties with a general overview of the financial position and results of operations. Questions concerning any of the information provided in this report or requests for additional information should be addressed to the Manager of General Accounting, Memphis Light, Gas and Water Division, P.O. Box 430, Memphis, TN 38101, or call 901-528-4221.

Financial Statements

Required and Supplemental Information

**Memphis Light, Gas and Water Division
Years ended December 31, 2019 and 2018
with Independent Auditor's Report**



MLGW
SERVING YOU IS
WHAT WE DO





STATEMENTS OF NET POSITION
DECEMBER 31, 2019 AND 2018
(Dollars in Thousands)



	Electric Division		Gas Division		Water Division	
	2019	2018	2019	2018	2019	2018
Assets						
Current assets:						
Cash and cash equivalents	\$ 84,272	\$ 138,013	\$ 43,562	\$ 46,280	\$ 8,029	\$ 6,784
Investments	86,964	100,355	41,902	31,738	8,301	4,939
Derivative financial instruments	-	-	1,630	1,546	-	-
Restricted funds - current	32,108	28,958	10,905	9,548	8,462	7,604
Accrued interest receivable	-	-	66	80	-	-
Accounts receivable - MLGW services (less allowance for doubtful accounts)	88,236	91,907	30,627	36,671	8,728	8,579
Accounts receivable - billing on behalf of other entities	-	-	9,940	9,600	9,734	10,270
Unbilled revenues	47,791	49,948	13,380	19,736	3,670	3,627
Unrecovered purchased power/gas cost	11,021	9,773	683	-	-	-
Gas stored - gas in storage	-	-	2,049	2,618	-	-
Inventories	44,336	34,419	9,416	8,529	4,892	5,052
Prepayment - insurance	-	-	625	514	-	-
Unamortized debt expense - current	127	131	61	63	63	65
Meter replacement - current	1,018	757	1,271	1,070	337	252
Other current assets	3,895	3,377	4,980	3,953	533	737
Total current assets	399,768	457,638	171,097	171,946	52,749	47,909
Non-current assets:						
Restricted funds:						
Insurance reserves - injuries and damages	5,082	5,925	1,547	2,321	1,586	2,154
Insurance reserves - casualties and general	21,022	20,400	9,948	9,885	7,412	7,256
Medical benefits	14,588	10,838	6,654	4,943	4,351	3,232
Customer deposits	28,611	27,976	6,355	5,238	2,239	2,215
Interest fund - revenue bonds - series 2014	227	235	-	-	38	39
Interest fund - revenue bonds - series 2016	136	141	136	142	70	73
Interest fund - revenue bonds - series 2017	302	312	146	150	75	77
Sinking fund - revenue bonds - series 2014	237	231	-	-	52	51
Sinking fund - revenue bonds - series 2016	120	116	120	116	102	100
Sinking fund - revenue bonds - series 2017	258	249	113	109	77	76
Groundwater reserve fund	-	-	-	-	1,237	938
Total restricted funds	70,583	66,423	25,019	22,904	17,239	16,211
Less restricted funds - current	(32,108)	(28,958)	(10,905)	(9,548)	(8,462)	(7,604)
Restricted funds - non-current	38,475	37,465	14,114	13,356	8,777	8,607

See accompanying notes.

STATEMENTS OF NET POSITION
DECEMBER 31, 2019 AND 2018
(Dollars in Thousands)
(Continued)



	Electric Division		Gas Division		Water Division	
	2019	2018	2019	2018	2019	2018
Other assets:						
Prepayment - in lieu of taxes	1,671	1,690	38	39	-	-
Unamortized debt expense	1,080	1,208	548	609	557	621
Notes receivable	-	-	3,713	2,123	1,727	1,747
Meter replacement - long term	14,339	11,082	19,432	17,085	3,946	2,996
Net pension asset - long term	-	24,604	-	9,432	-	6,971
Total other assets	17,090	38,584	23,731	29,288	6,230	12,335
Utility plant						
Plant in service	1,966,265	1,931,069	767,060	753,898	568,142	555,027
Plant held for future use	-	-	212	212	-	-
Non-utility plant	15,345	15,345	200	200	-	-
Total utility plant	1,981,610	1,946,414	767,472	754,310	568,142	555,027
Less accumulated depreciation & amortization	(850,563)	(816,788)	(351,950)	(333,064)	(213,937)	(205,773)
Utility plant, net	1,131,047	1,129,626	415,522	421,246	354,205	349,254
Total non-current assets	1,186,612	1,205,675	453,367	463,890	369,212	370,196
Total assets	1,586,380	1,663,313	624,464	635,836	421,961	418,105
Deferred outflows of resources						
Employer pension contribution	13,088	13,305	5,017	5,100	3,708	3,769
Employer OPEB contribution	20,370	29,383	7,808	11,264	5,771	8,325
Pension liability experience	4,281	3,137	1,642	1,203	1,215	889
OPEB liability experience	1,470	1,837	564	704	417	520
Pension investment earnings experience	82,501	20,562	31,625	7,882	23,375	5,826
OPEB investment earnings experience	22,326	-	8,558	-	6,326	-
Total deferred outflows of resources	144,036	68,224	55,214	26,153	40,812	19,329
Total assets and deferred outflows of resources	\$ 1,730,416	\$ 1,731,537	\$ 679,678	\$ 661,989	\$ 462,773	\$ 437,434

See accompanying notes.

STATEMENTS OF NET POSITION
DECEMBER 31, 2019 AND 2018
(Dollars in Thousands)
(Continued)



	Electric Division		Gas Division		Water Division	
	2019	2018	2019	2018	2019	2018
Liabilities						
Current liabilities:						
Accounts payable - purchased power and gas	\$ 137,467	\$ 138,306	\$ 16,669	\$ 28,948	\$ -	\$ -
Accounts payable - other payables and liabilities	23,043	24,147	5,915	5,502	3,728	4,769
Accounts payable - billing on behalf of other entities	-	-	8,164	7,707	8,783	8,880
Accrued taxes	-	39,823	-	15,077	-	1,250
Accrued vacation	9,338	9,110	3,651	3,666	2,578	2,576
Bonds payable	6,680	6,444	2,532	2,435	2,518	2,453
Total current liabilities payable from current assets	176,528	217,830	36,931	63,335	17,607	19,928
Current liabilities payable from restricted assets:						
Insurance reserves - injuries and damages	5,082	5,925	1,547	2,321	1,586	2,154
Medical benefits	7,718	10,838	3,520	4,943	2,302	3,232
Customer deposits	11,158	10,911	2,188	1,767	873	864
Bonds payable - accrued interest	665	688	282	292	183	189
Bonds payable - principal	615	596	233	225	231	227
Total current liabilities payable from restricted assets	25,238	28,958	7,770	9,548	5,175	6,666
Total current liabilities	201,766	246,788	44,701	72,883	22,782	26,594
Non-current liabilities:						
Customer advances for construction	4,421	5,973	406	494	-	-
Customer deposits	17,453	17,065	4,167	3,471	1,366	1,351
LNG deposits	-	-	25	125	-	-
Reserve for unused sick leave	7,200	7,114	3,013	2,997	1,903	2,055
Revenue bonds - series 2014	55,430	58,240	-	-	11,470	12,090
Revenue bonds - series 2016	34,615	36,040	34,615	36,040	25,330	26,545
Revenue bonds - series 2017	81,140	84,200	36,120	37,460	22,310	23,225
Unamortized debt premium	21,395	23,709	11,426	12,611	4,693	5,180
Net pension liability	64,687	-	24,797	-	18,328	-
Net OPEB liability	168,882	152,017	64,738	58,273	47,850	43,072
Other	1,663	1,437	4,789	3,197	3,202	3,201
Total non-current liabilities	456,886	385,795	184,096	154,668	136,452	116,719
Total liabilities	658,652	632,583	228,797	227,551	159,234	143,313
Deferred inflows of resources						
Pension liability experience	5,023	7,787	1,926	2,985	1,423	2,206
OPEB liability experience	1,567	-	601	-	444	-
Pension changes of assumptions	2,211	4,422	848	1,695	627	1,253
OPEB changes of assumptions	80,148	100,185	30,723	38,404	22,709	28,386
Pension investment earnings experience	44,654	60,048	17,117	23,018	12,652	17,014
OPEB investment earnings experience	11,198	14,931	4,293	5,724	3,173	4,230
Accumulated increase in fair value of hedging derivatives	-	-	1,630	1,546	-	-
Total deferred inflows of resources	144,801	187,373	57,138	73,372	41,028	53,089
Net position						
Net investment in capital assets	932,380	921,736	331,206	333,148	288,272	280,220
Restricted	27,893	20,400	13,057	9,760	10,698	8,194
Unrestricted	(33,310)	(30,555)	49,480	18,158	(36,459)	(47,382)
Total net position	926,963	911,581	393,743	361,066	262,511	241,032
Total liabilities, deferred inflows of resources and net position	\$ 1,730,416	\$ 1,731,537	\$ 679,678	\$ 661,989	\$ 462,773	\$ 437,434

See accompanying notes.

**STATEMENTS OF REVENUES, EXPENSES
AND CHANGES IN NET POSITION
FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018
(Dollars in Thousands)**



	Electric Division		Gas Division		Water Division	
	2019	2018	2019	2018	2019	2018
Operating revenues:						
Sales and service revenues	\$ 1,259,550	\$ 1,261,091	\$ 227,553	\$ 241,460	\$ 100,480	\$ 97,677
Transported gas revenues	-	-	12,571	11,119	-	-
Other revenues	26,426	28,815	20,503	21,609	5,199	5,463
Total operating revenues	1,285,976	1,289,906	260,627	274,188	105,679	103,140
Operating expenses:						
Purchased power and gas for resale	1,036,442	1,035,898	110,555	138,107	-	-
Production	-	-	-	-	14,919	14,358
Operation	121,450	87,670	67,946	56,233	44,386	39,161
Maintenance	48,746	50,334	6,883	7,520	10,994	11,599
Depreciation & amortization	56,599	55,844	22,500	21,483	10,635	9,653
Payment in lieu of taxes	6,496	8,017	1,061	1,168	-	-
Total operating expenses	1,269,733	1,237,763	208,945	224,511	80,934	74,771
Operating income	16,243	52,143	51,682	49,677	24,745	28,369
Non-operating revenues (expenses):						
Contributions in aid of construction	17,243	17,315	1,518	3,018	3,345	4,364
Reduction of plant costs recovered through contributions in aid of construction	(17,243)	(17,315)	(1,518)	(3,018)	(3,345)	(4,364)
Transmission credits	35,737	35,118	-	-	-	-
Investment and other income	7,791	8,433	1,336	899	1,054	1,177
Prepay credit	-	4,400	-	-	-	-
Interest expense	(5,981)	(10,357)	(2,339)	(2,400)	(1,820)	(1,864)
Total non-operating revenues (expenses)	37,547	37,594	(1,003)	(1,501)	(766)	(687)
Income before transfers	53,790	89,737	50,679	48,176	23,979	27,682
Transfers out - City of Memphis	(38,408)	(40,393)	(18,002)	(19,152)	(2,500)	(2,500)
Change in net position	\$ 15,382	\$ 49,344	\$ 32,677	\$ 29,024	\$ 21,479	\$ 25,182
Net position, beginning of year	\$ 911,581	\$ 1,152,467	\$ 361,066	\$ 443,223	\$ 241,032	\$ 298,066
Change in method of accounting for OPEB	-	(290,230)	-	(111,180)	-	(82,216)
Change in net position	15,382	49,344	32,677	29,024	21,479	25,182
Net position, end of year	\$ 926,963	\$ 911,581	\$ 393,743	\$ 361,066	\$ 262,511	\$ 241,032

See accompanying notes.

STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018
(Dollars in Thousands)



	Electric Division		Gas Division		Water Division	
	2019	2018	2019	2018	2019	2018
Cash flows from operating activities:						
Receipts from customers and users	\$ 1,291,625	\$ 1,297,248	\$ 271,619	\$ 270,134	\$ 106,746	\$ 103,766
Payments to suppliers	(1,069,430)	(921,400)	(141,326)	(156,062)	(29,273)	(31,054)
Payments to/on behalf of employees	(119,731)	(126,835)	(59,441)	(64,821)	(42,700)	(45,809)
Payments from (to) other Division funds	(7,390)	(6,531)	(1,588)	(2,698)	(4,201)	(4,621)
Payments for taxes	(14,422)	500	(2,132)	(104)	-	-
Net cash provided by operating activities	80,652	242,982	67,132	46,449	30,572	22,282
Cash flows from noncapital financing activities:						
Transfers to City of Memphis	(70,348)	(8,454)	(32,007)	(5,148)	(3,750)	(1,250)
Principal payments on long-term debt	-	(132,515)	-	-	-	-
Interest expense on bonds	-	(5,697)	-	-	-	-
Net cash used in noncapital financing activities	(70,348)	(146,666)	(32,007)	(5,148)	(3,750)	(1,250)
Cash flows from capital and related financing activities:						
Purchase and construction of utility plant	(80,849)	(94,525)	(23,271)	(50,090)	(20,125)	(36,358)
Contributions in aid of construction	17,243	17,315	1,518	3,018	3,345	4,364
Principal payments on long-term debt	(7,040)	(6,790)	(2,660)	(2,565)	(2,680)	(2,630)
Interest payments on debt	(8,186)	(8,429)	(3,470)	(3,560)	(2,247)	(2,300)
Net cash provided by (used in) capital and related financing activities	(78,832)	(92,429)	(27,883)	(53,197)	(21,707)	(36,924)
Cash flows from investing activities:						
Sales and maturities of investments	63,883	64,692	14,224	30,213	2,890	14,617
Purchases of investments	(52,671)	(79,503)	(25,089)	(26,310)	(7,096)	(6,633)
Payments received on notes receivable	-	-	-	-	20	37
Investment income earned on investments	5,556	6,029	2,319	1,743	500	518
Net cash provided by (used in) investing activities	16,768	(8,782)	(8,546)	5,646	(3,686)	8,539
Increase (decrease) in cash and cash equivalents	(51,760)	(4,895)	(1,304)	(6,250)	1,429	(7,353)
Cash and cash equivalents, beginning of year	193,345	198,240	64,042	70,292	18,636	25,989
Cash and cash equivalents, end of year	\$ 141,585	\$ 193,345	\$ 62,738	\$ 64,042	\$ 20,065	\$ 18,636

See accompanying notes.

STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018
(Dollars in Thousands)
(Continued)



	Electric Division		Gas Division		Water Division	
	2019	2018	2019	2018	2019	2018
Reconciliation of operating income to net cash provided by operating activities:						
Operating income	\$ 16,243	\$ 52,143	\$ 51,682	\$ 49,677	\$ 24,745	\$ 28,369
Adjustments to reconcile net operating income to net cash provided by operating activities:						
Pension expense - non-cash	6,055	(7,622)	2,321	(4,075)	1,716	(2,396)
OPEB expense - non-cash	(18,283)	(55,350)	(7,009)	(21,217)	(5,180)	(15,682)
Depreciation of utility plant	58,169	57,204	24,212	23,082	10,997	9,971
Transmission credits	35,737	35,118	-	-	-	-
Prepay power credits	-	4,400	-	-	-	-
Other income (loss)	2,234	2,403	(969)	(890)	555	659
(Increase) decrease in assets:						
Accounts receivable - MLGW services	3,670	5,268	5,362	(8,811)	(150)	(59)
Accounts receivable - billing on behalf of other entities	-	-	340	(405)	535	(2,132)
Unbilled revenues	2,157	6,505	6,354	2,935	(44)	473
Prepaid power cost	-	112,822	-	-	-	-
Prepayments - in lieu of taxes	19	25	1	1	-	-
Unrecovered purchased power and gas costs	(1,248)	(6,422)	(683)	788	-	-
Inventories	(9,917)	(4,044)	(887)	(2,277)	160	(516)
Other assets	(18)	(40)	71	(3,764)	-	-
Increase (decrease) in liabilities:						
Accounts payable - purchased power and gas	(839)	27,790	(12,279)	6,570	-	-
Accounts payable - other payables and liabilities	(1,104)	1,203	413	265	(1,041)	212
Accounts payable - billing on behalf of other entities	-	-	457	377	(97)	1,784
Accrued payment in lieu of taxes	(7,884)	7,884	(1,070)	1,072	-	-
Customer deposits	635	1,302	1,017	443	24	92
Insurance reserves	(843)	(16)	(774)	(368)	(568)	517
Medical benefit accrual	(3,120)	3,815	(1,423)	1,739	(930)	1,137
Other liabilities	(1,011)	(1,406)	(4)	1,307	(150)	(147)
Total adjustments	64,409	190,839	15,450	(3,228)	5,827	(6,087)
Net cash provided by operating activities	\$ 80,652	\$ 242,982	\$ 67,132	\$ 46,449	\$ 30,572	\$ 22,282
Reconciliation of cash and cash equivalents per statements of cash flows to the statements of net position:						
Restricted funds	\$ 70,583	\$ 66,423	\$ 25,019	\$ 22,904	\$ 17,239	\$ 16,211
Less investments included in restricted funds	(13,270)	(11,091)	(5,843)	(5,142)	(5,203)	(4,359)
Cash and cash equivalents included in restricted funds	57,313	55,332	19,176	17,762	12,036	11,852
Current assets - cash and cash equivalents	84,272	138,013	43,562	46,280	8,029	6,784
Total cash and cash equivalents	\$ 141,585	\$ 193,345	\$ 62,738	\$ 64,042	\$ 20,065	\$ 18,636

See accompanying notes.



1. Summary of Significant Accounting Policies

Organization

Memphis Light, Gas and Water Division (“MLGW”), a division of the City of Memphis, Tennessee (the “City”), was created by an amendment to the City Charter by Chapter 381 of the Private Acts of the General Assembly of Tennessee (the “Charter”), adopted March 9, 1939, as amended. MLGW is managed by its President, a five member Board of Commissioners, and two non-voting countywide Advisory Board members that are nominated by the City Mayor and approved by the Memphis City Council (the “Council”). MLGW, through its three divisions, provides electricity, gas and water to customers in Shelby County, Tennessee, which includes the City. MLGW’s annual budget and electric, gas and water rates require the approval of the Council. MLGW must also obtain the approval of the Council before incurring certain obligations.

Basis of Presentation

The financial statements present only the Electric, Gas and Water Divisions of MLGW in conformity with accounting principles generally accepted in the United States of America that are applicable to a proprietary fund of a government unit. The accompanying financial statements present the separate financial positions, results of operations, and cash flows of each of the three divisions--Electric, Gas and Water--(the “Divisions”) of MLGW, but do not present the financial position, results of operations, or cash flows of MLGW, a division of the City of Memphis. Accordingly, the accompanying disclosures relate separately to the Divisions, as applicable, and not collectively to MLGW. Unless expressly stated, each disclosure, including references to “MLGW” herein, applies solely to each of the separate divisions on an individual basis. The Divisions collectively pool resources for investing purposes and collectively participate in a pension plan and OPEB trust. Accordingly, certain disclosures for investments, the employee retirement system and other post employment benefits are presented on a combined basis. These statements are not intended to present the financial position of the City, the results of the City’s operations or the cash flows of the City’s funds, nor do they represent the financial position, results of operations, or cash flows of MLGW’s Retirement and Pension System discussed in Note 7 or the Other Postemployment Benefits (“OPEB”) Trust discussed in Note 8.

Basis of Accounting

MLGW is required by state statute and the Charter to maintain separate accounting for each division and to allocate among the Divisions, on an equitable basis, joint expenses, including those related to common facilities. MLGW utilizes direct cost methods where applicable. For expenses not directly charged to a specific division, internally developed cost allocation methods are used based on the function performed. Each division is separately financed, and its indebtedness is repayable from its net revenues.

1. Summary of Significant Accounting Policies (continued)

Basis of Accounting (continued)

Where applicable, the Federal Energy Regulatory Commission's ("FERC") (Electric and Gas Divisions) and the National Association of Regulatory Utility Commissioners' ("NARUC") (Water Division) Uniform Systems of Accounts are used. MLGW is not subject to the jurisdiction of federal or state regulatory commissions.

MLGW prepares its financial statements in accordance with the provisions of GASB Statement No. 62, *Codification of Accounting and Financial Reporting Guidance Contained in Pre-November 30, 1989 FASB and AICPA Pronouncements*, paragraphs 476-500, for regulated operations. These paragraphs recognize that accounting for rate regulated enterprises should reflect the relationship of costs and revenues introduced by rate regulation.

Regulatory Accounting

Regulatory accounting allows a regulated utility to defer a cost (a regulatory asset) or recognize an obligation (a regulatory liability) if it is probable that through the rate making process, there will be a corresponding increase or decrease in future revenues. Accordingly, MLGW has recognized certain regulatory assets and regulatory liabilities in the accompanying Statements of Net Position.

In the event MLGW no longer meets the criteria for regulated operations under GASB 62, MLGW would be required to recognize the effects of any regulatory change in assets or liabilities in its Statements of Revenues, Expenses and Changes in Net Position. The following are the regulatory assets and liabilities included in the Statements of Net Position:

NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2019 AND 2018
(Dollars in Thousands)
(Continued)



1. Summary of Significant Accounting Policies (continued)

Regulatory Accounting (continued)

	<u>Electric Division</u>		<u>Gas Division</u>		<u>Water Division</u>	
	<u>2019</u>	<u>2018</u>	<u>2019</u>	<u>2018</u>	<u>2019</u>	<u>2018</u>
Regulatory Assets:						
Current:						
Unrecovered purchased power/gas cost	\$ 11,021	\$ 9,773	\$ 683	\$ -	\$ -	\$ -
Meter replacement	1,018	757	1,271	1,070	337	252
Unamortized debt expense	127	131	61	63	63	65
Total current	<u>12,166</u>	<u>10,661</u>	<u>2,015</u>	<u>1,133</u>	<u>400</u>	<u>317</u>
Non-Current:						
Meter replacement	14,339	11,082	19,432	17,085	3,946	2,996
Unamortized debt expense	1,080	1,208	548	609	557	621
Total non-current	<u>15,419</u>	<u>12,290</u>	<u>19,980</u>	<u>17,694</u>	<u>4,503</u>	<u>3,617</u>
Total Regulatory Assets	<u>\$ 27,585</u>	<u>\$ 22,951</u>	<u>\$ 21,995</u>	<u>\$ 18,827</u>	<u>\$ 4,903</u>	<u>\$ 3,934</u>
Regulatory Liabilities:						
Current:						
Purchased gas adjustment	\$ -	\$ -	\$ 2,522	\$ 2,795	\$ -	\$ -
Total Regulatory Liabilities	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 2,522</u>	<u>\$ 2,795</u>	<u>\$ -</u>	<u>\$ -</u>

Fair Value of Financial Instruments

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The carrying amounts of cash and cash equivalents, investments, restricted fund investments, accounts receivable and accounts payable are a reasonable estimate of their fair values. The estimated fair values of MLGW's other financial instruments have been determined by MLGW using available market information. All investments are carried at fair value and changes in the fair values of investments are included in investment income in the accompanying Statements of Revenues, Expenses and Changes in Net Position.



1. Summary of Significant Accounting Policies (continued)

Fair Value of Financial Instruments (continued)

MLGW categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset. Level 1 inputs are quoted prices in active markets for identical assets; Level 2 inputs are significant other observable inputs; and Level 3 inputs are significant unobservable inputs.

MLGW had the following recurring fair value measurements as of December 31, 2019:

- U.S. Treasury Securities of \$123,174 (Level 1 inputs)
- Commercial Paper of \$109,601; Government Mortgage-backed Securities of \$33,291 and U.S. Government Agencies of \$5,007 (Level 2 inputs)

MLGW had the following recurring fair value measurements as of December 31, 2018:

- U.S. Treasury Securities of \$103,295 (Level 1 inputs)
- Commercial Paper of \$145,163; Government Mortgage-backed Securities of \$44,354; and U.S. Government Agencies of \$30,437 (Level 2 inputs)

Cash and cash equivalents

MLGW considers all highly liquid investments with maturities of three months or less when purchased to be cash equivalents.

Accounts Receivable

Accounts receivables result from charges for both utilities and other ancillary services provided by MLGW, and include wholesale, commercial, industrial and government customers in the Shelby County, Tennessee geographic area. Accounts receivable are potentially exposed to concentrations of credit risk. As a general policy, customer deposits are required for receivables unless or until the customer has established a good credit history. Accounts receivable are stated at the amount management expects to collect from outstanding balances.



1. Summary of Significant Accounting Policies (continued)

Accounts Receivable (continued)

As of December 31, 2019 and 2018, accounts receivable and allowances for doubtful accounts were as follows:

	Electric Division		Gas Division		Water Division	
	2019	2018	2019	2018	2019	2018
Accounts Receivable	\$ 98,977	\$ 101,074	\$ 41,350	\$ 46,898	\$ 19,327	\$ 19,477
Allowance for doubtful accounts	(10,741)	(9,167)	(783)	(627)	(865)	(628)
Total A/R, net of allowance	<u>\$ 88,236</u>	<u>\$ 91,907</u>	<u>\$ 40,567</u>	<u>\$ 46,271</u>	<u>\$ 18,462</u>	<u>\$ 18,849</u>

MLGW performs a monthly analysis of outstanding trade receivables to assess the likelihood of collection. For aged receivable balances, MLGW records an allowance to adjust the trade receivable to MLGW's best estimate of the amount it will ultimately collect. Such allowances are netted against operating revenues.

MLGW's policy is to write off trade receivables after 150 days of non-payment. The bad debt amounts netted against operating revenues are as follows:

	2019	2018
Electric	\$ 4,114	\$ 4,736
Gas	\$ 1,157	\$ 1,347
Water	\$ 848	\$ 900

Unbilled Revenues

MLGW customers are spread across twenty-one different billing cycles. Each cycle can range from twenty-five to thirty-five days. The summation of these twenty-one cycles represents a revenue month. Billing cycles do not correspond to a calendar month and, thus, have days that fall into two or more calendar months. Revenue is reported on a calendar month basis. Unbilled revenue represents management's estimate of the revenue earned for days of service that have not been billed as of year-end.

Prepaid Power Cost

The prepaid electricity agreement signed with Tennessee Valley Authority ("TVA") on November 19, 2003 expired in November 2018. Total prepaid power cost at December 31, 2019 and 2018 was \$0 for both years. As it relates to debt issued to finance the cost of that transaction, the amount of interest cost incurred and charged to electric expense in 2019 and 2018 totaled \$0 and \$4,197 respectively.

1. Summary of Significant Accounting Policies (continued)

Inventories and Stored Natural Gas

Inventories, consisting primarily of materials and supplies inventory, and stored natural gas are valued at cost using the average cost method.

Restricted Funds and Related Reserves

Certain MLGW assets are restricted for specific purposes. Legal and contractual agreements restrict amounts for debt service, refund of customer deposits, futures margin requirements, and capital improvements, while Board of Commissioners enacted provisions restrict funds for self-insurance and additional capital improvements. Restricted funds are first used for expenses when available, with the exception of the insurance reserve fund for casualties, which is used at the discretion of management depending on the severity of the catastrophe and the availability of funds.

The Electric and Gas Divisions maintain a cash margin account with its futures clearing member. The clearing member requires that a minimum cash margin be maintained based on the value of the Division's outstanding derivative positions. The minimum cash margin requirements are considered restricted and are reflected in restricted assets in the accompanying Statements of Net Position. The amounts of cash in excess of the minimum cash margin requirement are included in cash and cash equivalents.

The insurance reserves for injuries and damages are maintained for estimated liabilities incurred and risks assumed on claims for injuries and damages. The insurance reserves for casualties are maintained at discretionary amounts to partially cover losses of a catastrophic nature which are not ordinarily insurable or which are not insurable on an economical basis.

Medical benefit reserves are maintained for MLGW's medical insurance program, which serves employees and retirees. The medical benefit reserves represent the estimated costs incurred but not yet paid in providing medical benefits to employees and retirees which are not insured by third party providers.

Since MLGW is self-insured for insurance and medical benefit costs, the Board of Commissioners has authorized the restriction of assets equal to the computed reserves.

Customer deposit funds are maintained for the future repayment of deposits collected from customers without adequate credit history, in accordance with MLGW's policy and the respective customer service agreement.

Bond reserve and debt service funds are restricted under the terms of the respective bond indentures to pay current bond principal and interest as these obligations become due.

1. Summary of Significant Accounting Policies (continued)

Restricted Funds and Related Reserves (continued)

The Water Division maintains a ground water reserve fund in accordance with a five year Agreement entered into on July 1, 2018 by and between MLGW and the University of Memphis (University) on behalf of the Herff College of Engineering's Center for Applied Earth Science and Engineering Research (CAESAR). The University was awarded \$1,000 a year to study clay breaches in the Memphis aquifer and their impacts to water quality. A resolution was approved by the City Council on January 9, 2018 to increase water annual sales revenue by 1.05% to be effective with meters read on Cycle 1 of the January 2018 revenue month to fund the aquifer research (see Note 12). The funds will be used to cover the deliverables in accordance with the Agreement for the groundwater study.

Customer Deposits

Customers that do not have adequate credit history are required to make utility deposits before services are provided. Deposits are refunded or applied toward a customer's bill after a 24-month good pay status. Deposits are allocated to the Electric, Gas and Water Divisions based upon each division's percentage of total sales revenue of the previous year-end.

Utility Plant

The costs of additions and replacements of units of property are capitalized. Costs include contracted work, direct labor and materials, and allocable overhead. Donated assets are valued at acquisition value at the acquisition date. Costs are reduced by contributions in aid of construction. Upon retirement of property units, the original cost, plus removal cost, minus salvage is charged to either accumulated depreciation or accumulated amortization. The units of property adopted are related to those suggested by FERC for the Electric and Gas Divisions and NARUC for the Water Division, which allow for the reduction of plant cost recovered through contributions in aid of construction as opposed to recovery of costs through future regulatory rates.

Interest on debt is not capitalized, as it is recovered through current revenues. The amount of interest cost incurred and charged to electric expense in 2019 and 2018 totaled \$5,981 and \$10,357, respectively. The amount of interest cost incurred and charged to gas expense in 2019 and 2018 totaled \$2,339 and \$2,400, respectively. The amount of interest cost incurred and charged to water expense in 2019 and 2018 totaled \$1,820 and \$1,864, respectively.

Depreciation and amortization are computed using the straight-line method based on estimated service lives of various classes of depreciable property at rates equivalent to annual composite rates of approximately 3.0% for the electric division, 2.9% for the gas division and 2.1% for the water division.

1. Summary of Significant Accounting Policies (continued)

Utility Plant (continued)

Computations of the estimated service lives are the result of various depreciation studies and comparisons with industry standards. For assets owned by one division, but jointly used by more than one division, the other divisions share the costs by paying rent to the owning division to cover depreciation, interest, in lieu of taxes, and transfers.

Futures, Options and Swap Contracts

The Gas Division enters into futures contracts, swaps, and options on futures contracts as cash flow hedges to manage the risk of volatility in the market price of natural gas on anticipated purchase transactions. The Electric Division periodically enters into futures contracts, swaps, and options on futures contracts as cash flow hedges to manage the risk of volatility in the market price of unleaded gasoline and diesel fuel on anticipated purchase transactions. The market values of the open derivative positions are reported on the Statement of Net Position as derivative financial instruments. The changes in fair market value are recognized as deferred inflows (gains) or deferred outflows (losses) until the related gas purchases are recognized in the Statement of Revenues, Expenses and Changes in Net Position.

Bond Premiums, Discounts and Issuance Costs

Bond premiums and discounts, as well as issuance costs, are deferred and amortized using the interest method over the lives of the applicable bond issues. Long-term debt is reported net of the applicable bond premium or discount. Unamortized bond issuance costs are accounted for as a regulatory asset. As such, bond issue costs are capitalized and amortized over the term of the related debt.

Net Position

Net position is classified into three components – net investment in capital assets, restricted, and unrestricted. These classifications are defined as follows:

- Net investment in capital assets – This component of net position consists of capital assets, net of accumulated depreciation, reduced by the outstanding balances of bonds, mortgages, notes, or other borrowings that are attributable to the acquisition, construction, or improvement of those assets. If there are significant unspent related debt proceeds at year-end, the portion of the debt attributable to the unspent proceeds is not included in the calculation of net investment in capital assets. Rather, that portion of the debt is included in the same net position component as the unspent proceeds.

1. Summary of Significant Accounting Policies (continued)

Net Position (continued)

- Restricted net position – This component of net position consists of restricted assets reduced by liabilities and deferred inflows of resources related to those assets.
- Unrestricted net position – This component of net position is the net amount of the assets, deferred outflows of resources, liabilities, and deferred inflows of resources that are not included in the determination of net investment in capital assets or the restricted component of net position.

Revenues and Expenses

Revenues are recognized when earned which generally occurs when electricity, gas, or water is delivered to the customer. Customer meters are read and bills are rendered monthly. MLGW records an estimate for unbilled revenues earned from the dates its customers were last billed to the end of each month.

MLGW distinguishes between operating and non-operating revenues and expenses. Operating revenues and expenses generally result from providing services and producing and delivering goods in connection with an enterprise fund's principal operations. The principal operating revenues of MLGW consist of electric, gas and water sales and related activities. Non-operating revenues consist of transmission credits, the non-power cost portion of the prepaid electricity discount (ended in December 2018), investment income and other ancillary activities. Transmission credits are fees paid by the Tennessee Valley Authority for its use of the Electric Division's transmission facilities in supplying power to MLGW.

Operating expenses include the cost of purchased power and gas, water production costs, operation and maintenance expenses, depreciation on capital assets and payments in lieu of taxes. Expenses not meeting this definition are reported as non-operating expenses.

Deferred Outflows and Inflows of Resources

MLGW adheres to generally accepted accounting principles as it relates to the recognition of deferred outflows of resources and deferred inflows of resources. A deferred outflow of resources is defined as a consumption of net assets that is applicable to a future reporting period and a deferred inflow of resources is defined as an acquisition of net assets that is applicable to a future reporting period.

In accordance with GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*, MLGW recognizes deferred outflows and inflows of resources associated with the biennial measurement and recognition of MLGW's net OPEB Liability and OPEB expense.

1. Summary of Significant Accounting Policies (continued)

Deferred Outflows and Inflows of Resources (continued)

In accordance with GASB Statement No. 68, *Accounting and Financial Reporting for Pension – an Amendment of GASB Statement No. 27*, MLGW recognizes deferred outflows and inflows of resources associated with the annual measurement and recognition of MLGW’s net pension liability (asset) and pension expense.

Also, in accordance with GASB Statement No. 53, *Accounting and Financial Reporting for Derivative Instruments*, MLGW recognizes deferred outflows and inflows of resources associated with reporting the fair value change in derivative instruments purchased as a hedge against commodity price risk.

Pensions

For purposes of measuring the net pension liability (asset), deferred outflows of resources and deferred inflows of resources related to pensions, and pension expense, information about the fiduciary net position of the Memphis Light, Gas and Water Retirement and Pension System (the “MLGW Pension Plan”) and additions to and deductions from the MLGW Pension Plan’s fiduciary net position have been determined on the same basis as they are reported by the Pension Plan. For that purpose, benefits payments (including refunds of employee contribution) are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value.

Other Postemployment Benefits

For purposes of measuring the Net OPEB Liability (NOL), deferred outflows of resources and deferred inflows of resources related to OPEB benefits, OPEB expense, information about the fiduciary net position of the Memphis Light, Gas and Water OPEB Trust (“OPEB Trust”) and additions to and deductions from the MLGW OPEB Trust fiduciary net position have been determined on the same basis as they are reported by the MLGW OPEB Trust. For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value.

Related Parties

MLGW conducts business with related parties as “arm’s length” transactions: generally, MLGW provides utility and related services to and receives payments from these parties in the same manner as other non-related customers. Major related party entities include the City of Memphis government. For

1. Summary of Significant Accounting Policies (continued)

Related Parties (continued)

the years ending December 31, 2019 and 2018, receivables from related parties for utility construction, pole rentals and utility related services excluding utility bills were \$2,018 and \$1,584, respectively.

As of December 31, 2019, the only free service provided to the City is water for firefighting. Free water service provided to the City for public purposes is estimated to be \$57 for 2019 and \$60 for 2018.

The Electric, Gas and Water Divisions make transfers to the City. See Note 14 (Transfers to City).

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Events occurring after reporting date

Management has evaluated events and transactions that have occurred between December 31, 2019 and June 3, 2020, which is the date that the financial statements were available to be issued, for possible recognition or disclosure in the financial statements.

Recent Accounting Standards

In January 2020, GASB issued Statement No. 92, *Omnibus 2020*. The objectives of this Statement are to enhance comparability in accounting and financial reporting and to improve the consistency of authoritative literature by addressing practice issues that have been identified during the implementation and application of certain GASB Statements. This Statement addresses a variety of topics. June 15, 2021 is the new effective date for most provisions of this pronouncement. MLGW has not elected early implementation of this standard and has not completed the process of evaluating the impact of this statement on its financial statements.

In May 2020, GASB issued Statement No. 95, *Postponement of the Effective Dates of Certain Authoritative Guidance*. The primary objective of this Statement is to provide temporary relief to governments and other stakeholders in light of the COVID-19 pandemic. That objective is accomplished by postponing the effective dates of certain provisions in Statements and Implementation Guides that first

1. Summary of Significant Accounting Policies (continued)

Recent Accounting Standards (continued)

became effective or are scheduled to become effective for periods beginning after June 15, 2018, and later.

The effective dates of certain provisions contained in the subject pronouncements are postponed by at least one year. MLGW adopted this pronouncement upon GASB's issuance. There was no material impact on the financial statements.

2. Deposits and Investments

The MLGW Statement of Investment Policy has been adopted and approved by the MLGW Board of Commissioners. This policy sets forth the investment and operational policies for the management of the public funds of MLGW. The Board of Commissioners has the power to invest MLGW funds in accordance with the prudent investor rule. The Board members exercise authority and control over MLGW's investment portfolio by setting policies which MLGW's investment staff executes either internally, or through the use of external prudent experts.

Custodial Credit Risk

Deposits

Custodial credit risk for deposits is the risk that, in the event of the failure of a depository financial institution, MLGW will not be able to recover its deposits or will not be able to recover collateral securities that are in possession of an outside party. Deposits are exposed to custodial credit risk if they are not covered by depository insurance and are uncollateralized, collateralized with securities held by the pledging financial institution, or collateralized with securities held by the pledging financial institution's trust department or agent but not in the depository-government's name. MLGW deposits consist of bank deposits. The bank deposits are insured up to \$250 by the Federal Deposit Insurance Corporation ("FDIC") and the remainder is covered by the State of Tennessee Collateral Pool; certificates of deposit must be placed directly with depository institutions.

The depository bank shall provide collateral for MLGW deposits in accordance with requirements for public funds deposits in Tennessee. The market value of the pledged securities in the collateral pool must equal at least 105% of the value of the deposit secured, less the amount protected by federal deposit insurance. As of December 31, 2019, MLGW deposits with financial institutions were \$107,916. All bank deposits were maintained in collateralized accounts or covered by federal depository insurance and were not exposed to custodial credit risk.

2. Deposits and Investments (continued)

Custodial Credit Risk (continued)

Investments

The investment policy governs the overall administration and investment management of the funds held in the MLGW investment portfolio. MLGW is authorized by the Board of Commissioners to invest in the following investments as authorized by state law and as it deems proper: U.S. Treasuries; U.S. government obligations; repurchase agreements; commercial paper with specified ratings; bankers' acceptances with specified ratings; bank deposits; certificates of deposit; state pool; and proceeds of bonds, notes and other obligations issued by MLGW.

MLGW is prohibited from investing in the following securities: purchases on margin or short sales; investments in reverse repurchase agreements; collateralized mortgage obligations; and "exotic" derivatives such as range notes, dual index notes, inverse floating rate notes and leveraged notes, or notes linked to lagging indices or to long-term indices.

The following table presents the investments and maturities of MLGW's investment portfolio as of December 31, 2019:

Investment Type	Fair Value	Remaining Maturities (in Years)		
		Maturities < 1 year	Maturities 1 to 4 years	Maturities > 4 years
U.S. Treasuries	\$ 123,174	\$ 23,147	\$ 100,027	\$ -
Federal Agency (Fixed Rate)	38,298	17,095	21,203	-
Commercial Paper (Rated AA or higher)	109,601	109,601	-	-
Total Investments	\$ 271,073	\$ 149,843	\$ 121,230	\$ -

Custodial credit risk for investments is the risk that, in the event of failure of the counterparty to a transaction, MLGW will not be able to recover the value of its investment or collateral securities that are in the possession of another party. Investment securities are exposed to custodial credit risk if the securities are uninsured, are not registered in the name of the government, and are held by either the counterparty, or the counterparty's trust department or agent but not in the name of MLGW. Investments in external investment pools and in money market funds are not exposed to custodial credit risks because their existence is not evidenced by securities that exist in physical or book entry form. To limit its exposure, MLGW's investment policy requires that all securities purchased by MLGW shall be held in safekeeping by a third-party custodial bank or financial institution. None of MLGW's investments at December 31, 2019 were exposed to custodial credit risk.

2. Deposits and Investments (continued)

Interest Rate Risk

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment in debt securities. Generally, the longer the maturity of an investment the greater the sensitivity of its fair value to changes in market interest rates. MLGW's investment policy does not limit investment maturities as a means of managing its exposure to fair value losses arising from increasing interest rates. However, the investment policy states no investment will have a maturity of greater than four years from date of purchase. As of December 31, 2019, MLGW had purchased no investments in debt securities that were outside of the policy. MLGW uses the segmented time distribution method of disclosure, as shown above, to identify this risk. Some investments can be highly sensitive to changes in interest rates due to their terms or characteristics. In MLGW's investment portfolio, asset-backed and government mortgage-backed securities are most sensitive to changes in interest rates as their repayments can vary significantly with interest rate changes. These securities represent 12.3% of the total investment portfolio with a fair market value of \$33,291 at year-end 2019.

Credit Risk

Credit risk is the risk that an issuer of a debt security will not fulfill its obligation. This credit risk is measured by the credit quality of investments in debt securities as described by nationally recognized statistical rating organizations. Investments in obligations of the U.S. Government or obligations explicitly guaranteed by the U.S. Government are not considered to have credit risk. MLGW debt securities that were subject to credit risk were \$109,601, or 40.4% of total investments. These debt securities have a remaining maturity of one year or less.

2. Deposits and Investments (continued)

Credit Risk (continued)

MLGW's ratings and policy limits as of December 31, 2019 are as follows:

Investment Type	Fair Value	S&P Rating	Moody's Rating
Commercial Paper	\$ 9,782	AAA	Aaa
Commercial Paper	38,970	AA+	Aaa
Commercial Paper	7,465	AA+	Aa1
Commercial Paper	3,983	AA	Aa2
Commercial Paper	2,297	AA	Aa3
Commercial Paper	9,984	AA-	Aa1
Commercial Paper	12,564	AA-	(P)Aa3
Commercial Paper	20,559	AA-	Aa3
Commercial Paper	3,997	A	A2
Total credit risk debt securities	109,601		
U.S. Treasuries	123,174	AA+u	Aaa
Federal Agency (Fixed Rate)	5,007	AA+	Aaa
Federal Agency (Fixed Rate)	33,291	AA+u	Aaa
U.S. Government and Agencies	161,472		
Total debt securities investments	\$ 271,073		

Concentration of Credit Risk

Concentration of credit risk is the risk of loss attributed to the magnitude of a government's investment in a single issuer. Investments in any one issuer that represent five percent or more of total investments must be disclosed by amount and issuer. Investments issued or explicitly guaranteed by the U.S. government and investments in bank deposits, external investment pools, and other pooled investments are excluded from this requirement. In accordance with the investment policy, no more than 10% of

2. Deposits and Investments (continued)

Concentration of Credit Risk (continued)

MLGW's portfolio will be invested in the securities of any single issuer with the following exceptions: U.S. Government Obligations up to 100% of the portfolio book value for any single issuer at the date of acquisition.

In addition, MLGW's investment policy seeks to diversify its portfolio by limiting the percentage of the portfolio that may be invested in any one type of instrument as follows:

U.S. Treasuries	100%	maximum
Federal Agency (Fixed Rate)	100%	maximum
Federal Agency (Callable)	50%	maximum
Repurchase Agreements	50%	maximum
Commercial Paper (Rated AA or higher)	90%	maximum
Banker's Acceptance (Rated AA or higher)	60%	maximum
Certificates of Deposit	20%	maximum
Municipal Obligations	20%	maximum
Tennessee LGIP	40%	maximum

In accordance with GASB Statement No. 40, governments should provide information about investments in any one issuer that represents 5 percent or more of total investments. As of December 31, 2019, the investments in any one issuer of commercial paper that represents 5% or more of MLGW's investments are as follows:

Issuer	Reported Amount	Percentage of Portfolio
Exxon Mobil Corp	\$ 20,125	7.42%
Koch Industries Inc	13,574	5.01%
National Security Clearing Corp	18,845	6.95%
Total	\$ 52,544	

NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2019 AND 2018
(Dollars in Thousands)
(Continued)



2. Deposits and Investments (continued)

Restricted and Unrestricted Funds

Restricted funds, cash and cash equivalents, and investments consisted of the following as of December 31, 2019 and 2018.

	Electric Division		Gas Division		Water Division	
	2019	2018	2019	2018	2019	2018
Restricted fund:						
Cash and cash equivalents	\$ 57,313	\$ 55,332	\$ 19,176	\$ 17,762	\$ 12,037	\$ 11,852
Investments	13,270	11,091	5,843	5,142	5,203	4,359
Total restricted funds	<u>\$ 70,583</u>	<u>\$ 66,423</u>	<u>\$ 25,019</u>	<u>\$ 22,904</u>	<u>\$ 17,240</u>	<u>\$ 16,211</u>

	Electric Division		Gas Division		Water Division	
	2019	2018	2019	2018	2019	2018
Unrestricted fund:						
Cash and cash equivalents	\$ 84,272	\$ 138,013	\$ 43,562	\$ 46,280	\$ 8,029	\$ 6,784
Investments	86,964	100,355	41,902	31,738	8,301	4,939
Total unrestricted funds	<u>\$ 171,236</u>	<u>\$ 238,368</u>	<u>\$ 85,464</u>	<u>\$ 78,018</u>	<u>\$ 16,330</u>	<u>\$ 11,723</u>

3. Notes Receivable

In 2002, MLGW and the Valero Refining Group (“Valero”) entered into an agreement, whereby MLGW provided for the construction of two pipelines (14” and 20”) and leased them to Valero for the purpose of transporting crude oil and refinery products. The lease provided for monthly payments of principal and interest and had an initial term of 15 years, which ended October 31, 2016 and July 31, 2016, for the 14” Pipeline and the 20” Pipeline, respectively.

In November 2016, MLGW and Valero executed the secondary agreement of the expired 15 year initial term lease agreement, whereby Valero will continue to provide monthly payments under a secondary term of 30 years, ending October 31, 2046 for the 14” Pipeline and July 31, 2046 for the 20” Pipeline, subject to any early termination pursuant to the terms of the Pipeline Agreements.

Scheduled lease payments for January – June 2020 total \$401. Effective July 1, 2020 and each July 1 thereafter throughout the Secondary Term, the monthly fee applicable for the previous year for the 20” Pipeline and 14” Pipeline, respectively, shall be adjusted based on the Producer Price Index for Finished Goods (PPI-FG) formula per the contract.

3. Notes Receivable (continued)

The Valero lease receivable is included in notes receivables in the accompanying 2019 Gas Division's Statements of Net Position, except for the current portion of \$801, which is included in other current assets.

In 1997, MLGW and the Town of Arlington ("Arlington") entered into an agreement, whereby Arlington conveyed ownership, operation, maintenance, construction, and improvement and expansion of the Arlington water facilities and system to MLGW. The agreement provided Arlington to bill and collect water development fees to remit payment to MLGW for water facilities and system improvement costs incurred plus 6% annual accrued interest. The agreement provided for Arlington to remit to MLGW on the 15th day of each succeeding month the fees collected during the month less its service fee until MLGW is paid in full.

The Arlington note receivable is included in notes receivables in the accompanying 2019 Water Division's Statements of Net Position.

4. Utility Plant

Utility plant activity for the years ended December 31, 2019 and 2018 is as follows:

	Beginning Balance	Increases	Decreases	Ending Balance
Year ended December 31, 2019				
Electric Division				
Capital assets not being depreciated:				
Land	\$ 38,537	\$ -	\$ -	\$ 38,537
Land - Non-utility	15,345	-	-	15,345
Construction in progress	83,887	54,052	(54,478)	83,461
Total capital assets not being depreciated	137,769	54,052	(54,478)	137,343
Capital assets being depreciated or amortized:				
Structures and improvements	68,232	1,849	(200)	69,881
Transmission and distribution plant equipment	1,553,422	39,446	(15,413)	1,577,455
General plant equipment	174,906	13,235	(3,295)	184,846
Intangibles: Software	12,085	-	-	12,085
Total capital assets being depreciated or amortized	1,808,645	54,530	(18,908)	1,844,267
Less accumulated depreciation and amortization	(816,788)	(62,589)	28,814	(850,563)
Total capital assets being depreciated or amortized, net	991,857	(8,059)	9,906	993,704
Total capital assets, net	\$ 1,129,626	\$ 45,993	\$ (44,572)	\$ 1,131,047

NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2019 AND 2018
(Dollars in Thousands)
(Continued)



4. Utility Plant (continued)

	Beginning Balance	Increases	Decreases	Ending Balance
Year ended December 31, 2019				
Gas Division				
Capital assets not being depreciated:				
Land	\$ 7,312	\$ -	\$ -	\$ 7,312
Construction in progress	31,282	21,308	(21,917)	30,673
Plant held for future use	212	-	-	212
Total capital assets not being depreciated	38,806	21,308	(21,917)	38,197
Capital assets being depreciated or amortized:				
Structures and improvements	68,087	853	-	68,940
Processing and distribution plant equipment	521,710	14,581	(4,620)	531,671
General plant equipment	68,328	6,477	(3,526)	71,279
Intangibles: Software	57,179	6	-	57,185
Non-utility plant equipment	200	-	-	200
Total capital assets being depreciated or amortized	715,504	21,917	(8,146)	729,275
Less accumulated depreciation and amortization	(333,064)	(19,469)	583	(351,950)
Total capital assets being depreciated or amortized, net	382,440	2,448	(7,563)	377,325
Total capital assets, net	\$ 421,246	\$ 23,756	\$ (29,480)	\$ 415,522
Year ended December 31, 2018				
Water Division				
Capital assets not being depreciated:				
Land	\$ 2,372	\$ -	\$ -	\$ 2,372
Construction in progress	39,842	16,051	(10,502)	45,391
Total capital assets not being depreciated	42,214	16,051	(10,502)	47,763
Capital assets being depreciated or amortized:				
Structures and improvements	53,984	2	-	53,986
Pumping, transmission and distribution plant equipment	421,864	8,558	(1,939)	428,483
General plant equipment	35,264	1,942	(1,473)	35,733
Intangibles: Software	2,177	-	-	2,177
Total capital assets being depreciated or amortized	513,289	10,502	(3,412)	520,379
Less accumulated depreciation and amortization	(205,773)	(12,730)	4,567	(213,937)
Less acquisition adjustment	(476)	476	-	-
Total capital assets being depreciated or amortized, net	307,040	(1,752)	1,155	306,442
Total capital assets, net	\$ 349,254	\$ 14,299	\$ (9,347)	\$ 354,205

NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2019 AND 2018
(Dollars in Thousands)
(Continued)



4. Utility Plant (continued)

	Beginning Balance	Increases	Decreases	Ending Balance
Year ended December 31, 2018				
Electric Division				
Capital assets not being depreciated:				
Land	\$ 38,415	\$ 122	\$ -	\$ 38,537
Land - Non-utility	15,345	-	-	15,345
Construction in progress	87,406	198,668	(202,187)	83,887
Total capital assets not being depreciated	141,166	198,790	(202,187)	137,769
Capital assets being depreciated or amortized:				
Structures and improvements	65,788	2,444	-	68,232
Transmission and distribution plant equipment	1,495,913	76,349	(18,840)	1,553,422
General plant equipment	177,108	2,831	(5,033)	174,906
Intangibles: Software	12,085	-	-	12,085
Total capital assets being depreciated or amortized	1,750,894	81,624	(23,873)	1,808,645
Less accumulated depreciation and amortization	(782,462)	(59,570)	25,244	(816,788)
Total capital assets being depreciated or amortized, net	968,432	22,054	1,371	991,857
Total capital assets, net	\$ 1,109,598	\$ 220,844	\$ (200,816)	\$ 1,129,626
Year ended December 31, 2018				
Gas Division				
Capital assets not being depreciated:				
Land	\$ 7,312	\$ -	\$ -	\$ 7,312
Construction in progress	23,425	47,364	(39,507)	31,282
Plant held for future use	212	-	-	212
Total capital assets not being depreciated	30,949	47,364	(39,507)	38,806
Capital assets being depreciated or amortized:				
Structures and improvements	67,771	328	(12)	68,087
Processing and distribution plant equipment	494,512	35,539	(8,341)	521,710
General plant equipment	71,485	105	(3,262)	68,328
Intangibles: Software	53,568	3,611	-	57,179
Non-utility plant equipment	200	-	-	200
Total capital assets being depreciated or amortized	687,536	39,583	(11,615)	715,504
Less accumulated depreciation and amortization	(318,335)	(27,461)	12,732	(333,064)
Total capital assets being depreciated or amortized, net	369,201	12,122	1,117	382,440
Total capital assets, net	\$ 400,150	\$ 59,486	\$ (38,390)	\$ 421,246

4. Utility Plant (continued)

	Beginning Balance	Increases	Decreases	Ending Balance
Year ended December 31, 2018				
Water Division				
Capital assets not being depreciated:				
Land	\$ 2,372	\$ -	\$ -	\$ 2,372
Construction in progress	26,466	31,264	(17,888)	39,842
Total capital assets not being depreciated	28,838	31,264	(17,888)	42,214
Capital assets being depreciated or amortized:				
Structures and improvements	53,887	97	-	53,984
Pumping, transmission and distribution plant equipment	407,355	17,641	(3,132)	421,864
General plant equipment	35,645	-	(381)	35,264
Intangibles: Software	2,177	-	-	2,177
Total capital assets being depreciated or amortized	499,064	17,738	(3,513)	513,289
Less accumulated depreciation and amortization	(198,674)	(11,748)	4,649	(205,773)
Less acquisition adjustment	(1,440)	964	-	(476)
Total capital assets being depreciated or amortized, net	298,950	6,954	1,136	307,040
Total capital assets, net	\$ 327,788	\$ 38,218	\$ (16,752)	\$ 349,254

Total net capital asset changes include additions to construction in progress, transfers to or from other accounts, depreciation and amortization and the effects of sales, retirements, and contribution in aid of construction.

MLGW's planned construction program expenditures for 2020 are estimated as follows (unaudited):

Electric Division	\$ 109,974
Gas Division	24,078
Water Division	30,625

In June 1999, the Water Division purchased the Shelby County Water Distribution System and related assets from Shelby County, Tennessee. The difference between the purchase price and the net book value of the assets acquired (the "acquisition adjustment") is being amortized over twenty years by the Water Division.

5. Futures, Options and Swap Contracts

MLGW uses a range of derivative instruments to hedge commodity risk including futures, options, and swap contracts. The purchase and sale of futures contracts and swap contracts involve highly leveraged and rapidly fluctuating markets that can lead to significant losses for market participants. As such, market

5. Futures, Options and Swap Contracts (continued)

participants are required to maintain margin deposits with a Futures Commission Merchant (FCM) in order to trade in the commodity futures market. These margin deposits are required by the FCM as a condition of its contract to provide execution, clearing and bookkeeping services relative to the purchase and sale of commodity futures.

The FCM is not subject to state laws which govern financial institutions serving as depositories for municipal funds, but instead is governed by rules and regulations promulgated by the Federal Commodity Futures Trading Commission. The Commodity Exchange Act requires the FCM to segregate all customer transactions and assets from the FCM's proprietary activities.

Futures contracts and swap contracts are marked-to-market daily and valued at closing market prices on the valuation date. The fluctuations in the value of the futures contracts are recorded for financial statement purposes as deferred gains or losses.

MLGW's derivative instruments could be potentially exposed to concentrations of counterparty credit. MLGW's derivatives transactions are conducted directly or indirectly with the New York Mercantile Exchange ("NYMEX"). By clearing all trades through NYMEX, MLGW's exposure to counterparty credit risk for such transactions are largely minimized.

Gas Division:

The Gas Division enters into futures contracts, swaps, and options on futures contracts as cash flow hedges to manage the risk of volatility in the market price of natural gas on anticipated purchase transactions. The market values of the open derivative positions are reported on the Statements of Net Position as derivative financial instruments. MLGW maintained a margin deposit balance of \$3,036 and \$2,686 with its FCM at December 31, 2019 and 2018, respectively.

The schedule below shows the market values and notional amounts of the open futures, swaps, and options on futures contracts as of December 31, 2019 and 2018.

Type	December 31, 2019		December 31, 2018	
	Market Value	Notional Amount	Market Value	Notional Amount
Futures	\$ -	\$ -	\$ 396	\$ 3,930
Options	1,630	476,450	1,150	465,105
Total	<u>\$ 1,630</u>	<u>\$ 476,450</u>	<u>\$ 1,546</u>	<u>\$469,035</u>

5. Futures, Options and Swap Contracts (continued)

The schedule below reflects the deferred gains (losses) at year end associated with recording open derivative positions.

	<u>December 31, 2019</u>	<u>December 31, 2018</u>
Type	<u>Deferred Gains (Losses)</u>	<u>Deferred Gains (Losses)</u>
Futures	\$ -	\$395
Options	(715)	(978)
Total	<u>(715)</u>	<u>(583)</u>

Deferred costs at year end associated with gains (losses) on closed derivative positions are shown below.

	<u>December 31, 2019</u>	<u>December 31, 2018</u>
Type	<u>Deferred Gains (Losses)</u>	<u>Deferred Gains (Losses)</u>
Options	(\$299)	(\$206)
Total	<u>(\$299)</u>	<u>(\$206)</u>

The deferred gains (losses) at year end for the open derivative positions are reported on the Statement of Net Position as deferred inflows of resources and deferred outflows of resources, respectively. The deferred gains and losses derived from closed derivative positions are reported as other current assets and liabilities, respectively.

Electric Division:

The Electric Division enters into swap contracts to manage the risk of volatility in the market price of unleaded and diesel fuel on anticipated purchase transactions. The balance in MLGW's FCM fuel margin at December 31, 2019 and 2018 was (\$0).

6. Deferred Compensation Plan

MLGW offers its employees a voluntary compensation plan under Internal Revenue Code Section 457. The plan, available to all full-time MLGW employees, permits them to defer a portion of their salaries until future years. The deferred compensation paid through payroll deduction is not available to employees until termination, retirement, death, or unforeseeable emergency.

The plan provides that assets or income of the plan shall be used for the exclusive purpose of providing benefits for participants and their beneficiaries or defraying reasonable expenses of administration of the plan. Since the assets of the amended plan are held in custodial and annuity accounts for the exclusive



6. Deferred Compensation Plan (continued)

benefit of plan participants, the related assets of the plan are not reflected in MLGW's Statements of Net Position.

7. Employee Retirement System

Plan Description

Memphis Light, Gas and Water Retirement and Pension System (the "MLGW Pension Plan") is a single-employer defined benefit pension plan administered by the MLGW Pension Board. The plan covers permanent, full-time employees and appointed commissioners who opt to participate. MLGW issues a separate audited financial report for the MLGW Pension Plan that includes financial statements and required supplementary information. That report may be obtained by writing to Manager of Insurance and Pension, P. O. Box 430, Memphis, TN 38101.

Benefits Provided

The MLGW Pension Plan provides death and disability benefits as well as retirement benefits. MLGW Pension Plan members hired prior to January 1, 2014 who attain the age of fifty-five and retire on or after ten years of creditable service, or attain the age of seventy and retire on or after five years of creditable service, or attain twenty-five years of creditable service regardless of age are entitled to an annual retirement allowance computed by multiplying the applicable percentage for the age of retirement times the number of years of creditable service, which equals the benefit percentage, times the final average compensation.

MLGW Pension Plan members hired on or after January 1, 2014 who attain the age of sixty and retire on or after ten years of creditable service, or attain the age of seventy and retire on or after five years of creditable service, or attain the age of fifty-five with twenty-five years of creditable service are entitled to an annual retirement allowance computed by multiplying the applicable percentage for the age of retirement times the number of years of creditable service, which equals the benefit percentage, times the final average compensation.

7. Employee Retirement System (continued)

Benefits Provided (continued)

Effective January 1, 2001, the following table is the applicable benefit percentage for each year of creditable service at the applicable retirement age under the MLGW Pension Plan:

<u>Retirement Age</u>	<u>Benefit Percentage For Each Year of Creditable Service</u>
59 1/2 and less	2.25%
60	2.30%
61	2.40%
62 and older	2.50%

Final average compensation is the member's basic earnings (which includes member contributions pursuant to Section 414(h) and Section 457 of the Internal Revenue Code (the "Code") for the three consecutive years of creditable service if less than 30 years, two consecutive years if more than 30 years and one year if 35 or more years of creditable service during which the compensation was the highest) plus work out of classification pay, shift differential pay, and automobile allowance for such employees designated by Resolution of the Board of Commissioners.

The annual retirement allowance shall not exceed 85% of the member's final average compensation. The 2019 minimum monthly retirement benefit for all members is the greater of \$50 times the number of full years of service, or \$500.

Cost of Living Adjustments

As of July 1 of each plan year, each retired participant who (1) has attained age 56 on such date and (2) has been terminated from the employment of the Division for at least one year, shall be entitled to an increase in the amount of his monthly benefit under the MLGW Pension Plan equal to the cost of living adjustment.

A surviving spouse or handicapped child receiving death benefits shall be entitled to a cost of living adjustment if the surviving spouse or handicapped child has attained age 56 and the deceased participant has separated from service at least one year prior to July 1.

The cost of living adjustment shall be equal to the product of the monthly benefit payable to the participant, the surviving spouse, or handicapped child under the MLGW Pension Plan for the immediately preceding plan year multiplied by the applicable percentage increase in the Consumer Price Index (CPI) for the immediately preceding calendar year.

7. Employee Retirement System (continued)

Cost of Living Adjustments (continued)

The applicable percentage increase shall be determined based on the age of the participant, surviving spouse, or handicapped child as of the first day of July of the plan year in which the adjustment is made as follows:

Age	Percentage of CPI Increase
56-58	30%
59-61	60%
62 and older, and all Disabled Participants	75%

The cost of living adjustment for any retired participant, surviving spouse, or handicapped child in any plan year shall not exceed 5% of the retired participant's, surviving spouse's or handicapped child's benefit under the MLGW Pension Plan for the immediately preceding plan year. Under no circumstances shall the cost of living adjustment result in a decrease in the benefit of a retired participant, surviving spouse, or handicapped child.

Net Pension Liability (Asset)

The net pension liability (asset) is the difference between the actuarial present value of projected pension benefit payments attributable to employees' past service and the Plan's fiduciary net position. MLGW's net pension liability (asset) was measured as of December 31, 2018 and the total pension liability used to calculate the net pension liability (asset) was determined by an actuarial valuation as of January 1, 2019.

7. Employee Retirement System (continued)

Employees Covered

Plan membership consisted of the following participants as of December 31, 2018 and 2017:

	<u>2018</u>	<u>2017</u>
Retirees and beneficiaries receiving benefits	2,677	2,655
Participants inactive during year ended December 31 with vested rights	38	42
Active members fully vested	1,055	1,071
Active members not vested	1,566	1,568
Total	<u>5,336</u>	<u>5,336</u>

Contributions

The contribution requirements of pension plan members and MLGW are established and may be amended and approved by the MLGW Pension Board, the MLGW Board of Commissioners and the Memphis City Council. Pension plan members are required to contribute 8% of their annual covered salary. Under Article III, Section 3.2 of the pension plan, MLGW shall contribute to the pension fund such amounts as from time to time are estimated by the actuary. MLGW also funds the 8% pension plan member's contributions on behalf of the president and vice presidents. For 2018, MLGW contributed 13.33% of the annual covered payroll. Employer contributions recognized by the MLGW Pension Plan during 2018 totaled \$22,174.

Actuarial Assumptions

The actuarially determined contribution ("ADC") is calculated using a January 1 valuation date as of the beginning of the fiscal year prior to the year in which contributions are reported. Therefore, the ADC for the year ended December 31, 2018 is based on the January 1, 2017 actuarial valuation.

7. Employee Retirement System (continued)

Actuarial Assumptions (continued)

The actuarial assumptions used in the valuation as of January 1, 2019 are based on the results of an experience study for the period January 1, 2009 to December 31, 2013.

Inflation	2.75%
Salary increases	Inflation plus merit increases that vary by age and service, ranging from 0.00% to 6.75%
Investment rate of return	7.50% including inflation, net of investment expenses
Cost-of-living adjustments	0.83% for ages 56-58 1.65% for ages 59-61 2.06% for ages 62 and older, and all disabled participants

Pre-retirement mortality rates are based on the RP-2014 Employee Mortality Table with sex-distinct rates. Healthy annuitant mortality rates are based on the RP-2014 Healthy Annuitant Mortality Table with sex-distinct rates, adjusted by a factor of 138%. Disabled annuitant mortality rates are based on the RP-2014 Disabled Retiree Mortality Table with sex-distinct rates, also adjusted by a factor of 138%. All mortality tables above are projected generationally with a modified RPEC2014 projection table using a 15-year convergence period for cohort effects and 10-year convergence period for age/period effects.

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation.

7. Employee Retirement System (continued)

Actuarial Assumptions (continued)

The target allocation and projected arithmetic real rates of return for each major asset class, after deducting inflation, but before investment expenses, used in the derivation of the long-term expected investment rate of return assumption are summarized in the following table:

<u>Asset Class</u>	<u>Target Allocation</u>	<u>Long-Term Expected Real Rate of Return</u>
Domestic Equity	39%	6.41%
International Equity	12%	7.69%
Fixed Income	29%	2.38%
Alternatives	8%	3.83%
Real Estate	10%	4.76%
Short Term Investments	2%	1.16%
Total	100%	

Discount Rate

The discount rate used to measure the total pension liability is 7.50% as of December 31, 2018. The projection of cash flows used to determine the discount rate assumes that employee contributions will be made at the current 8.00% of pay contribution rate and that MLGW contributions will equal the actuarially determined contribution. For this purpose, only employee and employer contributions that are intended to fund benefits of current plan members and their beneficiaries are included. Based on those assumptions, the MLGW Pension Plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability as of December 31, 2018.

Sensitivity of the Net Pension Liability (Asset) to Changes in the Discount Rate

The following presents the net pension liability (asset) of MLGW as of December 31, 2018, calculated using the discount rate of 7.50%, as well as what MLGW's net pension liability (asset) would be if it were calculated using a discount rate that is one percentage-point lower (6.50%) or one percentage-point higher (8.50%) than the current rate:



7. Employee Retirement System (continued)

Sensitivity of the Net Pension Liability (Asset) to Changes in the Discount Rate (continued)

	1% Decrease (6.50%)	Current Discount (7.50%)	1% Increase (8.50%)
Net pension liability (asset) as of December 31, 2018	\$ 274,083	\$ 107,812	\$ (31,167)

Pension Plan's Fiduciary Net Position

Detailed information about the MLGW Pension Plan's fiduciary net position is available in the separately issued plan financial statements. For purposes of measuring the net pension liability (asset), all information about the pension plan's assets, deferred outflows of resources, liabilities, deferred inflows of resources, and fiduciary net position have been determined on the same basis as they are reported by the MLGW Pension Plan.

The MLGW Pension Plan's financial statements are prepared using the accrual basis of accounting in accordance with generally accepted accounting principles promulgated by the Governmental Accounting Standards Board. Investments are stated at fair value. Benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with the terms of the plan.

7. Employee Retirement System (continued)

Schedule of Changes in Net Pension Liability (Asset)

	Increase (Decrease)		
	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (Asset) (a)-(b)
Balance at December 31, 2017	\$ 1,471,230	\$ 1,512,237	\$ (41,007)
Changes for the Year:			
Service Costs	31,185		31,185
Interest	108,432		108,432
Differences Between Expected and Actual Experience	3,726		3,726
Changes of Assumptions	-		-
Contributions – Employer		22,174	(22,174)
Contributions – Employee		13,217	(13,217)
Net Investment Income (Loss)		(39,996)	39,996
Benefit Payments / Refunds	(113,316)	(113,316)	-
Administrative Expenses		(871)	871
Net Change	\$ 30,027	\$ (118,792)	\$ 148,819
Balance at December 31, 2018	\$ 1,501,257	\$ 1,393,445	\$ 107,812

NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2019 AND 2018
(Dollars in Thousands)
(Continued)



7. Employee Retirement System (continued)

Pension expense for the year ended December 31, 2019

Service cost	\$ 31,185	
Interest on Total Pension Liability	108,432	
Employee contributions	(13,217)	
Administrative Expenses	871	
Expected return on assets	(110,463)	
Expensed portion of current year period differences between expected and actual experience in Total Pension Liability	621	
Expensed portion of current year period assumptions changes	-	
Current year plan changes	-	
Expensed portion of current year period differences between projected and actual investment earnings	30,092	
Current year recognition of deferred inflows and outflows established in prior years	(15,617)	
Total expense	<u>\$ 31,904</u>	

Deferred outflows/inflows of resources related to pension

	Deferred Outflows of Resources	Deferred Inflows of Resources
Contributions subsequent to measurement date	\$ 21,813	\$ -
Net difference between projected and actual earnings on pension plan investments	137,501	(74,423)
Net difference between projected and actual experience in Total Pension Liability	7,138	(8,372)
Assumption changes	-	(3,686)
Total	<u>\$ 166,452</u>	<u>\$ (86,481)</u>

Note: The \$21,813 contribution made subsequent to the measurement date will be recognized as a reduction of the net pension liability in 2020.

NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2019 AND 2018
(Dollars in Thousands)
(Continued)



7. Employee Retirement System (continued)

Projected recognition of deferred outflows/(inflows)							Deferred Outflows/(Inflows) Recognized in Future Years					
Fiscal year	Year Established	Original Balance	Original Amortization Period (Years)	Outstanding Balance at December 31, 2018	Amount Recognized During FYE		2020	2021	2022	2023	2024 and Thereafter	
					Balance at December 31, 2019	Balance at December 31, 2019						
Fiscal year Outflows												
Investment	2016	\$ 85,673	5.00	\$ 34,270	\$ 17,135	\$ 17,135	\$ 17,135	\$ -	\$ -	\$ -	\$ -	
Demographic	2016	2,275	6.00	1,139	378	761	380	381	-	-	-	
Demographic	2018	4,908	6.00	4,090	818	3,272	818	818	818	818	-	
Demographic	2019	3,726	6.00	-	621	3,105	621	621	621	621	621	
Investment	2019	150,459	5.00	-	30,093	120,366	30,092	30,092	30,092	30,090	-	
Total Outflows				\$ 39,499	\$ 49,045	\$ 144,639	\$ 49,046	\$ 31,912	\$ 31,531	\$ 31,529	\$ 621	
Fiscal year Inflows												
Investment	2015	\$ (571)	5.00	\$ (114)	\$ (114)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Demographic	2015	(16,338)	6.00	(5,446)	(2,723)	(2,723)	(2,723)	-	-	-	-	
Assumption	2015	(21,112)	6.00	(7,370)	(3,684)	(3,686)	(3,686)	-	-	-	-	
Investment	2017	(11,042)	5.00	(6,625)	(2,208)	(4,417)	(2,208)	(2,209)	-	-	-	
Demographic	2017	(11,298)	6.00	(7,532)	(1,883)	(5,649)	(1,883)	(1,883)	(1,183)	-	-	
Investment	2018	(116,677)	5.00	(93,341)	(23,335)	(70,006)	(23,335)	(23,335)	(23,336)	-	-	
Total Inflows				\$ (120,428)	\$ (33,947)	\$ (86,481)	\$ (33,835)	\$ (27,427)	\$ (24,519)	\$ -	\$ -	
Total				\$ (80,929)	\$ 15,098	\$ 58,158	\$ 15,211	\$ 4,485	\$ 7,012	\$ 31,529	\$ 621	

8. Other Postemployment Benefits

The Memphis Light, Gas and Water Division OPEB Trust ("OPEB Trust") was established for the exclusive benefit of MLGW's retired employees and their dependents (who meet the eligibility requirements) to fund the postemployment benefits provided through the health and welfare benefit plan. Amounts contributed to the OPEB Trust by MLGW are held in trust and are irrevocable and are for the sole and exclusive purpose of funding health and welfare benefits of the eligible participants, and the cost of operating and administering the OPEB Trust. The OPEB Trust is administered by the MLGW OPEB Trust Investment Committee.

MLGW issues a separate audited financial report for the OPEB Trust that includes financial statements and required supplementary information. That report may be obtained by writing to: Manager, General Accounting, P.O. Box 430, Memphis, Tennessee 38101-0430.

Implementation of GASB 75

In fiscal year 2018, MLGW adopted GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions* ("GASB 75"). This statement provides guidance for the

8. Other Postemployment Benefits (continued)

Implementation of GASB 75 (continued)

measurement and recognition of a net OPEB liability and OPEB expense, and includes instruction for balances to be recognized as deferred outflows of resources and deferred inflows of resources. Due to time constraints associated with producing the financial statements and the need to ensure timely filing of such statements with appropriate authorities, MLGW deemed it impractical to restate all prior periods. As such, the cumulative effect of applying this statement is shown in 2018 and it resulted in a reduction in the beginning net position of all three divisions. In 2018, beginning net position in the Electric, Gas, and Water Divisions declined by \$290,230, \$111,181, and \$82,216, respectively. Additional impacts to MLGW's financial statements are as follows:

Net OPEB liability – The net OPEB liability reported under GASB 75 is the difference between the actuarial present value of projected OPEB benefit payments attributable to employees' past service and the OPEB Trust's fiduciary net position. Previous to this new guidance, a liability was recognized only to the extent that contributions made to the OPEB Trust were exceeded by the actuarially calculated contributions.

Deferred outflows of resources and deferred inflows of resources – GASB 75 requires recognition of deferred outflows and inflows of resources associated with the difference between projected and actual earnings on OPEB Trust plan investments, to be amortized to OPEB expense over a closed five-year period. Also to be recognized as deferred outflows and inflows of resources are differences between expected and actual experience with regard to economic or demographic factors in the measurement of total OPEB liability, to be amortized to OPEB expense over a closed period equal to the average of the expected remaining service lives of all employees receiving OPEB benefits. Employer contributions to the OPEB trust made between the net OPEB liability measurement date and the employer's fiscal year end are recognized as deferred outflows of resources related to OPEB.

Plan Description

Memphis Light, Gas and Water Division, by resolution of its Board of Commissioners, has established, adopted, and maintains a medical benefits (health and welfare) plan (the "Plan") for its retired employees and their eligible dependents. The Plan is a single-employer defined benefit healthcare plan administered by MLGW.

The Board of Commissioners of Memphis Light, Gas and Water Division serves as the "Trustee" and establishes the policies of the MLGW OPEB Trust. The Trustee shall fulfill the duties of the fiduciary responsible for MLGW OPEB Trust's administration and shall have overall control of the administration of the OPEB Trust, with all powers and discretion necessary to enable it to properly carry out its duties. The Trustee delegated the responsibility and authority to administer the assets of the OPEB Trust to the OPEB Trust Investment Committee.



8. Other Postemployment Benefits (continued)

Plan Description (continued)

The OPEB Trust Investment Committee is comprised of one member of the Board of Commissioners of the Division (who serves as Chairman), the President and CEO of the Division, the Sr. Vice President, CFO, CAO and Secretary-Treasurer of the Division, two Employee Members, one Retiree Member, and one Citizen Member.

The Plan provides postemployment coverage for health care, life insurance, accidental death and dismemberment (AD&D), medical, and prescription drugs to eligible retirees and their dependents. Benefits are payable to retirees and their spouses for their lifetime. Qualified dependents continue to receive benefits as long as they are qualified under the Plan. Dental, dependent life insurance, cancer, accident, and long-term care benefits are available, but are 100% paid by the retiree.

Employees retired under the MLGW Retirement and Pension Plan, or disabled with five years of service at any age, or disabled in the line of duty at any age with no years of service restriction, are eligible for OPEB benefits. Health care benefits are also offered to qualifying survivors of active employees who are eligible to retire at the time of death.

Members of the Plan consisted of the following at December 31, 2017 (valuation date):

	Medical	Life
Retired members currently receiving benefits	1,977	1,977
Beneficiaries currently receiving benefits	1,719	-
Vested terminated members entitled to, but not yet receiving benefits	-	-
Active members	2,639	2,639
Total	<u>6,335</u>	<u>4,616</u>

Funding Policy and Contributions

The contribution requirements of plan members and MLGW are established and may be amended by the MLGW Board of Commissioners. Contribution rates for retired plan members and beneficiaries currently receiving benefits are periodically reset and are currently at 25% of costs for medical and drug benefits. For life insurance and AD&D, retirees contribute 40% of the cost.

The Board of Commissioners has set the employer contribution rate based on the Actuarially Determined Contribution ("ADC"). The ADC represents a level of funding that, if paid on an ongoing basis, is projected to cover normal costs each year and amortize any unfunded actuarial liabilities of the plan over a period not to exceed thirty years. The ADC is based on the prior year's valuation, then adjusted forward at an assumed payroll growth rate.

8. Other Postemployment Benefits (continued)

Funding Policy and Contributions (continued)

MLGW contributed \$33,949 and \$48,972 for the years ended December 31, 2019 and 2018, respectively to the OPEB Trust.

Actuarial Assumptions

The actuarial assumptions used in the December 31, 2018 valuation were based on the results of an actuarial experience study for the period January 1, 2009 to December 31, 2013.

Inflation	2.75%
Salary increases	Inflation plus merit increases based on age and service.
Discount Rate	7.50%
Healthcare costs trend rates	
Medical	7.00% grading to 4.50% over 10 years
Prescription drug	9.00% grading to 4.50% over 10 years
Administrative costs	3.00%
Mortality rates	Based on RP - 2014 Mortality Tables for males and females, as appropriate, adjusted by a factor of 138%, and with mortality improvement using a modified RPEC 2014 scale.

Pre-retirement mortality rates are based on RP-2014 Employee Mortality Table with sex-distinct rates. Healthy annuitant mortality rates are based on the RP-2014 Healthy Annuitant Mortality Table with sex-distinct rates, adjusted by a factor of 138%. Disabled annuitant mortality rates are based on RP-2014 Disabled Retiree Mortality Table with sex-distinct rates, also adjusted by a factor of 138%. All mortality tables above are projected generationally with a modified RPEC2014 projection table using a 15-year convergence period for cohort effects and 10-year convergence period for age/period effects.

Investment Rates of Return

The long-term expected rate of return on OPEB plan investments was determined using a building block method in which best estimate ranges of expected future rates of return (expected returns, net of investment expense and inflation) are developed for each major asset class. These returns are combined to produce the long-term expected rate of return by weighting the expected future real rates or return by the target asset allocation percentage and by adding expected inflation and subtracting expected

8. Other Postemployment Benefits (continued)

Investment Rates of Return (continued)

investment expenses and a risk margin. The target allocation and projected arithmetic real rates of return for each major asset class, after deducting inflation, but before investment expenses, used in the derivation of the long-term expected investment rate of return assumption are summarized below:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Domestic Equity	39%	6.41%
International Equity	12%	7.69%
Fixed Income	29%	2.38%
Alternatives	8%	3.83%
Real Estate	10%	4.76%
Short Term Investments	2%	1.16%
Total	100%	

Discount Rate

The discount rate used to measure the total OPEB liability was 7.50% for both December 31, 2018 and December 31, 2017, respectively. The projection of cash flows used to determine the discount rate assumed that MLGW contributions would be made at rates equal to the actuarially determined contribution rates. Based on these assumptions, the OPEB Plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members hired on or before December 31, 2017.

Sensitivity of the Net OPEB Liability to Changes in the Discount Rate and Cost Trend

The following presents the Net OPEB Liability (NOL) of MLGW as of December 31, 2019, calculated using the discount rate of 7.50%, as well as what the Division's NOL would be if it were calculated using a discount rate that is 1-percentage-point lower (6.50%) or 1-percentage-point higher (8.50%) than the current rate. Also, shown is the NOL as if it were calculated using healthcare cost trend rates that were 1-percentage point lower or 1-percentage point higher than the current healthcare trend rates:



8. Other Postemployment Benefits (continued)

Sensitivity of the Net OPEB Liability to Changes in the Discount Rate and Cost Trend (continued)

	1% Decrease in Discount Rate (6.50%)	Current Discount Rate (7.50%)	1% Decrease in Discount Rate (8.50%)
Net OPEB Liability (Asset)	\$379,236	\$281,470	\$201,582
	1% Decrease in Trend Rates	Current Trend Rates	1% Decrease in Trend Rates
Net OPEB Liability (Asset)	\$197,340	\$281,470	\$385,998

OPEB Plan's Fiduciary Net Position

Detailed information about the MLGW OPEB Trust's fiduciary net position is available in the separately issued plan financial statements. For purposes of measuring the net OPEB liability, all information about the OPEB plan's assets, deferred outflows of resources, liabilities, deferred inflows of resources, and fiduciary net position have been determined on the same basis as they are reported by the MLGW OPEB Trust.

The MLGW OPEB Trust's financial statements are prepared using the accrual basis of accounting in accordance with generally accepted accounting principles promulgated by the Governmental Accounting Standards Board. Investments are stated at fair value. Benefit payments are recognized when due and payable in accordance with the terms of the plan.

NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2019 AND 2018
(Dollars in Thousands)
(Continued)



8. Other Postemployment Benefits (continued)

Schedule of Changes in Net OPEB Liability

	Total OPEB Liability (a)	Increase (Decrease) Plan Fiduciary Net Position (b)	Net OPEB Liability (a)-(b)
Balance at December 31, 2017	\$ 673,088	\$ 419,726	\$ 253,362
Changes for the Year:			
Service Costs	15,381		15,381
Interest	50,559		50,559
Differences Between Expected and Actual Experience	(3,134)		(3,134)
Contributions – Employer		48,972	(48,972)
Net Investment Income (Loss)		(14,274)	14,274
Benefit Payments / Refunds	(27,876)	(27,876)	-
Administrative Expenses	(800)	(800)	-
Net Change	<u>\$ 34,130</u>	<u>\$ 6,022</u>	<u>\$ 28,108</u>
Balance at December 31, 2018	<u>\$ 707,218</u>	<u>\$ 425,748</u>	<u>\$ 281,470</u>

8. Other Postemployment Benefits (continued)

Plan Changes Since Prior Valuation

Effective April 1, 2018 and reflected for the December 31, 2018 reporting date:

- Deductible increased from \$100/200 (single/family) to \$500/\$1,000 for In-Network and from \$400/\$1,200 to \$600/\$1,200 for Out-of-Network
- In-Network OOP maximum increased from \$1,650/\$14,700 to \$3,200/\$13,700
- Office visit copay increased from \$15/\$25 (PCP/Specialist) to \$25/\$35 and ER copay increased from \$100 to \$120
- Prescription drug benefits changes are shown in the table below:

	Pre April 1, 2018	Post April 1, 2018
Regular and Maintenance Medications:		
<u>Retail</u>		
Generic	\$5.00	\$10.00
Preferred Brand	30% with \$25 maximum	30% with \$30 maximum
Non-Preferred Brand	30% with \$25 maximum	30% with \$50 maximum
<u>Mail Order</u>		
Generic	\$10.00	\$20.00
Preferred Brand	\$50.00	\$60.00
Non-Preferred Brand	\$60.00	\$100.00
Specialty Medications:		
<u>Retail</u>		
Generic	\$5.00	\$10.00
Preferred Brand	\$25.00	\$30.00
Non-Preferred Brand	\$40.00	\$100.00
<u>Mail Order</u>		
Generic	\$10.00	\$20.00
Preferred Brand	\$50.00	\$100.00
Non-Preferred Brand	\$60.00	\$200.00

Assumption changes:

- Medical and Prescription Drug trends were updated
- Expected claims were updated

NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2019 AND 2018
(Dollars in Thousands)
(Continued)



8. Other Postemployment Benefits (continued)

OPEB expense for the year ended December 31, 2019

Service cost	\$ 15,381
Interest on the Total OPEB Liability	50,560
Expensed portion of current-period difference between expected and actual experience in the Total OPEB Liability	(522)
Projected earnings on plan investments	(32,241)
Expensed portion of current-period differences between actual and projected earnings on plan investments	9,303
Recognition of beginning of year deferred outflows of resources as OPEB expense	612
Recognition of beginning of year deferred inflows of resources as OPEB expense	(39,616)
Total OPEB expense	<u>\$ 3,477</u>

Deferred outflows/inflows of resources related to OPEB

	Deferred Outflows of Resources	Deferred Inflows of Resources
Contributions subsequent to measurement date	\$ 33,949	\$ -
Changes of assumptions or other inputs	-	(133,580)
Net difference between projected and actual earnings on OPEB plan investments	37,210	(18,664)
Difference between expected and actual experience in the Total OPEB Liability	<u>2,451</u>	<u>(2,612)</u>
Total	<u>\$ 73,610</u>	<u>\$ (154,856)</u>

NOTE: \$33,949 contribution made subsequent to the measurement date will be recognized as a reduction of net OPEB liability in 2020.

NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2019 AND 2018
(Dollars in Thousands)
(Continued)



8. Other Postemployment Benefits (continued)

Projected Recognition of Deferred Outflows/(Inflows)							Deferred Outflows/(Inflows) Recognized in Future Years				
	Year	Original	Original	Outstanding	Amount	Outstanding					
	Established	Balance	Amortization	Balance at	Recognized	Balance at					
			Period	December	During	December	2020	2021	2022	2023	2024
			(Years)	31, 2018	FYE	31, 2019					
Fiscal year											
Outflows											
Demographic	2018	\$ 3,674	6.00	\$ 3,061	\$ 610	\$ 2,451	\$ 612	\$ 612	\$ 612	\$ 615	-
Investment	2019	46,514	5.00	-	9,303	37,211	9,303	9,303	9,303	9,302	-
Total Outflows				\$ 3,061	\$ 9,913	\$ 39,662	\$ 9,915	\$ 9,915	\$ 9,915	\$ 9,917	\$ -
Fiscal year											
Inflows											
Investment	2018	\$ (31,107)	5.00	\$ (24,885)	\$ (6,221)	\$ (18,664)	\$ (6,221)	\$ (6,221)	\$ (6,222)	-	-
Assumption	2018	(200,370)	6.00	(166,975)	(33,395)	(133,580)	(33,395)	(33,395)	(33,395)	(33,395)	-
Demographic	2019	(3,133)	6.00	-	(521)	(2,612)	(522)	(522)	(522)	(522)	(524)
Total Inflows				\$ (191,860)	\$ (40,137)	\$ (154,856)	\$ (40,138)	\$ (40,138)	\$ (40,139)	\$ (33,917)	\$ (524)
Total				\$ (188,799)	\$ (30,224)	\$ (115,194)	\$ (30,223)	\$ (30,223)	\$ (30,224)	\$ (24,000)	\$ (524)

Note: In accordance with Paragraph 43 of GASB Statement No. 75, the difference between projected and actual earnings on OPEB plan investments should be recognized over a closed five-year period. The difference between expected and actual total OPEB liability experience (noted as "Demographic" in the chart above) and the assumption changes (noted as "Assumption" in the chart above) are each recognized over a closed period equal to the average of the expected remaining service lives of all employees who are provided with OPEB through the OPEB plan (active employees and inactive employees) determined as of the beginning of the measurement period.

9. Pollution Remediation Obligation

MLGW has a contract with a state licensed environmental remediation company. The liabilities to remove asbestos, mold and lead from various substations and equipment because of imminent danger were derived from the environmental remediation contractor's estimate. These estimates assume no expected change orders.

MLGW annually evaluates current conditions, remediation plan updates and changes in legal or regulatory requirements to revise MLGW's estimated liability. Regulatory accounts are used to capture the net effect of the changes in estimates for each division. See Note 1 (Regulatory Accounting).

The schedule below shows the balances as of December 31, 2019 and 2018 for the lead pollution liability from various substations and equipment by Division:

9. Pollution Remediation Obligation (continued)

	2019	2018
Electric		
<u>Lead</u>	<u>\$ 719</u>	<u>\$ 719</u>
Total Electric	719	719
Gas		
<u>Lead</u>	<u>276</u>	<u>276</u>
Total Gas	276	276
Water		
<u>Lead</u>	<u>3,200</u>	<u>3,200</u>
Total Water	3,200	3,200
Total Liability	<u>\$ 4,195</u>	<u>\$ 4,195</u>

10. Risk Management

MLGW is exposed to various risks of loss related to active and retiree medical claims; injuries to workers; torts; theft of, damage to, and destruction of assets; errors and omissions; environmental damages; and natural disasters.

MLGW is self-insured for health and medical benefits and for injuries and damages including workers compensation and general liability claims. The Tennessee Governmental Tort Liability Act, TCA 29-20-101, et al, (the "Act") applies to all tort actions against MLGW arising in the State of Tennessee. The Act establishes statutory limits of liability and MLGW is immune from any award or judgment for death, bodily injury or property damage in excess of the limits as set forth in the Act.

Pursuant to the Act, the current limits of liability for personal injuries are \$300 per person and \$700 for two or more persons per accident. The liability for property damage is limited to \$100 per accident.

MLGW purchases insurance to address the risks of loss associated with the following: property damage; employee travel; out-of-state automobile travel; employee dishonesty; forgery; computer fraud; counterfeiting; damage to leased or rented equipment; and worker injuries exceeding MLGW's retained risk of loss.

10. Risk Management (continued)

MLGW has established insurance reserves for the estimated liabilities, including an accrual for incurred but not reported claims, resulting from medical benefits and injuries and damages claims as established by a third party administrator and MLGW's Legal Department. The medical benefits reserve and the costs and charges to the reserve are allocated to each division based on a standard administrative and general cost allocation.

MLGW is party to various lawsuits filed against it in the normal course of business (see Note 15).

The changes in the self-insurance reserves for medical benefits and injuries and damages for the years ended December 31, 2019 and 2018 are as follows:

	<u>Medical Benefits</u>			<u>Injuries and Damages</u>		
	<u>Electric Division</u>	<u>Gas Division</u>	<u>Water Division</u>	<u>Electric Division</u>	<u>Gas Division</u>	<u>Water Division</u>
Balance -- December 31, 2017	\$ 7,023	\$ 3,204	\$ 2,095	\$ 5,941	\$ 2,689	\$ 1,637
Payments	(42,591)	(19,427)	(12,703)	(1,953)	(829)	(953)
Incurred claims expense	46,406	21,166	13,840	1,937	461	1,470
Balance -- December 31, 2018	\$ 10,838	\$ 4,943	\$ 3,232	\$ 5,925	\$ 2,321	\$ 2,154
Payments	(42,221)	(19,259)	(12,592)	(1,341)	(707)	(776)
Incurred claims expense	39,101	17,836	11,662	498	(67)	208
Balance -- December 31, 2019	<u>\$ 7,718</u>	<u>\$ 3,520</u>	<u>\$ 2,302</u>	<u>\$ 5,082</u>	<u>\$ 1,547</u>	<u>\$ 1,586</u>

NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2019 AND 2018
(Dollars in Thousands)
(Continued)



11. Bonds

Bonds as of December 31, 2019 and 2018 consist of the following:

	Interest Rates	2019	2018
Electric Division:			
Electric System Revenue Bonds:			
Series 2014, due serially 2014-2034	2.00 - 5.00%	\$ 58,240	\$ 60,965
Series 2016, due serially 2015-2036	3.00 - 5.00%	36,040	37,410
Series 2017, due serially 2018-2037	3.00 - 5.00%	84,200	87,145
Premium on revenue bonds		21,395	23,709
Total		<u>199,875</u>	<u>209,229</u>
Less: current portion of bonds payable		<u>(7,295)</u>	<u>(7,040)</u>
		<u>\$ 192,580</u>	<u>\$ 202,189</u>
Gas Division:			
Gas System Revenue Bonds:			
Series 2017, due serially 2017-2036	3.00 - 5.00%	\$ 36,040	\$ 37,410
Series 2017, due serially 2018-2037	3.00 - 5.00%	37,460	38,750
Premium on revenue bonds		11,426	12,611
Total		<u>84,926</u>	<u>88,771</u>
Less: current portion of bonds payable		<u>(2,765)</u>	<u>(2,660)</u>
		<u>\$ 82,161</u>	<u>\$ 86,111</u>
Water Division:			
Water System Revenue Bonds:			
Series 2014, due serially 2016-2034	2.00 - 5.00%	\$ 12,090	\$ 12,695
Series 2016, due serially 2017-2036	2.00 - 4.00%	26,545	27,725
Series 2017, due serially 2018-2037	2.00 - 5.00%	23,225	24,120
Premium on revenue bonds		4,693	5,180
Total		<u>66,553</u>	<u>69,720</u>
Less: current portion of bonds payable		<u>(2,749)</u>	<u>(2,680)</u>
		<u>\$ 63,804</u>	<u>\$ 67,040</u>

NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2019 AND 2018
(Dollars in Thousands)
(Continued)



11. Bonds (continued)

Principal payments on bonds are due annually on December 1. Debt service requirements as of December 31, 2019 are as follows:

	<u>Electric Division</u>	
	<u>Principal</u>	<u>Interest</u>
2020 - 2024	\$ 39,965	\$ 36,159
2025 - 2029	50,655	25,464
2030 - 2034	63,450	12,666
2035 - 2037	24,410	1,669
Total	<u>\$ 178,480</u>	<u>\$ 75,958</u>

	<u>Gas Division</u>	
	<u>Principal</u>	<u>Interest</u>
2020 - 2024	\$ 15,220	\$ 15,427
2025 - 2029	19,400	11,240
2030 - 2034	24,585	6,058
2035 - 2037	14,295	1,040
Total	<u>\$ 73,500</u>	<u>\$ 33,765</u>

	<u>Water Division</u>	
	<u>Principal</u>	<u>Interest</u>
2020 - 2024	\$ 14,580	\$ 10,061
2025 - 2029	17,330	7,311
2030 - 2034	20,935	3,707
2035 - 2037	9,015	503
Total	<u>\$ 61,860</u>	<u>\$ 21,582</u>

11. Bonds (continued)

MLGW, at its option, may redeem bonds prior to maturity at premiums and prices specified in the indentures.

Bonds are secured by the pledge of the respective division's revenues, by funds established by the bond resolutions and, in certain circumstances, proceeds from the sale of certain division assets.

The estimated fair value of long-term debt for the Electric, Gas, and Water Divisions based on quoted market prices (including accrued interest) are as follows as of December 31, 2019 and 2018:

	<u>2019</u>	<u>2018</u>
Electric Division	\$ 205,016	\$ 204,354
	<u>2019</u>	<u>2018</u>
Gas Division	\$ 86,230	\$ 84,929
	<u>2019</u>	<u>2018</u>
Water Division	\$ 68,328	\$ 67,577

During 2018, the remaining principal balance of \$65,305 of Electric Division Series 2008 revenue bonds reached final maturity. During 2018, the remaining principal balance of \$55,070 of Series 2010 revenue bonds reached final maturity.

During 2017, the Electric Division issued \$90,000 of Series 2017 revenue bonds to finance the costs of acquiring, expanding and/or improving the Electric Division and to pay certain costs of issuance with respect to the Series 2017 Electric Division Bonds. The first principal payment was made December 1, 2018, and thereafter will be made annually with a final maturity date of December 1, 2037. The Series 2017 revenue bonds bear interest at annual fixed rates ranging from 3.00% to 5.00%.

During 2017, the Gas Division issued \$40,000 of Series 2017 revenue bonds to finance the costs of acquiring, expanding and/or improving the Gas Division and to pay certain costs of issuance with respect to the Series 2017 Gas Division Bonds. The first principal payment was made December 1, 2018, and thereafter will be made annually with a final maturity date of December 1, 2037. The Series 2017 revenue bonds bear interest at annual fixed rates ranging from 3.00% to 5.00%.

During 2017, the Water Division issued \$25,000 of Series 2017 revenue bonds to finance the costs of acquiring, expanding and/or improving the Water Division and to pay certain costs of issuance with respect to the Series 2017 Water Division Bonds. The first principal payment was made December 1, 2018, and thereafter will be made annually with a final maturity date of December 1, 2037. The Series 2017 revenue bonds bear interest at annual fixed rates ranging from 2.00% to 5.00%.

11. Bonds (continued)

During 2016, the Electric Division issued \$40,000 of Series 2016 revenue bonds to finance the costs of acquiring, expanding and/or improving the Electric Division and to pay certain costs of issuance with respect to the Series 2016 Electric Division Bonds. The first principal payment was made December 1, 2017, and thereafter will be made annually with a final maturity date of December 1, 2036. The Series 2016 revenue bonds bear interest at annual fixed rates ranging from 3.00% to 5.00%.

During 2016, the Gas Division issued \$40,000 of Series 2016 revenue bonds to finance the costs of acquiring, expanding and/or improving the Gas Division and to pay certain costs of issuance with respect to the Series 2016 Gas Division Bonds. The first principal payment was made December 1, 2017, and thereafter will be made annually with a final maturity date of December 1, 2036. The Series 2016 revenue bonds bear interest at annual fixed rates ranging from 3.00% to 5.00%.

During 2016, the Water Division issued \$30,000 of Series 2016 revenue bonds to finance the costs of acquiring, expanding and/or improving the Water Division and to pay certain costs of issuance with respect to the Series 2016 Water Division Bonds. The first principal payment was made December 1, 2017, and thereafter will be made annually with a final maturity date of December 1, 2036. The Series 2016 revenue bonds bear interest at annual fixed rates ranging from 2.00% to 4.00%.

During 2014, the Electric Division issued \$71,000 of Series 2014 revenue bonds to finance the costs of acquiring, expanding and/or improving the Electric Division and to pay certain costs of issuance with respect to the Series 2014 Electric Division Bonds. The first principal payment was made December 1, 2015, and thereafter will be made annually with a final maturity date of December 1, 2034. The Series 2014 revenue bonds bear interest at annual fixed rates ranging from 2.00% to 5.00%.

During 2014, the Water Division issued \$15,000 of Series 2014 revenue bonds to finance the costs of acquiring, expanding and/or improving the Water Division and to pay certain costs of issuance with respect to the Series 2014 Water Division Bonds. The first principal payment was made December 1, 2015, and thereafter will be made annually with a final maturity date of December 1, 2034. The Series 2014 revenue bonds bear interest at annual fixed rates ranging from 2.00% to 5.00%.

MLGW's Electric Division bond covenants require that for Series 2014, 2016, and 2017 Bonds the ratio of net revenues to principal and interest for any fiscal year will equal at least 120%. The composite electric bonds debt service coverage as of December 31, 2019 was 7.38.

MLGW's Gas Division bond covenants require that for Series 2016 and 2017 Bonds the ratio of net revenues to principal and interest for any fiscal year will equal at least 120%. The composite gas bonds debt service coverage as of December 31, 2019 was 11.83.

MLGW's Water Division bond covenants require that for Series 2014, 2016 and 2017 Bonds the ratio of net revenues to principal and interest for any fiscal year will equal at least 120%. The composite water bonds debt service coverage as of December 31, 2019 was 6.79.

NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2019 AND 2018
(Dollars in Thousands)
(Continued)



11. Bonds (continued)

Long-term debt activity for the years ended December 31, 2019 and 2018 was as follows:

	<u>Beginning Balance</u>	<u>Increases</u>	<u>Decreases</u>	<u>Ending Balance</u>
Year ended December 31, 2019:				
Electric Division				
Bonds payable:				
Revenue bonds	\$ 185,520	\$ -	\$ (7,040)	\$ 178,480
Premium on revenue bonds	23,709	-	(2,314)	21,395
Total bonds payable	<u>\$ 209,229</u>	<u>\$ -</u>	<u>\$ (9,354)</u>	<u>\$ 199,875</u>
Gas Division				
Bonds payable:				
Revenue bonds	\$ 76,160	\$ -	\$ (2,660)	\$ 73,500
Premium on revenue bonds	12,611	-	(1,185)	11,426
Total bonds payable	<u>\$ 88,771</u>	<u>\$ -</u>	<u>\$ (3,845)</u>	<u>\$ 84,926</u>
Water Division				
Bonds payable:				
Revenue bonds	\$ 64,540	\$ -	\$ (2,680)	\$ 61,860
Premium on revenue bonds	5,180	-	(487)	4,693
Total bonds payable	<u>\$ 69,720</u>	<u>\$ -</u>	<u>\$ (3,167)</u>	<u>\$ 66,553</u>

NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2019 AND 2018
(Dollars in Thousands)
(Continued)



11. Bonds (continued)

	Beginning Balance	Increases	Decreases	Ending Balance
Year ended December 31, 2018:				
Electric Division				
Bonds payable:				
Revenue bonds	\$ 312,685	\$ -	\$ (127,165)	\$ 185,520
Premium on revenue bonds	27,659	-	(3,950)	23,709
Total bonds payable	<u>\$ 340,344</u>	<u>\$ -</u>	<u>\$ (131,115)</u>	<u>\$ 209,229</u>
Gas Division				
Bonds payable:				
Revenue bonds	\$ 78,725	\$ -	\$ (2,565)	\$ 76,160
Premium on revenue bonds	13,828	-	(1,217)	12,611
Total bonds payable	<u>\$ 92,553</u>	<u>\$ -</u>	<u>\$ (3,782)</u>	<u>\$ 88,771</u>
Water Division				
Bonds payable:				
Revenue bonds	\$ 67,170	\$ -	\$ (2,630)	\$ 64,540
Premium on revenue bonds	5,679	-	(499)	5,180
Total bonds payable	<u>\$ 72,849</u>	<u>\$ -</u>	<u>\$ (3,129)</u>	<u>\$ 69,720</u>

12. Rates and Energy Supplies

Rates

Electric, gas and water rates are established by MLGW and rate changes are subject to approval by the Memphis City Council. The City Council has approved mechanisms for pass-through of wholesale electric rate changes from TVA and natural gas price changes from suppliers without requiring additional specific approval.

MLGW adjusted rates effective with meters read on or after January 3, 2019 to recover the increased cost of wholesale power from its retail customers due the loss of the prepayment credit with TVA. The retail effect across all customer classes was approximately 1.20%.

TVA implemented a rate adjustment effective with the October 2018 revenue month, increasing the cost of wholesale power (excluding fuel and purchased power) purchased by MLGW by approximately 2.57%. MLGW implemented changes to retail rate schedules effective with meters read on or after October 2, 2018, to recover the increased cost of wholesale power from its retail customers. The retail effect across all customer classes was approximately 1.50%.

12. Rates and Energy Supplies (continued)

Rates (continued)

A MLGW electric rate increase was approved on February 6, 2018, by the City Council as part of the 2018 MLGW Budget. This increase was required due to increased operating and capital expenses. MLGW implemented new electric rate schedules for meters read on or after July 2, 2018. The retail impact was a 2.0% increase for all customer classes.

MLGW retail electric rates are adjusted for TVA's Fuel Cost Adjustor ("FCA"). The FCA is a variable wholesale energy rate that can fluctuate each month with TVA's cost of fuel for electricity generation and purchased power costs. The FCA affects energy (per kilowatt-hour) charges for all retail customers.

MLGW retail electric rates are also adjusted by a Power Cost Adjustment ("PCA"). The PCA is a component added to the monthly FCA and recovers the shortfall in power cost due to changes in load factor. The PCA is a quarterly fixed rate adjustment applied to energy charges for retail customers with demands less than 5,000 kilowatts. The PCA was approved on November 19, 2013 by the City Council as part of the 2014 MLGW Budget. MLGW implemented the PCA for meters read on or after January 2, 2014.

MLGW gas rate schedules are developed using a projected price of natural gas and related gas storage and transportation charges. Retail natural gas rates are adjusted monthly for the Purchased Gas Adjustment ("PGA") rider. A PGA is applied to customer bills to reflect the difference between the actual cost of gas, storage and transportation in a given month and the projected levels built into the base rate schedule.

A gas rate increase was approved on February 6, 2018 by the City Council as part of the 2018 MLGW Budget. This increase was required due to increased operating expenses. MLGW implemented new gas rate schedules for meters read on or after July 2, 2018. The retail impact was a 2.0% increase for all customer classes.

A temporary, one-year water rate increase was approved on February 19, 2019 by the City Council as part of the 2019 MLGW Budget. This increase was required due to increased operating expenses. MLGW implemented new water rate schedules for meters read on or after March 4, 2019. The retail impact was a 3.00% increase for all customer classes.

A water rate increase was approved on January 9, 2018 by the City Council as part of the 2018 MLGW Budget. This rate increase was required to fund aquifer research. MLGW implemented new water rate schedules for meters read on or after January 31, 2018. The retail impact was a 1.05% increase for all customer classes.

TVA currently supplies all of MLGW's electric power requirements pursuant to a power contract. Under the terms of the TVA power contract, MLGW may terminate its supply arrangement with TVA upon five years' prior written notice. TVA may terminate on not less than ten years' prior written notice.



12. Rates and Energy Supplies (continued)

Energy Supplies

MLGW purchases natural gas from multiple suppliers on multiple pipelines in order to minimize operational and performance risk. MLGW has short-term purchase commitments which are normally for one year or less.

MLGW and the Tennessee Energy Acquisition Corporation ("TEAC") entered into a 20 year gas purchase contract beginning January 1, 2007 with volume commitments for the term. TEAC payments are made monthly after the gas is received by MLGW for its customers, and therefore these deals present no increased cash flow risk compared to normal physical gas purchases.

MLGW signed a North American Energy Standards Board (NAESB) contract with the Municipal Gas Authority of Georgia (MGAG) on July 24, 2018 in order to participate in a prepay natural gas opportunity. Gas volumes are offered to MLGW at Texas Gas Zone 1 Index minus \$0.4235. Natural gas began flowing to MLGW effective October 1, 2018 at a volume of 3,000 MMBtu/day. The gas volume will increase to 6,000 MMBtu/day effective January 1, 2024. This contract will expire September 1, 2048.

MLGW entered into a gas purchase contract with the Public Energy Authority of Kentucky (PEAK) on December 4, 2018 in order to participate in a prepay natural gas opportunity. Gas volumes are offered to MLGW at Texas Gas Zone 1 Index minus \$0.3350. Natural gas began flowing to MLGW effective July 1, 2019. Purchase volume for MLGW is 7,800 MMBtu/day for the November through March periods and 3,900 MMBtu/day for the April through October periods of the contract. This contract will expire October 31, 2049.

MLGW entered into a gas purchase contract with the Tennergy Energy Acquisition Corporation (Tennergy) on February 1, 2019 in order to participate in a prepay natural gas opportunity. Gas volumes are offered to MLGW at Texas Gas Zone 1 Index minus \$0.27. Natural gas began flowing to MLGW effective January 1, 2020. Purchase volume for MLGW is 10,000 MMBtu/day for the November through March periods and 5,000 MMBtu/day for the April through October periods of the contract. This contract will expire December 31, 2049.

MLGW entered into a gas purchase contract with the Public Energy Authority of Kentucky (PEAK) on February 14, 2019 in order to participate in a prepay natural gas opportunity. Gas volumes are offered to MLGW at Texas Gas Zone 1 Index minus \$0.32. Natural gas began flowing to MLGW effective July 1, 2019. Purchase volume for MLGW is 2,200 MMBtu/day for the November through March periods and 1,100 MMBtu/day for the April through October periods of the contract. This contract will expire October 31, 2049.

MLGW entered into a gas purchase contract with the Public Energy Authority of Kentucky (PEAK) on December 1, 2019 in order to participate in a prepay natural gas opportunity. Gas volumes are offered to



12. Rates and Energy Supplies (continued)

Energy Supplies (continued)

MLGW at Texas Gas Zone 1 and Trunkline Z1A Index pricing minus \$0.2750. Natural gas will begin flowing to MLGW effective November 1, 2020. Effective November 1, 2020, purchase volume for

MLGW is approximately an average of 39,300 MMBtu/day for the November through March periods. Effective November 1, 2027, the November through March purchase volume will increase to an average of approximately 47,000 MMBtu/day. Effective April 1, 2027, the purchase volume is 850 MMBtu/day for the April through October periods of the contract. This contract will expire December 31, 2049.

13. Federal Grant Contributions

In June 2017, MLGW applied for a disaster assistance grant for the restoration work done after the May 2017 storm. In June 2017, FEMA awarded grant contract Edison #E 34101-0000023718 for the project under the Public Assistance Grant Award program for costs incurred during FEMA-4320-DR-TN. The initial award was \$12,744, of which \$12,728 is being federally funded to the Electric Division and \$16 to the Gas Division. In May 2019, the contract was amended to \$13,091, of which \$13,075 is being federally funded to the Electric Division and \$16 to the Gas Division. Total eligible cost of restoration work for this disaster as submitted to the FEMA field officer in January 2018 was \$16,992. Eligible cost submitted for the Electric Division was \$16,970 and \$22 for the Gas Division. In 2018, MLGW decreased the Electric Division receivable by \$20 representing project under runs that were refunded to FEMA and subsequently de-obligated by FEMA in July 2019. In October 2018, MLGW received \$11,485 for the Electric Division and \$16 for the Gas Division. In August 2019, MLGW received the final payment of \$1,590 for the Electric Division.

Electric	2019	2018	2017
Total Expenditures	\$ -	\$ -	\$ 17,433
Eligible Reimbursement	347	(20)	12,728
Reimbursement Received	1,590	11,485	-
Reimbursement Returned	-	(20)	-
Receivable Balance	\$ -	\$ (1,243)	\$ (12,728)

Gas	2019	2018	2017
Total Expenditures	\$ -	\$ -	\$ 22
Eligible Reimbursement	-	16	16
Reimbursement Received	-	(16)	-
Receivable Balance	\$ -	\$ -	\$ (16)

14. Transfers to City

The Electric, Gas and Water Divisions make transfers to the City.

The Electric Division transfer is based on the formula provided by the May 29, 1987, TVA Power Contract Amendment (Supp. No. 8). The formula includes a property tax equivalency calculation plus 4% of operating revenue less power costs (three-year average). The Division pays the amount requested by the City not exceeding this formula.

The Gas Division transfer is based on the formula provided by the Municipal Gas System Tax Equivalent Law of 1987. The formula includes a property tax equivalency calculation plus 4% of operating revenue less gas costs (three-year average). The Division pays the amount requested by the City not exceeding this formula.

The Water Division through an agreement with the City, transfers a payment in the amount of \$2,500 per year. This agreement is effective through the year 2028.

15. Commitments and Contingencies

The Electric and Gas Divisions have derivative contracts and agreements that are exchange traded exclusively on public exchanges thereby eliminating counterparty credit risk. The counterparty to any derivative transaction on an exchange is either the Chicago Mercantile Exchange ("CME"), which is the parent of the NYMEX, or the Intercontinental Exchange ("ICE"). The exposure to credit loss in the event of nonperformance by the other party is represented by the fair values of the open derivative contracts. However, there is no counterparty financial risk for contracts transacted through the NYMEX or the ICE.

MLGW pays a Transfer to the City and in lieu of taxes to Shelby County Government and the incorporated towns of Shelby County for the Electric and Gas Divisions based on the Tennessee Municipal Electric and Gas System Tax Equivalent Laws of 1987. MLGW pays a Transfer to the City for the Water Division based upon an agreement with the City, which calls for a payment of \$2,500 for each of the fiscal years through 2028.

MLGW is party to various legal proceedings incidental to its business. In the opinion of management, MLGW's liability, if any, in all pending litigation or other proceedings, taken as a whole after consideration of amounts accrued, insurance coverage, or other indemnification arrangements, will not have a material adverse effect on its financial position or results of operations.

See Note 12 for discussions of MLGW's power contract with TVA and gas purchase commitments.

16. Subsequent Event

On March 11, 2020 the World Health Organization declared the novel strain of coronavirus (COVID – 19) a global health pandemic and recommended containment and mitigation measures worldwide. On March 23, 2020 the Mayor of the City of Memphis issued Executive Order No. 03-2020 proclaiming a



16. Subsequent Event (continued)

civil emergency in Memphis and ordering citizens and businesses to follow specific measures designed to contain the spread of the virus. In support of our customers, MLGW temporarily suspended service disconnections and late fee charges through mid-July 2020. Current impact is increase in an age of receivables. We have also taken actions to protect the health and safety of our employees and we continue to monitor and assess our financial condition. At this time, we cannot reasonably predict the extent to which the disruption may impact our business operations or financial position over the long-term.

REQUIRED SCHEDULE OF CHANGES IN NET PENSION LIABILITY (ASSET)
DECEMBER 31, 2019
(Dollars in Thousands)



	2018	2017	2016	2015	2014	2013
Total pension liability						
Service cost	\$ 31,185	\$ 31,977	\$ 32,591	\$ 30,139	\$ 31,786	\$ 33,122
Interest	108,432	103,731	102,248	99,940	100,436	98,818
Differences between expected and actual experience	3,726	4,908	(11,298)	2,275	(16,338)	(14,280)
Changes in assumptions	-	-	-	-	(22,112)	-
Benefit payments, including refunds of employee contributions	(113,316)	(104,919)	(102,628)	(100,528)	(100,249)	(91,931)
Net change in total pension liability	30,027	35,697	20,913	31,825	(6,477)	25,730
Total pension liability – beginning	\$ 1,471,230	\$ 1,435,533	\$ 1,414,620	\$ 1,382,794	\$ 1,389,271	\$ 1,363,542
Total pension liability – ending (a)	\$1,501,257	\$1,471,230	\$1,435,533	\$1,414,620	\$1,382,794	\$1,389,271
Plan fiduciary net position						
Contributions – employer	\$ 22,174	\$ 22,390	\$ 21,390	\$ 21,390	\$ 26,804	\$ 30,706
Contributions – employee	13,217	12,959	12,513	12,310	11,729	12,000
Net investment income	(39,996)	216,498	108,008	15,231	98,931	185,707
Benefit payments including refunds of employee contributions	(113,316)	(104,919)	(102,628)	(100,528)	(100,249)	(91,931)
Administrative expense	(871)	(860)	(730)	(759)	(714)	(657)
Other	-	-	-	-	-	-
Net change in plan fiduciary net position	\$ (118,792)	\$ 146,068	\$ 38,553	\$ (52,356)	\$ 36,501	\$ 135,825
Other Adjustments	-	-	-	788	-	-
Plan fiduciary net position – beginning	\$ 1,512,237	\$ 1,366,169	\$ 1,327,616	\$ 1,379,184	\$ 1,342,683	\$ 1,206,858
Plan fiduciary net position – ending (b)	\$ 1,393,445	\$ 1,512,237	\$ 1,366,169	\$ 1,327,616	\$ 1,379,184	\$ 1,342,683
System’s net pension liability (asset) – ending (a) – (b)	\$ 107,812	\$ (41,007)	\$ 69,364	\$ 87,004	\$ 3,610	\$ 46,588
Plan fiduciary net position as a percentage of the total pension liability	92.82%	102.79%	95.17%	93.85%	99.74%	96.65%
Covered employee payroll	\$ 169,605	\$ 167,221	\$ 161,926	\$ 160,641	\$ 152,368	\$ 154,759
System’s net pension liability (asset) as a percentage of covered employee payroll	63.57%	-24.52%	42.84%	54.16%	2.37%	30.10%

Notes to schedule:

Benefit changes: There have been no changes in benefit provisions since GASB 68 implementation.

Change of assumptions: The assumptions were updated between December 31, 2013 and December 31, 2014 based on a five-year experience study for the period ending December 31, 2013.

Historical data: This schedule will be expanded in future years to include up to ten years of historical data as the required information becomes available.

REQUIRED SCHEDULE OF EMPLOYER CONTRIBUTIONS - PENSION
DECEMBER 31, 2019
(Dollars in Thousands)



Year Ended December 31	Actuarially Determined Contribution (ADC)	Actual Contribution in Relation to ADC	Contribution Deficiency (Excess)	Covered- Employee Payroll	Contributions as a Percentage of Covered- Employee Payroll
2010	\$ 27,381	\$ 27,385	\$ (4)	\$ 153,509	17.84%
2011	26,208	26,213	(5)	154,036	17.02%
2012	30,067	30,063	4	154,347	19.48%
2013	30,705	30,706	(1)	154,759	19.84%
2014	26,812	26,804	8	152,368	17.59%
2015	21,390	21,390	-	160,641	13.32%
2016	21,390	21,390	-	161,926	13.21%
2017	22,390	22,390	-	167,221	13.39%
2018	22,174	22,174	-	169,605	13.07%
2019	21,813	21,813	-	170,946	12.76%

**SCHEDULE OF NOTES TO REQUIRED SUPPLEMENTARY INFORMATION - PENSION
DECEMBER 31, 2019**



Valuation date	January 1, 2019
Actuarial cost method	Entry Age Actuarial Cost Method
Amortization method	Level percent of payroll, using 1.50% annual increases
Remaining amortization period	24 years remaining as of January 1, 2017
Asset valuation method	Market value of assets less unrecognized returns in each of the last five years. Unrecognized return is equal to the difference between the actual market return and the expected return on the market value, and is recognized over a five-year period, further adjusted, if necessary, to be within 30% of the market value.

Actuarial Assumptions:

Inflation	2.75%
Salary increases	Inflation plus merit increases that vary by age and service, ranging from 0.00% to 6.75%
Investment rate of return	7.50%, including inflation, net of pension plan investment expense
Cost-of-living adjustments	0.83% for ages 56-58 1.65% for ages 59-61 2.06% for ages 62 and older, and all disabled participants

Other Information:

The actuarially determined contribution (ADC) is calculated using January 1 valuation date as of the beginning of the fiscal year prior to the year in which contributions are reported. Therefore, the ADC for the year ended December 31, 2019 is based on the January 1, 2018 actuarial valuation.

Please see the January 1, 2019 actuarial valuation report for a full listing of assumptions.

REQUIRED SCHEDULE OF CHANGES IN NET OPEB LIABILITY
DECEMBER 31, 2019
(Dollars in Thousands)



	2018	2017
Total OPEB Liability		
Service cost	\$ 15,381	\$ 19,520
Interest	50,559	64,666
Change of benefit terms	-	(61,896)
Differences between expected and actual experience	(3,133)	3,674
Changes of assumptions	-	(200,370)
Benefit payments, including refunds of member contributions	(28,676)	(29,457)
Net change in Total OPEB Liability	\$ 34,131	\$ (203,863)
Total OPEB Liability - beginning	673,088	876,951
(a) Total OPEB Liability - ending	<u>\$ 707,219</u>	<u>\$ 673,088</u>
Plan Fiduciary Net Position		
Contributions - employer	\$ 48,972	\$ 45,184
Net investment income (loss)	(14,274)	57,671
Benefit payments, including refunds of member contributions	(27,876)	(28,765)
Administrative expense	(800)	(692)
Net change in Plan Fiduciary Net Position	\$ 6,022	\$ 73,398
Plan Fiduciary Net Position - beginning	419,726	346,328
(b) Plan Fiduciary Net Position - ending	<u>\$ 425,748</u>	<u>\$ 419,726</u>
(c) Net OPEB Liability - ending (a) - (b)	<u>\$ 281,471</u>	<u>\$ 253,362</u>
Plan Fiduciary Net Position as a percentage of the Total OPEB Liability	60.20%	62.36%
Covered employee payroll	\$ 169,605	\$ 167,221
Plan Net OPEB Liability as percentage of covered employee payroll	165.96%	151.51%

Note: Historical data: This schedule will be expanded to include up to ten years of historical data as the data becomes available.

REQUIRED SCHEDULE OF EMPLOYER CONTRIBUTIONS - OPEB
DECEMBER 31, 2019
(Dollars in Thousands)



Year Ended December 31	Actuarially Determined Contributions	Contributions in Relation to the Actuarially Determined Contributions*	Contribution Deficiency / (Excess)	Covered- Employee Payroll	Contributions as a Percentage of Covered Employee Payroll
2010	\$ 43,693	\$ 43,476	\$ 217	\$ 153,509	28.32%
2011	44,666	43,554	1,112	154,036	28.28%
2012	42,427	39,747	2,680	154,347	25.75%
2013	42,854	43,043	(189)	154,759	27.81%
2014	38,386	42,100	(3,713)	152,368	27.63%
2015	38,187	38,438	(251)	160,641	23.93%
2016	45,289	42,496	2,793	161,926	26.24%
2017	46,978	45,184	1,794	167,221	27.02%
2018	48,270	48,972	(702)	169,605	28.87%
2019	31,701	33,949	(2,248)	170,946	19.86%

*Starting with 2016, contributions are shown on an accrual basis.

SCHEDULE OF NOTES TO REQUIRED SUPPLEMENTARY INFORMATION - OPEB
DECEMBER 31, 2019



Valuation date	Actuarially determined contribution rates are calculated as of January 1, one year prior to the end of the fiscal year in which contributions are reported
Actuarial cost method	Entry Age Actuarial Cost Method
Amortization method	30-year closed, level salary
Remaining amortization period	27 years remaining as of 2018 contribution
Asset valuation method	The market value of assets less unrecognized returns in each of the last four years. Unrecognized return is equal to the difference between actual and expected returns on a market value basis and is recognized over a five-year period. The deferred return is further adjusted, if necessary, so that the actuarial value of assets will stay within 20% of the market value of assets.

**SCHEDULE OF BONDS,
PRINCIPAL AND INTEREST REQUIREMENTS
DECEMBER 31, 2019
(Dollars in Thousands)**



		Series 2014		Series 2016		Series 2017	
		Principal	Interest	Principal	Interest	Principal	Interest
Electric Division:							
2020	\$	2,810	\$ 2,704	\$ 1,425	\$ 1,628	\$ 3,060	\$ 3,599
2021		2,920	2,592	1,480	1,571	3,215	3,446
2022		3,040	2,475	1,555	1,497	3,375	3,285
2023		3,160	2,354	1,630	1,419	3,545	3,117
2024		3,315	2,196	1,715	1,338	3,720	2,939
2025		3,485	2,030	1,800	1,252	3,905	2,753
2026		3,655	1,856	1,890	1,162	4,100	2,558
2027		3,840	1,673	1,985	1,067	4,305	2,353
2028		3,995	1,519	2,085	968	4,520	2,138
2029		4,155	1,359	2,185	864	4,750	1,912
2030		4,320	1,193	2,295	755	4,985	1,674
2031		4,535	977	2,410	640	5,235	1,425
2032		4,760	751	2,510	543	5,420	1,242
2033		5,000	513	2,610	443	5,605	1,052
2034		5,250	262	2,710	339	5,805	856
2035		-	-	2,820	230	6,005	653
2036		-	-	2,935	117	6,215	443
2037		-	-	-	-	6,435	225
Total		\$ 58,240	\$ 24,454	\$ 36,040	\$ 15,833	\$ 84,200	\$ 35,670

**SCHEDULE OF BONDS,
PRINCIPAL AND INTEREST REQUIREMENTS
DECEMBER 31, 2019
(Dollars in Thousands)**



		Series 2016		Series 2017	
		Principal	Interest	Principal	Interest
Gas					
Division:					
2020	\$	1,425	\$ 1,628	\$ 1,340	\$ 1,736
2021		1,480	1,571	1,410	1,669
2022		1,555	1,497	1,480	1,599
2023		1,630	1,419	1,555	1,525
2024		1,715	1,337	1,630	1,447
2025		1,800	1,252	1,710	1,365
2026		1,890	1,162	1,800	1,280
2027		1,985	1,067	1,885	1,190
2028		2,085	968	1,980	1,096
2029		2,185	864	2,080	997
2030		2,295	755	2,185	892
2031		2,410	640	2,295	783
2032		2,510	543	2,410	669
2033		2,610	443	2,530	548
2034		2,710	339	2,630	447
2035		2,820	230	2,735	342
2036		2,935	117	2,845	233
2037		-	-	2,960	118
Total		\$ 36,040	\$ 15,832	\$ 37,460	\$ 17,936

**SCHEDULE OF BONDS,
PRINCIPAL AND INTEREST REQUIREMENTS
DECEMBER 31, 2019
(Dollars in Thousands)**



		Series 2014		Series 2016		Series 2017	
		Principal	Interest	Principal	Interest	Principal	Interest
Water Division:							
2020	\$	620	\$ 457	\$ 1,215	\$ 832	\$ 915	\$ 893
2021		635	438	1,250	795	940	866
2022		655	419	1,275	770	970	838
2023		680	393	1,315	732	1,000	808
2024		715	359	1,355	693	1,040	768
2025		740	338	1,395	652	1,080	727
2026		765	308	1,435	610	1,135	673
2027		790	285	1,465	581	1,190	616
2028		820	253	1,525	523	1,250	557
2029		855	221	1,585	462	1,300	507
2030		890	186	1,645	398	1,355	455
2031		925	151	1,715	333	1,405	400
2032		960	114	1,765	281	1,455	351
2033		1,000	75	1,820	228	1,515	293
2034		1,040	35	1,870	174	1,575	232
2035		-	-	1,930	117	1,640	169
2036		-	-	1,985	60	1,705	104
2037		-	-	-	-	1,755	53
Total	\$	<u>12,090</u>	<u>\$ 4,032</u>	<u>\$ 26,545</u>	<u>\$ 8,241</u>	<u>\$ 23,225</u>	<u>\$ 9,310</u>

**SCHEDULE OF CURRENT UTILITY RATES
DECEMBER 31, 2019**



Electric Division Rate Class	Base Charge	Customers
All Electric Rate Schedules Are Subject To Adjustment Under The Provisions of the TVA Fuel Cost and Purchased Power Adjustment Rider.		
Residential – Schedule RS	Effective meters read on or after January 3, 2019.	369,890
Customer Charge:	\$13.49 per month, less Hydro Allocation Credit: \$1.60	
Energy Charge:	Summer	Winter
First 500 kWh per month:	\$0.07416	\$0.07093
Additional kWh per month:	\$0.07321	\$0.06999
	Transition	\$0.06903
		\$0.06809
	The above rates are subject to adjustment under the provisions of the TVA Fuel Cost and Purchase Power Adjustment Rider.	
Time-Of-Use Residential Rate	Effective January 1, 2019.	75
Customer Charge:	\$13.49 per month, less Hydro Allocation Credit: \$1.60	
Energy Charge:	Summer	Winter
On-Peak kWh per month:	\$0.13057	\$0.08844
Off-Peak kWh per month:	\$0.05891	\$0.05891
	Transition	\$0.05891
		\$0.05891
	The above rates are subject to adjustment under the provisions of the TVA Fuel Cost and Purchase Power Adjustment Rider.	
General Service – Schedule GSA	Effective meters read on or after January 3, 2019.	43,240
	If (a) the higher of (i) the customer's currently effective contract demand, if any, or (ii) its highest billing demand during the latest 12 month period is not more than 50 kW, and (b) customer's monthly energy takings for any month during such period do not exceed 15,000 kWh:	
Customer Charge:	\$25.63 per delivery point per month	
Energy Charge:	Summer	Winter
	\$0.08234	\$0.07915
	Transition	\$0.07722
	If (a) the higher of (i) the customer's currently effective contract demand or (ii) its highest billing demand during the latest 12 month period is greater than 50 kW but not more than 1,000 kW, or (b) if the customer's billing demand is less than 50 kW and its energy takings for any month during such period exceed 15,000 kWh:	
Customer Charge:	\$76.89 per delivery point per month	
Demand Charge:	Summer	Winter
First 50 kW of billing demand per month:	\$0.00000	\$0.00000
	Transition	\$0.00000
Excess over 50 kW of billing demand per month:	\$14.36	\$13.36
		\$13.36
Energy Charge:		
First 15,000 kWh per month:	\$0.09509	\$0.09192
		\$0.08999
Additional kWh per month:	\$0.04308	\$0.04010
		\$0.03897

**SCHEDULE OF CURRENT UTILITY RATES
DECEMBER 31, 2019
(Continued)**



Electric Division Rate Class (cont.)	Base Charge			Customers
General Service – Schedule GSA (cont.)				
	If the higher of the customer’s currently effective contract demand or its highest billing demand during the latest 12 month period is greater than 1,000 kW:			
Customer Charge:	\$307.57 per delivery point per month			
Demand Charge:	Summer	Winter	Transition	
First 1,000 kW of billing demand per month:	\$13.34	\$12.35	\$12.35	
Excess over 1,000 kW of billing demand per month:	\$13.18	\$12.18	\$12.18	
Excess of billing demand over the higher of 2,500 kW or the customer’s contract demand per month:	\$13.18	\$12.18	\$12.18	
Energy Charge:				
All kWh per month:	\$0.04826	\$0.04527	\$0.04415	
Time-of-Day General Power Rate - Part A (Schedule TGSA)				0
Effective January 1, 2019.				
	Summer	Non-Summer		
Customer Charge:	\$307.57	\$307.57		
On-peak per kW of billing demand charges per month:	\$13.68	\$13.01		
Per kW charge per month for each kW, if any, by which off-peak billing demand exceeds on-peak billing demand:	\$1.70	\$1.70		
Per kW charge per month for each kW, if any, of the amount by which (1) the customer’s on-peak billing demand exceeds the higher of 2,500 kW or its on-peak contract demand or (2) the customer’s off-peak billing demand exceeds the higher of 2,500 kW or its off-peak contract demand, whichever is higher	\$13.68	\$13.01		
On-peak per kWh energy charge:	\$0.05870	\$0.05141		
Off-peak per kWh energy charge:	\$0.04246	\$0.04362		
Manufacturing Power Rate - Part A (Schedule MSA)				0
Effective January 1, 2019.				
Customer Charge:	\$307.57 per delivery point per month			
	Summer	Winter	Transition	
Per kW coincident billing demand charge per month:	\$8.51	\$7.53	\$7.53	
Per kW maximum billing demand charge per month:	\$4.93	\$4.91	\$4.91	

**SCHEDULE OF CURRENT UTILITY RATES
DECEMBER 31, 2019
(Continued)**



Electric Division Rate Class (cont.)	Base Charge			Customers
Manufacturing Power Rate - Part A (Schedule MSA) (cont.)				
	Summer	Winter	Transition	
Excess per kW charge per month by which billing demand exceeds contract demand:	\$13.44	\$12.44	\$12.44	
On-peak per kWh energy charge:	\$0.06531	\$0.05458	\$0.04490	
Off-peak per kWh energy charge:	\$0.04265	\$0.04428	\$0.04490	
Time Of Use General Service (Schedule TGS)				
	Effective January 1, 2019.			10
Service Charge:	\$1,537.86 per delivery point per month			
TVA Administrative Charge:	\$350.00 per delivery point per month			
Excess Demand:	Demand amount that exceeds the effective contract demand.			
Off-Peak Block 1:	First 200 hours use of on-peak metered demand multiplied by the ratio of metered off-peak energy to metered total energy.			
Off-Peak Block 2:	Next 200 hours use of on-peak metered demand multiplied by the ratio of metered off-peak energy to metered total energy.			
Off-Peak Block 3:	Over 400 hours use of on-peak metered demand multiplied by the ratio of metered off-peak energy to metered total energy.			
Rates applicable for delivery at:	Transmission Voltage: 115 kV and up			
	TDGSA	TGSB	TGSC	TGSD
Summer				
On-peak billing demand per kW:	\$10.90	\$10.82	\$10.82	\$10.82
Maximum billing demand per kW:	\$5.71	\$5.70	\$5.16	\$4.90
Excess demand per kW:	\$10.90	\$10.82	\$10.82	\$10.82
On-peak energy per kWh:	\$0.08255	\$0.06756	\$0.06756	\$0.06661
Off-peak block 1 per kWh:	\$0.04921	\$0.04275	\$0.04275	\$0.04181
Off-peak block 2 per kWh:	\$0.00692	\$0.00804	\$0.00804	\$0.00596
Off-peak block 3 per kWh:	\$0.00391	\$0.00464	\$0.00464	\$0.00370
Winter				
On-peak billing demand per kW:	\$9.95	\$9.85	\$9.85	\$9.85
Maximum billing demand per kW:	\$5.71	\$5.70	\$5.16	\$4.90
Excess demand per kW:	\$9.95	\$9.85	\$9.85	\$9.85
On-peak energy per kWh:	\$0.06733	\$0.05624	\$0.05624	\$0.05530
Off-peak block 1 per kWh:	\$0.05216	\$0.04496	\$0.04496	\$0.04401
Off-peak block 2 per kWh:	\$0.00692	\$0.00804	\$0.00804	\$0.00596
Off-peak block 3 per kWh:	\$0.00391	\$0.00464	\$0.00464	\$0.00370

**SCHEDULE OF CURRENT UTILITY RATES
DECEMBER 31, 2019
(Continued)**



Electric Division Rate Class (cont.)	Base Charge	Customers
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**Time Of Use General Service
(Schedule TGS)
(cont.)**

Rates applicable for delivery at:	Transmission Voltage: 115 kV and up			
	TDGSA	TGSB	TGSC	TGSD
Transition				
On-peak billing demand per kW:	\$9.95	\$9.85	\$9.85	\$9.85
Maximum billing demand per kW:	\$5.71	\$5.70	\$5.16	\$4.90
Excess demand per kW:	\$9.95	\$9.85	\$9.85	\$9.85
On-peak energy per kWh:	\$0.05335	\$0.04243	\$0.04243	\$0.04149
Off-peak block 1 per kWh:	\$0.05335	\$0.04243	\$0.04243	\$0.04149
Off-peak block 2 per kWh:	\$0.00692	\$0.00804	\$0.00804	\$0.00596
Off-peak block 3 per kWh:	\$0.00391	\$0.00464	\$0.00464	\$0.00370

Rates applicable for delivery at:	Distribution Voltage: < 115 kV			
	TDGSA	TGSB	TGSC	TGSD
Summer				
On-peak billing demand per kW:	\$11.22	\$11.14	\$11.14	\$11.14
Maximum billing demand per kW:	\$5.83	\$5.82	\$5.28	\$5.02
Excess demand per kW:	\$11.22	\$11.14	\$11.14	\$11.14
On-peak energy per kWh:	\$0.08490	\$0.06946	\$0.06946	\$0.06851
Off-peak block 1 per kWh:	\$0.05058	\$0.04392	\$0.04392	\$0.04298
Off-peak block 2 per kWh:	\$0.00705	\$0.00821	\$0.00821	\$0.00609
Off-peak block 3 per kWh:	\$0.00395	\$0.00471	\$0.00471	\$0.00377
Winter				
On-peak billing demand per kW:	\$10.24	\$10.14	\$10.14	\$10.14
Maximum billing demand per kW:	\$5.83	\$5.82	\$5.28	\$5.02
Excess demand per kW:	\$10.24	\$10.14	\$10.14	\$10.14
On-peak energy per kWh:	\$0.06923	\$0.05781	\$0.05781	\$0.05687
Off-peak block 1 per kWh:	\$0.05362	\$0.04620	\$0.04620	\$0.04525
Off-peak block 2 per kWh:	\$0.00705	\$0.00821	\$0.00821	\$0.00609
Off-peak block 3 per kWh:	\$0.00395	\$0.00471	\$0.00471	\$0.00377
Transition				
On-peak billing demand per kW:	\$10.24	\$10.14	\$10.14	\$10.14
Maximum billing demand per kW:	\$5.83	\$5.82	\$5.28	\$5.02
Excess demand per kW:	\$10.24	\$10.14	\$10.14	\$10.14
On-peak energy per kWh:	\$0.05484	\$0.04359	\$0.04359	\$0.04265
Off-peak block 1 per kWh:	\$0.05484	\$0.04359	\$0.04359	\$0.04265
Off-peak block 2 per kWh:	\$0.00705	\$0.00821	\$0.00821	\$0.00609
Off-peak block 3 per kWh:	\$0.00395	\$0.00471	\$0.00471	\$0.00377

**Time Of Use Manufacturing Service
(Schedule TMS)**

Effective January 1, 2019.

25

Service Charge: \$1,537.86 per delivery point per month

TVA Administrative Charge: \$350.00 per delivery point per month

Excess Demand: Demand amount that exceeds the effective contract demand.

SCHEDULE OF CURRENT UTILITY RATES
DECEMBER 31, 2019
(Continued)



Electric Division Rate Class (cont.)	Base Charge				Customers
Time Of Use Manufacturing Service (Schedule TMS) (cont.)					
Off-Peak Block 1:	First 200 hours use of on-peak metered demand multiplied by the ratio of metered off-peak energy to metered total energy.				
Off-Peak Block 2:	Next 200 hours use of on-peak metered demand multiplied by the ratio of metered off-peak energy to metered total energy.				
Off-Peak Block 3:	Over 400 hours use of on-peak metered demand multiplied by the ratio of metered off-peak energy to metered total energy.				
Rates applicable for delivery at:	Transmission Voltage: 115 kV and up				
	TDMSA	TMSB	TMSC	TMSD	
Summer					
On-peak billing demand per kW:	\$10.19	\$10.19	\$10.19	\$10.19	
Maximum billing demand per kW:	\$3.95	\$2.64	\$2.10	\$1.83	
Excess demand per kW:	\$10.19	\$10.19	\$10.19	\$10.19	
On-peak energy per kWh:	\$0.05731	\$0.05957	\$0.05845	\$0.05556	
Off-peak block 1 per kWh:	\$0.03243	\$0.03469	\$0.03356	\$0.03068	
Off-peak block 2 per kWh:	\$0.00513	\$0.00513	\$0.00653	\$0.00422	
Off-peak block 3 per kWh:	\$0.00259	\$0.00259	\$0.00653	\$0.00364	
Winter					
On-peak billing demand per kW:	\$9.23	\$9.23	\$9.23	\$9.23	
Maximum billing demand per kW:	\$3.95	\$2.64	\$2.10	\$1.83	
Excess demand per kW:	\$9.23	\$9.23	\$9.23	\$9.23	
On-peak energy per kWh:	\$0.04595	\$0.04822	\$0.04709	\$0.04420	
Off-peak block 1 per kWh:	\$0.03465	\$0.03691	\$0.03577	\$0.03288	
Off-peak block 2 per kWh:	\$0.00513	\$0.00513	\$0.00653	\$0.00422	
Off-peak block 3 per kWh:	\$0.00259	\$0.00259	\$0.00653	\$0.00364	

SCHEDULE OF CURRENT UTILITY RATES
DECEMBER 31, 2019
(Continued)



Electric Division Rate Class (cont.)	Base Charge				Customers
Time Of Use Manufacturing Service (Schedule TMS) (cont.)					
Rates applicable for delivery at:	Transmission Voltage: 115 kV and up				
	TDMSA	TMSB	TMSC	TMSD	
Transition					
On-peak billing demand per kW:	\$9.23	\$9.23	\$9.23	\$9.23	
Maximum billing demand per kW:	\$3.95	\$2.64	\$2.10	\$1.83	
Excess demand per kW:	\$9.23	\$9.23	\$9.23	\$9.23	
On-peak energy per kWh:	\$0.03553	\$0.03777	\$0.03664	\$0.03375	
Off-peak block 1 per kWh:	\$0.03553	\$0.03777	\$0.03664	\$0.03375	
Off-peak block 2 per kWh:	\$0.00513	\$0.00513	\$0.00653	\$0.00422	
Off-peak block 3 per kWh:	\$0.00259	\$0.00259	\$0.00653	\$0.00364	
Rates applicable for delivery at:	Distribution Voltage: < 115 kV				
	TDMSA	TMSB	TMSC	TMSD	
Summer					
On-peak billing demand per kW:	\$10.49	\$10.49	\$10.49	\$10.49	
Maximum billing demand per kW:	\$4.02	\$2.68	\$2.14	\$1.87	
Excess demand per kW:	\$10.49	\$10.49	\$10.49	\$10.49	
On-peak energy per kWh:	\$0.05893	\$0.06125	\$0.06010	\$0.05715	
Off-peak block 1 per kWh:	\$0.03332	\$0.03565	\$0.03448	\$0.03154	
Off-peak block 2 per kWh:	\$0.00522	\$0.00522	\$0.00666	\$0.00430	
Off-peak block 3 per kWh:	\$0.00261	\$0.00261	\$0.00666	\$0.00371	
Winter					
On-peak billing demand per kW:	\$9.50	\$9.50	\$9.50	\$9.50	
Maximum billing demand per kW:	\$4.02	\$2.68	\$2.14	\$1.87	
Excess demand per kW:	\$9.50	\$9.50	\$9.50	\$9.50	
On-peak energy per kWh:	\$0.04724	\$0.04957	\$0.04841	\$0.04545	
Off-peak block 1 per kWh:	\$0.03560	\$0.03793	\$0.03676	\$0.03380	
Off-peak block 2 per kWh:	\$0.00522	\$0.00522	\$0.00666	\$0.00430	
Off-peak block 3 per kWh:	\$0.00261	\$0.00261	\$0.00666	\$0.00371	
Transition					
On-peak billing demand per kW:	\$9.50	\$9.50	\$9.50	\$9.50	
Maximum billing demand per kW:	\$4.02	\$2.68	\$2.14	\$1.87	
Excess demand per kW:	\$9.50	\$9.50	\$9.50	\$9.50	
On-peak energy per kWh:	\$0.03651	\$0.03882	\$0.03765	\$0.03470	
Off-peak block 1 per kWh:	\$0.03651	\$0.03882	\$0.03765	\$0.03470	
Off-peak block 2 per kWh:	\$0.00522	\$0.00522	\$0.00666	\$0.00430	
Off-peak block 3 per kWh:	\$0.00261	\$0.00261	\$0.00666	\$0.00371	

SCHEDULE OF CURRENT UTILITY RATES
DECEMBER 31, 2019
(Continued)



Electric Division Rate Class (cont.)	Base Charge			Customers
Drainage Pumping Station Rate (Schedule DPS)	Effective January 3, 2019.			6
Customer Charge:	\$15.91 per delivery point per month			
Energy Charge:	Summer	Winter	Transition	
All kWh per month:	\$0.04061	\$0.03746	\$0.03553	
Outdoor Lighting Rate (Schedule LS)	Effective January 3, 2019.			17,019
	Part A – Charges for street and park lighting systems, traffic signal systems, and athletic field lighting installations.			
Energy Charge:	Summer	Winter	Transition	
All kWh per month:	\$0.05114	\$0.04824	\$0.04630	
Outdoor Lighting Facilities Charge:	<p>The annual facility charge shall be 10.41% of the installed cost to the Division's electric system of the facility devoted to street and park lighting service specified in this Part A. Such installed cost shall be recomputed on July 1 of each year, or more often if substantial changes in the facilities are made. Each month, one-twelfth of the then total annual facility charge shall be billed to the customer. If any part of the facilities has not been provided at the electric system's expense or if the installed cost of any portion thereof is reflected on the books of another municipality or agency or department, the annual facility charge shall be adjusted to reflect properly the remaining cost to be borne by the electric system.</p> <p>Traffic signal systems and athletic field lighting installations shall be provided, owned, and maintained by and at the expense of the customer, except as Division may agree otherwise in accordance with the provisions of the paragraph next following in this section. The facilities necessary to provide service to such systems and installations shall be provided by and at the expense of Division's electric system, and the annual facility charge provided for first above in this section shall apply to the installed cost of such facilities.</p> <p>When so authorized by policy duly adopted by Division's governing board, traffic signal systems and athletic field lighting installations may be provided, owned and maintained by Division's electric system for the customer's benefit. In such cases Division may require reimbursement from the customer for a portion of the initial installed cost of any such system or installation and shall require payment by the customer of facility charges sufficient to cover all of Division's costs (except reimbursed costs), including appropriate overheads, of providing, owning, and maintaining such system or installation; provided that, for athletic field lighting installations, such facility charge shall in no case be less than 12% per year of such costs. Said facility charge shall be in addition to the annual facility charge on the facilities necessary to provide service to such system or installation as provided for in the preceding paragraphs.</p>			

SCHEDULE OF CURRENT UTILITY RATES
DECEMBER 31, 2019
(Continued)



Electric Division Rate Class (cont.)	Base Charge	Customers
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Outdoor Lighting Rate (Schedule LS)
(cont.)

Part B – Charges for outdoor lighting for individual customers – charges per fixture per month:

(a) Type of Fixture

	Lamp Size		Rated	Facility
	(Watts)	(Lumens)	(kWh)	Charge
Mercury Vapor or Incandescent	175	7,650	70	\$3.02
	250	10,400	98	3.58
	400	19,100	155	4.53
	700	33,600	266	6.11
	1,000	47,500	378	7.78
Metal Halide	175	8,300	70	\$3.02
	250	14,000	98	3.58
	400	22,600	155	4.53
	1,000	88,000	378	7.78
High Pressure Sodium	50	3,285	22	\$4.30
	100	8,550	42	4.59
	150	14,400	63	4.73
	200	18,900	82	5.14
	250	23,000	105	5.43
	400	45,000	165	6.45
	1,000	126,000	385	10.30
LED	100	7,000	24	\$5.31
	150	9,300	31	5.53
	200	13,400	45	5.97

(b) Energy Charge:

For each lamp size under (a) above per rated kWh per month:

	Summer	Winter	Transition
All rated kWh per month:	\$0.05144	\$0.04824	\$0.04630

**SCHEDULE OF CURRENT UTILITY RATES
DECEMBER 31, 2019
(Continued)**



Gas Division Rate Class	Base Charge	Customers
Residential G-1 & G-3	Effective meters read on or after July 2, 2018	289,603
	Schedule G-1 is available for domestic use to residential customers in individual private residences or other individual dwelling units situated within the corporate limits of the City of Memphis, Tennessee. Schedule G-3 is available for domestic use to residential customers in individual private residences or other individual dwelling units situated outside the corporate limits of the City of Memphis, Tennessee.	
Service Charge:	\$ 10.22 per month, plus	
Commodity Charge:	First 100 ccf per month @ \$0.599 per ccf	
	Excess over 100 ccf per month @ \$0.507 per ccf, plus the above rates are subject to adjustment under the provisions of the Purchased Gas Adjustment Rider.	
Minimum Bill:	\$10.22 per meter per month	
Small General Service G-7	Effective meters read on or after July 2, 2018	20,807
	This rate schedule is available for gas service to all gas customers except residential.	
Service Charge:	For 0 to 425 ccf meter, \$30.65 Over 426 to 1,400 ccf meter, \$56.19 Over 1,400 ccf meter, \$102.17 per month plus,	
Commodity Charge:	All gas consumed: \$0.542 per ccf per month, plus	
	The above rates are subject to adjustment under the provisions of the Purchased Gas Adjustment Rider.	
Minimum Bill:	The minimum monthly bill shall be \$0.668 for each ccf of the higher of: (1) The maximum daily demand during the preceding eleven months, or (2) The daily contract demand, but in no case less than the Service charge listed above.	
Large General Service Firm on-peak G-8 and G-9	Effective meters on or after July 2, 2018	418
	This rate schedule is available for gas service to all customers contracting for not less than 100 ccf of maximum daily demand.	
Demand Charge:	\$0.256 ccf per month of contract demand or maximum daily demand during the twelve (12) months ending with the billing month, whichever is higher, plus	

**SCHEDULE OF CURRENT UTILITY RATES
DECEMBER 31, 2019
(Continued)**



**Large General Service Firm on-peak
G-8 and G-9
(cont.)**

Commodity Charge:	First 200,000 ccf per month @ \$0.499 per ccf Excess over 200,000 ccf per month @ \$0.403 per ccf, plus The above rates are subject to adjustment under the provisions of the Purchased Gas Adjustment Rider.
Minimum Bill:	The minimum bill shall be \$0.924 for each ccf of the higher of: (1) the maximum daily demand during the twelve (12) months ending with the billing month, or (2) the daily contract demand.

**Large General Service Interruptible Off-peak
G-10 and G-12** Effective meters on or after July 2, 2018

13

	This rate schedule is available for gas service to all customers contracting for not less than 1,500 ccf of maximum daily demand and providing oil or other alternate fuel facilities approved by the Division as being adequate in design and capacity.
Service Charge:	\$510.83 per month, plus
Commodity Charge:	First 200,000 Ccf per month @ \$0.468 per ccf Excess over 200,000 ccf per month @ \$0.397 per ccf, plus The above rates are subject to adjustment under the provisions of the Purchased Gas Adjustment Rider.
Minimum Bill:	The minimum monthly bill shall be \$0.358 for each ccf of the higher of (1) the maximum daily demand during the twelve months ending with the billing month, or (2) the daily contract demand, but in no event less than the service charge.

**SCHEDULE OF CURRENT UTILITY RATES
DECEMBER 31, 2019**



Water Division Rate Class	Base Charge	Customers
Residential – Inside City Rate	Effective meters read on or after March 4, 2019	185,124
	For water furnished to premises entirely within the corporate limits of the City of Memphis	
Commodity Charge:	All water consumed: \$1.913 per ccf per month	
Minimum Bill:	The minimum monthly bill shall be determined by the size of the meter installed, as follows:	
	5/8" meter \$8.09	
	3/4" meter 11.68	
	1" meter 20.71	
	1-1/2" meter 46.59	
	2" meter 82.84	
Residential – Outside City Rate	Effective meters read on or after March 4, 2019	23,655
	For water furnished to premises outside the corporate limits of the City of Memphis	
Commodity Charge:	All water consumed: \$2.979 per ccf per month	
Minimum Bill:	The minimum monthly bill shall be determined by the size of the meter installed, as follows:	
	5/8" meter \$11.26	
	3/4" meter 16.20	
	1" meter 28.83	
	1-1/2" meter 64.83	
	2" meter 115.24	
General Service – Inside City Rate	Effective meters read on or after March 4, 2019	18,662
	For water service to all customers within the corporate limits of the City of Memphis, except residential customers	
Commodity Charge:	Water consumed per month:	
	First 30 ccf \$2.440 per ccf	
	Next 70 ccf \$2.074 per ccf	
	Next 100 ccf \$1.578 per ccf	
	Next 400 ccf \$1.314 per ccf	
	Next 5,400 ccf \$1.022 per ccf	
	Excess over 6,000 ccf \$1.066 per ccf	

SCHEDULE OF CURRENT UTILITY RATES
DECEMBER 31, 2019
(Continued)



Water Division Rate Class (cont.)	Base Charge	Customers
General Service – Inside City Rate (cont.)		
Minimum Bill:	The minimum monthly bill shall be determined by the size of the meter installed, as follows:	
	5/8" meter	\$15.49
	3/4" meter	18.07
	1" meter	30.98
	1-1/2" meter	61.97
	2" meter	129.17
	3" meter	258.25
	4" meter	386.18
	6" meter	488.54
	8" meter	590.92
	10" meter	1,224.08
	12" meter	1,707.98
	14" meter	2,348.49
	Battery of 2-2" meters	258.25
	Battery of 3-2" meters	386.18
General Service – Outside City Rate	Effective meters read on or after March 4, 2019	823
	For water service to all customers outside the corporate limits of the City of Memphis, except residential customers	
Commodity Charge:	Water consumed per month:	
	First 30 ccf	\$3.666 per ccf
	Next 70 ccf	\$3.082 per ccf
	Next 100 ccf	\$2.352 per ccf
	Next 400 ccf	\$1.972 per ccf
	Next 5,400 ccf	\$1.547 per ccf
	Excess over 6,000 ccf	\$1.606 per ccf
Minimum Bill:	The minimum monthly bill shall be determined by the size of the meter installed, as follows:	
	5/8" meter	\$23.69
	3/4" meter	27.65
	1" meter	47.39
	1-1/2" meter	94.75
	2" meter	197.42
	3" meter	394.88
	4" meter	590.12
	6" meter	746.54
	8" meter	902.96
	10" meter	1,870.49
	12" meter	2,609.96
	14" meter	3,586.24
	Battery of 2-2" meters	394.88
	Battery of 3-2" meters	590.12

**SCHEDULE OF CURRENT UTILITY RATES
DECEMBER 31, 2019**



Water Division Rate Class (cont.)	Base Charge	Customers												
Residential – Shelby County Water Distribution System	Effective meters read on or after March 4, 2019	18,816												
	For water service within the area served by the Shelby County Water Distribution System at the time of its acquisition on June 30, 1999, for domestic uses to residential customers in individual private residences or other individual dwelling units.													
Monthly Rate:	All water consumed: \$2.979 per ccf per month													
Minimum Bill:	The minimum monthly bill shall be determined by the size of the meter installed, as follows:													
	<table><tr><td>5/8" meter</td><td>\$11.26</td></tr><tr><td>3/4" meter</td><td>16.20</td></tr><tr><td>1" meter</td><td>28.83</td></tr><tr><td>1-1/2" meter</td><td>64.83</td></tr><tr><td>2" meter</td><td>115.24</td></tr></table>	5/8" meter	\$11.26	3/4" meter	16.20	1" meter	28.83	1-1/2" meter	64.83	2" meter	115.24			
5/8" meter	\$11.26													
3/4" meter	16.20													
1" meter	28.83													
1-1/2" meter	64.83													
2" meter	115.24													
	Residential customers shall be served through a single meter not larger than 2" in size.													
Commercial - Industrial – Shelby County Water Distribution System	Effective meters read on or after March 4, 2019	618												
	For water service within the area served by the Shelby County Water Distribution System at the time of its acquisition on June 30, 1999, for all customers except residential customers using service exclusive for domestic use.													
Monthly Rate:	Water consumed per month:													
	<table><tr><td>First 30 ccf</td><td>\$3.666 per ccf</td></tr><tr><td>Next 70 ccf</td><td>\$3.082 per ccf</td></tr><tr><td>Next 100 ccf</td><td>\$2.352 per ccf</td></tr><tr><td>Next 400 ccf</td><td>\$1.972 per ccf</td></tr><tr><td>Next 5,400 ccf</td><td>\$1.547 per ccf</td></tr><tr><td>Excess over 6,000 ccf</td><td>\$1.606 per ccf</td></tr></table>	First 30 ccf	\$3.666 per ccf	Next 70 ccf	\$3.082 per ccf	Next 100 ccf	\$2.352 per ccf	Next 400 ccf	\$1.972 per ccf	Next 5,400 ccf	\$1.547 per ccf	Excess over 6,000 ccf	\$1.606 per ccf	
First 30 ccf	\$3.666 per ccf													
Next 70 ccf	\$3.082 per ccf													
Next 100 ccf	\$2.352 per ccf													
Next 400 ccf	\$1.972 per ccf													
Next 5,400 ccf	\$1.547 per ccf													
Excess over 6,000 ccf	\$1.606 per ccf													

**SCHEDULE OF CURRENT UTILITY RATES
DECEMBER 31, 2019
(Continued)**



Water Division Rate Class (cont.)	Base Charge	Customers
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**Commercial - Industrial – Shelby County
Water Distribution System (cont.)**

Minimum Bill: The minimum monthly bill shall be determined by the size of the meter installed, as follows:

5/8" meter	\$23.69
3/4" meter	27.65
1" meter	47.39
1-1/2" meter	94.75
2" meter	197.42
3" meter	394.88
4" meter	590.12
6" meter	746.54
8" meter	902.96
10" meter	1,870.49
12" meter	2,609.96
14" meter	3,586.24

**NON-REVENUE WATER
FOR THE YEAR ENDED DECEMBER 31, 2019**



**AWWA Free Water Audit Software:
Reporting Worksheet**

WAS v5.0
American Water Works Association
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Water Audit Report for: **Memphis Light, Gas and Water Division (TN000450)**
Reporting Year: **2019** 1/2019 - 12/2019

Please enter data in the white cells below. Where available, metered values should be used; if metered values are unavailable please estimate a value. Indicate your confidence in the accuracy of the input data by grading each component (n/a or 1-10) using the drop-down list to the left of the input cell. Hover the mouse over the cell to obtain a description of the grades.

All volumes to be entered as: **MILLION GALLONS (US) PER YEAR**

To select the correct data grading for each input, determine the highest grade where the utility meets or exceeds all criteria for that grade and all grades below it.

WATER SUPPLIED

Enter grading in column 'E' and 'J' →

Volume from own sources:	+	?	9	47,323.100	MG/yr	+	?		MG/yr
Water imported:	+	?	n/a	0.000	MG/yr	+	?		MG/yr
Water exported:	+	?	5	10.536	MG/yr	+	?		MG/yr
WATER SUPPLIED:				47,312.564	MG/yr				

Master Meter and Supply Error Adjustments

Port: Value: MG/yr

Enter negative % or value for under-registration
Enter positive % or value for over-registration

AUTHORIZED CONSUMPTION

Billed metered:	+	?	7	37,006.857	MG/yr				
Billed unmetered:	+	?	n/a	0.000	MG/yr				
Unbilled metered:	+	?	4	374.600	MG/yr				
Unbilled unmetered:	+	?	8	106.827	MG/yr				
AUTHORIZED CONSUMPTION:				37,488.284	MG/yr				

WATER LOSSES (Water Supplied - Authorized Consumption)

9,824.280 MG/yr

Apparent Losses

Unauthorized consumption: + ? 118.281 MG/yr

Default option selected for unauthorized consumption - a grading of 5 is applied but not displayed

Customer metering inaccuracies: + ? 10 0.000 MG/yr

Systematic data handling errors: + ? 92.517 MG/yr

Default option selected for systematic data handling errors - a grading of 5 is applied but not displayed

Apparent Losses: ? 210.799 MG/yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: ? 9,613.481 MG/yr

WATER LOSSES: 9,824.280 MG/yr

NON-REVENUE WATER

NON-REVENUE WATER: ? 10,305.707 MG/yr

Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains: + ? 9 4,058.2 miles

Number of active AND inactive service connections: + ? 8 293,192

Service connection density: ? 72 conn./mile main

Are customer meters typically located at the curbstop or property line? Yes (length of service line, beyond the property boundary, that is the responsibility of the utility)

Average length of customer service line: + ? (length of service line, beyond the property boundary, that is the responsibility of the utility)

Average length of customer service line has been set to zero and a data grading score of 10 has been applied

Average operating pressure: + ? 9 60.0 psi

COST DATA

Total annual cost of operating water system: + ? 10 \$83,178,524 \$/Year

Customer retail unit cost (applied to Apparent Losses): + ? 10 \$2.04 \$/100 cubic feet (ccf)

Variable production cost (applied to Real Losses): + ? 10 \$190.27 \$/Million gallons ☐ Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

*** YOUR SCORE IS: 83 out of 100 ***

A weighted scale for the components of consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION:

Based on the information provided, audit accuracy can be improved by addressing the following components:

- 1: Unbilled metered
- 2: Volume from own sources
- 3: Billed metered

**NON-REVENUE WATER
FOR THE YEAR ENDED DECEMBER 31, 2019
(Continued)**



**AWWA Free Water Audit Software:
System Attributes and Performance Indicators**

WAS v5.0
American Water Works Association.
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Water Audit Report for: Memphis Light, Gas and Water Division (TN000450)

Reporting Year: 2019 1/2019 - 12/2019

*** YOUR WATER AUDIT DATA VALIDITY SCORE IS: 83 out of 100 ***

System Attributes:

Apparent Losses:	210.799	MG/Yr	
+ Real Losses:	9,613.481	MG/Yr	
= Water Losses:	9,824.280	MG/Yr	
? Unavoidable Annual Real Losses (UARL):	1,443.94	MG/Yr	
Annual cost of Apparent Losses:	\$573,620		
Annual cost of Real Losses:	\$1,829,157		Valued at Variable Production Cost
			Return to Reporting Worksheet to change this assumption

Performance Indicators:

Financial:	{	Non-revenue water as percent by volume of Water Supplied:	21.8%	
		Non-revenue water as percent by cost of operating system:	3.0%	
Operational Efficiency:	{	Apparent Losses per service connection per day:	1.97	gallons/connection/day
		Real Losses per service connection per day:	89.83	gallons/connection/day
		Real Losses per length of main per day*:	N/A	
		Real Losses per service connection per day per psi pressure:	1.50	gallons/connection/day/psi
		From Above, Real Losses = Current Annual Real Losses (CARL):	9,613.48	million gallons/year
		? Infrastructure Leakage Index (ILI) [CARL/UARL]:	6.66	

* This performance indicator applies for systems with a low service connection density of less than 32 service connections/mile of pipeline

**SCHEDULE OF INSURANCE
FOR THE YEAR ENDED DECEMBER 31, 2019
(Dollars in Thousands)**



<u>Type of Coverage</u>	<u>Amount of Coverage</u>
Property	\$ 695,575
Crime	2,500
Excess Insurance for Workers Compensation and Employers Liability	2,000
Out of State Automobile Travel	1,000
Travel Accident	1,000
Commercial Automobile	1,000
Leased Rental Equipment	300 per item 1,000 coverage limit

**SCHEDULE OF ADDITIONS AND RETIREMENTS TO UTILITY PLANT
FOR THE YEAR ENDED DECEMBER 31, 2019
(Dollars in Thousands)
(Continued)**



	Electric Division	Gas Division	Water Division
Utility plant in service, December 31, 2018	\$ 1,847,182	\$ 722,615	\$ 515,185
Additions - Construction	54,478	21,917	10,502
Additions - Acquisition Adjustment	-	-	482
Retirements	(18,907)	(8,094)	(3,334)
Transfers	51	(51)	(83)
Utility plant in service, December 31, 2019	<u>\$ 1,882,804</u>	<u>\$ 736,387</u>	<u>\$ 522,752</u>

Note: Utility plant in service balances exclude amounts for construction work in process; non-utility property and plant held for future use.



5100 Poplar Ave., 30th Floor ■ Memphis, TN 38137
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**Report on Internal Control Over Financial Reporting and on Compliance and Other
Matters Based on Audits of Financial Statements Performed in Accordance with
*Government Auditing Standards***

Independent Auditor's Report

To the Board of Commissioners and Management
Memphis Light, Gas and Water Division
Memphis, Tennessee

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of the Electric, Gas and Water Divisions (the "Divisions") of Memphis Light, Gas and Water Division, enterprise funds of the City of Memphis, Tennessee, as of and for the year ended December 31, 2019, and the related notes to the financial statements, which collectively comprise the Divisions' basic financial statements, and have issued our report thereon dated June 3, 2020.

Internal Control Over Financial Reporting

In planning and performing our audits of the financial statements, we considered the Divisions' internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinions on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the Divisions' internal control. Accordingly, we do not express an opinion on the effectiveness of the Divisions' internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A *material weakness* is a deficiency, or combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the Divisions' financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies and therefore, material weaknesses or significant deficiencies may exist that have not been identified. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses.

Compliance and Other Matters

As part of obtaining reasonable assurance about whether the Divisions' financial statements are free from material misstatement, we performed tests of the Divisions' compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance that are required to be reported under *Government Auditing Standards*.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the Divisions' internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Divisions' internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

A handwritten signature in black ink that reads "Mayer Hoffman McCann P.C." in a cursive, flowing script.

Memphis, Tennessee
June 3, 2020

MEMPHIS LIGHT, GAS AND WATER DIVISION

Schedule of Prior Year Audit Findings
For the Year Ended December 31, 2019

2018-001 Segregation of accounts payable functions

Current status: In response to Internal Audit's Invoice Processing Review Consulting Engagement Report dated January 10, 2018 management reviewed the users with MLGW Payables and Purchasing Super User responsibilities and revoked access for those without a need. The access was revoked from Users without a need on June 3, 2019.

In addition, management has collaborated with the IT Department to improve the data security and create an Oracle responsibility to view only the Vendor Master File.

2018-002 Physical security of scrap metal

Current status: The MLGW Corporate Security Department concluded its internal investigation of this matter and turned over its findings to local law enforcement authorities. As a result of the investigation appropriate disciplinary action was taken against two MLGW employees for violation of MLGW HR Policy #23-10, "Theft and/or Unauthorized Use of MLGW Property and/or Utility Services".

In addition, in response to recommendations made by Internal Audit in their report dated, August 28, 2018, Management of the Material and Stores Department revised the scrap metal transfer process to enhance controls around the physical storage and disposition of scrap metal.

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MLGW
SERVING YOU IS
WHAT WE DO

APPENDIX F

**SUMMARY OF CERTAIN PROVISIONS OF THE
ELECTRIC SYSTEM RESOLUTION**

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Summary of Certain Provisions of the Electric System Resolution

The following briefly summarizes certain terms and provisions of the Master Resolution adopted by MLGW on June 20, 2002 and by the City on July 2, 2002; as supplemented by a First Supplemental Resolution adopted by MLGW on June 20, 2002 and by the City on July 2, 2002; as amended by the First Supplemental Amending Resolution adopted by MLGW on October 16, 2003 and by the City on October 21, 2003; as supplemented by the Second Supplemental Resolution adopted by MLGW on October 16, 2003 and by the City on October 21, 2003; as supplemented by the Third Supplemental Resolution adopted by MLGW on May 1, 2008 and by the City on June 3, 2008; as supplemented by the Fourth Supplemental Resolution adopted by MLGW on October 15, 2009 and by the City on November 3, 2009, and as ratified and readopted by the City on December 1, 2009; as supplemented by the Fifth Supplemental Resolution adopted by the City on April 15, 2014, and MLGW on April 8, 2014; and supplemented by the Sixth Supplemental Resolution adopted by MLGW on June 1, 2016 and by the City on July 5, 2016; and as supplemented by the Seventh Supplemental Resolution adopted by MLGW on July 19, 2017 and by the City on August 22, 2017; and as supplemented by the Eighth Supplemental Resolution adopted by MLGW on June 30, 2020, and by the City on August 4, 2020; and as supplemented by the Ninth Supplemental Resolution adopted by MLGW on June 30, 2020, and by the City on August 4, 2020 (collectively, the “Resolution”). This summary is not a complete explanation of the terms and conditions of the Resolution. Investors should refer to the Resolution for a complete statement of the terms, provisions and conditions thereof.

Definitions of Certain Terms

“Accreted Value” means, with respect to each Compound Interest Bond, the principal amount of such Compound Interest Bond, plus, on the date of calculation, the interest accrued thereon to such date compounded at the interest rate thereof on each compounding date contained in such Compound Interest Bond, and, with respect to any calculation on a date other than a compounding date, the Accreted Value means the Accreted Value as of the preceding compounding date plus interest on such amount from such compounding date to the date of calculation at a rate equal to the interest rate on such Compound Interest Bond.

“Acquired System” means any other electric system or facility acquired by the City or MLGW pursuant to State law.

“Acts” mean Chapter 34 of Title 7, Chapter 21 of Title 9 and Chapter 10 of Title 12 of the Tennessee Code Annotated, as amended.

“Additional Interest” means, for any period during which any Pledged Bonds are owned by a Credit Issuer pursuant to a Credit Facility or Credit Facility Agreement, the amount of interest accrued on such Pledged Bonds at the Pledged Bond Rate less the amount of interest which would have accrued during such period on an equal principal amount of Bonds at the Bond Rate.

“Additional Obligations” means Revenue Obligations issued in accordance with and pursuant to the Resolution.

“Annual Budget” means the annual budget of the Board relating to the System (which shall specify all costs, obligations, and expenses properly allocable to the System), as amended or supplemented in accordance with established procedures of the Board, adopted or in effect for a particular Fiscal Year.

“Balloon Date” means any Principal Maturity Date or Put Date for Balloon Obligations in a Balloon Year.

“Balloon Obligations” means any Revenue Obligations 25% or more of the original principal amount of which (i) is due in any 12-month period or (ii) may, at the option of the holders thereof, be required to be redeemed, prepaid, purchased directly or indirectly by the City or MLGW, or otherwise paid in any 12-month period; provided that, in calculating the principal amount of such Revenue Obligations due or required to be redeemed, prepaid, purchased, or otherwise paid in any 12-month period, such principal amount shall be reduced to the extent that all or any portion of such amount is required to be redeemed or amortized prior to such 12-month period.

“Balloon Year” means any 12-month period in which more than 25% of the original principal amount of related Balloon Obligations mature or are subject to mandatory redemption or could, at the option of the holders thereof, be required to be redeemed, prepaid, purchased directly or indirectly by the City or MLGW, or otherwise paid.

“Beneficiaries” means the holders of any Revenue Obligations and the parties to Contracts.

“Board” means the Board of Light, Gas and Water Commissioners operating as the governing body of MLGW.

“Bond Counsel” means any firm of nationally recognized bond counsel experienced in matters relating to tax-exempt financing retained by MLGW.

“Bondholder” or **“holder”** means the registered owner or the holder of one or more Revenue Obligations.

“Bond Rate” means the rate of interest per annum payable on specified Revenue Obligations other than Pledged Bonds.

“Bond Register” means the registration books maintained and to be maintained by the Bond Registrar.

“Bond Registrar” means any bank or trust company designated as such by MLGW with respect to any of the Bonds. Such Bond Registrar shall perform the duties required of the Bond Registrar in the Resolution.

“Bonds” means any revenue bonds or notes authorized by and authenticated and delivered pursuant to the Resolution.

The term **“category”** or **“category of Revenues”** means an objectively definable portion of Revenues related to a particular type of service, activity or facility, including the categories of General Revenues, Released Revenues and Special Purpose Revenues and subcategories within such categories. A “category of Revenues,” unless otherwise determined by MLGW, includes Investment Earnings or other moneys in funds or amounts derived from such portion of Revenues.

“City” means the City of Memphis, Tennessee, a municipal corporation created and existing under the laws of the State.

“Code” means the Internal Revenue Code of 1986, as amended, and any applicable regulations thereunder.

“Commitment,” when used with respect to Balloon Obligations, means a binding written commitment from a financial institution, surety, or insurance company to refinance such Balloon

Obligations on or prior to any Balloon Date thereof, including without limitation any Credit Facility for such Balloon Obligations.

“Compound Interest Bonds” means Bonds that bear interest which is calculated based on periodic compounding, payable only at maturity or earlier redemption.

“Conduit Bonds” means bonds, notes or other obligations issued by a Conduit Issuer to provide proceeds to be loaned by the Conduit Issuer to the City or MLGW pursuant to a Loan Agreement.

“Conduit Issuer” means a governmental entity or instrumentality of any governmental entity that issues Conduit Bonds at the request of MLGW.

“Consulting Engineer” means (i) an engineering firm or individual engineer employed by MLGW with substantial experience in advising utilities similar to the System operated by MLGW as to the construction and maintenance of the System and in the projection of relative costs of expansion in the System or (ii) an engineer or engineers who are employees of MLGW whose reports or projections are certified by a Financial Adviser.

“Contracts” means all Credit Facility Agreements, including any related Reimbursement Obligations, all agreements with respect to Reserve Account Credit Facilities, including any related Reimbursement Obligations, all Qualified Hedge Agreements, and any agreement made pursuant to the Resolution.

“Contract Payments Account” means the Contract Payments Account within the Sinking Fund established pursuant to the Resolution.

“Costs,” with respect to any Project, means the total cost, paid or incurred, to study, plan, design, finance, acquire, construct, reconstruct, install or otherwise implement the Project including improvements to another Project, and shall include, but shall not be limited to, the following costs and expenses relating to such Project and the reimbursement to MLGW for any such items previously paid by MLGW;

- (a) the cost of all lands, real or personal properties, rights, easements and franchises acquired;

- (b) the cost of all financing charges and interest prior to, during construction and after;

- (c) the cost of the acquisition, construction, reconstruction, implementation or installation of any Project;

- (d) the cost of engineering, architectural, planning, development, and supervisory services, fiscal agents' and legal expenses, plans and specifications, and other expenses necessary or incident to determining the feasibility or practicability of any Project, administrative expenses, and such other expenses as may be necessary or incident to any financing with proceeds of Revenue Obligations;

- (e) the cost of placing any Project in operation;

- (f) the cost of condemnation of property necessary for construction implementation and operation;

- (g) the costs of issuing any Revenue Obligations to finance or to refinance any Project;

(h) any other costs which may be incident to any Project prior to completion and implementation; and

(i) interest on the Revenue Obligations during the construction and installation of any Project and for up to six (6) months thereafter; and

(j) any other costs permitted by the Acts.

“Council” means the governing body of the City.

“Credit Facility” means any letter of credit, insurance policy, guaranty, surety bond, standby bond purchase agreement, line of credit, revolving credit agreement, or similar obligation, arrangement, or instrument issued by a bank, insurance company, or any entity that is used by MLGW to perform one or more of the following tasks: (i) enhancing MLGW's credit by assuring owners of any of the Revenue Obligations that principal of and interest on such Revenue Obligations will be paid promptly when due; (ii) providing liquidity for the owners of Revenue Obligations through undertaking to cause Revenue Obligations to be bought from the owners thereof when submitted pursuant to an arrangement prescribed by a Supplemental Resolution; or (iii) remarketing any Revenue Obligations so submitted to the Credit Issuer (whether or not the same Credit Issuer is remarketing the Revenue Obligations). The term Credit Facility shall not include a Reserve Account Credit Facility.

“Credit Facility Agreement” means an agreement between the City, at the request of MLGW and/or MLGW and a Credit Issuer pursuant to which the Credit Issuer issues a Credit Facility and may include a related Reimbursement Obligation. The term Credit Facility Agreement shall not include an agreement with respect to a Reserve Account Credit Facility.

“Credit Issuer” means any issuer of a Credit Facility then in effect for all or part of the Revenue Obligations. The term Credit Issuer shall not include any Reserve Account Credit Facility Provider. Whenever in the Resolution the consent of the Credit Issuer is required, such consent shall only be required from the Credit Issuer whose Credit Facility is issued with respect to the Revenue Obligations for which the consent is required.

“Current Interest Bonds” means those Bonds which are not Compound Interest Bonds.

“Debt Service Requirement” means the total principal and interest coming due, whether at maturity or upon mandatory redemption (less any amount of interest that is capitalized and payable with the proceeds of debt on deposit with MLGW or any Paying Agent), in any specified period, provided:

(i) If any Revenue Obligations Outstanding or proposed to be issued shall bear interest at a Variable Rate, including Hedged Obligations if the interest thereon calculated as set forth below is expected to vary and Revenue Obligations secured by a Credit Facility if the interest thereon calculated as set forth below is expected to vary, the interest coming due in any specified future period shall be determined as if the Variable Rate in effect at all times during such future period equaled, at the option of MLGW either (1) the average of the actual Variable Rates which were in effect (weighted according to the length of the period during which each such Variable Rate was in effect) for the most recent 12-month period immediately preceding the date of calculation for which such information is available (or shorter period if such information is not available for a 12-month period), or (2) the current average annual fixed rate of interest on securities of similar quality having a similar maturity date as certified by a Financial Adviser.

(ii) If any Compound Interest Bonds are Outstanding or proposed to be issued, the total principal and interest coming due in any specified period shall be determined in accordance with a Supplemental Resolution of MLGW authorizing such Compound Interest Bonds.

(iii) With respect to any Revenue Obligations secured by a Credit Facility, the Debt Service Requirement therefor shall include (1) any commission or commitment fee obligations with respect to such Credit Facility, (2) the outstanding amount of any Reimbursement Obligation and interest thereon, (3) any Additional Interest owed on Pledged Bonds, and (4) any remarketing agent fees; provided if (a) the Credit Facility requires the Credit Issuer to make all interest payments on the Revenue Obligations, (b) the Reimbursement Obligation provides for payments by MLGW or the Credit Issuer based on levels of, or changes or differences in, interest rates, currency exchange rates, or stock or other indices, and (c) the Credit Issuer, upon the execution of the Credit Facility Agreement, would qualify as a Qualified Hedge Provider if the Credit Facility Agreement were to be construed as a Hedge Agreement and the related Revenue Obligations as Hedged Obligations, then interest on such Revenue Obligations shall be calculated by adding (x) the amount of interest payable on such Revenue Obligations pursuant to their terms and (y) the amount of payments for interest to be made by the City or MLGW under the Credit Facility Agreement, and subtracting (z) the amounts payable by the Credit Issuer to the City or MLGW or as interest on such Revenue Obligations as specified in the Credit Facility Agreement; but only to the extent the Credit Issuer is not in default under the Credit Facility and if such default has occurred and is continuing, interest on such Revenue Obligations shall be calculated as if there were no Credit Facility. In determining the amounts described in this paragraph for any future period, MLGW (A) may assume that any Credit Facility presently in effect will remain in effect even if such Credit Facility has an expiration date prior to the maturity of the related Revenue Obligations and (B) may assume that the current payments relating to the Credit Facility will remain in effect or may estimate such payments in the future provided that MLGW obtains a certificate from a Financial Adviser that such estimates are reasonable.

(iv) With respect to any Hedged Obligations, the interest on such Hedged Obligations during any Hedge Period and for so long as the provider of the related Hedge Agreement has not defaulted on its payment obligations thereunder shall be calculated by adding (x) the amount of interest payable by the City or MLGW on such Hedged Obligations pursuant to their terms and (y) the amount of Hedge Payments payable by the City or MLGW under the related Hedge Agreement and subtracting (z) the amount of Hedge Receipts payable by the provider of the related Hedge Agreement at the rate specified in the related Hedge Agreement; provided, however, that to the extent that the provider of any Hedge Agreement is in default thereunder, the amount of interest payable by the City or MLGW on the related Hedged Obligations shall be the interest calculated as if such Hedge Agreement had not been executed. In determining the amount of Hedge Payments or Hedge Receipts that are not fixed throughout the Hedge Period (i.e., which are variable), payable or receivable for any future period, such Hedge Payments or Hedge Receipts for any period of calculation (the "Determination Period") shall be computed by assuming that the variables comprising the calculation (e.g., indices) applicable to the Determination Period are equal to the average of the actual variables which were in effect (weighted according to the length of the period during which each such variable was in effect) for the most recent 12- month period immediately preceding the date of calculation for which such information is available (or shorter period if such information is not available for a 12-month period).

(v) For the purpose of calculating the Debt Service Requirement on Balloon Obligations (1) which are subject to a Commitment or (2) which do not have a Balloon Year commencing within 12 months from the date of calculation or (3) which are issued in anticipation of the issuance of Bonds that are not Balloon Obligations, at the option of MLGW, the actual principal and interest on such Balloon Obligations shall be included in the Debt Service Requirement, subject to the other assumptions contained therein, or such Balloon Obligations shall be assumed to be amortized in substantially equal annual amounts to be paid for principal and interest over an assumed amortization period of 20 years at an

assumed interest rate (which shall be the interest rate certified by a Financial Adviser to be the interest rate at which MLGW could reasonably expect to borrow the same amount by issuing Bonds with the same priority of lien as such Balloon Obligations and with a 20-year term); provided, however, that if the maturity of such Balloon Obligations (taking into account the term of any Commitment) is in excess of 20 years from the date of issuance, then such Balloon Obligations shall be assumed to be amortized in substantially equal annual amounts to be paid for principal and interest over an assumed amortization period of years equal to the number of years from the date of issuance of such Balloon Obligations to maturity (including the Commitment) and at the interest rate applicable to such Balloon Obligations. For the purpose of calculating the Debt Service Requirement on Balloon Obligations not described in the preceding sentence, the principal payable on such Bonds during the Balloon Year shall be calculated as if paid on the Balloon Date.

(vi) The principal of and interest on Revenue Obligations, amounts for interest under a Credit Facility and Hedge Payments shall be excluded from the determination of Debt Service Requirement to the extent that the same were or are expected to be paid with amounts on deposit on the date of calculation (or proceeds of Revenue Obligations to be deposited on the date of issuance of proposed Revenue Obligations) in a fund under the Resolution.

(vii) With respect to a Revenue Obligation that is a Loan Agreement, the Debt Service Requirement shall be calculated in a manner consistent with the calculation of the Debt Service Requirement on other Revenue Obligations and shall include payments under the Loan Agreement which consist of principal, interest, payments made in connection with a Hedge Agreement entered into by a Conduit Issuer in connection with the Conduit Bonds, fees and expenses of any letter of credit, insurance policy, guaranty, surety bond, standby bond purchase agreement, line of credit, revolving credit agreement, remarketing agreement, legal fees and expenses, trustee fees, fees and expenses of the Conduit Issuer, fees and expenses of any administration, rating agency fees, rebate and similar obligations of the Conduit Issuer with respect to the Conduit Bonds, but excluding any Termination Payments to be made in connection with a Hedge Agreement entered into by a Conduit Issuer.

“Debt Service Reserve Account” means the Debt Service Reserve Account within the Sinking Fund established in the Resolution.

“Debt Service Reserve Requirement” means an amount determined from time to time by MLGW as a reasonable reserve, if any, for the payment of principal of and interest on Revenue Obligations for which a subaccount in the Debt Service Reserve Account is created or added to pursuant to a Supplemental Resolution.

“Defeasance Obligations” means Government Obligations and such other investments that are from time to time permitted by applicable law to be used by the City or MLGW to provide for the payment of Revenue Obligations in connection with the refunding of such Revenue Obligations.

“Depository” means any depository of a fund established under the Resolution selected in the discretion of MLGW.

“Division” or **“MLGW”** means the Memphis Light, Gas and Water Division of the City of Memphis, a division of the City of Memphis, established pursuant to Chapter 381 of the 1939 Private Acts of Tennessee, as amended.

“DTC” means The Depository Trust Company, New York, New York, or its nominee, or its successors and assigns, or any other depository performing similar functions under the Resolution.

“Financial Adviser” means an investment banking or financial advisory firm, commercial bank, or any other Person who or which is retained by MLGW for the purpose of passing on questions relating to the availability and terms of specified types of Revenue Obligations or the financial condition or operation of the System and is actively engaged in and, in the good faith opinion of MLGW, has a favorable reputation for skill and experience in providing financial advisory services of the type with respect to which the Financial Adviser has been retained.

“Fiscal Year” means the 12-month period used by MLGW for its general accounting purposes, as it may be changed from time to time. The Fiscal Year at the time the Resolution was adopted began on January 1, and ended on December 31.

“Forecast Period” means a period beginning with the first Fiscal Year beginning after the later of (i) the Fiscal Year in which any proposed Additional Obligations are to be issued or (ii) the Fiscal Year in which any Project to be financed with the proceeds of any proposed Additional Obligations is, in the judgment of MLGW, expected to be completed and ending on the last day of the fifth (5th) Fiscal Year thereafter.

“General Revenue Account” means the General Revenue Account within the Revenue Fund established by the Resolution.

“General Revenue Obligations” means Revenue Obligations secured by a Senior Lien on General Revenues.

“General Revenue Facilities” means the System, but not including all Special Purpose Facilities and Released Revenue Facilities

“General Revenues” means all Revenues other than Released Revenues and Special Revenues.

“Governing Body” means the Board.

“Government Obligations” means (i) direct obligations of the United States of America for the full and timely payment of which the full faith and credit of the United States of America is pledged, or (ii) obligations issued by a person controlled or supervised by and acting as an instrumentality of the United States of America, the full and timely payment of the principal of and the interest on which is fully and unconditionally guaranteed as a full faith and credit obligation of the United States of America (including any securities described in (i) or (ii) issued or held in book-entry form on the books of the Department of the Treasury of the United States of America), which obligations, in either case, (y) are not subject to redemption or prepayment prior to maturity except at the option of the holder of such obligations and (z) may include U.S. Treasury Trust Receipts.

“Hedge Agreement” means, without limitation, (i) any contract known as or referred to or which performs the function of an interest rate swap agreement, currency swap agreement, forward payment conversion agreement, or futures contract; (ii) any contract providing for payments based on levels of, or changes or differences in, interest rates, currency exchange rates, or stock or other indices; (iii) any contract to exchange cash flows or payments or series of payments; (iv) any type of contract called, or designed to perform the function of, interest rate floors, collars, or caps, options, puts, or calls, to hedge or minimize any type of financial risk, including, without limitation, payment, currency, rate, or other financial risk; and (v) any other type of contract or arrangement that MLGW determines is to be used, or is intended to be used, to manage or reduce the cost of any Revenue Obligations, to convert any element of any Revenue Obligations from one form to another, to maximize or increase investment return, to minimize investment return risk, or to protect against any type of financial risk or uncertainty.

“Hedge Payments Account” means the Hedge Payments Account within the Sinking Fund established pursuant to the Resolution.

“Hedge Payments” means amounts payable by the City or MLGW pursuant to any Hedge Agreement, other than Termination Payments, fees, expenses, and indemnity payments.

“Hedge Period” means the period during which a Hedge Agreement is in effect.

“Hedge Receipts” means amounts payable by any provider of a Hedge Agreement pursuant to such Hedge Agreement, other than Termination Payments, fees, expenses, and indemnity payments.

“Hedged Obligations” means any Revenue Obligations for which the City or MLGW shall have entered into a Qualified Hedge Agreement.

“Independent Certified Public Accountant” means a certified public accountant, or a firm of certified public accountants, who or which are “independent” as that term is defined in Rule 101 and related interpretations of the Code of Professional Ethics of the American Institute of Certified Public Accountants, of recognized standing, who or which does not devote their full time to MLGW (but who or which may be regularly retained by MLGW).

“Interest Payment Date” means each date on which interest is to become due on any Revenue Obligations, as established in a Supplemental Resolution for such Revenue Obligations.

“Interest Account” means the Interest Account within the Sinking Fund established pursuant to the Resolution.

“Investment Earnings” means all interest received on and profits derived from investments made with Revenues or any other moneys in the funds and accounts established under the Resolution.

“Loan Agreement” means any agreement or contract entered into by the City or MLGW whereby another governmental entity or instrumentality of a governmental entity agrees to advance funds to the City or MLGW and the City or MLGW agrees to repay those funds with interest and all costs associated with the Loan Agreement and any bonds, notes or other obligations issued to fund the Loan Agreement.

“Master Resolution” means the Master Resolution adopted by MLGW on June 20, 2002 and by the City Council of the City of Memphis, Tennessee (the “City”) on July 2, 2002, as amended by the First Supplemental Amending Resolution adopted by MLGW on October 16, 2003 and by the City on October 21, 2003, and as further amended from time to time.

“Net Revenues” means, for each category of Revenues, Revenues net of related Operating Expenses.

“Operating Expenses” means the current costs and expenses of MLGW for operation, maintenance and repair applicable to the System, salaries and wages, employees' health, hospitalization, pension and retirement expenses, fees for services, materials and supplies, rents, administrative and general expenses (including legal, engineering, accounting and financial advisory fees and expenses and costs of other consulting or technical services not funded with proceeds of Revenue Obligations), insurance expenses, taxes and other governmental charges, the imposition or amount of which is not subject to control of MLGW or the City, any payments made by MLGW during any fiscal year to purchase electrical power for distribution and sale during or after the end of that fiscal year, and other

payments made under any electrical power supply contract or commodity swap or other hedging mechanism to the extent not inconsistent with generally accepted accounting principles. Operating Expenses do not include depreciation or obsolescence charges or reserves therefor, charges relating to any prepayment for the purchase of electricity made directly by MLGW, amortization of intangibles or other bookkeeping entries of a similar nature, on Revenue Obligations or Contracts of MLGW or the City, on behalf of MLGW, payable from Net Revenues of the System, costs or charges made therefor, capital additions, replacements, betterments, extensions or improvements to or retirement from the System which under generally accepted accounting principles are properly chargeable to the capital account or the reserve for depreciation, or payment in lieu of taxes or otherwise to the City or any political subdivision or public body, and do not include losses from the sale, abandonment, reclassification, revaluation or other disposition of any properties of the System, nor such property items, including taxes and fuels, which are capitalized pursuant to the then existing accounting practices of the Board or expenses of an Acquired System if revenues of the Acquired System are not included in Revenues at the election of MLGW.

“Other System Obligations” means obligations of any kind, including but not limited to, revenue bonds, capital leases, Hedge Agreements which are not Qualified Hedge Agreements, installment purchase agreements, or notes (but excluding Revenue Obligations and Contracts), incurred or issued by MLGW to finance or refinance the cost of acquiring, constructing, reconstructing, improving, bettering, or extending any part of the System or any other cost relating to the System, which do not have a lien on any category of Revenues.

“Outstanding” means, when used in reference to the Revenue Obligations, all Revenue Obligations that have been duly authenticated and/or delivered under the Resolution, with the exception of (a) Revenue Obligations in lieu of which other Revenue Obligations have been issued under agreement to replace lost, mutilated, stolen, or destroyed obligations, (b) Bonds surrendered by the owners in exchange for other Bonds under the Resolution, and (c) Revenue Obligations for the payment of which provision has been made in accordance with Article IX of the Resolution. In determining the amount of Compound interest Bonds Outstanding under the Resolution, the Accreted Value of such Compound Interest Bonds at the time of determination shall be used.

The term **“parity”** or **“parity secured”** when applied to two or more series of Revenue Obligations means each such Revenue Obligation has a lien of equal rank on the same category of Revenues.

“Paying Agent” means a bank, trust company, or any other Person designated as such by MLGW with respect to the Revenue Obligations issued hereunder and authorized to pay the principal of, premium, if any, or interest on such Revenue Obligations on behalf of MLGW. Such Paying Agent shall perform the duties required of the Paying Agent in the Resolution and any Supplemental Resolution authorizing Revenue Obligations. MLGW may designate itself as Paying Agent with respect to any Revenue Obligations; provided, however, if an Event of Default has occurred and is ongoing hereunder, then any Bondholder of Revenue Obligations to which the Event of Default relates may petition a court of competent jurisdiction for appointment of a replacement Paying Agent.

“Permitted Investments” means obligations selected by MLGW in which MLGW is permitted to invest moneys pursuant to applicable law.

“Person” or **“person”** means any individual, corporation, partnership, limited liability company, joint venture, association, joint stock company, trust, unincorporated organization, body, government, or agency or political subdivision thereof.

“Pledged Bond” means any Revenue Obligation purchased and held by a Credit Issuer pursuant to a Credit Facility Agreement. A Revenue Obligation shall be deemed a Pledged Bond only for the actual period during which such Revenue Obligation is owned by a Credit Issuer pursuant to a Credit Facility Agreement.

“Pledged Bond Rate” means the rate of interest payable on Pledged Bonds, as may be provided in a Credit Facility or Credit Facility Agreement.

“Pledged Revenues” means all Net Revenues and all moneys paid or required to be paid into, and all moneys and securities on deposit from time to time in, the funds and accounts specified in the Resolution, but excluding (i) amounts in the Revenue Fund required to be used to pay Operating Expenses and (ii) any amounts required in the Resolution to be set aside pending, or used for, rebate to the United States government pursuant to Section 148(f) of the Code, including, but not limited to, amounts in the Rebate Fund.

“President and CEO” means the individual appointed by the Mayor, confirmed by the Council, as the chief executive officer of MLGW.

The term **“principal”** means the principal amount of any Revenue Obligations and includes the Accreted Value of any Compound Interest Bonds. All references to principal shall be construed as if they were also references to Accreted Value with respect to Compound Interest Bonds.

“Principal Account” means the Principal Account within the Sinking Fund established pursuant to the Resolution.

“Principal Maturity Date” means each date on which principal is to become due on any Revenue Obligations, by maturity or mandatory sinking fund redemption, as established in a Supplemental Resolution for such Revenue Obligations.

“Project” means the construction of improvements and extensions to and the equipping of improvements to the System, in whole or in part, and the acquisition of all property, real and personal, related thereto, with the proceeds of any Revenue Obligations.

“Put Date” means any date on which a holder may elect to have Balloon Obligations redeemed, prepaid, purchased directly or indirectly by the City or MLGW, or otherwise paid.

“Qualified Hedge Agreement” means any Hedge Agreement with a Qualified Hedge Provider.

“Qualified Hedge Provider” means an entity whose senior unsecured long term obligations, financial program rating, counterparty rating, or claims paying ability, or whose payment obligations under the related Hedge Agreement are absolutely and unconditionally guaranteed or insured or collateralized by an entity whose senior unsecured long term obligations, financial program rating, counterparty rating, or claims paying ability, are rated either (i) at least as high as the second highest Rating category of each Rating Agency (ignoring any gradations within a Rating category), but, if there is no Credit Facility with respect to the related Hedged Obligations, in no event lower than any Rating on the related Hedged Obligations at the time of execution of the Hedge Agreement, or (ii) in any such lower Rating categories which each Rating Agency indicates in writing to MLGW will not, by itself, result in a reduction or withdrawal of its Rating on the related Hedged Obligations that is in effect prior to entering into the Hedge Agreement. An entity's status as a “Qualified Hedge Provider” is determined only at the time MLGW or the City, at the direction of MLGW, enters into a Hedge Agreement with such entity and will not be redetermined with respect to that Hedge Agreement.

“Rating” means a rating in one of the categories by a Rating Agency, disregarding pluses, minuses, and numerical gradations.

“Rating Agencies” or **“Rating Agency”** means Fitch, Moody's, and Standard & Poor's or any successors thereto and any other nationally recognized credit rating agency then maintaining a rating on any Revenue Obligations at the request of MLGW. If at any time a particular Rating Agency does not have a rating outstanding with respect to the relevant Revenue Obligations, then a reference to Rating Agency or Rating Agencies shall not include such Rating Agency.

“Rebate Fund” means the Rebate Fund, established pursuant to the Resolution.

“Record Date” means any record date designated in a Supplemental Resolution for any Revenue Obligations.

“Reimbursement Obligation” means the obligation of the Board or of the City, on behalf of the Board, to directly reimburse any Credit Issuer for amounts paid by such Credit Issuer under a Credit Facility, whether or not such obligation to so reimburse is evidenced by a promissory note or other similar instrument. The term Reimbursement Obligation includes obligations pursuant to a Credit Facility Agreement either to make payments for interest based on levels of, or changes or differences in, interest rates, currency exchange rates, or stock or other indices, in return for the Credit Issuer's fixed obligations under the Credit Facility or to make fixed payments for interest in return for the Credit Issuer's payments based on such variables.

The term **“related”** means, when used to refer to Revenue Obligations, subaccounts, category of Revenues or liens, the item modified by such term has a definite relationship to the subject as described in the Resolution. The term “related” means, when used to refer to Operating Expenses, (i) for Released Revenue Obligations or Released Revenues, Operating Expenses with respect to Released Revenue Facilities, (ii) for Special Purpose Revenue Obligations or Special Purpose Revenues, Operating Expenses with respect to Special Purpose Facilities, and (iii) for General Revenue Obligations or General Revenues, all Operating Expenses of the System less Operating Expenses with respect to Related Revenue Facilities and Special Purpose Facilities.

“Released Revenue Account” means the Released Revenue Account within the Revenue Fund established pursuant to the Resolution.

“Released Revenue Facilities” means the portion of the System with respect to which Released Revenues arise or from which they are generated.

“Released Revenue Obligations” means Revenue Obligations secured by a Senior Lien on one or more categories of Released Revenues.

“Released Revenues” mean particular categories of Revenues which would otherwise be General Revenues, but have been identified by MLGW in accordance with the Resolution as not constituting General Revenues.

“Resolution” means the Master Resolution as it may from time to time be modified, supplemented, or amended by Supplemental Resolutions.

“Revenue Obligations” means any revenue bonds, notes or other obligations authorized by and authenticated and delivered or any loan agreement executed and delivered pursuant to the Resolution.

“Revenues” means (i) all revenues, rentals, income, receipts, accounts receivable and money derived from the ownership and operation of the System, received by MLGW, Investment Earnings and all other income earned and accreted from, and deferred gain from, securities and other investments and amounts earned on amounts deposited in funds and accounts under the Resolution or otherwise maintained with respect to the System, computed in accordance with generally accepted accounting principles (excluding any investment earnings from construction or improvement funds created for the deposit of Revenue Obligation proceeds pending use, to the extent such income is applied to the purposes for which the Revenue Obligations were issued, and funds created to refund any outstanding obligations payable from Revenues of the System), and (ii) all gifts, grants, reimbursements or payments received from governmental units or public agencies for the benefit of the System which are (y) not restricted by law or the payor to application for a particular purpose and (z) otherwise lawfully available for payment of Revenue Obligations or Contracts. The term “Revenues” also does not include: (a) proceeds of insurance so long as such proceeds are to be paid to a party separate from MLGW, in respect of a liability or are to be used to repair or replace portions of the System; (b) extraordinary gains from the sale of assets or similar one-time sources of income; and (c) amounts resulting from any prepayment for the purchase of electricity by MLGW which would be treated as other income in accordance with generally accepted accounting principles.

“Senior Lien” means a lien on one or more categories of Revenues that entitles the Beneficiaries of such lien to have a claim on such Revenues prior to any other Person and ahead of the use of such Revenues for any purpose other than payment of Operating Expenses; provided one or more series of Revenue Obligations, Contracts and related Beneficiaries may have parity Senior Liens on the same categories of Revenues pursuant to the terms of the Resolution.

“Senior Lien Revenue Obligations” means General Revenue Obligations and Released Revenue Obligations but not Subordinate Lien Obligations provided “Senior Lien Obligations” also includes Additional Senior Lien Obligations issued in compliance with the provisions of the Resolution and obligations secured by a Senior Lien pursuant to the Resolution.

“Series 2020 Bonds” means not to exceed \$160,000,000 Electric System Revenue Bonds, Series 2020 of the City, to be dated the date of issuance.

“Series 2020 Refunding Bonds” means the not to exceed \$53,000,000 Electric System Revenue Refunding Bonds Series 2020 (Federally Taxable) of the City, to be dated the date of issuance

“Sinking Fund” means the Sinking Fund established pursuant to the Resolution.

“Special Purpose Facilities” means facilities which (i) will not result, upon completion or acquisition, in a material reduction in Net General Revenues in the judgment of the Board of MLGW, (ii) will not be of such a type or design that the subsequent closing thereof will materially impair the general operations of the System and (iii) the Board has designated in a Supplemental Resolution, as “Special Purpose Facilities” and may include an Acquired System.

“Special Purpose Revenues” means Revenues arising from or generated by one or more Special Purpose Facilities. At the election of MLGW, Special Purpose Revenues shall include all fees, notes, rates, charges and income received from an Acquired System.

“Special Purpose Revenue Account” means the Special Purpose Revenue Account within the Revenue Fund established pursuant to the Resolution.

“Special Purpose Revenue Obligations” means Obligations secured by a Senior Lien on Special Purpose Revenues.

“Subordinate Lien” means a lien on one or more categories of Revenues which is not a Senior Lien.

“State” means the State of Tennessee.

“Subordinate Lien Obligations” means Revenue Obligations which only have a Subordinate Lien and obligations secured by a Subordinate Lien pursuant to the Resolution.

“Supplemental Resolution” means a resolution supplemental to the Master Resolution (which itself may be supplemented by one or more resolutions) to be adopted prior to and authorizing the issuance and delivery of any series of Revenue Obligations. Such a resolution as supplemented shall establish, or shall establish a method or procedure for establishing, the date or dates of the pertinent series of Revenue Obligations, the schedule of maturities of such Revenue Obligations, whether any such Revenue Obligations will be Compound Interest Bonds, the rate or rates of interest to be borne thereby (or a range thereof), whether fixed or variable, the interest payment dates for such Revenue Obligations, the terms and conditions, if any, under which such Revenue Obligations may be made subject to redemption (mandatory or optional) prior to maturity, the form of such Revenue Obligations, the liens relating to such Revenue Obligations, the Contracts, if any, relating to such Revenue Obligations, and such other details as MLGW may determine.

“System” means the complete electrical system and facilities of MLGW including, without limitation, all electric distribution, generation and transmission facilities of MLGW, together with all electric system properties of every nature hereafter owned by MLGW, including all improvements and extensions made by MLGW while the Revenue Obligations remain outstanding, and including all real and personal property of every nature comprising part of or used or useful in connection with the electric system, all administrative and operational support facilities, and including all appurtenances, contracts, leases, franchises and other intangibles; provided, however, at the election of MLGW, an Acquired System may be included within the System as defined therein and become a part thereof or, at the election of MLGW, not become a part of the System but be operated as a separate and independent system by MLGW with the continuing right, upon the election of MLGW, to incorporate such separately Acquired System within the System.

“Tax-Exempt Bonds” means any Revenue Obligations the interest on which has been determined, in an unqualified opinion of Bond Counsel, to be excludable from the gross income of the owners thereof for federal income tax purposes.

“Termination Payments” means an amount payable by MLGW or the City on behalf of MLGW or a Qualified Hedge Provider upon termination of a Hedge Agreement and similar payments made by a Conduit Issuer under a Loan Agreement.

“Variable Rate” means a rate of interest applicable to the Revenue Obligations, other than a fixed rate of interest which applies to a particular maturity of Revenue Obligations so long as that maturity of Revenue Obligations remains Outstanding.

Pledged Revenues and Flow of Funds

Pledge of Revenues: Limited Obligations; Contract Liens

(a) All Pledged Revenues shall be and are hereby pledged to the prompt payment of the principal of, premium, if any, and interest on the Revenue Obligations, obligations treated as Senior Lien Revenue Obligations or Subordinate Lien Obligations pursuant to the Resolution and the obligations under the Contracts; provided:

(1) General Revenues shall secure only (A) General Revenue Obligations, (B) Subordinate Lien Obligations which have a lien on General Revenues, and (C) any Contracts with respect to such General Revenue Obligations;

(2) Released Revenues shall secure only (A) the related Released Revenue Obligations, (B) Subordinate Lien Obligations which have a lien on any related Released Revenues, (C) any Contracts with respect to such Released Revenue Obligations, and (D) separate agreements pursuant to the provisions of the Resolution;

(3) Special Purpose Revenues shall secure only (A) the related Special Purpose Revenue Obligations, (B) Subordinate Lien Obligations which have a lien on any related Special Purpose Revenues, and (C) any Contracts with respect to such Special Purpose Revenue Obligations; and

(4) A Contract may have a Senior Lien or a Subordinate Lien on a related category of Revenues, or no lien at all on Revenues, but (A) no Contract shall have a lien on Revenues that is senior to the lien on the category of Revenues securing the Revenue Obligations related to the Contract, and (B) the lien of the Contract shall be on parity with the lien of the related Revenue Obligations only to the extent the payment of principal of, premium, if any, and interest on such Revenue Obligations is made through such Contract as evidenced by Reimbursement Obligations or through a Qualified Hedge; provided other amounts due on a Contract may be secured by a lien ranking immediately thereafter with the effect set forth in the Resolution.

Pledged Revenues shall immediately be subject to the lien of this pledge for the benefit of the Beneficiaries without any physical delivery thereof or further act, and the lien of this pledge shall be valid and binding against MLGW and the City and against all other persons having claims against MLGW and the City, whether such claims shall have arisen in tort, contract, or otherwise, and regardless of whether such persons have notice of the lien of this pledge. This pledge shall rank superior to all other pledges which may hereafter be made of any Pledged Revenues. The lien of this pledge does not secure any obligation of MLGW other than the Revenue Obligations, obligations treated as Senior Lien Revenue Obligations or Subordinate Lien Obligations pursuant to the Resolution and the Contracts.

(b) The Revenue Obligations and related Contracts shall be limited obligations of the City and MLGW as provided therein payable solely from the particular Revenues pledged thereto. The Revenue Obligations and the interest thereon and related Contracts shall not constitute a debt of any municipality, the State, or any political subdivision thereof other than the City and MLGW and shall not constitute an indebtedness within the meaning of any constitutional or statutory provision whatsoever. The City has no authority to levy any taxes to pay the Revenue Obligations or the Contracts. Neither the members of the Governing Body nor any person executing the Revenue Obligations shall be liable personally on the Revenue Obligations by reason of the issuance thereof or on the Contracts by reason of the execution thereof.

(c) Other System Obligations (other than obligations treated as Senior Lien Revenue Obligations or Subordinate Lien Obligations pursuant to the Resolution) are not secured by a lien on any category of Revenues, but such obligations, prior to an Event of Default, may be paid from Revenues as described in the Resolution.

Funds, Accounts, and Subaccounts

The following funds, accounts, and subaccounts are established under the Master Resolution, and the moneys deposited in such funds, accounts, and subaccounts shall be held in trust for the purposes set forth in the Master Resolution:

(a) Electric System Revenue Fund, to be held by MLGW, and within the Revenue Fund:

- (1) General Revenue Account.
- (2) Released Revenue Account.
- (3) Special Purpose Revenue Account.

(b) Electric System Sinking Fund, to be held by MLGW, and within the Sinking Fund:

(1) Interest Account, with further subaccounts therein for each series of Revenue Obligations; provided a subaccount therein may be utilized for more than one series of Revenue Obligations if all such series of Revenue Obligations share exactly the same lien status on the same categories of Revenues.

(2) Hedge Payments Account, with further subaccounts therein for each series of Revenue Obligations; provided a subaccount therein may be utilized for more than one series of Revenue Obligations if all such series share exactly the same lien status on the same categories of Revenues and are secured in parity by the same or identical Qualified Hedge Agreements with the same provider.

(3) Contract Payments Account, with further subaccounts therein for each series of Revenue Obligations; provided a subaccount therein may be utilized for more than one series of Revenue Obligations if all such series of Revenue Obligations share exactly the same lien status on the same categories of Revenues and are secured in parity by the same or identical Contracts with the same provider.

(4) Principal Account, with further subaccounts therein for each series of Revenue Obligations; provided a subaccount therein may be utilized for more than one series of Revenue Obligations if all such series of Revenue Obligations share exactly the same lien status on the same categories of Revenues.

(5) Loan Repayment Account, with further subaccounts therein for each series of Revenue Obligations; provided a subaccount therein may be utilized for more than one series of Revenue Obligations if all such series of Revenue Obligations share exactly the same lien status on the same category of Revenues.

(6) Debt Service Reserve Account, with a subaccount for each series of Revenue Obligations which has a Debt Service Reserve Requirement; provided a subaccount therein may be utilized for more than one series of Revenue Obligations if all such series of Revenue

Obligations are specified in the related Supplemental Resolutions to share a pledge of such account and have a combined Debt Service Reserve Requirement.

(c) Electric System Renewal and Extension Fund, if one is created by MLGW, to be held by MLGW.

(d) Electric System Rebate Fund, to be held by MLGW.

(e) Electric System Project Fund, to be held by MLGW.

Each account listed above shall be held within the fund under which it is created. Each subaccount listed above shall be held within the account under which it is created. MLGW reserves the right, in its sole discretion, to create additional subaccounts or to abolish any subaccounts within any account from time to time.

Revenue Fund

All Revenues shall be deposited to the Revenue Fund established under the Resolution from time to time as and when received. The amounts deposited shall be immediately allocated to the account within the Revenue Fund designated therefor: General Revenues other than Special Purpose Revenues and Released Revenues to the General Revenue Account; Released Revenues to the Released Revenue Account; and Special Purpose Revenues to the Special Purpose Revenue Account. Moneys in the Revenue Fund shall be applied from time to time to the following purposes and, prior to the occurrence and continuation of an Event of Default, in the order of priority determined by MLGW, in its sole discretion; (a) to pay Operating Expenses; (b) to deposit into the Sinking Fund the amounts required by the Resolution; (c) to deposit into the Debt Service Reserve Account the amounts required by of the Resolution; (d) to deposit into the Rebate Fund the amounts required by the Resolution; (e) to pay to any party to a Contract the amounts due thereon, including Additional Interest, continuing commission or commitment fees, remarketing agent fees and repayment of amounts equivalent to principal on related Bonds; (f) to pay any amounts required to be paid with respect to any Other System Obligations; (g) for transfer to the Renewal and Extension Fund, if any; and (h) for any other lawful purpose; provided the following strictures shall be applicable for purposes of such use of funds:

(1) For Operating Expenses, (A) amounts in the Released Revenue Account shall be used only for Operating Expenses of Released Revenue Facilities, (B) amounts in the Special Purpose Revenue Account shall be used for Operating Expenses of Special Purpose Revenue Facilities, and (C) Operating Expenses related to General Revenues shall be paid first from amounts in the General Revenue Account;

(2) For deposits to the Sinking Fund, the Debt Service Reserve Account or the Rebate Fund, (A) amounts in the Released Revenue Account shall be used only for deposits to subaccounts relating to Revenue Obligations which have a lien on any Released Revenues or for other purposes pursuant to the Resolution, (B) amounts in the Special Purpose Revenue Account shall be for deposits to subaccounts relating to Revenue Obligations having a lien on Special Purpose Revenues, and (C) deposits to subaccounts relating to Revenue Obligations which have a lien on General Revenues shall be made first from amounts in the General Revenue Account;

(3) For any payments on a Contract, amounts may be drawn only from the account or accounts relating to the revenues securing the Revenue Obligations related to such Contract, only in accordance with the strictures of (2) and, unless otherwise provided in the related Supplemental Resolution because a Credit Facility is intended to be drawn on for payments on

Revenue Obligations, only after all payments then due with respect to the related Revenue Obligations have been made;

(4) For any payments with respect to any Other System Obligations, (A) if such Other System Obligations relate to Released Revenue Facilities, then from the Released Revenue Account; (B) if such Other System Obligations relate to Special Purpose Revenue Facilities, from the Special Purpose Revenue Account, and (C) otherwise, first from the General Revenue Account;

(5) No payments may be made to a subaccount of the Sinking Fund related to Subordinate Lien Obligations unless all required payments have been made to other subaccounts with respect to Revenue Obligations, or Contracts related to Revenue Obligations, which have a lien on a category of Revenues ahead of or in parity with the lien of such Subordinate Lien Obligations and no payments may be made with respect to any Other System Obligations unless all required payments have been made to each subaccount with respect to Revenue Obligations and on all Contracts; provided if required by the terms thereof, obligations treated as Senior Lien Revenue Obligations or Subordinate Lien Obligations pursuant to the Resolution shall be paid with the other Senior Lien Revenue Obligations or Subordinate Lien Obligations;

(6) If at any time the amounts in any subaccount of the Sinking Fund are less than the amounts required by the Resolution, and there are not on deposit in any Renewal and Extension Fund available moneys sufficient to cure any such deficiency, then MLGW shall withdraw from subaccounts related to Subordinate Lien Obligations (taking such amounts first from subaccounts related to Subordinate Lien Obligations, pro rata,) and deposit in such subaccount of the Sinking Fund, as the case may be, the amount necessary (or all the moneys in such funds and accounts, if less than the amount required) to make up such deficiency.

Sinking Fund

(a) General. Sufficient moneys shall be paid in periodic installments from the Revenue Fund into the Interest Account, the Hedge Payments Account, the Principal Account and the Loan Repayment Account for the purpose of paying the Revenue Obligations as they become due and payable and for the purpose of making payments under Contracts.

(b) Interest Account. Unless otherwise provided in a Supplemental Resolution, on or before each Interest Payment Date for a series of Revenue Obligations, MLGW shall deposit in the related subaccount of the Interest Account an amount which, together with any other moneys already on deposit therein and available to make such payment, is not less than the interest (excluding Additional Interest) coming due on such Revenue Obligations on such Interest Payment Date. Moneys in the related subaccount of the Interest Account shall be used solely to pay interest (excluding Additional Interest) on the Revenue Obligations when due or to pay Reimbursement Obligations for Credit Facilities under which the Credit Issuer makes all interest payments on the Revenue Obligations. MLGW shall also deposit and continue to deposit all Hedge Receipts under related Qualified Hedge Agreements and any payments from a Credit Issuer under a Credit Facility Agreement in the related subaccount of the Interest Account from time to time as and when received.

(c) Hedge Payments Account and Contract Payments Account. Unless otherwise provided in a Supplemental Resolution or a Hedge Agreement, on or before each payment date for Hedge Payments under Qualified Hedge Agreements, MLGW shall deposit in the related subaccount of the Hedge Payments Account an amount which, together with any Hedge Receipts on deposit in the Interest Account and other moneys already on deposit therein and available to make such payment, is not less than such

Hedge Payments coming due on such payment date. Moneys in the related subaccount of the Hedge Payments Account shall be used solely to pay Hedge Payments under Qualified Hedge Agreements when due. Unless otherwise provided in a Supplemental Resolution or a Contract, on or before each payment date for amounts, other than for Reimbursement Obligations, due on Contracts other than Qualified Hedge Agreements, including Additional Interest, continuing commission or commitment fees and remarketing fees, MLGW shall deposit in the related subaccount of the Contract Payments Account an amount which, together with any other moneys already on deposit therein and available to make such payment, is not less than the amount coming due on such payment date. Moneys in the related subaccount of the Contract Payments Account shall be used solely for such payments when due.

(d) Principal Account. Unless otherwise provided in a Supplemental Resolution, on or before each Principal Maturity Date for a series of Revenue Obligations, MLGW shall deposit in the related subaccount of the Principal Account an amount which, together with any other moneys already on deposit therein and available to make such payment, is not less than the principal coming due on such Revenue Obligations on such Principal Maturity Date. Moneys in the related subaccount of the Principal Account shall be used solely for the payment of principal of the Revenue Obligations as the same shall become due and payable at maturity or upon redemption or to pay Reimbursement Obligations for Credit Facilities under which the Credit Issuer makes all principal payments on the Revenue Obligations.

(e) Loan Repayment Account. Unless otherwise provided in a Supplemental Resolution, on or before each loan repayment date for a Loan Agreement, MLGW shall deposit in the related subaccount of the Loan Repayment Account an amount which, together with moneys already on deposit therein and available to make such payments is not less than all payments due under a Loan Agreement other than principal, interest and Termination Payments. Moneys in the Loan Repayment Account shall be used solely for such payments.

(f) Further Payments. No further payments need be made into a subaccount of the Interest Account or the Principal Account whenever the amount available in such subaccount of the Interest Account and the related subaccount of the Principal Account, if added to the amount then in the related subaccount of the Debt Service Reserve Account, if any (without taking into account any amount available to be drawn on any applicable Reserve Account Credit Facility), is sufficient to retire all the Revenue Obligations then Outstanding and Contracts to which such subaccounts relate and to pay all unpaid interest accrued and to accrue prior to such retirement. No moneys in any subaccount of the Interest Account or the Principal Account shall be used or applied to the optional purchase or redemption of or prepayment of Revenue Obligations prior to maturity unless: (i) provision shall have been made for the payment of all of the Revenue Obligations to which such subaccount relates and all other Revenue Obligations having a parity or higher ranking lien on any category of Revenues securing such Revenue Obligations; or (ii) the Revenue Obligations to which such subaccount relates are Senior Lien Revenue Obligations and such moneys are applied to the purchase and cancellation of such Revenue Obligations which are subject to mandatory redemption on the next mandatory redemption date, which falls due within 12 months, such Revenue Obligations are purchased at a price not more than would be required for mandatory redemption, and such Revenue Obligations are canceled upon purchase and credited against the redemption otherwise to be made on such mandatory redemption date; or (iii) the Revenue Obligations to which such subaccount relates are Senior Lien Revenue Obligations and such moneys are applied to the purchase and cancellation of such Revenue Obligations at a price less than the amount of principal which would be payable on such Revenue Obligations, together with interest accrued through the date of purchase, and such Revenue Obligations are canceled upon purchase; or (iv) the Revenue Obligations to which such subaccount relates are Senior Lien Revenue Obligations and such moneys are in excess of the then required balance of the related subaccount in the Interest Account or the Principal Account and are applied to redeem or prepay a part of such Revenue Obligations on the next succeeding redemption date for which the required notice of redemption may be given.

(g) Debt Service Reserve Account. There shall be deposited into the same or separate subaccount of the Debt Service Reserve Account the amounts specified, if any, in Supplemental Resolutions with respect to the first series of Revenue Obligations and any Additional Obligations. MLGW shall not be required by the by the Resolution to establish a subaccount of the Debt Service Reserve Account for any Revenue Obligations, and any such subaccount shall only be established if required by the Supplemental Resolution authorizing the issuance of the Revenue Obligations. After the issuance of any Additional Obligations, any increase in the amount of the Debt Service Reserve Requirement resulting from the issuance of Additional Obligations which also are secured by an existing subaccount of the Debt Service Reserve Account shall be accumulated, to the extent not covered by deposits from proceeds of Revenue Obligations or funds on hand or as otherwise provided in the Supplemental Resolution authorizing the issuance of the first series of Revenue Obligations secured by such subaccount, over a period not exceeding 61 months from date of delivery of such Additional Obligations in monthly deposits from the Revenue Fund, none of which is less than 1/60 of the amount to be accumulated. The balance of each subaccount of the Debt Service Reserve Account shall be maintained at an amount equal to the Debt Service Reserve Requirement for the related Revenue Obligations (or such lesser amount that is required to be accumulated in such subaccount of the Debt Service Reserve Account in connection with the periodic accumulation to the Debt Service Reserve Requirement after the issuance of Additional Obligations or upon the failure of MLGW to provide a substitute Reserve Account Credit Facility in certain events). There shall be transferred from the Revenue Fund on a pro rata basis (1) to each subaccount of the Debt Service Reserve Account the amount necessary to restore the amount of cash and securities in such subaccount of the Debt Service Reserve Account to an amount equal to the difference between (a) the Debt Service Reserve Requirement for the related Revenue Obligations (or such lesser monthly amount that is required to be deposited into the Debt Service Reserve Account after the issuance of Additional Obligations or upon the failure of MLGW to provide a substitute Reserve Account Credit Facility in certain events), and (b) the portion of the required balance of such subaccount of the Debt Service Reserve Account satisfied by means of a Reserve Account Credit Facility, and (2) to any Reserve Account Credit Facility Provider the amount necessary to reinstate any Reserve Account Credit Facility which has been drawn down. Notwithstanding anything therein to the contrary, a subaccount in the Debt Service Reserve Account that secures General Revenue Obligations shall only be funded with General Revenues, a subaccount in the Debt Service Reserve Account that secures Special Purpose Revenue Obligations shall only be funded with related Special Purpose Revenues, and a subaccount in the Debt Service Reserve Account that secures Released Revenue Obligations shall only be funded with related Released Revenues. No Revenues shall be used to fund a subaccount in the Debt Service Reserve Account to secure Subordinate Lien Obligations if an Event of Default has occurred under the Resolution with respect to the related category of Revenue Obligations. Whenever for any reason the amount in the related subaccounts of the Interest Account or the Principal Account is insufficient to pay all interest or principal falling due on any Revenue Obligations, MLGW shall make up any deficiency by transfers from the Renewal and Extension Fund, if any. Whenever, on the date that such interest or principal is due on any Revenue Obligations, there are insufficient moneys in the related subaccounts of the Interest Account or the Principal Account available to make such payment, MLGW shall, without further instructions, apply so much as may be needed of the moneys in the related subaccount, if any, of the Debt Service Reserve Account to prevent default in the payment of such interest or principal, with priority to interest payments. Whenever by reason of any such application or otherwise the amount remaining to the credit of the related subaccount of the Debt Service Reserve Account is less than the amount then required to be in such subaccount of the Debt Service Reserve Account, such deficiency shall be remedied by monthly deposits from the related account or accounts of the Revenue Fund, to the extent funds are available in the related account or accounts of the Revenue Fund for such purpose after all required transfers set forth above have been made.

MLGW may elect to satisfy in whole or in part the Debt Service Reserve Requirement for any Revenue Obligations by means of a Reserve Account Credit Facility, subject to the following

requirements; (A) the Reserve Account Credit Facility Provider must have a credit rating issued by a Rating Agency not less than the greater of the then current Rating on the related series of Revenue Obligations or the second highest long-term Rating of such Rating Agency; (B) no obligation to the Reserve Account Credit Facility Provider shall be secured by a lien equal to or superior to the lien granted to the related series of Revenue Obligations; (C) each Reserve Account Credit Facility shall have a term of at least one (1) year (or, if less, the remaining term of the related series of Revenue Obligations) and shall entitle MLGW to draw upon or demand payment and receive the amount so requested in immediately available funds the date of such draw or demand; (D) the Reserve Account Credit Facility shall permit a drawing by MLGW for the full stated amount in the event (i) the Reserve Account Credit Facility expires or terminates for any reason prior to the final maturity of the related series of Revenue Obligations, and (ii) MLGW fails to satisfy the Debt Service Reserve Requirement by the deposit to the Debt Service Reserve Account of cash, obligations, a substitute Reserve Account Credit Facility, or any combination thereof, on or before the date of such expiration or termination; (E) if the Rating issued by the Rating Agency to the Reserve Account Credit Facility Provider is withdrawn or reduced below the greater of the Rating assigned to the related series of Revenue Obligations immediately prior to such action by the Rating Agency or the second highest long-term Rating of such Rating Agency, MLGW shall provide a substitute Reserve Account Credit Facility within sixty (60) days after such rating change, and, if no substitute Reserve Account Credit Facility is obtained by such date, shall fund the Debt Service Reserve Requirement in not more than twenty-four (24) equal monthly deposits commencing not later than the first day of the month immediately succeeding the date representing the end of such sixty (60) day period; and (F) if the Reserve Account Credit Facility Provider commences any insolvency proceedings or is determined to be insolvent or fails to make payments when due on its obligations, MLGW shall provide a substitute Reserve Account Credit Facility within sixty (60) days thereafter, and, if no substitute Reserve Account Credit Facility is obtained by such date, shall fund the Debt Service Reserve Requirement in not more than twenty-four (24) equal monthly deposits commencing not later than the first day of the month immediately succeeding the date representing the end of such sixty (60) day period. If the events described in either clauses (E) or (F) above occur, MLGW shall not relinquish the Reserve Account Credit Facility at issue until after the Debt Service Reserve Requirement is fully satisfied by the provision of cash, obligations, or a substitute Reserve Account Credit Facility or any combination thereof. Any amounts received from a Reserve Account Credit Facility for the purpose of paying principal and/or interest on related Revenue Obligations shall be deposited directly into the related subaccounts of the Interest Account and the Principal Account, and such deposit shall constitute the application of amounts in the related subaccount of the Debt Service Reserve Account. Any amounts received from a Reserve Account Credit Facility drawn upon as a result of expiration or termination of such Reserve Account Credit Facility shall be deposited to the related subaccount of the Debt Service Reserve Account. All repayments of any draw-down on the Reserve Account Credit Facility and any interest or fees due the Reserve Account Credit Facility Provider under such Reserve Account Credit Facility shall be secured by a lien on Revenues subordinate to the lien of the related Revenue Obligations for payments into the related subaccounts of the Sinking Fund, the Rebate Fund and payments on any Credit Facility Agreement securing the related Revenue Obligations.

Any such Reserve Account Credit Facility shall be pledged to the benefit of the owners of all of the Revenue Obligations secured by it. MLGW reserves the right, if it deems it necessary in order to acquire such a Reserve Account Credit Facility, to amend the Resolution without the consent of any of the owners of the Bonds in order to grant to the Reserve Account Credit Facility Provider such additional rights as it may demand, provided that such amendment shall not, in the written opinion of Bond Counsel filed with MLGW, impair or reduce the security granted to the owners of Revenue Obligations or any of them.

Renewal and Extension Fund

MLGW may deposit, in its sole discretion, funds in a Renewal and Extension Fund created by MLGW, which may be created by MLGW in its sole discretion. All sums accumulated and retained in the Renewal and Extension Fund shall be used first to prevent default in the payment of interest on or principal of any General Revenue Obligations when due and then shall be applied by MLGW from time to time, as and when MLGW shall determine, to the following purposes and, prior to the occurrence and continuation of an Event of Default, in the order of priority determined by MLGW in its sole discretion: (a) for the purposes for which moneys held in the Revenue Fund may be applied under the Resolution, (b) to pay any amounts which may then be due and owing under any Hedge Agreement (including fees, expenses, and indemnity payments) and any Termination Payments due under a Hedge Agreement or Loan Agreement, (c) to pay any governmental charges and assessments against the System or any part thereof which may then be due and owing, (d) to make acquisitions, betterments, extensions, repairs, or replacements or other capital improvements (including the purchase of equipment) to the System deemed necessary by MLGW (including payments under contracts with vendors, suppliers, and contractors for the foregoing purposes), and (e) to acquire Revenue Obligations (other than Special Purpose Revenue Obligations) by redemption or by purchase in the open market prior to their respective maturities, and when so used for such purposes the moneys shall be withdrawn from the Renewal and Extension Fund and deposited into the related subaccounts of the Interest Account and the Principal Account for the Revenue Obligations to be so redeemed or purchased.

Deposits and Security of Funds and Accounts

All moneys in the funds and accounts established under the Resolution shall be held by the Board in one or more Depositories qualified for use by MLGW. Uninvested moneys shall, at least to the extent not guaranteed by the Federal Deposit Insurance Corporation, be secured to the fullest extent required by the laws of the State for the security of public funds.

Investment of Funds and Accounts

Moneys in the funds and accounts established under the Resolution shall be invested and reinvested in Permitted Investments and containing such maturities as are deemed suitable by MLGW.

Investment Earnings in each fund and account (except the Debt Service Reserve Account) shall be retained therein. Investment Earnings from the investment of moneys in each subaccount of the Debt Service Reserve Account shall be retained in such subaccount of the Debt Service Reserve Account at all times if the balance (taking into account the current market value of the Investments held in the Debt Service Reserve Account) is less than the respective Debt Service Reserve Requirement; thereafter and at all times if the balance of such subaccount of the Debt Service Reserve Account is equal to or greater than the respective Debt Service Reserve Requirement (taking into account the current market value of the investments held in the Debt Service Reserve Account), such Investment Earnings shall be deposited in the related subaccount of the Interest Account.

A Supplemental Resolution authorizing the issuance of any Revenue Obligations may specify maturity limitations and different allocations of Investment Earnings on investments of moneys in the funds and accounts relating to such Revenue Obligations.

Moneys in each of such funds shall be accounted for as a separate and special fund apart from all other funds, provided that investments of moneys therein may be made in a pool of investments together with other moneys of MLGW so long as sufficient Permitted Investments in such pool, not allocated to

other investments of contractually or legally limited duration, are available to meet the requirements of the foregoing provisions.

Valuation of Investments

All investments made for any fund, account or subaccount shall, for purposes of the Resolution, be valued at fair market value on the last day of Fiscal Year.

Application of Excess in Sinking Fund

Whenever at the end of each Fiscal Year the amount of moneys in any account or subaccount of the Sinking Fund, including the Debt Service Reserve Account, exceeds the amount then currently required to be held therein, the excess shall be transferred to the related account in the Revenue Fund.

Disposition of Moneys After Payment of Revenue Obligations and Contracts

Any amounts remaining in any fund or account established under the Resolution after payment in full of the principal of, redemption premium, if any, and interest on the Revenue Obligations (or after provision for payment thereof has been made) and obligations treated as Senior Lien Revenue Obligations or Subordinate Lien Obligations pursuant to the Resolution, the fees, charges, and expenses of the Paying Agent and Bond Registrar, all amounts owing to any Credit Issuer, any Reserve Account Credit Facility Provider, and any Qualified Hedge Provider or other party to a Contract, and all other amounts required to be paid under the Resolution (including amounts required to be paid into the Rebate Fund), shall be promptly paid to MLGW.

Additional Revenue Obligations

No Revenue Obligations Except as Permitted in the Resolution

No Revenue Obligations may be issued and no other obligations, except Contracts, which are secured by any interest in or lien on Pledged Revenues may be entered into except pursuant to the Resolution; provided, however, the City or MLGW may issue an initial series of Senior Lien Revenue Obligations pursuant to a Supplemental Resolution without meeting the requirements of the Resolution.

Additional Senior Lien Revenue Obligations

(a) Any portion (including any maturities or portions thereof whether or not in chronological order and any amounts subject to mandatory redemption) or all of a series of Senior Lien Revenue Obligations may be refunded at maturity, upon redemption in accordance with their terms, or upon payment, prepayment or redemption with the consent of the owners of such Senior Lien Revenue Obligations, and the refunding Revenue Obligations so issued shall constitute Senior Lien Revenue Obligations secured on a parity with any Revenue Obligations secured on a parity with the refunded Revenue Obligations, if all of the following conditions are satisfied:

(1) MLGW shall have obtained a report from an Independent Certified Public Accountant or a Financial Adviser demonstrating that the refunding will reduce the total debt service payments on Outstanding Senior Lien Revenue Obligations, including payments on related Contracts, which are parity secured with the Revenue Obligations to be refunded on a present value basis; or

(2) as an alternative to, and in lieu of, satisfying the requirements of (1), all Outstanding Senior Lien Revenue Obligations which are secured on a parity with the Revenue Obligations to be refunded are being refunded under arrangements which immediately result in making provision for the payment of such Revenue Obligations; and

(3) requirements of (b)(2), (5), and (6) are met with respect to such refunding Revenue Obligations.

(b) Additional Senior Lien Revenue Obligations (including refunding Revenue Obligations which do not meet the requirements of (a)) may also be issued on a parity with Outstanding Senior Lien Revenue Obligations pursuant to a Supplemental Resolution, and the Revenue Obligations so issued shall be secured on a parity with such Outstanding Senior Lien Revenue Obligations, if all of the following conditions are satisfied:

(1) There shall have been procured and filed with MLGW either:

(A) a report by a Financial Adviser or a certificate by the Secretary-Treasurer of MLGW to the effect that the historical related Net Revenues for either (i) a period of 12 consecutive months of the most recent 18 consecutive months prior to the issuance of the proposed Additional Obligations or (ii) the most recent audited Fiscal Year, were equal to at least 120% of the maximum Debt Service Requirement for any Fiscal Year commencing with the first Fiscal Year after the Fiscal Year in which the Additional Obligations are issued on all related Senior Lien Revenue Obligations which will be Outstanding immediately after the issuance of the proposed Additional Obligations and secured on a parity therewith, provided, however, (x) the report or certificate may contain pro forma adjustments to historical related Net Revenues equal to 100% of the increased annual amount attributable to any revision in the schedule of rates, fees, and charges for the services and facilities furnished by the System, imposed prior to the date of delivery of the proposed Additional Obligations and not fully reflected in the historical related Net Revenues actually received during such historical period used; (y) if MLGW or City has a contract to purchase or otherwise acquire an Acquired System that will become part of the System, the historical Net Revenues may be adjusted to include the anticipated Net Revenues from the Acquired System; and (z) if MLGW has entered into a contract to furnish services of the System that is not fully reflected in the historical Net Revenues of the System, such historical Net Revenues may be adjusted to include the anticipated Net Revenues from such contract; or

(B) a report by a Financial Adviser to the effect that in each Fiscal Year of the Forecast Period the forecasted related Net Revenues (which forecast can take into account (i) any planned increases in the rates, fees and charges for the services and facilities furnished by the System, (ii) any revenues forecasted to be received from any Acquired Systems as to which the City or Division has entered into a contract to purchase or otherwise acquire, and (iii) any forecasted savings in Operating Expenses resulting from a purchase of electrical power for distribution and sale during or after the end of any Fiscal Year, to the extent not included in Operating Expenses) are expected to equal at least 120% of the Debt Service Requirement during such period on all related Senior Lien Revenue Obligations which will be Outstanding immediately after the issuance of the proposed Additional Obligations and secured on a parity therewith.

(2) MLGW shall have received, at or before issuance of the Additional Obligations, a report from a Financial Adviser or a certificate of the Secretary-Treasurer of MLGW to the

effect that the payments required to be made into each account or subaccount of the Sinking Fund have been made and the balance in each account or subaccount of the Sinking Fund is not less than the balance required by the Resolution as of the date of issuance of the proposed Additional Obligations.

(3) A Supplemental Resolution authorizing the proposed Additional Obligations must require (i) that the amount to be accumulated and maintained in the subaccount of the Debt Service Reserve Account for Senior Lien Revenue Obligations which are to be secured on a parity with such Additional Obligations, if any, be increased to not less than 100% of the Debt Service Reserve Requirement, if any, computed on a basis which includes all Senior Lien Revenue Obligations which will be Outstanding and secured on a parity with the Additional Obligations immediately after the issuance of the proposed Additional Obligations and (ii) that the amount of such increase be deposited in such subaccount prior to or at the end of the period and at least as fast as the rate specified in the Resolution.

(4) A Supplemental Resolution authorizing the proposed Additional Obligations must require the proceeds of such proposed Additional Obligations to be used to make capital improvements to or capital acquisitions for the System, to fund interest on the proposed Additional Obligations, to refund other obligations issued for such purposes (whether or not such refunding Revenue Obligations satisfy the requirements of (a)), for any other legal purpose under applicable law as evidenced by an opinion of Bond Counsel, and/or to pay expenses incidental thereto and to the issuance of the proposed Additional Obligations.

(5) The Secretary-Treasurer shall have certified, by written certificate dated as of the date of issuance of the Additional Obligations, that MLGW is in compliance with all requirements of the Resolution.

(6) MLGW shall have received an opinion of Bond Counsel, dated as of the date of issuance of the Additional Obligations, to the effect that the Supplemental Resolution authorizing the issuance of Additional Obligations has been duly adopted by MLGW or by the City, as the case may be.

(c) Obligations which would be Other System Obligations but for the existence of a Senior Lien on a category of Revenues securing such obligations may be issued and so secured, and thereafter will be treated as Senior Lien Revenue Obligations, if all of the conditions of (b)(2) through (6) are satisfied treating such obligations as Additional Obligations and the issuance and security documents therefore as Supplemental Resolutions.

Additional Subordinate Lien Obligations

(a) Revenue Obligations also may be issued on a Subordinate Lien basis pursuant to a Supplemental Resolution or a resolution otherwise adopted by MLGW payable from moneys which would otherwise be available for any other lawful purpose, and the Revenue Obligations so issued shall constitute Subordinate Lien Obligations, if (1) the Supplemental Resolution authorizing the Subordinate Lien Obligations shall provide that such Subordinate Lien Obligations shall be junior and subordinate in lien and right of payment (A) directly, to any Outstanding Senior Lien Revenue Obligations or Senior Lien Revenue Obligations issued in the future which have a Senior Lien on a category of Revenues as to which such proposed Additional Obligations have a Subordinate Lien; and (2) MLGW shall have received a report from a Financial Adviser, or a certificate of the Secretary-Treasurer to the effect that the payments required to be made into each account or subaccount of the Sinking Fund have been made and the balance in each account or subaccount of the Sinking Fund is not less than the balance required by the

resolution for Senior Lien Revenue Obligations as of the date of issuance of any Subordinate Lien Obligations.

(b) In the event of any insolvency or bankruptcy proceedings, and any receivership, liquidation, reorganization, or other similar proceedings in connection therewith, relative to MLGW or to its creditors, as such, or to its property, and in the event of any proceedings for voluntary liquidation, dissolution, or other winding up of MLGW, whether or not involving insolvency or bankruptcy, the owners of all Senior Lien Revenue Obligations then Outstanding and parties to related Contracts shall be entitled to receive payment in full of all principal and interest due on all such Senior Lien Revenue Obligations, all other payments due under Loan Agreements, which Loan Agreements are Senior Lien Obligations and all payments due under related Contracts in accordance with the provisions of the Resolution before the owners of any Subordinate Lien Obligations having a Subordinate Lien on a category of Revenues as to which such Senior Lien Revenue Obligations have a Senior Lien or related Contracts are entitled to receive any payment from the Pledged Revenues or the amounts held in the funds and accounts created under the Resolution on account of principal of, premium, if any, or interest on the Subordinate Lien Obligations or related Contracts.

(c) If any Event of Default shall have occurred and be continuing (under circumstances when the provisions of paragraph (b) shall not be applicable), the owners of all Senior Lien Revenue Obligations then Outstanding and parties to related Contracts shall be entitled to receive payment in full of all principal and interest then due on all such Senior Lien Revenue Obligations, all other payments due under Loan Agreements, which Loan Agreements are Senior Lien Obligations, and all payments due on related Contracts before the owners of the Subordinate Lien Obligations or parties to Contracts related to Senior Lien Obligations or which are subordinate to Senior Lien Revenue Obligations are entitled to receive any payment from the Pledged Revenues or the amounts held in the funds and accounts created under the Resolution of principal of, premium, if any, or interest on the Subordinate Lien Obligations or payments under related Contracts.

(d) No owner of Senior Lien Revenue Obligations or party to any related Contract shall be prejudiced in its right to enforce subordination of the Subordinate Lien Obligations and related Contracts by any act or failure to act on the part of MLGW or the City.

(e) The obligations of MLGW and the City to pay to the owners of the Subordinate Lien Obligations the principal of, premium, if any, and interest thereon in accordance with their terms and to pay parties to related Contracts in accordance with the terms of the related Contracts shall be unconditional and absolute. Nothing in the Resolution shall prevent the owners of the Subordinate Lien Obligations or parties to related Contracts from exercising all remedies otherwise permitted by applicable law or under the Resolution or the related Contracts upon default thereunder, subject to the rights contained in the Resolution of the owners of Senior Lien Revenue Obligations and parties to related Contracts to receive cash, property, or securities otherwise payable or deliverable to the owners of the Subordinate Lien Obligations and parties to related Contracts, and any Supplemental Resolution authorizing Subordinate Lien Obligations may provide that, insofar as a trustee or paying agent for the Subordinate Lien Obligations is concerned, the foregoing provisions shall not prevent the application by such trustee or paying agent of any moneys deposited with such trustee or paying agent for the purpose of the payment of or on account of the principal or premium, if any, and interest on such Subordinate Lien Obligations and payments under related Contracts if such trustee or paying agent did not have knowledge at the time of such application that such payment was prohibited by the foregoing provisions.

(f) Any series of Subordinate Lien Obligations and related Contracts may have such rank or priority with respect to any other series of Subordinate Lien Obligations and related Contracts as may be provided in the Supplemental Resolution or other resolution authorizing such series of Subordinate Lien

Obligations and may contain such other provisions as are not in conflict with the provisions of the Resolution.

(g) Obligations which would be Other System Obligations but for the existence of a Subordinate Lien on a category of Revenues securing such obligations may be issued and so secured, and thereafter will be treated as Subordinate Lien Obligations, if all of the conditions of paragraphs (a) through (c) above are satisfied treating such obligations as Subordinate Lien Obligations and the issuance and security documents therefor as Supplemental Resolutions.

Additional Special Purpose Revenue Obligations

Additional Special Purpose Revenue Obligations may be issued after compliance with any requirements therefor set forth in any Supplemental Resolution related to such Special Purpose Obligations or Outstanding Special Purpose Obligations which will be secured on a parity with such Additional Special Purpose Obligations.

Released Revenue Obligations; Accession of Subordinate Lien Obligations to Senior Lien Status

For so long as any Series 2016 Bonds are Outstanding, each of the City and the Division hereby agrees that it shall not (a) cause a separable category or portion of revenues, income, receipts and money relating to a definable service, facility or program of the System to be withdrawn from General Revenues and thereafter treated as Released Revenues or (b) cause the accession of any Subordinate Lien Obligations to the status of complete parity with any Senior Lien Revenue Obligations.

Adoption of Proceedings

MLGW, or the City at the request of MLGW, shall adopt a Supplemental Resolution authorizing the issuance of any Additional Obligations and, except for the first Supplemental Resolution, reciting that the requirements of this Article have been satisfied, and shall set forth in such proceedings, among other things, the security therefor, the date or dates such Additional Obligations shall bear and the rate or rates of interest, interest payment date or dates, maturity date or dates, and redemption provisions with respect to such Additional Obligations and any other matters applicable to such Additional Obligations as MLGW may deem advisable.

Any such Supplemental Resolution shall restate and reaffirm, by reference, all of the applicable terms, conditions, and provisions of the Resolution not modified by the Supplemental Resolution.

Proceedings Authorizing Additional Obligations

No Supplemental Resolution authorizing the issuance of Additional Obligations shall conflict with the terms and conditions of the Resolution, except to the extent that the Supplemental Resolution is adopted for one of the purposes set forth in the Resolution and complies with the provisions of the Resolution for the adoption of Supplemental Resolutions without the consent of holders of the Revenue Obligations.

Applicability to Additional Obligations

The provisions of the Resolution shall be construed as including and being applicable to any future series of Revenue Obligations, and any such Revenue Obligations shall be treated, unless otherwise specifically stated, just as if they had been issued pursuant to the terms of the Master Resolution and the first Supplemental Resolution.

Credit Facilities and Hedge Agreements

(a) In connection with the issuance of any Revenue Obligations, MLGW may obtain or cause to be obtained one or more Credit Facilities providing for payment of all or a portion of the principal of, premium, if any, or interest due or to become due on such Revenue Obligations, providing for the purchase of such Revenue Obligations by the Credit Issuer, or providing funds for the purchase of such Revenue Obligations by MLGW. In connection therewith MLGW, or the City on behalf of MLGW, shall enter into Credit Facility Agreements with such Credit Issuers providing for, among other things, (i) the payment of fees and expenses to such Credit Issuers for the issuance of such Credit Facilities; (ii) the terms and conditions of such Credit Facilities and the Revenue Obligations affected thereby; and (iii) the security, if any, to be provided for the issuance of such Credit Facilities. MLGW, or the City on behalf of MLGW, may secure any Credit Facility by an agreement providing for the purchase of the Revenue Obligations secured thereby with such adjustments to the rate of interest, method of determining interest, maturity, or redemption provisions as are specified by MLGW, in the applicable Supplemental Resolution. MLGW may in a Credit Facility Agreement agree to directly reimburse such Credit Issuer for amounts paid under the terms of such Credit Facility, together with interest thereon; provided, however, that no Reimbursement Obligation shall be created for purposes of the Resolution until amounts are paid under such Credit Facility. Any such Reimbursement Obligation shall be deemed to be a part of the Revenue Obligations to which the Credit Facility relates which gave rise to such Reimbursement Obligation, and references to principal and interest payments with respect to such Revenue Obligations shall include principal and interest (except for Additional Interest and principal amortization requirements with respect to the Reimbursement Obligation that are more accelerated than the amortization requirements for the related Revenue Obligations, without acceleration) due on the Reimbursement Obligation incurred as a result of payment of such Revenue Obligations with the Credit Facility. All other amounts payable under the Credit Facility Agreement (including any Additional Interest and principal amortization requirements with respect to the Reimbursement Obligation that are more accelerated than the amortization requirements for the related Revenue Obligations, without acceleration) shall be fully subordinate to the payment of debt service on the related class of Revenue Obligations. Any such Credit Facility shall be for the benefit of and secure such Revenue Obligations or portion thereof as specified in the applicable Supplemental Resolution. Notwithstanding the other provisions of the Resolution, MLGW's obligations under a Credit Facility which requires the Credit Issuer to make all interest payments due on the Revenue Obligations may be secured to the extent of such amounts by a pledge of, and lien on, the Pledged Revenues on a parity with the lien created by the Resolution to secure the related Revenue Obligations, or may be wholly or partially subordinate in lien and right of payment to the payment of the Revenue Obligations, as determined by MLGW.

(b) In connection with the issuance of any Revenue Obligations or at any time thereafter so long as such Revenue Obligations remain Outstanding, MLGW may enter into Hedge Agreements with Qualified Hedge Providers, and no other providers, with respect to any Revenue Obligations. MLGW shall authorize the execution, delivery, and performance of each Qualified Hedge Agreement in a Supplemental Resolution, in which it shall designate the related Hedged Obligations. MLGW's obligation to pay Hedge Payments on a Qualified Hedge Agreement may be secured by a pledge of, and lien on, the Pledged Revenues on a parity with the lien created by the Resolution to secure the related Hedged Obligations (other than Termination Payments), or may be wholly or partially subordinate in lien and right of payment to the payment of the Revenue Obligations, as determined by MLGW.

Other Obligations

MLGW expressly reserves the right, at any time, to adopt one or more other bond resolutions and reserves the right, at any time, to issue any other obligations not secured by the amounts pledged under the Resolution.

General Provisions

Rate Covenant

MLGW shall continuously own, and MLGW shall continuously control, operate, and maintain the System in an efficient and economical manner and on a revenue producing basis and shall at all times prescribe, fix, maintain, and collect rates, fees, and other charges for the services and facilities furnished by the System fully sufficient at all times:

(a) for 100% of the Operating Expenses and for the accumulation in the Revenue Fund of a reasonable reserve therefor, in an amount, if any, as shall be determined from time to time by MLGW; and

(b) such that Net Revenues in each Fiscal Year:

(1) will equal at least 120% of the Debt Service Requirement on all Senior Lien Revenue Obligations and 100% of the Debt Service Requirement on all other Revenue Obligations then Outstanding for such Fiscal Year;

(2) will enable MLGW to make all required payments, if any, into the Debt Service Reserve Account and the Rebate Fund and on any Contract or Other System Obligation;

(3) will enable MLGW to accumulate an amount to be held in the Renewal and Extension Fund, which in the judgment of MLGW is adequate to meet the costs of major renewals, replacements, repairs, additions, betterments, and improvements to the System, necessary to keep the same in good operating condition or as is required by any governmental agency having jurisdiction over the System;

(4) will remedy all deficiencies in required payments into any of the funds and accounts mentioned in the Resolution from prior Fiscal Years; and

(5) will permit MLGW to comply with the terms of any agreement that MLGW has entered into to purchase, sell or generate electric power;

provided for purposes of (a), (b) (1) and (2) each category of Net Revenues shall be compared to the required payments with respect to, or for accounts related to, related Operating Expenses, Revenue Obligations, Contracts and Other System Obligations.

If the audited Revenues in any Fiscal Year are less than the total amount required as set forth in subsections (a) and (b) above, then MLGW shall promptly request the Consulting Engineer or Financial Advisor to make recommendations as to a revision in such rates, fees, charges or methods of operating the System which will result in the required amount of Revenues as set forth in subsections (a) and (b) above. Upon receipt of such recommendations, MLGW will, subject to applicable requirements imposed by law, immediately take action to revise such rates, fees and charges and take such other actions respecting the methods of operation of the System as shall in its discretion be deemed necessary.

The rates, fees, and other charges shall be classified in a reasonable manner to cover users of the services and facilities furnished by the System so that, as nearly as practicable, such rates, fees, and other charges shall be uniform in application to all users falling within any reasonable class.

Maintenance of the System in Good Condition

MLGW covenants that it has and will continue to enforce reasonable rules and regulations governing the System and the operation thereof, that all compensation, salaries, fees, and wages paid by it in connection with the operation, maintenance, and repair of the System will be reasonable, and that no more persons will be employed by it than are necessary, that it will operate the System in an efficient and economical manner and will at all times maintain the System in good repair and in sound operating condition, that it will make all necessary repairs, renewals, and replacements to the System, and that it will comply with all valid acts, rules, regulations, orders, and directions of any legislative, executive, administrative, or judicial body applicable to the System and MLGW's operation thereof.

Insurance

With respect to the System, MLGW will carry adequate public liability, fidelity, and property insurance, such as is maintained by similar Systems as the System; provided, MLGW shall not be required to insure beyond the limits of immunity provided by Sections 29-20-101 et seq., Tennessee Code Annotated, as amended, and provided further, MLGW may self-insure against any risks that its Governing Body deems appropriate provided MLGW maintains adequate reserves, in such amounts as MLGW determines is reasonable, for such self-insurance.

MLGW, without in any way limiting the generality of the following, shall: (a) require each construction contractor and each subcontractor to furnish a bond, or bonds, of such type and in amounts adequate to assure the faithful performance of their contracts and the payment of all bills and claims for labor and material arising by virtue of such contracts; and (b) require each construction contractor or the subcontractor to maintain at all times until the completion and acceptance of the Project adequate compensation insurance for all of their employees and adequate public liability and property damage insurance for the full and complete protection of Division from any and all claims of every kind and character which may arise by virtue of the operations under their contracts, whether such operations be by themselves or by anyone directly or indirectly for them, or under their control.

All such policies shall be for the benefit of and made payable to MLGW and shall be on deposit with MLGW.

All moneys received for losses under any such insurance policies, except public liability policies, are hereby pledged by MLGW, as security for the Revenue Obligations until and unless such proceeds are paid out in making good the loss or damage in respect of which such proceeds are received, either by repairing the property damaged or replacing the property destroyed or by depositing the same in the Renewal and Extension Fund. Adequate provision for making good such loss and damage shall be made within 120 days from the date of the loss, insurance proceeds not used in making such provision shall be deposited in the Renewal and Extension Fund on the expiration of such 120-day period. Such insurance proceeds shall be payable to MLGW by appropriate clause to be attached to or inserted in the policies.

No Sale, Lease, or Encumbrance; Exceptions

Unless consent is given by the holders of at least a majority of the aggregate principal amount of the Revenue Obligations and by any Credit Issuer, MLGW will not sell, lease, mortgage, or in any manner dispose of the System, or any part thereof, including any and all extensions and additions that

may be made thereto, or any facility necessary for the operation thereof except as may be set forth in the Resolution; provided, however, the use of any of the System facilities may at any time be permanently abandoned or the System or any portion of the System or of the System facilities sold or otherwise disposed of, provided that:

(a) All covenants and undertakings in connection with all Revenue Obligations then outstanding and payable from the Revenues of the System are in compliance and any required reserve funds have been fully established and contributions thereto are current;

(b) After the abandonment, sale or other disposal of all or a portion of the System, (i) provision is made for the payment of all the outstanding Revenue Obligations or (ii) the remaining Revenues of the System after such sale shall be sufficient to pay principal of, premium, if any, and interest on the remaining Revenue Obligations and sufficient to be in compliance with the covenants set forth in the Resolution as certified by a Consulting Engineer or Financial Adviser;

(c) The abandonment, sale or disposition is for the purpose of disposing of facilities which are no longer necessary or no longer useful to the operation of the System or it is otherwise in the best interests of MLGW to dispose of all or a part of the System as determined by the Governing Body of MLGW and

(d) MLGW receives an opinion of nationally recognized bond counsel to the effect that the disposition of the System or any portion thereof and use of the proceeds therefrom will not adversely affect the exclusion of interest on the Revenue Obligations from gross income of the holders thereof for purposes of federal income taxation.

Nothing in the Resolution is intended to prohibit the lease purchase of equipment or facilities of the System hereafter to be put in service or to prohibit the transfer or exchange of service areas to provide for more efficient operation of the System so long as MLGW in full compliance with the covenants set forth in the Resolution immediately following such transfer or exchange.

In addition to the transfers permitted above, MLGW shall have the right to sell, lease, transfer or otherwise dispose of the System as a whole or substantially as a whole, to any municipal corporation, county, political subdivision, governmental corporation or governmental agency (each of which shall be included within the term "Transferee" as used in the Resolution), provided the transferee thus acquiring the System from MLGW will assume the performance of and be bound by all of MLGW's and the City's obligations to the holders of the Revenue Obligations to make the payments into the funds required by the resolutions authorizing the Revenue Obligations and the Resolution and to pay the principal of, premium, if any, and interest on the Revenue Obligations as provided in the covenants and provisions of the Resolution.

For so long as any Series 2020 Bonds or the Series 2020 Refunding Bonds are Outstanding, each of the City and the Division hereby agrees that it shall not combine any or all of the Division's utility systems into a single unified operation (the "Combined System") or commingle the revenues of the systems so combined in the Combined System.

No Impairment of Rights

MLGW shall not enter into any contract or contracts, nor take any action, the results of which might materially impair the rights of the holders of any Revenue Obligations.

Books and Accounts

MLGW shall keep proper books and accounts in compliance with applicable laws and regulations, if any, and shall cause such books and accounts to be audited for each Fiscal Year by an independent certified public accountant or firm of independent certified public accountants. A copy of each annual audit report showing in reasonable detail the financial condition of the System at the close of the Fiscal Year, the income and expenses for such Fiscal Year, including the transactions relating to any and all funds and accounts created pursuant to the Resolution, shall be available to any Bondholder upon request.

Enforcement of Charges and Connections

MLGW shall compel the prompt payment of rates, fees, and charges imposed for service connected with the System, and to that end will vigorously enforce all of the provisions of any resolution or ordinance of MLGW having to do with the same, and all of the rights and remedies permitted MLGW under law. MLGW expressly covenant and agrees that such charges will be enforced and promptly collected to the full extent permitted by law.

Payments

All payments falling due on the Revenue Obligations and related Contracts shall be made by MLGW, from the Pledged Revenues or, at MLGW's option, other legally available revenues to the owners thereof when due in full, and all reasonable and authorized charges made by the Bond Registrar and any Paying Agent shall be paid by MLGW, when due.

No Loss of Lien on Revenues

MLGW and the City shall not do, or omit to do, or permit to be done or to be omitted any matter or thing whatsoever whereby the lien of the Resolution on the Pledged Revenues or any part thereof might or could be lost or impaired.

Annual Budget

MLGW agrees to adopt an Annual Budget for the System for each Fiscal Year in compliance with the rate covenant as stated in the Resolution.

Tax Provisions

MLGW recognizes that the purchasers and owners of Tax-Exempt Bonds will have accepted the Tax-Exempt Bonds on, and paid for the Tax-Exempt Bonds a price which reflects, the understanding that interest on such Tax-Exempt Bonds is not included in the gross income of the owners for federal income tax purposes under laws in force at the time the Tax-Exempt Bonds shall have been delivered.

MLGW shall take any and all action which may be required from time to time in order to assure that interest on the Tax-Exempt Bonds shall remain excludable from the gross income of the owners of the Tax-Exempt Bonds for federal income tax purposes and shall refrain from taking any action which would adversely affect such status.

The covenants, certifications, representations, and warranties contained under this heading shall survive payment in full or provision for payment in full of the Tax-Exempt Bonds until the end of the statute of limitations following the later of final payment of such Revenue Obligations (without regard to

any defeasance or other provision for the payment thereof) or the last date as of which payments under Section 148(f) of the Code could be due to the United States.

Compliance with Purchase Contracts

MLGW agrees to comply with all material terms of any agreement to purchase electric power for the System, and the Resolution shall not be construed to prevent MLGW from complying with the terms of any such agreements.

Events of Default and Remedies

Definition of Events of Default

An “Event of Default” shall mean the occurrence of any one or more of the following:

(a) a failure to pay the principal or redemption price of any Senior Lien Revenue Obligation when the same shall become due and payable, either at maturity or by proceedings for redemption or otherwise; or

(b) a failure to pay any installment of interest on any Senior Lien Revenue Obligation when and as such installment of interest shall become due and payable; or

(c) a court of competent jurisdiction shall enter an order, judgment, or decree appointing a receiver of the System or any of the funds or accounts established under the Resolution, or approving a petition seeking reorganization of MLGW under the federal bankruptcy laws or any other applicable law or statute of the United States of America or the State, and such order, judgment, or decree shall not be vacated or set aside or stayed within 60 days from the date of the entry thereof; or

(d) the City or MLGW shall fail to perform any of the other covenants, conditions, agreements, and provisions contained in the Senior Lien Revenue Obligations or in the Resolution on the part of the City or MLGW to be performed, and such failure shall continue for 90 days after written notice specifying such failure and requiring it to be remedied shall have been given to MLGW by the Paying Agent or by the owners of not less than or any Credit Issuer securing not less than twenty-five percent (25%) in aggregate principal amount of the Senior Lien Revenue Obligations; provided, however, if the failure stated in such notice can be corrected, but not within such 90 day period, MLGW shall have 180 days after such written notice to cure such default if corrective action is instituted by MLGW within such 90 day period and diligently pursued until the failure is corrected; or

(e) an Event of Default under any Supplemental Resolution relating to Senior Lien Revenue Obligations shall occur;

provided if the Event of Default relates solely to Revenue Obligations related to a particular category of Revenues and no other event has occurred which, with the lapse of time or the delivery of notice or both, could become an Event of Default with respect to any other Revenue Obligations then Outstanding, such Event of Default shall be deemed to apply solely to the related Revenue Obligations and Contracts and the provisions of the Resolution shall otherwise remain in full force and effect with respect to all other Revenue Obligations and related Contracts.

Remedies

Upon the occurrence of an Event of Default, the Paying Agent shall have the power to proceed with any right or remedy available at law or in equity or by statute, as it may deem best, including any suit, action or special proceeding in equity or at law for the collection of amounts due and to become due under the Resolution and under the Senior Lien Revenue Obligations or the performance of any covenant or agreement contained therein or for the enforcement of any proper legal or equitable remedy as the Paying Agent shall deem most effectual to protect the rights aforesaid, insofar as such may be authorized by law. The rights specified in the Resolution are to be cumulative to all other available rights, remedies or powers.

Without limiting the foregoing, upon the request of the holders of not less than twenty-five percent (25%) of the Outstanding Senior Lien Revenue Obligations, the Paying Agent shall, in addition to all other remedies and rights upon or under the Resolution, have the right, by appropriate proceedings in any court of competent jurisdiction, to obtain the appointment of a receiver for the System, which receiver may enter upon and take possession of the System, operate and maintain the System, fix rates and collect all revenues arising therefrom in as full a manner and to the same extent as MLGW itself might do. The receiver shall deposit all moneys collected by it in a separate account or accounts and shall dispose of such revenues in accordance with the terms and conditions of the resolutions authorizing Senior Lien Revenue Obligations and the Resolution and as the court shall direct.

No delay or omission to exercise any right or remedy accruing upon any Event of Default shall impair any such right or remedy or shall be construed to be a waiver of any such Event of Default or acquiescence therein; and every such right and remedy may be exercised from time to time and as often as may be deemed expedient.

No waiver of any Event of Default under the Resolution, whether by the Paying Agent, any Credit Issuer or by the Bondholders, shall extend to or affect any subsequent or other Event of Default, or impair any rights or remedies consequent thereon.

Rights of Bondholders

Upon the occurrence of an Event of Default and if requested so to do by the Holders of more than fifty percent (50%) in aggregate principal amount of the Senior Lien Revenue Obligations then Outstanding and if indemnified for its costs and expenses, the Paying Agent, subject to the provisions under "Right of Bondholders to Direct Proceedings" as provided below, shall be obligated to exercise such one or more of the rights and remedies conferred by the Resolution as the Paying Agent, being advised by counsel, shall deem most expedient in the interests of the Bondholders.

Right of Bondholders to Direct Proceedings

Anything to the contrary in the Resolution notwithstanding, the Holders of more than fifty percent (50%) in aggregate principal amount of the Senior Lien Revenue Obligations then Outstanding shall have the right, at any time, by an instrument or instruments in writing executed and delivered to the Paying Agent, to direct (as between such Bondholders and the Paying Agent) the time, method and place of conducting all proceedings otherwise permitted to be taken in connection with the enforcement of the terms and conditions of the Resolution, or for the appointment of a receiver or any other proceedings thereunder, provided the Paying Agent is indemnified as provided above.

Remedies Cumulative

No remedy conferred upon or reserved to the holders of any Revenue Obligations is intended to be exclusive of any other remedy or remedies, and each and every such remedy shall be cumulative and shall be in addition to every other remedy given under the Resolution or now or hereafter existing at law or in equity or by statute.

Waiver of Default

No delay or omission of any holder of any Revenue Obligations to exercise any right or power accruing upon any Event of Default shall impair any such right or power or shall be construed to be a waiver of any such Event of Default, or an acquiescence therein, and every power and remedy given by the Resolution to the holders of any Revenue Obligations may be exercised from time to time and as often as may be deemed expedient.

Application of Moneys After Default

If an Event of Default occurs and shall not have been remedied, MLGW or a receiver appointed for the purpose shall apply all Pledged Revenues as follows and in the following order of priority (subject to the last paragraph of this section):

(a) Expenses of Receiver and Paying Agent and Bond Registrar - to the payment of the reasonable and proper charges, expenses, and liabilities of the receiver and the Paying Agent and Bond Registrar under the Resolution with the amounts payable under this (a), if related to a particular series and therefore to a particular category of Revenues, first from such category and second from other categories of Revenues in amounts as determined by the receiver or the Paying Agent, and if not so related to a particular series or category of Revenues, then from all Revenues as determined by the Receiver or the Paying Agent;

(b) Operating Expenses - then, within each category of Revenues, to the payment of all reasonable and necessary related Operating Expenses;

(c) Principal or redemption price, interest, and payments on Loan Agreements and payments on related Contracts - then, within each category of Revenues, to the payment of the interest and principal or redemption price then due on the related Senior Lien Revenue Obligations and payments then due under Loan Agreement and payments under related Contracts, as follows:

(1) Unless the principal of all the Senior Lien Revenue Obligations related to such category of Revenues shall have become due and payable due to the maturity thereof, all such moneys shall be applied as follows:

first: to the payment to the persons entitled thereto of all installments of interest then due on the Senior Lien Revenue Obligations, in the order of the maturity of such installments (with interest on defaulted installments of interest at the rate or rates borne by the Senior Lien Revenue Obligations with respect to which such interest is due, but only to the extent permitted by law), and, if the amount available shall not be sufficient to pay in full any particular installment, then to the payment ratably, according to the amounts due on such installment, to the persons entitled thereto, without any discrimination or preference. If some of the Senior Lien Revenue Obligations bear interest payable at different intervals or upon different dates and if at any time moneys from the Debt Service Reserve Account must be used to pay any such interest, the

moneys in the Debt Service Reserve Account shall be applied (to the extent necessary) to the payment of all interest falling due on the dates upon which such interest is payable to and including the date six months after the date of application of such moneys. After such period, moneys in the Debt Service Reserve Account plus any other moneys available in the Interest Account shall be set aside for the payment of interest on Senior Lien Revenue Obligations of each class (a class consisting of all Senior Lien Revenue Obligations payable as to interest on the same dates) pro rata among Senior Lien Revenue Obligations of the various classes on a daily basis so that there shall accrue to each owner of a Senior Lien Revenue Obligation throughout each Fiscal Year the same proportion of the total interest payable to such owner of a Senior Lien Revenue Obligation as shall so accrue to every other owner of a Senior Lien Revenue Obligation during such Fiscal Year. As to any Compound Interest Bond which is a Senior Lien Revenue Obligation, such interest shall accrue on the Accreted Value of such Senior Lien Revenue Obligation and be set aside on a daily basis until the next compounding date for such Senior Lien Revenue Obligations, whereupon it shall be paid to the owner of such Senior Lien Revenue Obligation as interest on a defaulted obligation and only the unpaid portion of such interest (if any) shall be treated as principal of such Senior Lien Revenue Obligation.

second: to the payment to the persons entitled thereto of the unpaid principal of any of the Senior Lien Revenue Obligations which shall have become due at maturity or upon mandatory redemption prior to maturity (other than Senior Lien Revenue Obligations called for redemption for the payment of which moneys are held pursuant to the provisions of Article IX of the Resolution), in the order of their due dates, with interest upon such Senior Lien Revenue Obligations from the respective dates upon which they became due, and, if the amount available shall not be sufficient to pay in full Senior Lien Revenue Obligations due on any particular date, together with such interest, then to the payment first of such interest, ratably according to the amount of such interest due on such date, and then to the payment of such principal, ratably according to the amount of such principal due on such date, to the persons entitled thereto without any discrimination or preference. If some of the Senior Lien Revenue Obligations mature (including mandatory redemption prior to maturity as a maturity) upon a different date or dates and if at any time moneys from the Debt Service Reserve Account must be used to pay any such principal falling due, the moneys in the Debt Service Reserve Account not required to pay interest under paragraph first above shall be applied to the extent necessary to the payment of all principal falling due prior to the date 12 months after the date of application of such moneys. After such period, moneys in the Debt Service Reserve Account not required to pay interest plus any other moneys available in the Principal Account shall be set aside for the payment of principal of Senior Lien Revenue Obligations of each class (a class consisting of all Senior Lien Revenue Obligations payable as to principal on the same date) pro rata among Senior Lien Revenue Obligations of the various classes which mature or must be redeemed pursuant to mandatory redemption prior to maturity throughout each Fiscal Year in such proportion of the total principal payable on each such Senior Lien Revenue Obligation as shall be equal among all classes of Senior Lien Revenue Obligations maturing or subject to mandatory redemption within such Fiscal Year. The Accreted Value of a Compound Interest Bond which is a Senior Lien Revenue Obligation (except for interest which shall have been paid under paragraph first) shall be treated as principal for purposes of this paragraph third.

third: to the payment of the redemption premium on and the principal of any Senior Lien Revenue Obligations called for optional redemption pursuant to their terms.

fourth: to interest portions of Reimbursement Obligations that have not been designated as Senior Lien Revenue Obligations, but are related to Senior Lien Revenue Obligations pursuant to the terms of the related Contracts.

fifth: to the payment of the principal portions of Reimbursement Obligations that have not been designated as Senior Lien Revenue Obligations but are related to Senior Lien Revenue Obligations pursuant to the terms of the related Contracts.

sixth: to the payment of all other amounts then due on Loan Agreements (excluding Termination Payments) and on Contracts (excluding Termination Payments) related to Senior Lien Revenue Obligations.

(2) If the principal of all the Senior Lien Revenue Obligations shall have become due and payable, all such moneys shall be applied to the payment of the principal and interest then due and unpaid upon the Senior Lien Revenue Obligations, with interest thereon as aforesaid, and due and unpaid payments under related Contracts (excluding Termination Payments) and due and unpaid payments under Loan Agreements other than principal and interest (excluding Termination Payments), without preference or priority of principal over interest or payments on Contracts and other payments on Loan Agreements (excluding Termination Payments) or of interest over principal or payments on Contracts and other payments on Loan Agreements, or of payments on Contracts (excluding Termination Payments) over principal or interest, or of any installment of interest over any other installment of interest, or of any Senior Lien Revenue Obligation over any other Senior Lien Revenue Obligations, or of any such payment under a Contract and other payments on Loan Agreements (excluding Termination Payments) over any other such payment under a Contract and other payments on Loan Agreements (excluding Termination Payments), ratably, according to the amounts due respectively for principal, interest, and payments under Contracts and other payments on Loan Agreements (excluding Termination Payments), to the persons entitled thereto without any discrimination or preference.

Notwithstanding anything else in the Resolution to the contrary, payments made pursuant to (b) and (c) shall be made by category of Revenues to related Revenue Obligations such that:

(i) Amounts traceable to General Revenues are used only for General Revenue Obligations and related Contracts;

(ii) Amounts traceable to Released Revenues are used only for Released Revenue Obligations and related Contracts or otherwise as permitted by the Resolution;

(iii) Amounts traceable to Special Purpose Revenues are used only for Special Purpose Revenue Obligations and related Contracts or otherwise as permitted by the Resolution; and

(iv) Amounts not traceable to particular categories of Revenues shall be used first as General Revenues for purposes of this section, then as other Released Revenues, and then as Special Purpose Revenues.

Rights of Credit Issuer

Notwithstanding any other provision of the Resolution, in the event that the City or MLGW shall draw under a Credit Facility any amount for the payment of principal of or interest on any Revenue Obligations, then upon such payment the related Credit Issuer shall succeed to and become subrogated to

the rights of the recipients of such payments to the extent of such payments and such principal or interest shall be deemed to continue to be unpaid and Outstanding for all purposes and shall continue to be fully secured by the Resolution until the Credit Issuer, as successor and subrogee, has been paid all amounts owing in respect of such subrogated payments of principal and interest. Such rights shall be limited and evidenced by having MLGW note the Credit Issuer's rights as successor and subrogee on its records, and MLGW shall, upon request, deliver to the Credit Issuer (i) in the case of interest on the Revenue Obligations, an acknowledgment of the Credit Issuer's ownership of interest to be paid on the Revenue Obligations specifying the amount of interest owed, the period represented by such interest, and the numbers of the Revenue Obligations on which such interest is owed and (ii) in the case of principal of the Revenue Obligations, either the Revenue Obligations themselves duly assigned to the Credit Issuer or new Revenue Obligations registered in the name of the Credit Issuer or in such other name as the Credit Issuer shall specify. Whenever moneys become available for the payment of any interest or principal then overdue, the Credit Issuer shall be treated as to interest or principal owed to it as successor and subrogee as if it had been the holder of the Revenue Obligations on which such interest or principal is payable on any special record date therefor.

Rights and Remedies Vested in Paying Agent

All rights of action and remedies under the Resolution or under any of the Senior Lien Revenue Obligations may be enforced by the Paying Agent without the possession of any of the Senior Lien Revenue Obligations or the production thereof in any trial or other proceedings relating thereto and any such suit or proceeding instituted by the Paying Agent shall be brought in its name as Paying Agent without the necessity of joining as plaintiffs or defendants any Holders of the Senior Lien Revenue Obligations or any Credit Issuer, and any recovery of judgment shall, subject to the terms of the Resolution, be for the benefit of the Holders of the Senior Lien Revenue Obligations and any Credit Issuer.

Rights and Remedies of Bondholders

No Holder of any Senior Lien Revenue Obligation shall have any right to institute any suit, action or proceeding in equity or law for the enforcement of the Resolution, for the execution of any trust thereof or for the appointment of a receiver or to enforce any other right or remedy thereunder, unless (a) a Default has occurred of which the Paying Agent has been notified, or of which it is deemed to have notice, (b) such Default shall have become an Event of Default and the Holders of more than fifty percent (50%) in aggregate principal amount of Senior Lien Revenue Obligations then outstanding shall have made written request to the Paying Agent and shall have offered reasonable opportunity to the Paying Agent either to proceed to exercise the powers granted in the Resolution or to institute such action, suit or proceeding in its own name, and (c) such Bondholders have offered to the Paying Agent indemnity as provided in the Resolution and the Paying Agent shall thereafter fail or refuse to exercise the powers therein granted, or to institute such action, suit or proceeding in its own name. Such notification, request and offer of indemnity are declared in every case at the option of the Paying Agent to be conditions precedent to the execution of the powers and trusts of the Resolution, and to any action or cause of action for the enforcement thereof, or for the appointment of a receiver or for any other right or remedy thereunder; it being understood and intended that no one or more Holders of the Senior Lien Revenue Obligations shall have any right in any manner whatsoever to affect, disturb or prejudice the lien thereof by its, his or their action or to enforce any right or remedy thereunder except in the manner therein provided, and that all proceedings at law or in equity shall be instituted, had and maintained in the manner therein provided and for the benefit, first, of the Holders of all Senior Lien Revenue Obligations and, second, of any Credit Issuer.

Termination of Proceedings

If the Paying Agent shall have proceeded to enforce any right or remedy under the Resolution by any action at law or in equity, by the appointment of a receiver or otherwise, and such proceedings shall have been discontinued or abandoned for any reason, or shall have been determined adversely to the Paying Agent, then and in every such case MLGW, the Paying Agent, any Credit Issuer and the Bondholders shall be restored to their former positions and rights under the Resolution, respectively, with respect to the Pledged Revenues, and all rights, remedies and powers of the Paying Agent, any Credit Issuer and the Bondholders, respectively, shall continue as if no such proceedings had been taken.

Waivers of Events of Default

The Paying Agent shall waive any Event of Default under the Resolution and its consequences upon the written request of the Holders of more than fifty percent (50%) in aggregate principal amount of all Senior Lien Revenue Obligations then Outstanding, provided, however, there shall not be waived:

(i) any Event of Default pertaining to the payment of the principal or redemption price of any Senior Lien Revenue Obligation at its maturity or Redemption Date; or

(ii) any Event of Default pertaining to the payment when due of the interest on any Senior Lien Revenue Obligation unless prior to such waiver, all arrears of interest and all principal or redemption price payments in respect of which such Event of Default shall have occurred, with interest thereon (to the extent permitted by law) for the period from the occurrence of such Event of Default until paid in full at a rate per annum equal to the interest rate payable on the Senior Lien Revenue Obligations from time to time during such period in accordance with the terms of the Senior Lien Revenue Obligations, and all expenses of the Paying Agent in connection with such Event of Default, shall have been paid or provided for, and in case of any such waiver, or in case any proceeding taken by the Paying Agent on account of any such Event of Default shall have been discontinued or abandoned or for any reason, or shall have been determined adversely to the Paying Agent, then and in every such case MLGW, the Paying Agent, the Credit Issuer and the Bondholders shall be restored to their former positions and rights under the Resolution, respectively, but no such waiver shall extend to or affect any subsequent or other Event of Default, or impair any rights or remedies consequent thereon.

Paying Agent

Acceptance of Duties

With respect to the Senior Lien Revenue Obligations issued under the Resolution, the Paying Agent by participating in the closing of the initial series of Senior Lien Revenue Obligations, shall be deemed to have accepted the duties imposed upon it by the Resolution, and to have agreed to perform said duties, but only upon and subject to the following express terms and conditions;

(a) The Paying Agent, prior to the occurrence of an Event of Default and after the curing of all Events of Default which may have occurred undertakes to perform such duties and only such duties as are specifically set forth in the Resolution, and no implied agreements or obligations shall be read into the Resolution against the Paying Agent. In case an Event of Default has occurred and is continuing, the Paying Agent shall exercise such of the rights and powers vested in it by the Resolution and use the same degree of care and skill in their exercise as a prudent corporate trustee would exercise or use under the circumstances.

(b) The Paying Agent may execute any of the trusts or powers of the Resolution and perform any of its duties by or through attorneys, agents, receivers or employees but shall be answerable for the conduct of the same in accordance with the standard specified in subsection (a) above, and shall be entitled to advice of counsel concerning all matters relating to its duties thereunder, and may in all cases pay reasonable compensation to all such attorneys, agents, receivers and employees as may reasonably be employed in connection with the trusts thereof. The Paying Agent may act upon the opinion or advice of any attorney (who may be the attorney or attorneys for MLGW), approved by the Paying Agent in the exercise of reasonable care. The Paying Agent shall not be responsible for any loss or damage resulting from any action or non-action in good faith in reliance upon such opinion or advice.

(c) The Paying Agent shall not be responsible for any recital in the Resolution, or in the Senior Lien Revenue Obligations (except with respect to the authentication certificate of the Paying Agent endorsed on the Senior Lien Revenue Obligations), or for the recording or rerecording, filing or re-filing of the Resolution or any other document, or for the validity of the execution or approval hereof by MLGW or of any supplements thereto or instruments of further assurance, or for the sufficiency of the security for the Senior Lien Revenue Obligations, or for the value of or title in and to the Pledged Revenues or any part of the Pledged Revenues or otherwise as to the maintenance of the security hereof, and the Paying Agent shall not be bound to ascertain or inquire as to the performance or observance of any agreements or conditions on the part of MLGW except as set forth in the Resolution.

(d) Except to the extent specifically provided in the Resolution, the Paying Agent shall not be accountable for the use of the proceeds of any of the Senior Lien Revenue Obligations. The Paying Agent, in its individual capacity, may in good faith buy, sell, own, hold or deal in any of the Revenue Obligations issued under the Resolution, and may join in any action which any Bondholder may be entitled to take with like effect as if such Person did not act in any capacity thereunder. The Paying Agent, in its individual capacity, either as principal or agent, may also engage in or be interested in any financial or other transaction with any Credit Issuer, and may act as depository. Paying Agent or agent for any committee or body of Bondholders in connection with any other resolution or similar agreement to which MLGW or any Credit Issuer is a party and hold any bonds secured thereby or other obligations of MLGW as freely as if such Person did not act in any capacity under the Resolution.

(e) Except as is otherwise provided in subsection (a) above:

(i) The Paying Agent shall be protected in acting upon opinions of Counsel and upon any notice, request, consent, certificate, order, affidavit, letter, telegram or other paper or document believed to be genuine and correct and to have been signed or sent by the proper Person or Persons. Any action taken by the Paying Agent, pursuant to the Resolution upon the request, authority or consent of the Bond Registrar acting at the direction of any Person who at the time of making such request or giving such authority or consent is the Holder of any Senior Lien Revenue Obligation, shall be conclusive and binding upon all future Holders of the same Senior Lien Revenue Obligation and upon Senior Lien Revenue Obligations issued in exchange therefor or in place thereof. The Paying Agent may conclusively rely upon a certificate furnished by any Credit Issuer as to amounts owing with respect to any Credit Facility.

(ii) As to the existence or non-existence of any fact or as to the sufficiency or validity of any instrument, paper or proceeding, the Paying Agent shall be entitled to rely upon a certificate of MLGW as sufficient evidence of the facts therein contained and prior to the occurrence of an Event of Default of which the Paying Agent has been notified as provided in subsection (e)(iv) of this Section, or of which by said subsection it is deemed to have notice, shall also be at liberty to accept a similar certificate to the effect that any particular dealing, transaction or action is necessary or expedient, but may at its discretion secure such further evidence deemed

necessary or advisable, but shall in no case be bound to secure the same. The Paying Agent may accept a certificate of MLGW to the effect that a resolution in the form therein set forth has been adopted as conclusive evidence that such resolution has been adopted and is in full force and effect.

(iii) The right of the Paying Agent to do things enumerated in the Resolution shall not be construed as a duty and the Paying Agent shall not be answerable for other than its gross negligence or willful misconduct.

(iv) Unless a Responsible Officer of the Paying Agent shall be specifically notified in writing of an Event of Default by MLGW, any Credit Issuer or by the Holders of more than fifty percent (50%) in aggregate principal amount of Outstanding Senior Lien Revenue Obligations, the Paying Agent shall not be required to take notice or be deemed to have notice of any Default under the Resolution except failure to pay the principal or redemption price of or interest on the Senior Lien Revenue Obligations when due. All notices or other instruments required to be delivered to the Paying Agent must, in order to be effective, be delivered at the principal corporate trust office of the Paying Agent, and in the absence of such notice so delivered the Paying Agent may conclusively assume there is no Default except as aforesaid. In the event that any payment referred to above is not paid when due, the Paying Agent shall give Immediate Notice to MLGW and any Credit Issuer that such payment has not been made and shall immediately confirm such notice by registered or certified mail to MLGW and any Credit Issuer.

(f) The Paying Agent shall not be required to give any bond or surety in respect of the execution of the said trusts and powers or otherwise in respect of the premises.

(g) Notwithstanding anything elsewhere therein contained, the Paying Agent shall have the right, but shall not be required, to demand, in respect of the authentication of any Senior Lien Revenue Obligations, the taking of any action reasonably within the purview of the Resolution, as a condition of such action by the Paying Agent.

(h) Before taking any action under the Resolution (other than acting on a Credit Facility) at the request or direction of any Bondholder, the Paying Agent may require that satisfactory security or indemnity be furnished by the Holders of the Senior Lien Revenue Obligations for the reimbursement of all expenses to which it may be put and to protect it against all liability, except liability which is adjudicated to have resulted from the gross negligence or willful misconduct of the Paying Agent, by reason of any action so taken.

(i) All moneys received by the Paying Agent or the Bond Registrar for the Senior Lien Revenue Obligations shall, until used or applied or invested as therein provided, be held in trust for the purposes for which they were received but need not be segregated from other funds except to the extent required in the Resolution or by law.

(j) No provision of the Resolution shall require the Paying Agent to expend or risk its own funds or otherwise incur any financial liability in the performance of any of its duties thereunder, or in the exercise of any of its rights or powers, if it shall have reasonable grounds for believing that repayment of such funds or adequate security or indemnity against such risk or liability is not reasonably assured to it.

(k) The Paying Agent shall be entitled to pay any amount to a Credit Issuer required under the Resolution upon written notice from the Credit Issuer that such amount is due and owed by MLGW to the Credit Issuer pursuant to the Resolution, a Credit Facility or other related documents, and the Paying Agent shall have no obligation to determine whether such amount is in fact owed to the Credit Issuer.

Fees, Charges and Expenses of Paying Agent

MLGW shall pay and/or reimburse the Paying Agent reasonable compensation for its Ordinary Services rendered under the Resolution.

Notice by Paying Agent and Division

(a) If a Default occurs of which the Paying Agent is by the terms of the Resolution required to take notice or if notice of a Default be given as provided in the Resolution, then the Paying Agent shall give written notice thereof by first-class mail, postage prepaid, to any Credit Issuer, MLGW and the Holders of all Senior Lien Revenue Obligations then Outstanding of the applicable series.

(b) At any time that any series of Senior Lien Revenue Obligations are rated by a Rating Agency or MLGW, shall promptly give notice to such Rating Agency, at such address as the Rating Agency shall have furnished to MLGW of:

- (i) any change in the identity of the Paying Agent,
- (ii) any amendments or supplements of the Resolution or the Senior Lien Revenue Obligations,
- (iii) any redemption of all the Senior Lien Revenue Obligations or any mandatory purchase of all the Senior Lien Revenue Obligations,
- (iv) any amendment, renewal, substitution, termination or expiration of any Credit Facility; and
- (v) any other information that the Rating Agency may reasonably request.

Removal of the Paying Agent

The Paying Agent may be removed at any time, by an instrument or concurrent instruments in writing delivered to the Paying Agent and to MLGW and any Credit Issuer, and signed by MLGW or the Holders of more than fifty percent (50%) in aggregate principal amount of the outstanding Senior Lien Revenue Obligations; provided, however, that such removal shall take effect only upon the appointment of a successor Paying Agent as provided in the Resolution and provided further if the removal is by MLGW, that there shall not then exist an Event of Default under the Resolution.

Defeasance

Provision for Payment

Except as otherwise set forth in a Supplemental Resolution authorizing Revenue Obligations, all or any portion of the Revenue Obligations for the payment, prepayment or redemption of which sufficient moneys or sufficient Defeasance Obligations shall have been deposited with the Paying Agent or an escrow agent selected by MLGW (whether upon or prior to the maturity or the redemption date of such Revenue Obligations) shall be deemed to be paid and no longer Outstanding under the Resolution; provided, however, that if such Revenue Obligations are to be redeemed prior to the maturity thereof, notice of such redemption shall have been duly given as provided in Article III of the Resolution or firm and irrevocable arrangements shall have been made for the giving of such notice. Defeasance Obligations

shall be considered sufficient for purposes of Article IX of the Resolution only; (i) if such Defeasance Obligations are not callable by the issuer of the Defeasance Obligations prior to their stated maturity, and (ii) if such Defeasance Obligations fall due and bear interest in such amounts and at such times as will assure sufficient cash (whether or not such Defeasance Obligations are redeemed by MLGW pursuant to any right of redemption) to pay currently maturing interest and to pay principal and redemption premiums, if any, when due on the Revenue Obligations without rendering the interest on any Tax-Exempt Bonds includable in gross income of any owner thereof for federal income tax purposes.

MLGW may at any time surrender to the Bond Registrar for cancellation by it any Bonds previously authenticated and delivered under the Resolution which MLGW may have acquired in any manner whatsoever. All such Bonds, upon such surrender and cancellation, shall be deemed to be paid and retired.

Release of Pledge

If all Revenue Obligations and obligations secured by a lien on a category of Revenues have been paid or provision for payment thereof made pursuant to the Resolution and the related Supplemental Resolution, then at the option of MLGW, the terms and provisions of the Resolution relating solely to such category of Revenues may be determined as void and of no further force or effect; provided the other terms and provisions of the Resolution shall remain in effect until the election of MLGW, after payment or provision for payment of all Revenue Obligations and obligations secured by a lien created pursuant to the Resolution on any Revenues.

Supplemental Resolutions

Supplemental Resolutions Not Requiring Consent of Bondholders

MLGW, from time to time and at any time, subject to the conditions and restrictions in the Resolution, may adopt one or more Supplemental Resolutions which thereafter shall form a part of the Resolution, for any one or more or all of the following purposes:

(a) to add to the covenants and agreements in the Resolution other covenants and agreements thereafter to be observed or to surrender, restrict, or limit any right or power reserved in the Resolution to or conferred upon MLGW or the City (including but not limited to the right to issue Additional Obligations);

(b) to make such provisions for the purpose of curing any ambiguity, or of curing, correcting, or supplementing any defective provision contained in the Resolution, or in regard to matters or questions arising under the Resolution, as MLGW may deem necessary or desirable and not inconsistent with the Resolution;

(c) to subject to the lien and pledge of the Resolution additional revenues, receipts, properties, or other collateral;

(d) to evidence the appointment of successors to any Paying Agent(s) or Bond Registrars);

(e) to modify, amend, or supplement the Resolution in such manner as to permit the qualification of the Resolution under the Trust Indenture Act of 1939 or any federal statute hereinafter in effect, and similarly to add to the Resolution such other terms, conditions, and provisions as may be permitted or required by such Trust Indenture Act of 1939 or any similar federal statute;

(f) to make any modification or amendment of the Resolution required in order to make any Revenue Obligations eligible for acceptance by DTC or any similar holding institution or to permit the issuance of any Revenue Obligations or interests therein in book-entry form;

(g) to modify any of the provisions of the Resolution in any respect if such modification shall not become effective until after all the Outstanding Revenue Obligations immediately prior to the effective date of such Supplemental Resolution shall cease to be Outstanding and if any Revenue Obligations issued contemporaneously with or after the effective date of such Supplemental Resolution shall contain a specific reference to the modifications contained in such subsequent proceedings;

(h) to modify the provisions of the Resolution with respect to the disposition of any moneys remaining in the Project Fund upon the completion of any Project or to revise, enlarge or reduce the definition or description of any particular Project;

(i) to create additional subaccounts or to abolish any subaccounts within any account;

(j) to modify the Resolution to permit the qualification of any Revenue Obligations for offer or sale under the securities laws of any state in the United States of America;

(k) to modify the Resolution in connection with the issuance of Additional Obligations or Subordinate Lien Obligations permitted to be issued under the Resolution prior to such modification, and such modification may deal with any subjects and make any provisions relating to the Additional Obligations or Subordinate Lien Obligations which MLGW deems necessary or desirable for that purpose;

(l) to make such modifications in the provisions of the Resolution as may be deemed necessary by MLGW to accommodate the issuance of Revenue Obligations which (i) are Compound Interest Bonds (including, but not limited to, provisions for determining the Debt Service Requirement for such Compound Interest Bonds and for treatment of Accreted Value in making such determination) or (ii) bear interest at a Variable Rate;

(m) to make such modifications as are necessary to permit the combination of the System with the other utility systems operated by MLGW for purposes of collecting and accounting for revenues; or

(n) to modify any of the provisions of the Resolution in any respect (other than a modification of the type described in the Resolution requiring the unanimous written consent of the holders); provided that for (i) any Outstanding Revenue Obligations which are assigned a Rating and which are not secured by a Credit Facility providing for the payment of the full amount of principal and interest to be paid thereon, each Rating Agency shall have given written notification to MLGW that such modification will not cause the then applicable Rating on any Revenue Obligations to be reduced or withdrawn, and (ii) any Outstanding Revenue Obligations which are secured by Credit Facilities providing for the payment of the full amount of the principal and interest to be paid thereon, each Credit Issuer shall have consented in writing to such modification.

Any Supplemental Resolution authorized by the provisions of this Section may be adopted by MLGW and the City without the consent of or notice to the owners of any of the Revenue Obligations (except as otherwise set forth in such Supplemental Resolution) at the time Outstanding, notwithstanding any of the provisions of the Resolution described under "Supplemental Resolutions Requiring Consent of Holders of Revenue Obligations" below. Any such Supplemental Resolution may modify the provisions of the Resolution in such a manner, and to such extent and containing such provisions, as MLGW may

deem necessary or desirable to effect any of the purposes stated above. As used in this Section, the term “modify” shall mean “modify, amend, or supplement” and the term “modification” shall mean “modification, amendment, or supplement.” Modifications to any Loan Agreement shall also be made only in conformance with any additional provisions required by such Loan Agreement. MLGW and the City may agree in any Supplemental Resolution authorizing Revenue Obligations not to exercise its right to modify the Resolution pursuant to any of the provisions above without the consent of a requisite number of holders of the Revenue Obligations being issued.

The provisions of this Section and described under “Supplemental Resolutions Requiring Consent of Holders of Revenue Obligations below of the Resolution shall be interpreted by category of Revenues such that each provision of any Supplemental Resolution shall be reviewed for compliance with such sections upon its effect on the Revenue Obligations and Loan Agreements secured by the related category of Revenues and whether the consent of any holders, of a majority of holders of a certain category of Revenue Obligations and Loan Agreements or the consent of all such holders shall be determined with respect to each category of Revenues. Supplemental Resolutions may be adopted containing provisions which (1) do not require the consents of any holders, (2) require the consents of some but not all holders of Revenue Obligations and Loan Agreements related to a category of Revenues, (3) require the consents of some but not all holders of Revenue Obligations and Loan Agreements related to several categories of Revenues, (4) require the consents of all holders of Revenue Obligations and Loan Agreements related to a category of Revenues, (5) require the consents of all holders of Revenue Obligations and Loan Agreements, or (6) are covered in a combination of some or all of (1) through (5).

Supplemental Resolutions Requiring Consent of Holders of Revenue Obligations

Exclusive of Supplemental Resolutions covered under “Supplemental Resolutions Not Requiring Consent of Bondholders” above, with the consent (evidenced as provided in Article VIII of the Resolution) of the owners of not less than a majority in aggregate principal amount of the Outstanding Revenue Obligations of each class (senior and subordinate), voting separately by class, of each series of Revenue Obligations related to an affected category of Revenues or related Revenue Obligations, MLGW and the City may from time to time and at any time adopt a Supplemental Resolution for the purpose of adding any provisions to or changing in any manner or eliminating any of the provisions of the Resolution or of any Supplemental Resolution; provided, however, that no such Supplemental Resolution shall: (a) extend the maturity date or due date of any mandatory sinking fund redemption with respect to any Revenue Obligations Outstanding under the Resolution; (b) reduce or extend the time for payment of principal of, redemption premium, or interest on any Revenue Obligations Outstanding under the Resolution; (c) reduce any premium payable upon the redemption of any Revenue Obligations under the Resolution or advance the date upon which any Revenue Obligations may first be called for redemption prior to its stated maturity date; (d) give to any Revenue Obligation or Revenue Obligations (or related Contracts) a preference over any other Revenue Obligation or Revenue Obligations (or related Contracts) not already permitted by the Resolution; (e) permit the creation of any lien or any other encumbrance on the Pledged Revenues having a lien equal to or prior to the lien created under the Resolution for the Senior Lien Revenue Obligations; (f) reduce the percentage of owners of Revenue Obligations required to approve any such Supplemental Resolution; or (g) deprive the owners of the Revenue Obligations of the right to payment of the Revenue Obligations or from the Pledged Revenues, without, in each case, the consent of the owners of all the Revenue Obligations then Outstanding of the category of Revenue Obligations affected thereby. No amendment may be made under this Section which affects the rights or duties of any Credit Issuer securing any of the Revenue Obligations or any Qualified Hedge Provider under any Hedge Agreement without its written consent. The provisions of this paragraph shall be strictly construed such that Supplemental Resolutions requiring the consents of owners of Revenue Obligations shall be limited to those clearly falling within one of the enumerated categories.

If MLGW intends to enter into or adopt any Supplemental Resolution as described in this Section, MLGW shall mail, by registered or certified mail, to the registered owners of the Revenue Obligations at their addresses as shown on the Bond Register and the holders or assignees of such holders of any Loan Agreement, a notice of such intention along with a description of such Supplemental Resolution not less than 30 days prior to the proposed effective date of such Supplemental Resolution. The consents of the registered owners of the Revenue Obligations and the holders or assignees of such holders of any Loan Agreement need not approve the particular form of wording of the proposed Supplemental Resolution, but it shall be sufficient if such consents approve the substance thereof. Failure of the owner of any Bond and the holders or assignees of such holders of any Loan Agreement to receive the notice required in the Resolution shall not affect the validity of any Supplemental Resolution if the required number of owners of the Bonds and the holders or assignees of such holders of any Loan Agreement of each class shall provide their written consent to such Supplemental Resolution. Modifications to any Loan Agreement shall also be made in conformance with any additional provisions required by such Loan Agreement. In connection with the issuance of any Revenue Obligations, the underwriter of such Revenue Obligations shall be deemed to be the initial holder of such Revenue Obligations for all purposes under the Resolution, whether or not such Revenue Obligations are delivered in book-entry form through DTC or another securities depository, and the consent of such underwriter to any Supplemental Resolution shall be fully binding on all subsequent holders of such Revenue Obligations.

Notwithstanding any provision of the Resolution to the contrary, upon the issuance of a Credit Facility to secure any Revenue Obligations and for the period in which such Credit Facility is outstanding, the Credit Issuer may have the consent rights of the owners of the Revenue Obligations which are secured by such Credit Facility pertaining to some or all of the amendments or modifications of the Resolution, to the extent provided in the applicable Supplemental Resolution. Notwithstanding the foregoing, if a Credit Issuer is granted the consent rights of the owners of any Revenue Obligations in a Supplemental Resolution and refuses to exercise such consent rights, either affirmatively or negatively, then the registered owners of the Revenue Obligations secured by the related Credit Facility may exercise such consent rights.

Notice of Supplemental Resolutions

MLGW shall cause the Bond Registrar to mail a notice by registered or certified mail to the registered owners of all Bonds Outstanding, at their addresses shown on the Bond Register or at such other address as has been furnished in writing by such registered owner to the Bond Registrar, and to the holder or its assignee of any Loan Agreement at the address set forth therein, setting forth in general terms the substance of any Supplemental Resolution which has been: (i) adopted by MLGW pursuant to the Resolution; or (ii) approved by holders or any Credit Issuer and adopted by MLGW pursuant to the Resolution.

Bond Opinion for Supplemental Resolutions

So long as there are Tax-Exempt Bonds Outstanding, no Supplemental Resolution may become effective prior to the filing by MLGW of an opinion from Bond Counsel that such Supplemental Resolution will have no adverse effect on the tax status of any Tax-Exempt Bonds and the adoption of such Supplemental Resolution was permitted by the terms of the Resolution.

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APPENDIX G

SUMMARY OF CERTAIN PROVISIONS OF THE GAS SYSTEM RESOLUTION

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Summary of Certain Provisions of the Gas System Resolution

The following briefly summarizes certain terms and provisions of the Master Resolution adopted by MLGW on June 1, 2016 and by the City on July 5, 2016; as supplemented by a First Supplemental Resolution adopted by MLGW on June 1, 2016 and by the City on July 5, 2016; and as supplemented by the Second Supplemental Resolution adopted by MLGW on July 19, 2017 and by the City on August 22, 2017; and as supplemented by the Third Supplemental Resolution adopted by MLGW on June 30, 2020, and by the City on August 4, 2020 (collectively, the “Resolution”). This summary is not a complete explanation of the terms and conditions of the Resolution. Investors should refer to the Resolution for a complete statement of the terms, provisions and conditions thereof.

Definitions of Certain Terms

“**Acquired System**” means any other gas system or facility acquired by the City or MLGW pursuant to State law.

“**Acts**” mean Chapter 34 of Title 7 and Chapter 21 of Title 9 of the Tennessee Code Annotated, as amended.

“**Additional Interest**” means, for any period during which any Credit Facility Bonds are owned by a Credit Issuer pursuant to a Credit Facility or Credit Facility Agreement, the amount of interest accrued on such Credit Facility Bonds at the Credit Facility Bond Rate less the amount of interest which would have accrued during such period on an equal principal amount of Bonds at the Bond Rate.

“**Additional Obligations**” means Revenue Obligations issued in accordance with and pursuant to the Resolution.

“**Annual Budget**” means the annual budget of MLGW relating to the System (which shall specify all costs, obligations, and expenses properly allocable to the System), as amended or supplemented in accordance with established procedures of the Board, adopted by the Board and approved by the Council or otherwise in effect for a particular Fiscal Year.

“**Balloon Date**” means any Principal Maturity Date or Put Date for Balloon Obligations in a Balloon Year.

“**Balloon Obligations**” means any Revenue Obligations, 25% or more of the original principal amount of which (a) is due in any 12-month period or (b) may, at the option of the holders thereof, be required to be redeemed, prepaid, purchased directly or indirectly by the City or MLGW, or otherwise paid in any 12-month period; provided that, in calculating the principal amount of such Revenue Obligations due or required to be redeemed, prepaid, purchased, or otherwise paid in any 12-month period, such principal amount shall be reduced to the extent that all or any portion of such amount is required to be redeemed or amortized prior to such 12-month period.

“**Balloon Year**” means any 12-month period in which more than 25% of the original principal amount of related Balloon Obligations mature or are subject to mandatory redemption or could, at the option of the holders thereof, be required to be redeemed, prepaid, purchased directly or indirectly by the City or MLGW, or otherwise paid.

“**Beneficiaries**” means the holder of any Revenue Obligations and the parties to Contracts.

“Board” means the Board of Light, Gas and Water Commissioners operating as the governing body of MLGW.

“Bond Counsel” means any firm of nationally recognized bond counsel experienced in matters relating to tax-exempt financing retained by MLGW.

“Bondholder” or **“holder”** means the registered owner or the holder of one or more Revenue Obligations.

“Bond Rate” means the rate of interest per annum payable on specified Revenue Obligations other than Credit Facility Bonds.

“Bond Register” means the registration books maintained and to be maintained by the Bond Registrar.

“Bond Registrar” means any bank or trust company designated as such by MLGW with respect to any of the Bonds. Such Bond Registrar shall perform the duties required of the Bond Registrar in the Resolution.

“Bonds” means any revenue bonds or notes authorized by and authenticated and delivered pursuant to the Resolution.

The term **“category”** or **“category of Revenues”** means an objectively definable portion of Revenues related to a particular type of service, activity or facility, including the categories of General Revenues and Special Purpose Revenues and subcategories within such categories. A “category of Revenues,” unless otherwise determined by MLGW, includes Investment Earnings or other moneys in funds or amounts derived from such portion of Revenues.

“City” means the City of Memphis, Tennessee, a municipal corporation created and existing under the laws of the State.

“City Payments” means any amounts payable by MLGW to the City or payable by MLGW to any other entity at the direction of the Council, including but not limited to any payments in lieu of taxes or any dividend payments resulting from any equity investment by the City in the System.

“Code” means the Internal Revenue Code of 1986, as amended, and any applicable regulations thereunder.

“Commitment,” when used with respect to Balloon Obligations, means a binding written commitment from a financial institution, surety, or insurance company to refinance such Balloon Obligations on or prior to any Balloon Date thereof, including without limitation any Credit Facility for such Balloon Obligations.

“Consulting Engineer” means (a) an engineering firm or individual engineer employed by MLGW with substantial experience in advising utilities similar to the System operated by MLGW as to the construction and maintenance of the System and in the projection of relative costs of, and revenues resulting from, expansion in the System or (b) an engineer or engineers who are employees of MLGW whose reports or projections are certified by a Municipal Advisor.

“Contract Payments Account” means the Contract Payments Account within the Sinking Fund established pursuant to the Resolution.

“Contracts” means all Credit Facility Agreements, including any related Reimbursement Obligations, all agreements with respect to Reserve Account Credit Facilities, including any related Reimbursement Obligations and all Qualified Hedge Agreements.

“Costs,” with respect to any Project, means the total cost, paid or incurred, to study, plan, design, finance, acquire, construct, reconstruct, install, equip or otherwise implement the Project, including improvements to another Project, and shall include, but shall not be limited to, the following costs and expenses relating to such Project and the reimbursement to MLGW for any such items previously paid by MLGW:

- i) the cost of all lands, real or personal properties, rights, easements and franchises acquired;
- ii) the cost of all financing charges incurred and interest occurring prior to and during construction, including interest on the Revenue Obligations, and, subject to approval by Bond Counsel and otherwise not prohibited by law, the cost of all financing charges incurred and interest occurring after construction, including interest on the Revenue Obligations;
- iii) the cost of the acquisition, construction, reconstruction, implementation, installation or equipping of any Project;
- iv) the cost of the acquisition of any long-term supply of natural gas pursuant to any prepaid gas agreement with any supplier of natural gas;
- v) the cost of engineering, architectural, planning, development, and supervisory services, fiscal agents’ and legal expenses, plans and specifications, and other expenses necessary or incident to determining the feasibility or practicability of any Project, administrative expenses, and such other expenses as may be necessary or incident to any financing with proceeds of Revenue Obligations;
- vi) the cost of placing any Project in operation;
- vii) the cost of condemnation of property necessary for construction implementation and operation;
- viii) the costs of issuing any Revenue Obligations to finance or to refinance any Project;
- ix) any other costs which may be incident to any Project prior to completion and implementation; and
- x) any other costs permitted by the Acts.

“Council” means the governing body of the City.

“Credit Facility” means any letter of credit, insurance policy, guaranty, surety bond, standby bond purchase agreement, line of credit, revolving credit agreement, or similar obligation, arrangement, or instrument issued by a bank, insurance company, or any entity that is used by MLGW to perform one or more of the following tasks: (a) enhancing MLGW’s credit by assuring owners of any of the Revenue Obligations that principal of and interest on such Revenue Obligations will be paid promptly when due; (b) providing liquidity for the owners of Revenue Obligations through undertaking to cause Revenue Obligations to be bought from the owners thereof when submitted pursuant to an arrangement prescribed by a Supplemental Resolution; or (c) remarketing any Revenue Obligations so submitted to the Credit

Issuer (whether or not the same Credit Issuer is remarketing the Revenue Obligations). The term Credit Facility shall not include a Reserve Account Credit Facility.

“Credit Facility Agreement” means an agreement between the City, at the request of the Board and/or MLGW, and a Credit Issuer pursuant to which the Credit Issuer issues a Credit Facility and may include a related Reimbursement Obligation. The term Credit Facility Agreement shall not include an agreement with respect to a Reserve Account Credit Facility.

“Credit Facility Bond” means any Revenue Obligation purchased and held by a Credit Issuer pursuant to a Credit Facility Agreement. A Revenue Obligation shall be deemed a Credit Facility Bond only for the actual period during which such Revenue Obligation is owned by a Credit Issuer pursuant to a Credit Facility Agreement.

“Credit Facility Bond Rate” means the rate of interest payable on Credit Facility Bonds, as may be provided in a Credit Facility or Credit Facility Agreement.

“Credit Issuer” means any issuer of a Credit Facility then in effect for all or part of the Revenue Obligations. The term Credit Issuer shall not include any Reserve Account Credit Facility Provider. Whenever in the Resolution the consent of the Credit Issuer is required, such consent shall only be required from the Credit Issuer whose Credit Facility is issued with respect to the Revenue Obligations for which the consent is required.

“Debt Service Requirement” means, with respect to Revenue Obligations, the total principal and interest coming due, whether at maturity or upon mandatory redemption (less any amount of interest that is capitalized and payable with the proceeds of debt on deposit with MLGW or any Paying Agent), in any specified period, provided:

(a) If any Revenue Obligations Outstanding or proposed to be issued shall bear interest at a Variable Rate, including Hedged Obligations if the interest thereon calculated as set forth below is expected to vary and Revenue Obligations secured by a Credit Facility if the interest thereon calculated as set forth below is expected to vary, the interest coming due in any specified future period shall be determined as if the Variable Rate in effect at all times during such future period equaled, at the option of MLGW, either (1) the average of the actual Variable Rates which were in effect (weighted according to the length of the period during which each such Variable Rate was in effect) for the most recent 12-month period immediately preceding the date of calculation for which such information is available (or shorter period if such information is not available for a 12-month period), or (2) the current average annual fixed rate of interest on securities of similar quality having a similar maturity date as certified by a Municipal Advisor.

(b) With respect to any Revenue Obligations secured by a Credit Facility, the Debt Service Requirement therefor shall include (1) any commission or commitment fee obligations with respect to such Credit Facility, (2) the outstanding amount of any Reimbursement Obligation and interest thereon, (3) any Additional Interest owed on Credit Facility Bonds, and (4) any remarketing agent fees; provided if (A) the Credit Facility requires the Credit Issuer to make all interest payments on the Revenue Obligations, (B) the Reimbursement Obligation provides for payments by MLGW or the Credit Issuer based on levels of, or changes or differences in, interest rates, currency exchange rates, or stock or other indices, and (C) the Credit Issuer, upon the execution of the Credit Facility Agreement, would qualify as a Qualified Hedge Provider if the Credit Facility Agreement were to be construed as a Hedge Agreement and the related Revenue Obligations as Hedged Obligations, then interest on such Revenue Obligations shall be calculated by adding (x) the amount of interest payable on such Revenue Obligations pursuant to their terms and (y) the amount of payments for interest to be made by the City or MLGW under the Credit

Facility Agreement, and subtracting (z) the amounts payable by the Credit Issuer to the City or MLGW or as interest on such Revenue Obligations as specified in the Credit Facility Agreement; but only to the extent the Credit Issuer is not in default under the Credit Facility and if such default has occurred and is continuing, interest on such Revenue Obligations shall be calculated as if there were no Credit Facility. In determining the amounts described in this paragraph for any future period, MLGW (i) may assume that any Credit Facility presently in effect will remain in effect even if such Credit Facility has an expiration date prior to the maturity of the related Revenue Obligations and (ii) may assume that the current payments relating to the Credit Facility will remain in effect or may estimate such payments in the future provided that MLGW obtains a certificate from a Municipal Advisor that such estimates are reasonable.

(c) With respect to any Hedged Obligations, the interest on such Hedged Obligations during any Hedge Period and for so long as the provider of the related Qualified Hedge Agreement has not defaulted on its payment obligations thereunder shall be calculated by adding (1) the amount of interest payable by the City or MLGW on such Hedged Obligations pursuant to their terms and (2) the amount of Hedge Payments payable by the City or MLGW under the related Qualified Hedge Agreement and subtracting (3) the amount of Hedge Receipts payable by the provider of the related Qualified Hedge Agreement at the rate specified in the related Qualified Hedge Agreement; provided, however, that to the extent that the provider of any Qualified Hedge Agreement is in default thereunder, the amount of interest payable by the City or MLGW on the related Hedged Obligations shall be the interest calculated as if such Qualified Hedge Agreement had not been executed. In determining the amount of Hedge Payments or Hedge Receipts that are not fixed throughout the Hedge Period (i.e., which are variable), and that are payable or receivable for any future period, such Hedge Payments or Hedge Receipts for any period of calculation (the “**Determination Period**”) shall be computed by assuming that the variables comprising the calculation (e.g., indices) applicable to the Determination Period are equal to the average of the actual variables which were in effect (weighted according to the length of the period during which each such variable was in effect) for the most recent 12-month period immediately preceding the date of calculation for which such information is available (or shorter period if such information is not available for a 12-month period).

(d) For the purpose of calculating the Debt Service Requirement on Balloon Obligations (1) which are subject to a Commitment or (2) which do not have a Balloon Year commencing within 12 months from the date of calculation or (3) which are issued in anticipation of the issuance of Bonds that are not Balloon Obligations or (4) which are issued pursuant to a Supplemental Resolution which contemplates that the principal of Revenue Obligations tendered for payment at the option of the holder thereof prior to the stated maturity of such Revenue Obligations will be paid from the proceeds of the remarketing of such tendered Revenue Obligations (or from the issuance of new Revenue Obligations authorized by such Supplemental Resolution), in each such case, at the option of MLGW, (A) the actual principal and interest on such Balloon Obligations in any specified period shall be included in the Debt Service Requirement, subject to the other assumptions contained therein, or (B) the principal on such Balloon Obligations shall be assumed to be amortized in such amounts as to require substantially equal annual amounts to be paid for principal and interest over an assumed amortization period of 20 years at an assumed interest rate (which shall be the interest rate certified by a Municipal Advisor to be the interest rate at which MLGW could reasonably expect to borrow the same amount by issuing Bonds with the same priority of lien as such Balloon Obligations and with a 20-year term); provided, however, that if the maturity of such Balloon Obligations (taking into account the term of any Commitment) is in excess of 20 years from the date of issuance, then such Balloon Obligations shall be assumed to be amortized in substantially equal annual amounts to be paid for principal and interest over an assumed amortization period of years equal to the number of years from the date of issuance of such Balloon Obligations to maturity (including the Commitment) and at the interest rate applicable to such Balloon Obligations. For the purpose of calculating the Debt Service Requirement on Balloon Obligations not described in the

preceding sentence, the principal payable on such Bonds during the Balloon Year shall be calculated as if paid on the Balloon Date.

(e) The principal of and interest on Revenue Obligations, amounts for interest under a Credit Facility and Hedge Payments shall be excluded from the determination of Debt Service Requirement to the extent that the same were or are expected to be paid with amounts on deposit on the date of calculation (or proceeds of Revenue Obligations to be deposited on the date of issuance of proposed Revenue Obligations) in a fund under the Resolution.

“Debt Service Reserve Account” means the Debt Service Reserve Account within the Sinking Fund established in the Resolution.

“Debt Service Reserve Requirement” means an amount determined from time to time by MLGW as a reasonable reserve, if any, for the payment of principal of and interest on Revenue Obligations for which a subaccount in the Debt Service Reserve Account is created or added to pursuant to a Supplemental Resolution.

“Defeasance Obligations” means Government Obligations and such other investments that are from time to time permitted by applicable law to be used by the City or MLGW to provide for the payment of Revenue Obligations in connection with the defeasance or refunding of such Revenue Obligations.

“Depository” means any depository of a fund established under the Resolution selected by MLGW in its discretion.

“DTC” means The Depository Trust Company, New York, New York, or its nominee, or its successors and assigns, or any other depository performing similar functions under the Resolution.

“Fiscal Year” means the 12-month period used by MLGW for its general accounting purposes, as it may be changed from time to time. The Fiscal Year at the time the Resolution was adopted began on January 1, and ended on December 31.

“Forecast Period” means a period beginning with the first Fiscal Year beginning after the later of (a) the Fiscal Year in which any proposed Additional Obligations are to be issued or (b) the Fiscal Year in which any Project to be financed with the proceeds of any proposed Additional Obligations is, in the judgment of MLGW, expected to be completed, and ending on the last day of the fifth (5th) Fiscal Year thereafter.

“General Revenue Account” means the General Revenue Account within the Revenue Fund established in the Resolution.

“General Revenue Obligations” means Revenue Obligations secured by a Senior Lien on General Revenues.

“General Revenue Facilities” means the System, but not including any Special Purpose Facilities.

“General Revenues” means all Revenues other than Special Revenues.

“Government Obligations” means (a) direct obligations of the United States of America for the full and timely payment of which the full faith and credit of the United States of America is pledged or (b)

obligations issued by a person controlled or supervised by and acting as an instrumentality of the United States of America, the full and timely payment of the principal of and the interest on which is fully and unconditionally guaranteed as a full faith and credit obligation of the United States of America (including any securities described in (a) or (b) issued or held in book-entry form on the books of the Department of the Treasury of the United States of America), which obligations, in either case, (y) are not subject to redemption or prepayment prior to maturity except at the option of the holder of such obligations and (z) may include U.S. Treasury Trust Receipts.

“Hedge Agreement” means, without limitation: (a) any contract known as or referred to or which performs the function of an interest rate swap agreement, currency swap agreement, forward payment conversion agreement, or futures contract; (b) any contract providing for payments based on levels of, or changes or differences in, interest rates, currency exchange rates, or stock or other indices; (c) any contract to exchange cash flows or payments or series of payments; (d) any type of contract called, or designed to perform the function of, interest rate floors, collars, or caps, options, puts, or calls, to hedge or minimize any type of financial risk, including, without limitation, payment, currency, rate, or other financial risk; and (e) any other type of contract or arrangement that MLGW determines is to be used, or is intended to be used, to manage or reduce the cost of any Revenue Obligations, to convert any element of any Revenue Obligations from one form to another, to maximize or increase investment return, to minimize investment return risk, or to protect against any type of financial risk or uncertainty.

“Hedge Payments” means amounts payable by the City or MLGW pursuant to any Hedge Agreement, other than Termination Payments, fees, expenses, and indemnity payments.

“Hedge Payments Account” means the Hedge Payments Account within the Sinking Fund established in the Resolution.

“Hedge Period” means the period during which a Hedge Agreement is in effect.

“Hedge Receipts” means amounts payable by any provider of a Hedge Agreement pursuant to such Hedge Agreement, other than Termination Payments, fees, expenses, and indemnity payments.

“Hedged Obligations” means any Revenue Obligations for which the City or MLGW shall have entered into a Qualified Hedge Agreement.

“Independent Certified Public Accountant” means a certified public accountant, or a firm of certified public accountants, who or which are “independent” as that term is defined in Rule 101 and related interpretations of the Code of Professional Ethics of the American Institute of Certified Public Accountants, of recognized standing, who or which does not devote their full time to MLGW (but who or which may be regularly retained by MLGW).

“Interest Payment Date” means each date on which interest is to become due on any Revenue Obligations, as established in the Supplemental Resolution for such Revenue Obligations.

“Interest Account” means the Interest Account within the Sinking Fund established pursuant to the Resolution.

“Investment Earnings” means all interest received on and profits derived from investments made with Revenues or any other moneys in the funds and accounts established pursuant to the Resolution.

“Master Resolution” means the Master Resolution adopted by MLGW on June 1, 2016 and by the City Council of the City of Memphis, Tennessee (the “City”) on July 5, 2016, as amended by the First Supplemental Resolution adopted by MLGW on June 1, 2016 and by the City on July 5, 2016, and as further amended from time to time.

“MLGW” or **“Division”** means the Memphis Light, Gas and Water Division of the City of Memphis, a division of the City of Memphis, established pursuant to Chapter 381 of the 1939 Private Acts of Tennessee, as amended.

“Municipal Advisor” means an investment banking or financial advisory firm, commercial bank, or any other Person who or which is retained by MLGW for the purpose of passing on questions relating to the availability and terms of specified types of Revenue Obligations or the financial condition or operation of the System and is actively engaged in and, in the good faith opinion of MLGW, has a favorable reputation for skill and experience in providing financial advisory services of the type with respect to which the Municipal Advisor has been retained.

“Net Revenues” means, for each category of Revenues, Revenues net of related Operating Expenses.

“Operating Expenses” means the current costs and expenses of MLGW for operation, maintenance and repair applicable to the System, salaries and wages, employees’ health, hospitalization, actuarially required pension and retirement expenses, actuarially required post-employment benefits, fees for services, materials and supplies, rents, administrative and general expenses (including legal, engineering, accounting and financial advisory fees and expenses and costs of other consulting or technical services not funded with proceeds of Revenue Obligations), insurance expenses, taxes and other governmental charges, the imposition or amount of which is not subject to control of MLGW or the City, any payments made by MLGW during any Fiscal Year to purchase gas for distribution and sale during or after the end of that Fiscal Year (except to the extent any of such purchased gas is treated as a prepaid asset by MLGW for accounting purposes), and other payments made under any gas supply contract or commodity swap or other hedging mechanism, and any principal or interest payments made by MLGW during any Fiscal Year on bonds, notes or other obligations, including loan agreements, issued or entered into for the purpose of financing the purchase of gas, and to the extent so provided by the resolution authorizing such bonds, notes or obligations and to the extent not inconsistent with generally accepted accounting principles. Operating Expenses do not include depreciation or obsolescence charges or reserves therefor, amortization of intangibles or other bookkeeping entries of a similar nature, payment on Revenue Obligations or Contracts of MLGW or the City, on behalf of MLGW, payable from Net Revenues of the System, costs or charges made therefor, capital additions, replacements, betterments, extensions or improvements to or retirement from the System which under generally accepted accounting principles are properly chargeable to the capital account or the reserve for depreciation, or City Payments or any other payments to a political subdivision or public body, and do not include losses from the sale, abandonment, reclassification, revaluation or other disposition of any properties of the System, nor such property items, including taxes and fuels, which are capitalized pursuant to the then existing accounting practices of the Board or expenses of an Acquired System if revenues of the Acquired System are not included in Revenues at the election of MLGW.

“Other System Obligations” means obligations of any kind, including but not limited to, revenue bonds, capital leases, Hedge Agreements which are not Qualified Hedge Agreements, installment purchase agreements, or notes (but excluding Revenue Obligations and Contracts), incurred or issued by MLGW to finance or refinance the cost of acquiring, constructing, reconstructing, improving, bettering, or extending any part of the System or any other cost relating to the System, which do not have a lien on, or are not secured by a pledge of, any category of Revenues.

“Outstanding” means, when used in reference to the Revenue Obligations, all Revenue Obligations that have been duly authenticated and/or delivered under the Resolution, with the exception of (a) Revenue Obligations in lieu of which other Revenue Obligations have been issued under agreement to replace lost, mutilated, stolen, or destroyed obligations, (b) Bonds surrendered by the owners in exchange for other Bonds pursuant to the Resolution, and (c) Revenue Obligations for the payment of which provision has been made in accordance with the Resolution.

The term **“parity”** or **“parity secured”** when applied to two or more series of Revenue Obligations means each such Revenue Obligation has a lien or pledge of equal rank on the same category of Revenues.

“Paying Agent” means a bank, trust company, or any other Person designated as such by MLGW with respect to the Revenue Obligations issued under the Resolution and authorized to pay the principal of, premium, if any, or interest on such Revenue Obligations on behalf of MLGW. Such Paying Agent shall perform the duties required of the Paying Agent in the Resolution and any Supplemental Resolution authorizing Revenue Obligations. MLGW may designate itself as Paying Agent with respect to any Revenue Obligations, provided, however, if an Event of Default has occurred and is ongoing under the Resolution, then any holder of Revenue Obligations to which the Event of Default relates may petition a court of competent jurisdiction for appointment of a replacement Paying Agent.

“Permitted Investments” means obligations selected by MLGW in which MLGW is permitted to invest moneys pursuant to applicable law.

“Person” or **“person”** means any individual, corporation, partnership, limited liability company, joint venture, association, joint stock company, trust, unincorporated organization, body, government, or agency or political subdivision thereof.

“Pledged Revenues” means all Net Revenues and all moneys paid or required to be paid into, and all moneys and securities on deposit from time to time in, the funds and accounts specified in the Resolution, but excluding (a) amounts in the Revenue Fund required to be used to pay Operating Expenses and (b) any amounts required in the Resolution to be set aside pending, or used for, rebate to the United States government pursuant to Section 148(f) of the Code, including, but not limited to, amounts in the Rebate Fund.

“President and CEO” means the individual appointed by the Mayor, confirmed by the Council, as the chief executive officer of MLGW.

The term **“principal”** means the principal amount of any Revenue Obligations.

“Principal Account” means the Principal Account within the Sinking Fund established pursuant to the Resolution.

“Principal Maturity Date” means each date on which principal is to become due on any Revenue Obligations, by maturity or mandatory sinking fund redemption, as established in the Supplemental Resolution for such Revenue Obligations.

“Project” includes the construction of improvements and extensions to and the equipping of improvements and extensions to the System, in whole or in part, and the acquisition of all property, real and personal, related thereto, and the acquisition of long-term supplies of natural gas pursuant to any prepaid gas agreement with any supplier of natural gas, with the proceeds of any Revenue Obligations.

“Project Fund” means MLGW’s Gas System Project Fund established in the Resolution.

“Put Date” means any date on which a holder may elect to have Balloon Obligations redeemed, prepaid, purchased directly or indirectly by the City or MLGW, or otherwise paid.

“Qualified Hedge Agreement” means any Hedge Agreement with a Qualified Hedge Provider.

“Qualified Hedge Provider” means an entity whose senior unsecured long-term obligations, financial program rating, counterparty rating, or claims paying ability, or whose payment obligations under the related Hedge Agreement are absolutely and unconditionally guaranteed or insured or collateralized by an entity whose senior unsecured long-term obligations, financial program rating, counterparty rating, or claims paying ability, are rated either (a) at least A- by S&P or at least A3 by Moody’s, (b) in any such lower Rating categories which each Rating Agency indicates in writing to MLGW will not, by itself, result in a reduction or withdrawal of its Rating on the related Hedged Obligations that is in effect prior to entering into the Hedge Agreement, or (c) in such higher Rating category as may be specified in a Supplemental Resolution. An entity’s status as a “Qualified Hedge Provider” is determined only at the time MLGW or the City, at the direction of MLGW, enters into a Hedge Agreement with such entity and will not be redetermined with respect to that Hedge Agreement.

“Rate Covenant” means, collectively, the covenants set forth under the heading “Rate Covenant” in this summary of the Resolution, as such covenants may be explicitly supplemented or amended in any Supplemental Resolution.

“Rate Stabilization Fund” means the Rate Stabilization Fund established in the Resolution.

“Rating” means a rating in one of the categories by a Rating Agency, disregarding pluses, minuses, and numerical gradations.

“Rating Agencies” or **“Rating Agency”** means Fitch, Moody’s, and Standard & Poor’s or any successors thereto and any other nationally recognized credit rating agency then maintaining a rating on any Revenue Obligations at the request of MLGW. If at any time a particular Rating Agency does not have a rating outstanding with respect to the relevant Revenue Obligations, then a reference to Rating Agency or Rating Agencies shall not include such Rating Agency.

“Rebate Fund” means the Rebate Fund, established pursuant to the Resolution.

“Receiver” means any receiver for the System appointed in accordance with the applicable laws of the State.

“Record Date” means any record date designated in a Supplemental Resolution for any Revenue Obligations.

“Reimbursement Obligation” means the obligation of the Board or of the City, on behalf of the Board, to directly reimburse any Credit Issuer for amounts paid by such Credit Issuer under a Credit Facility, whether or not such obligation to so reimburse is evidenced by a promissory note or other similar instrument. The term Reimbursement Obligation includes obligations pursuant to a Credit Facility Agreement either to make payments for interest based on levels of, or changes or differences in, interest rates, currency exchange rates, or stock or other indices, in return for the Credit Issuer’s fixed obligations under the Credit Facility or to make fixed payments for interest in return for the Credit Issuer’s payments based on such variables.

The term “**related**” means, when used to refer to Revenue Obligations, subaccounts, categories of Revenues or liens, the item modified by such term has a definite relationship to the subject as described in the Resolution. The term “related” means, when used to refer to Operating Expenses, (a) for Special Purpose Revenue Obligations or Special Purpose Revenues, Operating Expenses with respect to Special Purpose Facilities, and (b) for General Revenue Obligations or General Revenues, all Operating Expenses of the System less Operating Expenses with respect to Special Purpose Facilities.

“**Renewal and Extension Fund**” means any System Renewal and Extension Fund established pursuant to the Resolution.

“**Reserve Account Credit Facility**” means any letter of credit, insurance policy, line of credit, surety bond, or similar obligation, arrangement or instrument issued by a bank, insurance company, or other financial institution, together with any substitute or replacement therefor, if any, complying with the provisions of the Resolution, thereby fulfilling all or a portion of a Debt Service Reserve Requirement, if any.

“**Reserve Account Credit Facility Provider**” means any provider of a Reserve Account Credit Facility.

“**Resolution**” means the Master Resolution as it may from time to time be modified, supplemented, or amended by Supplemental Resolutions.

“**Revenue Obligations**” means any revenue bonds, notes or other obligations authorized by and authenticated and delivered or any loan agreement executed and delivered pursuant to the Resolution.

“**Revenues**” means (a) all revenues, fees, rentals, income, receipts, accounts receivable and money derived from the ownership and operation of the System received by MLGW, Investment Earnings and all other income earned and accreted from, and deferred gain from, securities and other investments and amounts earned on amounts deposited in funds and accounts under the Resolution or otherwise maintained with respect to the System, computed in accordance with generally accepted accounting principles (excluding any investment earnings from construction or improvement funds created for the deposit of Revenue Obligation proceeds pending use, to the extent such income is applied to the purposes for which the Revenue Obligations were issued, and funds created to refund any outstanding obligations payable from Revenues of the System), and (b) all gifts, grants, reimbursements or payments received from governmental units or public agencies for the benefit of the System which are (1) not restricted by law or the payor to application for a particular purpose and (2) otherwise lawfully available for payment of Revenue Obligations or Contracts. The term “Revenues” does not include (A) any revenues or other money received by MLGW and derived from the ownership and operation of MLGW of its electric system or its water system, (B) proceeds of insurance so long as such proceeds are to be paid to a party separate from MLGW in respect of a liability or are to be used to repair or replace portions of the System, (C) extraordinary gains from the sale of assets or similar one-time sources of income and (D) tap fees, impact fees and other payments treated by MLGW as contributions in aid of construction for tax and accounting purposes. The computation of Revenues with respect to any period of time shall be increased by the amount of transfers during such period from the Rate Stabilization Fund to the Revenue Fund pursuant to the Resolution, and decreased by the amount of any transfers during such period from the Revenue Fund to the Rate Stabilization Fund pursuant to the Resolution.

“**SEC**” means the Securities and Exchange Commission.

“**Secretary-Treasurer**” means the individual appointed by the Board and confirmed by the Council as the secretary-treasurer of MLGW.

“Senior Lien” means a lien on or pledge of one or more categories of Revenues that entitles the Beneficiaries of such lien or pledge to have a claim on such Revenues prior to any other Person and ahead of the use of such Revenues for any purpose other than payment of Operating Expenses; provided one or more series of Revenue Obligations, Contracts and related Beneficiaries may have parity Senior Liens on the same categories of Revenues pursuant to the terms of the Resolution.

“Senior Lien Revenue Obligations” means General Revenue Obligations and Special Purpose Revenue Obligations, but not Subordinate Lien Obligations, provided that “Senior Lien Revenue Obligations” also includes Additional Senior Lien Revenue Obligations issued in compliance with the provisions of the Resolution and obligations secured by a Senior Lien pursuant to the Resolution.

“Sinking Fund” means the Sinking Fund established in the Resolution.

“Special Purpose Facilities” means facilities which (a) will not result, upon completion or acquisition, in a material reduction in Net General Revenues in the judgment of the Board, (b) will not be of such a type or design that the subsequent closing thereof will materially impair the general operations of the System and (c) the Board has designated in a Supplemental Resolution as “Special Purpose Facilities,” and may include an Acquired System.

“Special Purpose Revenue Obligations” means Obligations secured by a Senior Lien on Special Purpose Revenues.

“Special Purpose Revenues” means Revenues arising from or generated by one or more Special Purpose Facilities. At the election of MLGW, Special Purpose Revenues shall include all fees, notes, rates, charges and income received from an Acquired System.

“State” means the State of Tennessee.

“Subordinate Lien” means a lien on or pledge of one or more categories of Revenues which is not a Senior Lien.

“Subordinate Lien Obligations” means Revenue Obligations which only have a Subordinate Lien and obligations secured by a Subordinate Lien pursuant to the Resolution.

“Supplemental Resolution” means a resolution supplemental to the Master Resolution (which itself may be supplemented by one or more resolutions) to be adopted prior to, and authorizing the issuance and delivery of, any series of Revenue Obligations. Such a resolution as supplemented shall establish, or shall establish a method or procedure for establishing, the date or dates of the pertinent series of Revenue Obligations, the schedule of maturities of such Revenue Obligations, the rate or rates of interest to be borne thereby (or a range thereof), whether fixed or variable, the interest payment dates for such Revenue Obligations, the terms and conditions, if any, under which such Revenue Obligations may be made subject to redemption (mandatory or optional) prior to maturity, the form of such Revenue Obligations, the liens relating to such Revenue Obligations, the Contracts, if any, relating to such Revenue Obligations, and such other details as MLGW may determine.

“System” means the complete gas distribution system of MLGW, together with all gas system properties of every nature hereafter owned by MLGW, including all improvements and extensions made by MLGW while the Revenue Obligations remain outstanding, and including all real and personal property of every nature comprising part of or used or useful in connection with the gas system, all administrative and operational support facilities, and including all appurtenances, contracts, leases, franchises and other intangibles; provided, however, at the election of MLGW, an Acquired System may

be included within the System as defined in the Resolution and become a part thereof or, at the election of MLGW, not become a part of the System but be operated as a separate and independent system by MLGW with the continuing right, upon the election of MLGW, to incorporate such separately Acquired System within the System.

“Tax-Exempt Obligations” means any Revenue Obligations the interest on which has been determined, in an unqualified opinion of Bond Counsel, to be excludable from the gross income of the owners thereof for federal income tax purposes.

“Termination Payments” means an amount payable by MLGW or the City, on behalf of MLGW, or a Qualified Hedge Provider upon termination of a Hedge Agreement.

“Variable Rate” means a rate of interest applicable to the Revenue Obligations, other than a fixed rate of interest, which applies to a particular maturity of Revenue Obligations so long as that maturity of Revenue Obligations remains Outstanding.

Pledged Revenues and Flow of Funds

Pledge of Revenues; Limited Obligations; Contract Liens.

(a) All Pledged Revenues shall be and are pledged to the prompt payment of the principal of, premium, if any, and interest on the Revenue Obligations, obligations treated as Senior Lien Revenue Obligations, or Subordinate Lien Obligations pursuant to the Resolution and the obligations under the Contracts; provided:

(1) General Revenues shall secure only (A) General Revenue Obligations, (B) Subordinate Lien Obligations which have a lien on General Revenues, and (C) any Contracts with respect to such General Revenue Obligations;

(2) Special Purpose Revenues shall secure only (A) the related Special Purpose Revenue Obligations, (B) Subordinate Lien Obligations which have a lien on any related Special Purpose Revenues, and (C) any Contracts with respect to such Special Purpose Revenue Obligations; and

(3) A Contract may have a Senior Lien or a Subordinate Lien on a related category of Revenues, or no lien at all on Revenues, but (A) no Contract shall have a lien on Revenues that is senior to the lien on the category of Revenues securing the Revenue Obligations related to the Contract, and (B) the lien of the Contract shall be in parity with the lien of the related Revenue Obligations only to the extent the payment of principal of, premium, if any, and interest on such Revenue Obligations is made through such Contract as evidenced by Reimbursement Obligations or through a Qualified Hedge Agreement; provided other amounts due on a Contract may be secured by a lien ranking immediately thereafter with the effect set forth in the Resolution.

Pledged Revenues shall immediately be subject to the lien of this pledge for the benefit of the Beneficiaries without any physical delivery thereof or further act, and the lien of this pledge shall be valid and binding against MLGW and the City and against all other persons having claims against MLGW and the City, whether such claims shall have arisen in tort, contract, or otherwise, and regardless of whether such persons have notice of the lien of this pledge. This pledge shall rank superior to all other pledges which may hereafter be made of any Pledged Revenues. The lien of this pledge does not secure any obligation of MLGW other than the Revenue Obligations, obligations treated as Senior Lien Revenue Obligations pursuant to the Resolution, obligations treated as Subordinate Lien Obligations pursuant to the Resolution and the Contracts.

(b) None of the Revenue Obligations nor any related Contracts shall constitute a debt of the City or MLGW within the meaning of any Constitutional, City Charter or statutory limitation. Neither the full faith and credit nor the taxing power of the State or any political subdivision thereof, including the City, shall be pledged to the payment of the Revenue Obligations or any Contracts, and no Holder of any Revenue Obligations issued under the Resolution nor any counterparty to any related Contracts shall have the right to compel any exercise of the taxing powers of the City to pay the Revenue Obligations, or the interest thereon, or any related Contracts, and the Revenue Obligations, including the interest thereon, and the related Contracts shall be limited obligations of the City and MLGW as provided therein payable solely from the particular Revenues pledged thereto. The Revenue Obligations and related Contracts do not constitute a charge, lien or encumbrance upon any other property of the City excepting only the Pledged Revenues expressly pledged under the Resolution or in a Supplemental Resolution. The City has no authority to levy any taxes to pay the Revenue Obligations or the Contracts. Neither the members of the Board nor any person executing the Revenue Obligations shall be liable personally on the Revenue Obligations by reason of the issuance thereof or on the Contracts by reason of the execution thereof.

(c) Other System Obligations (other than obligations treated as Senior Lien Revenue Obligations pursuant to the Resolution or obligations treated as Subordinate Lien Obligations pursuant to the Resolution) are not secured by a lien on any category of Revenues, but such obligations, prior to an Event of Default, may be paid from Revenues as described in the Resolution.

(d) City Payments are not secured by a lien on any category of Revenues, but such City Payments, prior to an Event of Default, may be paid from Revenues as described in the Resolution.

Funds, Accounts, and Subaccounts.

The following funds, accounts, and subaccounts are established under the Master Resolution, and the moneys deposited in such funds, accounts, and subaccounts shall be held in trust for the purposes set forth in the Master Resolution:

(a) Gas System Revenue Fund, to be held by MLGW, and within the Revenue Fund:

- (1) General Revenue Account.
- (2) Special Purpose Revenue Account.

(b) Gas System Sinking Fund, to be held by MLGW, and within the Sinking Fund:

- (1) Interest Account, with further subaccounts therein for each series of Revenue Obligations; provided a subaccount therein may be utilized for more than one series of Revenue Obligations if all such series of Revenue Obligations share exactly the same lien status on the same categories of Revenues.
- (2) Hedge Payments Account, with further subaccounts therein for each series of Revenue Obligations; provided a subaccount therein may be utilized for more than one series of Revenue Obligations if all such series share exactly the same lien status on the same categories of Revenues and are secured in parity by the same or identical Qualified Hedge Agreements with the same provider.
- (3) Contract Payments Account, with further subaccounts therein for each series of Revenue Obligations; provided a subaccount therein may be utilized for more than one series of Revenue Obligations if all such series of Revenue Obligations share exactly the same lien status on the same categories of Revenues and are secured in parity by the same or identical Contracts with the same provider.

(4) Principal Account, with further subaccounts therein for each series of Revenue Obligations; provided a subaccount therein may be utilized for more than one series of Revenue Obligations if all such series of Revenue Obligations share exactly the same lien status on the same categories of Revenues.

(5) Debt Service Reserve Account, with a subaccount for each series of Revenue Obligations which has a Debt Service Reserve Requirement; provided a subaccount therein may be utilized for more than one series of Revenue Obligations if all such series of Revenue Obligations are specified in the related Supplemental Resolutions to share a pledge of such account and have a combined Debt Service Reserve Requirement.

(c) Gas System Renewal and Extension Fund, to be held by MLGW.

(d) Gas System Rate Stabilization Fund, to be held by MLGW.

(e) Gas System Rebate Fund, to be held by MLGW.

(f) Gas System Project Fund, to be held by MLGW.

Each account listed above shall be held within the fund under which it is created. Each subaccount listed above shall be held within the account under which it is created. MLGW reserves the right, in its sole discretion, to create additional subaccounts or to abolish any subaccounts within any account from time to time.

Revenue Fund.

(c) All Revenues shall be deposited in the Revenue Fund from time to time as and when received. The amounts deposited shall be immediately allocated to the account within the Revenue Fund designated therefor as follows: General Revenues other than Special Purpose Revenues to the General Revenue Account; and Special Purpose Revenues to the Special Purpose Revenue Account. Moneys in the Revenue Fund shall be applied from time to time to the following purposes and in the following order of priority; provided, however, prior to the occurrence and continuation of an Event of Default, MLGW, in its sole discretion, may elect to change the order of priority in a Supplemental Resolution:

(1) to pay Operating Expenses;

(2) to deposit into the Sinking Fund the amounts required by the Resolution;

(3) to deposit into the Debt Service Reserve Account the amounts required by the Resolution;

(4) to deposit into the Rebate Fund the amounts required by the Resolution;

(5) to pay to any party to a Contract the amounts due thereon and not already deposited into the Sinking Fund pursuant to the Resolution, including Termination Payments, fees, expenses, indemnity payments and other amounts payable under a Qualified Hedge Agreement that are not Hedge Payments;

(6) to pay any amounts required to be paid with respect to any Other System Obligations;

(7) for transfer to the Renewal and Extension Fund, if any, any amounts required by a Supplemental Resolution and any amounts otherwise determined by MLGW in its discretion are needed for the purposes set forth in the Resolution;

- (8) to pay any amounts required to be paid with respect to any City Payments;
 - (9) to deposit into the Rate Stabilization Fund the amount, if any, budgeted for deposit into such Rate Stabilization Fund at the time set forth in the current Annual Budget of MLGW or in any amount at any time as otherwise determined by the Secretary-Treasurer; and
 - (10) for any other lawful purpose;
- (d) The following limitations and qualifications shall govern all applicable uses of Revenues under the Resolution:
- (1) For Operating Expenses, (A) amounts in the Special Purpose Revenue Account shall be used only for Operating Expenses of Special Purpose Revenue Facilities, and (B) Operating Expenses related to General Revenues shall be paid first from amounts in the General Revenue Account;
 - (2) For deposits to the Sinking Fund, the Debt Service Reserve Account or the Rebate Fund, (A) amounts in the Special Purpose Revenue Account shall be used only for deposits to subaccounts relating to Revenue Obligations having a lien on Special Purpose Revenues, and (B) deposits to subaccounts relating to Revenue Obligations which have a lien on General Revenues shall be made first from amounts in the General Revenue Account;
 - (3) For any payments on a Contract, amounts may be drawn only from the account or accounts relating to the Revenues securing the Revenue Obligations related to such Contract, only in accordance with the requirements of subparagraph (2) hereinabove and, unless otherwise provided in the related Supplemental Resolution because a Credit Facility is intended to be drawn on for payments on Revenue Obligations, only after all payments then due with respect to the related Revenue Obligations have been made;
 - (4) For any payments with respect to any Other System Obligations, (A) if such Other System Obligations relate to Special Purpose Revenue Facilities, from the Special Purpose Revenue Account, and (B) otherwise, first from the General Revenue Account;
 - (5) Notwithstanding any provision of the Resolution to the contrary, (A) no payments may be made to a subaccount of the Sinking Fund related to Subordinate Lien Obligations unless all required payments have been or are being made to other subaccounts related to Revenue Obligations, or Contracts related to Revenue Obligations, in each case which have a lien on a category of Revenues ahead of or in parity with the lien of such Subordinate Lien Obligations, (B) no payments may be made with respect to any Other System Obligations unless all required payments have been made to each subaccount with respect to all Revenue Obligations and all Contracts, and (C) no City Payments may be made unless all required payments have been made to each subaccount with respect to all Revenue Obligations, all Contracts and all Other System Obligations; provided, if required by the terms thereof, obligations treated as Senior Lien Revenue Obligations pursuant to the Resolution shall be paid with the other Senior Lien Revenue Obligations and obligations treated as Subordinate Lien Obligations pursuant to the Resolution shall be paid with the other Subordinate Lien Obligations, as applicable;
 - (6) If at any time the amounts in any subaccount of the Sinking Fund are less than the amounts required by the Resolution, and there are not on deposit in any Renewal and Extension Fund available moneys sufficient to cure any such deficiency, then MLGW shall withdraw from subaccounts related to Subordinate Lien Obligations (taking such amounts first from subaccounts related to Subordinate Lien Obligations, pro rata) and deposit in such subaccount of the Sinking Fund, as the case may be, the amount necessary (or all the moneys in such funds and accounts, if less than the amount required) to make up such deficiency.

Sinking Fund.

(a) General. Sufficient moneys shall be transferred in periodic installments from the Revenue Fund into the Interest Account, the Hedge Payments Account, the Contracts Payments Account and the Principal Account for the purpose of paying the Revenue Obligations as they become due and payable and for the purpose of making payments under Contracts. Notwithstanding any provision of the Resolution to the contrary, the qualifications set forth in (b)(5) and (b)(6) of the previous section describing the Revenue Fund shall control as to any transfers to or withdrawals from any Account or subaccount of the Sinking Fund established with respect to Subordinate Lien Obligations.

(b) Interest Account. Unless otherwise provided in a related Supplemental Resolution, on or after the first day of the month next succeeding the date of issuance of any series of Revenue Obligations, but not later than the last day of such month, and each month thereafter, MLGW shall deposit in the related subaccount of the Interest Account an amount such that, if the same amount were so deposited into and credited to the related subaccount of the Interest Account each succeeding month thereafter prior to the next Interest Payment Date, the aggregate of the amounts so deposited into and credited to the related subaccount of the Interest Account is not less than the interest (excluding Additional Interest) coming due on such Revenue Obligations on such Interest Payment Date. Moneys in the related subaccount of the Interest Account shall be used solely to pay interest (excluding Additional Interest) on the Revenue Obligations when due or to pay Reimbursement Obligations for Credit Facilities under which the Credit Issuer makes all interest payments on the Revenue Obligations. MLGW shall also deposit and continue to deposit all Hedge Receipts under related Qualified Hedge Agreements and any payments from a Credit Issuer under a Credit Facility Agreement in the related subaccount of the Interest Account from time to time as and when received.

(c) Hedge Payments Account and Contract Payments Account. Unless otherwise provided in a related Supplemental Resolution or a Qualified Hedge Agreement, on or before each payment date for Hedge Payments under Qualified Hedge Agreements, MLGW shall deposit in the related subaccount of the Hedge Payments Account an amount which, together with any Hedge Receipts on deposit in the Interest Account and other moneys already on deposit in the Hedge Payments Account and available to make any Hedge Payment on such payment date, is not less than such Hedge Payments coming due on such payment date. Moneys in the related subaccount of the Hedge Payments Account shall be used solely to pay Hedge Payments under Qualified Hedge Agreements when due. Unless otherwise provided in a Supplemental Resolution or a Contract, on or before each payment date for amounts, other than for Reimbursement Obligations, due on Contracts other than Qualified Hedge Agreements, including Additional Interest, continuing commission or commitment fees and remarketing fees, MLGW shall deposit in the related subaccount of the Contract Payments Account an amount which, together with any other moneys already on deposit therein and available to make such payment, is not less than the amount coming due on such payment date. Moneys in the related subaccount of the Contract Payments Account shall be used solely for such payments when due.

(d) Principal Account. Unless otherwise provided in a Supplemental Resolution, on or after the first day of the month next succeeding the date of issuance of any series of Revenue Obligations, but not later than the last day of such month, and each month thereafter, MLGW shall deposit in the related subaccount of the Principal Account an amount such that, if the same amount were so deposited into and credited to the related subaccount of the Principal Account each succeeding month thereafter prior to the next Principal Maturity Date, the aggregate of the amounts so deposited into and credited to the related subaccount of the Principal Account is not less than the principal coming due on such Revenue Obligations on such Principal Maturity Date. Moneys in the related subaccount of the Principal Account shall be used solely for the payment of principal of the Revenue Obligations as the same shall become due and payable at maturity or upon redemption or to pay Reimbursement Obligations for Credit Facilities under which the Credit Issuer makes all principal payments on the Revenue Obligations.

(e) Further Payments. No further payments need be made into a subaccount of the Interest Account or the Principal Account whenever the amount available in such subaccount of the Interest Account and the related subaccount of the Principal Account, if added to the amount then in the related subaccount of the Debt Service Reserve Account, if any (without taking into account any amount available to be drawn on any applicable Reserve Account Credit Facility), is sufficient to retire all the Revenue Obligations then Outstanding and Contracts to which such subaccounts relate and to pay all unpaid interest accrued and to accrue prior to such retirement. No moneys in any subaccount of the Interest Account or the Principal Account shall be used or applied to the optional purchase or redemption of or prepayment of Revenue Obligations prior to maturity unless: (1) provision shall have been made for the payment of all of the Revenue Obligations to which such subaccount relates and all other Revenue Obligations having a parity or higher ranking lien on any category of Revenues securing such Revenue Obligations; or (2) the Revenue Obligations to which such subaccount relates are Senior Lien Revenue Obligations and such moneys are applied to the purchase and cancellation of such Revenue Obligations which are subject to mandatory redemption on the next mandatory redemption date, which falls due within 12 months, such Revenue Obligations are purchased at a price not more than would be required for mandatory redemption, and such Revenue Obligations are canceled upon purchase and credited against the redemption otherwise to be made on such mandatory redemption date; or (3) the Revenue Obligations to which such subaccount relates are Senior Lien Revenue Obligations and such moneys are applied to the purchase and cancellation of such Revenue Obligations at a price less than the amount of principal which would be payable on such Revenue Obligations, together with interest accrued through the date of purchase, and such Revenue Obligations are canceled upon purchase; or (4) the Revenue Obligations to which such subaccount relates are Senior Lien Revenue Obligations and such moneys are in excess of the then required balance of the related subaccount in the Interest Account or the Principal Account and are applied to redeem or prepay a part of such Revenue Obligations on the next succeeding redemption date for which the required notice of redemption may be given.

(f) Debt Service Reserve Account.

(1) There shall be deposited into the same or separate subaccount of the Debt Service Reserve Account the amounts specified, if any, in Supplemental Resolutions with respect to the first series of Revenue Obligations and any Additional Obligations. MLGW may establish by Supplemental Resolution a subaccount within the Debt Service Reserve Account for each separately issued series of Revenue Obligations; provided, however, that MLGW shall not be required by the Resolution to establish a subaccount of the Debt Service Reserve Account for any Revenue Obligations, and any such subaccount shall only be established if required by the Supplemental Resolution authorizing the issuance of the Revenue Obligations. Each such subaccount shall be for the benefit and security of one or more series of Revenue Obligations as specified in the related Supplemental Resolution and need not secure all Revenue Obligations. Each such subaccount shall be initially funded, maintained and replenished as prescribed by Supplemental Resolution.

(2) The balance of each subaccount of the Debt Service Reserve Account shall be maintained at an amount equal to the Debt Service Reserve Requirement for the related Revenue Obligations (or such lesser amount that is required to be accumulated in such subaccount of the Debt Service Reserve Account in connection with any periodic accumulation to the Debt Service Reserve Requirement provided in the Resolution or in any Supplemental Resolution). Whenever for any reason the amount in the related subaccounts of the Interest Account or the Principal Account is insufficient to pay all interest or principal falling due on any related Revenue Obligations, MLGW shall make up any deficiency by transfers from the Renewal and Extension Fund, if any. Whenever, after compliance with the immediately preceding sentence, on the date that such interest or principal is due on any Revenue Obligations, there are insufficient moneys in the related subaccounts of the Interest Account or the Principal Account available to make such payment, MLGW shall, without further instructions, apply so much as may be needed of the moneys in the related subaccount, if any, of the Debt Service Reserve Account to prevent default

in the payment of such interest or principal, with priority to interest payments. Whenever by reason of any such application or otherwise the amount remaining to the credit of the related subaccount of the Debt Service Reserve Account is less than the amount then required to be in such subaccount of the Debt Service Reserve Account, such deficiency shall be remedied in the amounts and at the times prescribed by the related Supplemental Resolution establishing such related subaccount of the Debt Service Reserve Account. Notwithstanding anything in the Resolution to the contrary, a subaccount in the Debt Service Reserve Account that secures General Revenue Obligations shall only be funded with General Revenues, and a subaccount in the Debt Service Reserve Account that secures Special Purpose Revenue Obligations shall only be funded with related Special Purpose Revenues. No Revenues shall be used to fund a subaccount in the Debt Service Reserve Account to secure Subordinate Lien Obligations if the Rate Covenant under the Resolution has not been satisfied or an Event of Default has occurred under the Resolution with respect to the related category of Revenue Obligations or with respect to any Senior Lien Revenue Obligations.

(3) If at the times set forth in any Supplemental Resolution the moneys on deposit in any subaccount in the Debt Service Reserve Account established by such Resolution shall exceed the Debt Service Reserve Requirement related thereto, and after giving effect to any Reserve Fund Credit Facility that may be credited to such subaccount in accordance with the provisions of such Supplemental Resolution, such excess shall be transferred from such subaccount of the Debt Service Reserve Account to the Sinking Fund to redeem Revenue Obligations allocable thereto or to such other Fund or Account as may be directed by MLGW, subject to an opinion from Bond Counsel to the effect that such application is permitted by applicable law and will not adversely affect any applicable exemption from federal income taxation of the interest on any Tax Exempt Obligations.

(4) Whenever the amount in a subaccount within the Debt Service Reserve Account attributable to a series of Senior Lien Revenue Obligations, together with the amount in the Sinking Fund for such series, is sufficient to pay in full all such Senior Lien Revenue Obligations secured thereby in accordance with their terms (including the maximum amount of principal or applicable sinking fund redemption price and interest which could become payable thereon), the applicable funds on deposit in such subaccount of the Debt Service Reserve Account shall be transferred to the Debt Service Fund and applied to the timely payment of principal or redemption price, if applicable, and interest on the outstanding Senior Lien Revenue Obligations secured thereby.

(5) In the event of the refunding or defeasance of any Revenue Obligations secured by a subaccount of the Debt Service Reserve Account, MLGW may withdraw from the separate subaccount in the Debt Service Reserve Account established for the benefit of such series of Revenue Obligations all or any portion of the amounts accumulated therein and deposit such amounts with any escrow agent for the Revenue Obligations being refunded or defeased to be held for the payment of the principal or redemption price, if applicable, and interest on the Revenue Obligations being refunded or defeased; provided that such withdrawal shall not be made unless the amount thereafter remaining in such separate subaccount shall not be less than the remaining Debt Service Reserve Requirement related thereto.

(6) MLGW may elect to satisfy in whole or in part the Debt Service Reserve Requirement for any Revenue Obligations by means of a Reserve Account Credit Facility, subject to the following requirements: (A) the Reserve Account Credit Facility Provider must have a credit rating issued by a Rating Agency not less than the greater of the then current Rating on the related series of Revenue Obligations or the second highest long-term Rating of such Rating Agency; (B) no obligation to the Reserve Account Credit Facility Provider shall be secured by a lien equal to or superior to the lien granted to the related series of Revenue Obligations; (C) each

Reserve Account Credit Facility shall have a term of at least one (1) year (or, if less, the remaining term of the related series of Revenue Obligations) and shall entitle MLGW to draw upon or demand payment and receive the amount so requested in immediately available funds the date of such draw or demand; (D) the Reserve Account Credit Facility shall permit a drawing by MLGW for the full stated amount in the event (i) the Reserve Account Credit Facility expires or terminates for any reason prior to the final maturity of the related series of Revenue Obligations, and (ii) MLGW fails to satisfy the Debt Service Reserve Requirement by the deposit to the Debt Service Reserve Account of cash, obligations, a substitute Reserve Account Credit Facility, or any combination thereof, on or before the date of such expiration or termination; (E) if the Rating issued by the Rating Agency to the Reserve Account Credit Facility Provider is withdrawn or reduced below the greater of the Rating assigned to the related series of Revenue Obligations immediately prior to such action by the Rating Agency or the second highest long-term Rating of such Rating Agency, MLGW shall provide a substitute Reserve Account Credit Facility within sixty (60) days after such rating change, and, if no substitute Reserve Account Credit Facility is obtained by such date, shall fund the Debt Service Reserve Requirement in the amounts and at the times prescribed by the related Supplemental Resolution pursuant to which the Reserve Fund Credit Facility is delivered; and (F) if the Reserve Account Credit Facility Provider commences any insolvency proceedings or is determined to be insolvent or fails to make payments when due on its obligations, MLGW shall provide a substitute Reserve Account Credit Facility within sixty (60) days thereafter, and, if no substitute Reserve Account Credit Facility is obtained by such date, shall fund the Debt Service Reserve Requirement in the amounts and at the times prescribed by the related Supplemental Resolution pursuant to which the Reserve Fund Credit Facility is delivered. If the events described in either clauses (E) or (F) above occur, MLGW shall not relinquish the Reserve Account Credit Facility at issue until after the Debt Service Reserve Requirement is fully satisfied by the provision of cash, obligations, or a substitute Reserve Account Credit Facility or any combination thereof. Any amounts received from a Reserve Account Credit Facility for the purpose of paying principal and/or interest on related Revenue Obligations shall be deposited directly into the related subaccounts of the Interest Account and the Principal Account, and such deposit shall constitute the application of amounts in the related subaccount of the Debt Service Reserve Account. Any amounts received from a Reserve Account Credit Facility drawn upon as a result of expiration or termination of such Reserve Account Credit Facility shall be deposited to the related subaccount of the Debt Service Reserve Account. MLGW may provide for the repayment of any draw-down on a Reserve Account Credit Facility from amounts required to be deposited to the related subaccount of the Debt Service Reserve Account, all as may be set forth in a Supplemental Resolution. All repayments of any draw-down on the Reserve Account Credit Facility and any interest or fees due the Reserve Account Credit Facility Provider under such Reserve Account Credit Facility (excluding any Subordinate Lien Reserve Account Credit Facility) shall be secured by a lien on related Revenues subordinate to the lien of the related Revenue Obligations for payments into the related subaccounts of the Sinking Fund, the Rebate Fund and payments on any Credit Facility Agreement securing the related Revenue Obligations.

(7) Any such Reserve Account Credit Facility shall be pledged to the benefit of the owners of all of the Revenue Obligations secured by it. MLGW reserves the right, if it deems it necessary in order to acquire such a Reserve Account Credit Facility, to amend the Resolution without the consent of any of the owners of the Revenue Obligations in order to grant to the Reserve Account Credit Facility Provider such additional rights as it may demand, provided that such amendment shall not, in the written opinion of Bond Counsel filed with the Division, impair or reduce the security granted to the owners of Revenue Obligations or any of them.

Rate Stabilization Fund.

MLGW may, from time to time, withdraw amounts on deposit in the Rate Stabilization Fund and (a) transfer such amounts to the Revenue Fund, (b) use such amounts to purchase or redeem Revenue Obligations, (c) use such amounts to otherwise provide for the payment of Revenue Obligations or interest thereon or (d) use such funds to make any other lawful payments.

Project Fund.

(a) Project Fund. There shall be established within the Project Fund a separate account for each series of Revenue Obligations used to finance Costs of Projects. Moneys in the Project Fund shall be held by MLGW and applied to the payment of the Costs of Projects financed with such series of Revenue Obligations, or for the repayment of advances made for that purpose in accordance with and subject to the provisions and restrictions set forth in the Resolution and in the related Supplemental Resolution. MLGW covenants that it will not cause or permit to be paid from the Project Fund any sums except in accordance with such provisions and restrictions; provided, however, that any moneys in the Project Fund not presently needed for the payment of current obligations during the course of construction may be invested in Permitted Investments maturing or otherwise available not later than (1) the date upon which such moneys will be needed according to a schedule of anticipated payments from the Project Fund prepared by MLGW in connection with the Project, if any, or, (2) in the absence of such schedule, 36 months from the date of issuance of the related Revenue Obligations, in either case upon written direction of MLGW. Any such investments shall be held by MLGW, in trust, for the account of the Project Fund until maturity or until sold, and at maturity or upon such sale the proceeds received therefrom including accrued interest and premium, if any, shall be immediately deposited by the Depository in the Project Fund and shall be disposed of in the manner and for the purposes provided in the Resolution.

(b) Purposes of Payments. Moneys in each separate account in the Project Fund shall be used for the payment or reimbursement of the Costs of the Project for which such account was established as provided in the Resolution.

(c) Documentation of Payments. MLGW shall maintain records with respect to the expenditure of such funds. Unless otherwise specifically instructed in a written opinion of Bond Counsel, MLGW will retain such records for a period ending not earlier than six (6) years following the final maturity of any Revenue Obligations issued under this Resolution.

(d) Funds Remaining on Completion of Projects. Funds remaining upon completion of a Project shall be used as set forth in the related Supplemental Resolution.

Renewal and Extension Fund.

MLGW may deposit, in its sole discretion, funds in a Renewal and Extension Fund or any account or subaccount therein created by MLGW, which may be created by MLGW in its sole discretion. All sums accumulated and retained in the Renewal and Extension Fund shall be used first to prevent default in the payment of interest on or principal of any General Revenue Obligations when due and then shall be applied by MLGW from time to time, as and when MLGW shall determine, to the following purposes and, prior to the occurrence and continuation of an Event of Default, in the order of priority determined by MLGW in its sole discretion: (a) for the purposes for which moneys held in the Revenue Fund may be applied pursuant to the Resolution; (b) to pay any amounts which may then be due and owing under any Qualified Hedge Agreement (including fees, expenses, and indemnity payments) and any Termination Payments due under a Qualified Hedge Agreement; (c) to pay any governmental charges and assessments against the System or any part thereof which may then be due and owing; (d) to make

acquisitions, betterments, extensions, repairs, or replacements or other capital improvements (including the purchase of equipment) to the System deemed necessary by MLGW (including payments under contracts with vendors, suppliers, and contractors for the foregoing purposes); and (e) to acquire Revenue Obligations (other than Special Purpose Revenue Obligations) by redemption or by purchase in the open market prior to their respective maturities, and when so used for such purposes the moneys shall be withdrawn from the Renewal and Extension Fund and deposited into the related subaccounts of the Interest Account and the Principal Account for the Revenue Obligations to be so redeemed or purchased.

Deposits and Security of Funds and Accounts.

All moneys in the funds and accounts established under the Resolution shall be held by the Board in one or more Depositories qualified for use by MLGW. Uninvested moneys shall, at least to the extent not guaranteed by the Federal Deposit Insurance Corporation, be secured to the fullest extent required by the laws of the State for the security of public funds.

Investment of Funds and Accounts.

Moneys in the funds and accounts established under the Resolution shall be invested and reinvested in Permitted Investments and containing such maturities as are deemed suitable by MLGW.

Investment Earnings in each fund and account (except the Debt Service Reserve Account) shall be retained therein. Investment Earnings from the investment of moneys in each subaccount of the Debt Service Reserve Account shall be retained in such subaccount of the Debt Service Reserve Account at all times if the balance (taking into account the current market value of the investments held in the Debt Service Reserve Account) is less than the respective Debt Service Reserve Requirement; thereafter and at all times if the balance of such subaccount of the Debt Service Reserve Account is equal to or greater than the respective Debt Service Reserve Requirement (taking into account the current market value of the investments held in the Debt Service Reserve Account), such Investment Earnings shall be transferred to the related account in the Revenue Fund.

The Supplemental Resolution authorizing the issuance of any Revenue Obligations may specify maturity limitations and different allocations of Investment Earnings on investments of moneys in the funds and accounts relating to such Revenue Obligations.

Moneys in each of such funds shall be accounted for as a separate and special fund apart from all other funds, provided that investments of moneys therein may be made in a pool of investments together with other moneys of MLGW so long as sufficient Permitted Investments in such pool, not allocated to other investments of contractually or legally limited duration, are available to meet the requirements of the foregoing provisions.

Valuation of Investments.

All investments made for any fund, account or subaccount under the Resolution shall, for purposes of the Resolution, be valued at fair market value on the last day of each Fiscal Year or as otherwise required by law.

Application of Excess in Sinking Fund.

Whenever at the end of each Fiscal Year the amount of moneys in any account or subaccount of the Sinking Fund, including the Debt Service Reserve Account, exceeds the amount then currently required to be held therein, the excess shall be transferred to the related account in the Revenue Fund.

Disposition of Moneys After Payment of Revenue Obligations and Contracts.

Any amounts remaining in any fund or account established under the Resolution after payment in full of the principal of, redemption premium, if any, and interest on the Revenue Obligations (or after provision for payment thereof has been made) and obligations treated as Senior Lien Revenue Obligations pursuant to the Resolution or obligations treated as Subordinate Lien Obligations pursuant to the Resolution, the fees, charges, and expenses of the Paying Agent and Bond Registrar, all amounts owing to any Credit Issuer, any Reserve Account Credit Facility Provider, and any Qualified Hedge Provider or other party to a Contract, and all other amounts required to be paid under the Resolution (including amounts required to be paid into the Rebate Fund), shall be promptly paid to MLGW.

Additional Revenue Obligations

No Revenue Obligations Except as Permitted in the Resolution.

No Revenue Obligations may be issued and no other obligations, except Contracts, which are secured by any interest in or lien on Pledged Revenues may be entered into except pursuant to the Master Resolution; provided, however, the City or MLGW may issue an initial series of Senior Lien Revenue Obligations pursuant to a Supplemental Resolution without meeting the requirements of the Master Resolution.

Additional Senior Lien Revenue Obligations.

(a) Any portion (including any maturities or portions thereof whether or not in chronological order and any amounts subject to mandatory redemption) or all of a series of Senior Lien Revenue Obligations may be refunded at maturity, upon redemption in accordance with their terms, or upon payment, prepayment or redemption with the consent of the owners of such Senior Lien Revenue Obligations, and the refunding Revenue Obligations so issued shall constitute Senior Lien Revenue Obligations secured on a parity with any Revenue Obligations secured on a parity with the refunded Revenue Obligations, if all of the following conditions are satisfied:

(1) MLGW shall have obtained a report from an Independent Certified Public Accountant or a Municipal Advisor demonstrating that the refunding will reduce the total debt service payments on Outstanding Senior Lien Revenue Obligations, including payments on related Contracts, which are parity secured with the Revenue Obligations to be refunded, on a present value basis; or

(2) as an alternative to, and in lieu of, satisfying the requirements of (1), all Outstanding Senior Lien Revenue Obligations which are secured on a parity with the Revenue Obligations to be refunded are being refunded under arrangements which immediately result in making provision for the payment of such Revenue Obligations; and

(3) all applicable laws and regulations of the State, including without limitation laws and regulations pertaining to the issuance by municipalities of revenue refunding bonds, are complied with; and

(4) requirements of (b)(2), (b)(5), and (b)(6) below are met with respect to such refunding Revenue Obligations.

(b) Additional Senior Lien Revenue Obligations (including refunding Revenue Obligations which do not meet the requirements of (a)) may also be issued on a parity with Outstanding Senior Lien Revenue Obligations pursuant to a Supplemental Resolution, and the Revenue Obligations so issued shall be secured on a parity with such Outstanding Senior Lien Revenue Obligations, if all of the following conditions are satisfied:

(1) There shall have been procured and filed with MLGW either:

(a) a report by a Municipal Advisor or a certificate by the Secretary-Treasurer of MLGW to the effect that the historical related Net Revenues for either (i) a period of 12 consecutive months of the most recent 18 consecutive months prior to the issuance of the proposed Additional Obligations or (ii) the most recent audited Fiscal Year, were equal to at least 120% of the maximum Debt Service Requirement for any Fiscal Year, commencing with the first Fiscal Year after the Fiscal Year in which the Additional Obligations are issued, on all related Senior Lien Revenue Obligations which will be Outstanding immediately after the issuance of the proposed Additional Obligations and secured on a parity therewith, provided, however, (x) the report or certificate may contain pro forma adjustments to historical related Net Revenues equal to 100% of the increased annual amount attributable to any revision in the schedule of rates, fees, and charges for the services, facilities and commodities furnished by the System, imposed prior to the date of delivery of the proposed Additional Obligations and not fully reflected in the historical related Net Revenues actually received during such historical period used; (y) if MLGW or City has a contract to purchase or otherwise acquire an Acquired System that will become part of the System, the historical Net Revenues may be adjusted to include the anticipated Net Revenues from the Acquired System as certified in the report or certificate; and (z) if MLGW has entered into a contract to furnish services of the System that is not fully reflected in the historical Net Revenues of the System, such historical Net Revenues may be adjusted to include the anticipated Net Revenues from such contract as certified in the report or certificate; or

(b) a report by a Municipal Advisor or a certificate by the Secretary-Treasurer of MLGW to the effect that in each Fiscal Year of the Forecast Period the forecasted related Net Revenues (which forecast can take into account (i) any planned increases in the rates, fees and charges for the services, facilities and commodities furnished by the System and (ii) any revenues forecasted to be received from any Acquired Systems as to which the City or MLGW has entered into a contract to purchase or otherwise acquire), are expected to equal at least 120% of the Debt Service Requirement during such period on all related Senior Lien Revenue Obligations which will be Outstanding immediately after the issuance of the proposed Additional Obligations and secured on a parity therewith.

(2) MLGW shall have received, at or before issuance of the Additional Obligations, a report from a Municipal Advisor or a certificate of the Secretary-Treasurer of MLGW to the effect that the payments required to be made into each account or subaccount of the Sinking Fund have been made and the balance in each account or subaccount of the Sinking Fund is not less than the balance required by the Resolution as of the date of issuance of the proposed Additional Obligations.

(3) The Supplemental Resolution authorizing the proposed Additional Obligations must require (A) that the amount, if any, to be deposited to or accumulated in, and maintained in, the subaccounts of the Debt Service Reserve Account for Senior Lien Revenue Obligations which are to be secured on a parity with such Additional Obligations be increased to not less than 100% of the Debt Service Reserve Requirement, if any, computed on a basis which includes all Senior Lien Revenue Obligations which will be Outstanding and secured on a parity with the Additional Obligations immediately after the issuance of the proposed Additional Obligations and (B) that the amount of such increase be deposited in such subaccounts prior to or at the end of the period and at least as fast as the rate specified in the Resolution or any applicable Supplemental Resolution.

(4) The Supplemental Resolution authorizing the proposed Additional Obligations must require the proceeds of such proposed Additional Obligations to be used to make capital improvements to or capital acquisitions for the System, to fund interest on the proposed Additional Obligations, to refund other obligations issued for such purposes (whether or not such refunding Revenue Obligations satisfy the requirements of (a)), for any other legal purpose under applicable law as evidenced by an opinion of Bond Counsel, and/or to pay expenses incidental thereto and to the issuance of the proposed Additional Obligations.

(5) The Secretary-Treasurer shall have certified, by written certificate dated as of the date of issuance of the Additional Obligations, that MLGW is in compliance in all material respects with the requirements of the Resolution.

(6) MLGW shall have received an opinion of Bond Counsel, dated as of the date of issuance of the Additional Obligations, to the effect that the Supplemental Resolution authorizing the issuance of Additional Obligations has been duly adopted by MLGW or by the City, as the case may be.

(c) Obligations which would be Other System Obligations but for the existence of a Senior Lien on a category of Revenues securing such obligations may be issued and so secured, and thereafter will be treated as Senior Lien Revenue Obligations, if all of the conditions of (b)(2) through (b)(6) are satisfied treating such obligations as Additional Obligations and the issuance and security documents therefore as Supplemental Resolutions.

Additional Subordinate Lien Obligations.

(a) Revenue Obligations also may be issued on a Subordinate Lien basis pursuant to a Supplemental Resolution or a resolution otherwise adopted by MLGW payable from moneys which would otherwise be available for any other lawful purpose, and the Revenue Obligations so issued shall constitute Subordinate Lien Obligations, if:

(1) the Supplemental Resolution authorizing the Subordinate Lien Obligations shall provide that such Subordinate Lien Obligations shall be junior and subordinate in lien and right of payment directly to any Outstanding Senior Lien Revenue Obligations or Senior Lien Revenue Obligations issued in the future which have a Senior Lien on a category of Revenues as to which such proposed Additional Obligations have a Subordinate Lien;

(2) there shall have been procured and filed with MLGW either:

(a) a report by a Municipal Advisor or a certificate by the Secretary-Treasurer of MLGW to the effect that the historical related Net Revenues for either (i) a period of 12 consecutive months of the most recent 18 consecutive months prior to the issuance of the proposed Additional Obligations or (ii) the most recent audited Fiscal Year, were equal to at least 120% of the maximum Debt Service Requirement for any Fiscal Year, commencing with the first Fiscal Year after the Fiscal Year in which the Additional Obligations are issued, on all Senior Lien Revenue Obligations which will be Outstanding immediately after the issuance of the proposed Additional Obligations and at least 100% of the maximum Debt Service Requirement for any Fiscal Year, commencing with the first Fiscal Year after the Fiscal Year in which the Additional Obligations are issued, on all other Revenue Obligations which will be Outstanding immediately after the issuance of the proposed Additional Obligations, provided, however, (x) the report or certificate may contain pro forma adjustments to historical related Net Revenues equal to 100% of the increased annual amount attributable to any revision in the schedule of rates, fees, and charges for the services, facilities and commodities furnished by the System, imposed prior to the date of delivery of the

proposed Additional Obligations and not fully reflected in the historical related Net Revenues actually received during such historical period used; (y) if MLGW or City has a contract to purchase or otherwise acquire an Acquired System that will become part of the System, the historical Net Revenues may be adjusted to include the anticipated Net Revenues from the Acquired System as certified in the report or certificate; and (z) if MLGW has entered into a contract to furnish services of the System that is not fully reflected in the historical Net Revenues of the System, such historical Net Revenues may be adjusted to include the anticipated Net Revenues from such contract as certified in the report or certificate; or

(b) a report by a Municipal Advisor or a certificate by the Secretary-Treasurer of MLGW to the effect that in each Fiscal Year of the Forecast Period the forecasted related Net Revenues (which forecast can take into account (i) any planned increases in the rates, fees and charges for the services, facilities and commodities furnished by the System and (ii) any revenues forecasted to be received from any Acquired Systems as to which the City or MLGW has entered into a contract to purchase or otherwise acquire), are expected to equal at least 120% of the Debt Service Requirement during such period on all Senior Lien Revenue Obligations which will be Outstanding immediately after the issuance of the proposed Additional Obligations and at least 100% of the Debt Service Requirement during such period on all other Revenue Obligations which will be Outstanding immediately after the issuance of the proposed Additional Obligations; and

(3) MLGW shall have received a report from a Municipal Advisor or a certificate of the Secretary-Treasurer to the effect that the payments required to be made into each account or subaccount of the Sinking Fund have been made and the balance in each account or subaccount of the Sinking Fund is not less than the balance required for any Senior Lien Revenue Obligations as of the date of issuance of any Subordinate Lien Obligations.

(b) In the event of any insolvency or bankruptcy proceedings, and any receivership, liquidation, reorganization, or other similar proceedings in connection therewith, relative to MLGW or to its creditors, as such, or to its property, and in the event of any proceedings for voluntary liquidation, dissolution, or other winding up of MLGW, whether or not involving insolvency or bankruptcy, the owners of all Senior Lien Revenue Obligations then Outstanding and parties to related Contracts shall be entitled to receive payment in full of all principal and interest due on all such Senior Lien Revenue Obligations and all payments due under related Contracts in accordance with the provisions of the Resolution before the owners of any Subordinate Lien Obligations having a Subordinate Lien on a category of Revenues as to which such Senior Lien Revenue Obligations have a Senior Lien or related Contracts are entitled to receive any payment from the Pledged Revenues or the amounts held in the funds and accounts created under the Resolution on account of principal of, premium, if any, or interest on the Subordinate Lien Obligations or related Contracts.

(c) If any Event of Default shall have occurred and be continuing (under circumstances when the provisions of paragraph (b) shall not be applicable), the owners of all Senior Lien Revenue Obligations then Outstanding and parties to related Contracts shall be entitled to receive payment in full of all principal and interest then due on all such Senior Lien Revenue Obligations and all payments due on related Contracts before the owners of the Subordinate Lien Obligations or parties to Contracts related to Senior Lien Revenue Obligations or which are subordinate to Senior Lien Revenue Obligations are entitled to receive any payment from the Pledged Revenues or the amounts held in the funds and accounts created under the Resolution of principal of, premium, if any, or interest on the Subordinate Lien Obligations or payments under related Contracts.

(d) No owner of Senior Lien Revenue Obligations or party to any related Contract shall be prejudiced in its right to enforce subordination of the Subordinate Lien Obligations and related Contracts by any act or failure to act on the part of MLGW or the City.

(e) The obligations of MLGW and the City to pay to the owners of the Subordinate Lien Obligations the principal of, premium, if any, and interest thereon in accordance with their terms and to pay parties to related Contracts in accordance with the terms of the related Contracts shall be unconditional and absolute. Nothing in the Resolution shall prevent the owners of the Subordinate Lien Obligations or parties to related Contracts from exercising all remedies otherwise permitted by applicable law or under the Resolution or the related Contracts upon default thereunder, subject to the rights contained in the Resolution of the owners of Senior Lien Revenue Obligations and parties to related Contracts to receive cash, property, or securities otherwise payable or deliverable to the owners of the Subordinate Lien Obligations and parties to related Contracts, and any Supplemental Resolution authorizing Subordinate Lien Obligations may provide that, insofar as a trustee or paying agent for the Subordinate Lien Obligations is concerned, the foregoing provisions shall not prevent the application by such trustee or paying agent of any moneys deposited with such trustee or paying agent for the purpose of the payment of or on account of the principal or premium, if any, and interest on such Subordinate Lien Obligations and payments under related Contracts if such trustee or paying agent did not have knowledge at the time of such application that such payment was prohibited by the foregoing provisions.

(f) Any series of Subordinate Lien Obligations and related Contracts may have such rank or priority with respect to any other series of Subordinate Lien Obligations and related Contracts as may be provided in the Supplemental Resolution or other resolution authorizing such series of Subordinate Lien Obligations and may contain such other provisions as are not in conflict with the provisions of the Resolution.

(g) Obligations which would be Other System Obligations but for the existence of a Subordinate Lien on a category of Revenues securing such obligations may be issued and so secured, and thereafter will be treated as Subordinate Lien Obligations, if all of the conditions of paragraph (a) above are satisfied treating such obligations as Subordinate Lien Obligations and the issuance and security documents therefor as Supplemental Resolutions.

Additional Special Purpose Revenue Obligations.

Additional Special Purpose Revenue Obligations may be issued after compliance with any requirements therefor set forth in any Supplemental Resolution related to such Special Purpose Obligations or Outstanding Special Purpose Obligations which will be secured on a parity with such Additional Special Purpose Obligations.

Adoption of Proceedings.

MLGW, or the City at the request of MLGW, shall adopt a Supplemental Resolution authorizing the issuance of any Additional Obligations and, except for the first Supplemental Resolution, reciting that the requirements of this Article have been satisfied, and shall set forth in such proceedings, among other things, the security therefor, the date or dates such Additional Obligations shall bear interest, the rate or rates of interest, the interest payment date or dates, the maturity date or dates, the redemption provisions with respect to such Additional Obligations and any other matters applicable to such Additional Obligations as MLGW may deem advisable. Any such Supplemental Resolution shall restate and reaffirm, by reference, all of the applicable terms, conditions, and provisions of the Resolution not modified by the Supplemental Resolution.

Proceedings Authorizing Additional Obligations.

No Supplemental Resolution authorizing the issuance of Additional Obligations shall conflict with the terms and conditions of the Resolution, except to the extent that the Supplemental Resolution is adopted for one of the purposes set forth in the Resolution and complies with the provisions of the Resolution for the adoption of Supplemental Resolutions without the consent of holders of the Revenue Obligations.

Applicability to Additional Obligations.

The provisions of the Resolution shall be construed as including and being applicable to any future series of Revenue Obligations, and any such Revenue Obligations shall be treated, unless otherwise specifically stated, just as if they had been issued pursuant to the terms of the Master Resolution and the first Supplemental Resolution.

Credit Facilities and Hedge Agreements.

(a) In connection with the issuance of any Revenue Obligations, MLGW may obtain or cause to be obtained one or more Credit Facilities providing for payment of all or a portion of the principal of, premium, if any, or interest due or to become due on such Revenue Obligations, providing for the purchase of such Revenue Obligations by the Credit Issuer, or providing funds for the purchase of such Revenue Obligations by MLGW. In connection therewith MLGW, or the City on behalf of MLGW, shall enter into Credit Facility Agreements with such Credit Issuers providing for, among other things, (1) the payment of fees and expenses to such Credit Issuers for the issuance of such Credit Facilities; (2) the terms and conditions of such Credit Facilities and the Revenue Obligations affected thereby; and (3) the security, if any, to be provided for the issuance of such Credit Facilities. MLGW, or the City on behalf of MLGW, may secure any Credit Facility by an agreement providing for the purchase of the Revenue Obligations secured thereby with such adjustments to the rate of interest, method of determining interest, maturity, or redemption provisions as are specified by MLGW, in the applicable Supplemental Resolution. MLGW may in a Credit Facility Agreement agree to directly reimburse such Credit Issuer for amounts paid under the terms of such Credit Facility, together with interest thereon; provided, however, that no Reimbursement Obligation shall be created for purposes of the Resolution until amounts are paid under such Credit Facility. Any such Reimbursement Obligation shall be deemed to be a part of the Revenue Obligations to which the Credit Facility relates which gave rise to such Reimbursement Obligation, and references to principal and interest payments with respect to such Revenue Obligations shall include principal and interest (except for Additional Interest and principal amortization requirements with respect to the Reimbursement Obligation that are more accelerated than the amortization requirements for the related Revenue Obligations, without acceleration) due on the Reimbursement Obligation incurred as a result of payment of such Revenue Obligations with the Credit Facility. All other amounts payable under the Credit Facility Agreement (including any Additional Interest and principal amortization requirements with respect to the Reimbursement Obligation that are more accelerated than the amortization requirements for the related Revenue Obligations, without acceleration) shall be fully subordinate to the payment of debt service on the related class of Revenue Obligations. Any such Credit Facility shall be for the benefit of and secure such Revenue Obligations or portion thereof as specified in the applicable Supplemental Resolution. Notwithstanding the other provisions of the Resolution, MLGW's obligations under a Credit Facility which requires the Credit Issuer to make all interest payments due on the Revenue Obligations may be secured to the extent of such amounts by a pledge of, and lien on, the Pledged Revenues on a parity with the lien created by the Resolution to secure the related Revenue Obligations, or may be wholly or partially subordinate in lien and right of payment to the payment of the Revenue Obligations, as determined by MLGW.

(b) In connection with the issuance of any Revenue Obligations or at any time thereafter so long as such Revenue Obligations remain Outstanding, MLGW may enter into Hedge Agreements with Qualified Hedge Providers, and no other providers, with respect to any Revenue Obligations. MLGW shall authorize the execution, delivery, and performance of each Qualified Hedge Agreement in a Supplemental Resolution, in which it shall designate the related Hedged Obligations. MLGW's obligation to pay Hedge Payments on a Qualified Hedge Agreement may be secured by a pledge of, and lien on, the Pledged Revenues on a parity with the lien created by the Resolution to secure the related Hedged Obligations (other than Termination Payments), or may be wholly or partially subordinate in lien and right of payment to the payment of the Revenue Obligations, as determined by MLGW.

Other Obligations.

MLGW expressly reserves the right, at any time, to adopt one or more other bond resolutions and reserves the right, at any time, to issue any other obligations not secured by the amounts pledged under the Resolution.

General Provisions

Rate Covenant.

MLGW shall continuously own the System, and MLGW shall continuously control, operate, and maintain the System in an efficient and economical manner and on a revenue-producing basis and shall at all times prescribe, fix, maintain and collect, and the City shall approve, rates, fees, and other charges for the services, facilities and commodities furnished by the System fully sufficient at all times:

(a) for 100% of the Operating Expenses and for the accumulation in the Revenue Fund of a reasonable reserve therefor, in an amount, if any, as shall be determined from time to time by MLGW; and

(b) such that Net Revenues in each Fiscal Year:

(1) will equal at least 120% of the Debt Service Requirement on all Senior Revenue Obligations and 100% of the Debt Service Requirement on all other Revenue Obligations then Outstanding for such Fiscal Year;

(2) will enable MLGW to make all required payments, if any, into the Debt Service Reserve Account and the Rebate Fund and on any Contract or Other System Obligation;

(3) will enable MLGW to accumulate an amount to be held in the Renewal and Extension Fund, if any such Renewal and Extension Fund has been established by MLGW, which in the judgment of MLGW is adequate to meet the costs of major renewals, replacements, repairs, additions, betterments and improvements to the System necessary to keep the same in good operating condition or as is required by any governmental agency having jurisdiction over the System; and

(4) will remedy all deficiencies in required payments into any of the funds and accounts mentioned in the Resolution from prior Fiscal Years; and

(5) will enable MLGW to make all required City Payments when due; and

(6) will permit MLGW to comply with the terms of any agreement that MLGW has entered into to purchase or sell gas;

provided for purposes of (a), (b)(1) and (b)(2) each category of Net Revenues shall be compared to the required payments with respect to, or for accounts related to, related Operating Expenses, Revenue Obligations, Contracts and Other System Obligations.

In order to ensure compliance with the Rate Covenant under this heading, and in order to comply with its obligations under the Resolution, prior to the commencement of each Fiscal Year, the Board will adopt and submit to the Council for approval an Annual Budget for MLGW that includes reasonable and expressly stated assumptions as to usage, collections and similar factors and that fixes, establishes or maintains rates, fees and other charges for the services, facilities and commodities furnished by the System in order to generate funds sufficient at all times to comply with the Rate Covenant. Upon receipt of the final Annual Budget adopted by the Board and submitted to the Council, the Council promptly shall, by separate resolution, approve and/or amend and approve the Annual Budget; provided, however, the Council covenants in the Resolution to approve an Annual Budget prior to the commencement of each Fiscal Year that is in full compliance with all applicable requirements contained in the Resolution, including, without limitation, such rates, fees and other charges for the services, facilities and commodities furnished by the System as will be sufficient at all times to comply with the Rate Covenant, all in accordance with the statutory obligations of the City and Council set forth in Section 2-20-3 of the Memphis City Code and Section 7-34-114(a) of the Revenue Bond Law. If, during any Fiscal Year, the Secretary-Treasurer determines that Revenues in any Fiscal Year are or will be less than the total amount required in order to comply with the Rate Covenant, then the Secretary-Treasurer shall make, or MLGW shall promptly request the Consulting Engineer or Municipal Advisor to make, written recommendations as to a revision in such rates, fees, charges or methods of operating the System which will result in the generation of the required amount of Revenues in order to comply with the Rate Covenant. Upon receipt of such recommendations, the Board shall, subject to applicable requirements imposed by law, immediately take action to revise, and the Council shall, subject to applicable requirements imposed by law, immediately take action to approve, such rates, fees and charges in accordance with such recommendations and take such other actions respecting the methods of operation of the System as shall in the discretion of the Secretary-Treasurer be deemed necessary in order to comply with the Rate Covenant. If the Board fails to prescribe, fix, maintain and collect, and/or the Council fails to approve, rates, fees and other charges in accordance with the provisions of this Section in any Fiscal Year, but each of the Board and the Council in the immediately following Fiscal Year has promptly taken all available measures to revise such rates, fees and other charges as advised by the Secretary-Treasurer, a Consulting Engineer and/or a Municipal Advisor, there shall be no Event of Default as described in the Resolution solely as a result of the aforesaid failure until at least the end of such immediately following Fiscal Year and only then if Revenues and Net Revenues during such immediately following Fiscal Year are less than the amounts required to satisfy the Rate Covenant.

The rates, fees, and other charges shall be classified in a reasonable manner to cover users of the services, facilities and commodities furnished by the System so that, as nearly as practicable, such rates, fees, and other charges shall be uniform in application to all users falling within any reasonable class.

Maintenance of the System in Good Condition.

MLGW covenants that it has and will continue to enforce reasonable rules and regulations governing the System and the operation thereof, that all compensation, salaries, fees, and wages paid by it in connection with the operation, maintenance, and repair of the System will be reasonable, that no more persons will be employed by it than are necessary, that it will operate the System in an efficient and economical manner and will at all times maintain the System in good repair and in sound operating condition, that it will make all necessary repairs, renewals and replacements to the System, and that it will comply with all valid acts, rules, regulations, orders, and directions of any legislative, executive, administrative, or judicial body applicable to the System and MLGW's operation thereof.

Insurance.

With respect to the System, MLGW will carry adequate public liability, fidelity, and property insurance, such as is maintained by similar systems as the System; provided, MLGW shall not be required to insure beyond the limits of immunity provided by Sections 29-20-101 et seq., Tennessee Code Annotated, as amended, and provided further, MLGW may self-insure against any risks that the Board deems appropriate provided MLGW maintains adequate reserves, in such amounts as MLGW determines is reasonable, for such self-insurance.

MLGW, without in any way limiting the generality of the following, shall: (a) require each construction contractor and each subcontractor to furnish a bond, or bonds, of such type and in amounts adequate to assure the faithful performance of their contracts and the payment of all bills and claims for labor and material arising by virtue of such contracts; and (b) require each construction contractor or the subcontractor to maintain at all times until the completion and acceptance of any Project adequate compensation insurance for all of their employees and adequate public liability and property damage insurance for the full and complete protection of MLGW from any and all claims of every kind and character which may arise by virtue of the operations under their contracts, whether such operations be by themselves or by anyone directly or indirectly for them, or under their control.

All such policies shall be for the benefit of and made payable to MLGW and shall be on deposit with MLGW.

All moneys received for losses under any such insurance policies, except public liability policies, are pledged by MLGW, as security for the Revenue Obligations until and unless such proceeds are paid out in making good the loss or damage in respect of which such proceeds are received, either by repairing the property damaged or replacing the property destroyed or by depositing the same in the Renewal and Extension Fund. Adequate provision for making good such loss and damage shall be made within 120 days from the date of the loss, and insurance proceeds not used in making such provision shall be deposited in the Renewal and Extension Fund on the expiration of such 120-day period. Such insurance proceeds shall be payable to MLGW by appropriate clause to be attached to or inserted in the policies.

No Sale, Lease, or Encumbrance; Exceptions.

MLGW will not sell, lease, mortgage, or in any manner dispose of the System, or any part thereof, including any and all extensions and additions that may be made thereto, or any facility necessary for the operation thereof except as follows:

(a) The use of any of the System facilities may at any time be permanently abandoned or the System or any portion of the System or of the System facilities sold or otherwise disposed of, provided that:

(7) All covenants and undertakings in connection with all Revenue Obligations then outstanding and payable from the Revenues of the System are in compliance and any required reserve funds have been fully established and contributions thereto are current;

(8) After the abandonment, sale or other disposal of all or a portion of the System, (1) provision is made for the payment of all the outstanding Revenue Obligations or (2) the remaining Revenues of the System after such sale shall be sufficient to pay principal of, premium, if any, and interest on the remaining Revenue Obligations and sufficient to be in compliance with the covenants set forth in the Resolution as certified by the Secretary-Treasurer, a Consulting Engineer or Municipal Advisor;

(9) The abandonment, sale or disposition is for the purpose of disposing of facilities which are no longer necessary or no longer useful to the operation of the System or it is otherwise in the best interests of MLGW to dispose of all or a part of the System as determined by the Board; and

(10) MLGW receives an opinion of Bond Counsel to the effect that the disposition of the System or any portion thereof and use of the proceeds therefrom will not adversely affect the exclusion of interest on any Tax-Exempt Obligations from gross income of the holders thereof for purposes of federal income taxation.

(b) Nothing in the Resolution is intended to prohibit the lease or purchase of equipment or facilities of the System hereafter to be put in service or to prohibit the transfer or exchange of service areas to provide for more efficient operation of the System so long as MLGW is in full compliance with the covenants set forth herein immediately following such transfer or exchange.

(c) In addition to the transfers permitted above, MLGW shall have the right to sell, lease, transfer or otherwise dispose of the System as a whole or substantially as a whole, to any municipal corporation, county, political subdivision, governmental corporation or governmental agency (each of which shall be included within the term "Transferee" as used in the Resolution), provided (i) the Transferee thus acquiring the System from MLGW will assume the performance of and be bound by all of MLGW's and the City's obligations to the holders of the Revenue Obligations to make the payments into the funds required by the resolutions authorizing the Revenue Obligations and the Resolution and to pay the principal of, premium, if any, and interest on the Revenue Obligations as provided in the covenants and provisions of this Resolution and (ii) MLGW receives an opinion of Bond Counsel to the effect that the transfer of the System or any portion thereof to the Transferee and application of the disposition proceeds from such transfer will not adversely affect the exclusion of interest on any Tax-Exempt Obligations from gross income of the holders thereof for purposes of federal income taxation.

(d) Nothing contained in the Resolution shall prohibit MLGW from transferring any property or facilities constituting a part of the System to any of MLGW's other utility systems so long as such transfer will not materially impair the ability of MLGW to comply during the current or any future Fiscal Year with the provisions of the Rate Covenant set forth in the Resolution and will not result in the noncompliance by MLGW with any of the covenants contained in the Resolution or in any tax regulatory agreements or non-arbitrage certificates executed by MLGW in connection with the issuance of any Tax-Exempt Obligations.

No Impairment of Rights.

MLGW shall not enter into any contract or contracts, nor take any action, the results of which might materially impair the rights of the holders of any Revenue Obligations.

Books and Accounts.

MLGW shall keep proper books and accounts in compliance with applicable laws and regulations, if any, and shall cause such books and accounts to be audited for each Fiscal Year by an Independent Certified Public Accountant. A copy of each annual audit report showing in reasonable detail the financial condition of the System at the close of the Fiscal Year, the income and expenses for such Fiscal Year, including the transactions relating to any and all funds and accounts created pursuant to the Resolution, shall be available to any Bondholder upon request.

Enforcement of Charges and Connections.

MLGW shall compel the prompt payment of rates, fees, and charges imposed for service connected with the System, and to that end will vigorously enforce all of the provisions of any resolution or ordinance of MLGW having to do with the same, and all of the rights and remedies permitted MLGW under law. MLGW expressly covenants and agrees that such charges will be enforced and promptly collected to the full extent permitted by law.

Payments.

All payments falling due on the Revenue Obligations and related Contracts shall be made by MLGW, from the Pledged Revenues or, at MLGW's option, other legally available revenues to the owners thereof when due in full, and all reasonable and authorized charges made by the Bond Registrar and any Paying Agent shall be paid by MLGW, when due.

No Loss of Lien on Revenues.

MLGW and the City shall not do, or omit to do, or permit to be done or to be omitted any matter or thing whatsoever whereby the lien of the Resolution on the Pledged Revenues or any part thereof might or could be lost or impaired.

Annual Budget.

Each of the Board and the Council agrees to adopt an Annual Budget for MLGW for each Fiscal Year in compliance with the Rate Covenant and other provisions set forth in the Resolution. Prior to the commencement of each Fiscal Year, the Board will adopt and submit to the Council for approval an Annual Budget for MLGW adopted by the Board for the coming Fiscal Year that includes reasonable and expressly stated assumptions as to usage, collections and similar factors and that fixes, establishes or maintains rates, fees and other charges for the services, facilities and commodities furnished by the System in order to generate funds sufficient at all times to comply with the Rate Covenant. Promptly upon receipt of the final Annual Budget adopted by the Board, but in any event no later than the commencement of the coming Fiscal Year, the Council shall, by separate resolution, adopt and/or amend and approve the Annual Budget of MLGW; provided, however, the Council shall approve as a part of its approval of any such Annual Budget all rates, fees and other charges as are necessary to meet the requirements contained in the Resolution and all other bond resolutions, which bond resolutions have been approved by the Council.

Tax Provisions.

MLGW recognizes that the purchasers and owners of Tax-Exempt Obligations will have accepted the Tax-Exempt Obligations on, and paid for the Tax-Exempt Obligations a price which reflects, the understanding that interest on such Tax-Exempt Obligations is not included in the gross income of the owners thereof for federal income tax purposes under laws in force at the time the Tax-Exempt Obligations shall have been delivered.

MLGW shall take any and all action which may be required from time to time in order to assure that interest on the Tax-Exempt Obligations shall remain excludable from the gross income of the owners of the Tax-Exempt Obligations for federal income tax purposes and shall refrain from taking any action which would adversely affect such status.

The covenants, certifications, representations, and warranties contained under this heading shall survive payment in full or provision for payment in full of the Tax-Exempt Obligations until the end of the statute of limitations following the later of final payment of such Revenue Obligations (without regard to any defeasance or other provision for the payment thereof) or the last date as of which payments under Section 148(f) of the Code could be due to the United States.

Continuing Disclosure.

Each of the City and MLGW shall comply with any and all federal or state securities law requirements applicable to any Revenue Obligations, including, without limitation, Rule 15c2-12 of the SEC if and to the extent applicable to any Revenue Obligations, and each of the City and MLGW will enter into such undertakings, covenants and/or agreements as may be required in any Supplemental Resolution in order to ensure such compliance. Notwithstanding any provision in the Resolution to the contrary, no default under any continuing disclosure undertaking will constitute a default or Event of Default under the Resolution.

Compliance with Purchase Contracts.

MLGW agrees to comply with all material terms of any agreement to purchase gas for the System, and the Resolution shall not be construed to prevent MLGW from complying with the terms of any such agreements.

Events of Default and Remedies

Definition of Events of Default.

An “Event of Default” shall mean the occurrence of any one or more of the following:

(a) a failure to pay the principal or redemption price of any Senior Lien Revenue Obligation when the same shall become due and payable, either at maturity or by proceedings for redemption or otherwise; or

(b) a failure to pay any installment of interest on any Senior Lien Revenue Obligation when and as such installment of interest shall become due and payable; or

(c) a court of competent jurisdiction shall enter an order, judgment, or decree appointing a Receiver of the System or any of the funds or accounts established under the Resolution, or approving a petition seeking reorganization of MLGW under the federal bankruptcy laws or any other applicable law or statute of the United States of America or the State, and such order, judgment, or decree shall not be vacated or set aside or stayed within 60 days from the date of the entry thereof; or

(d) the City or MLGW shall fail to perform any of the other covenants, conditions, agreements, and provisions contained in the Senior Lien Revenue Obligations or in the Resolution with respect to Senior Lien Revenue Obligations on the part of the City or MLGW to be performed, and such failure shall continue for 90 days after written notice specifying such failure and requiring it to be remedied shall have been given to MLGW by the Paying Agent or by the owners of not less than, or any Credit Issuer securing not less than, twenty-five percent (25%) in aggregate principal amount of the Senior Lien Revenue Obligations; provided, however, if the failure stated in such notice can be corrected, but not within such 90 day period, MLGW shall have 180 days after such written notice to cure such

default if corrective action is instituted by MLGW within such 90 day period and diligently pursued until the failure is corrected; or

(e) an Event of Default under any Supplemental Resolution relating to Senior Lien Revenue Obligations shall occur;

provided if the Event of Default relates solely to Senior Lien Revenue Obligations related to a particular category of Revenues and no other event has occurred which, with the lapse of time or the delivery of notice or both, could become an Event of Default with respect to any other Senior Lien Revenue Obligations then Outstanding, such Event of Default shall be deemed to apply solely to the related Senior Lien Revenue Obligations and Contracts and the provisions of the Resolution shall otherwise remain in full force and effect with respect to all other Senior Lien Revenue Obligations and related Contracts.

Remedies.

Upon the occurrence of an Event of Default, the Paying Agent shall have the power to proceed with any right or remedy available at law or in equity or by statute, as it may deem best, including without limitation any suit, action or special proceeding in equity or at law for the collection of amounts due and to become due under the Resolution and under the Senior Lien Revenue Obligations or the performance of any covenant or agreement contained therein or for the enforcement of any proper legal or equitable remedy as the Paying Agent shall deem most effectual to protect the rights aforesaid, insofar as such may be authorized by law. The rights therein specified are to be cumulative to all other available rights, remedies or powers.

Without limiting the foregoing, upon the request of the holders of not less than, or any Credit Issuer securing not less than, twenty-five percent (25%) of the Outstanding Senior Lien Revenue Obligations, the Paying Agent shall, in addition to all other remedies and rights upon or under the Resolution, have the right, by appropriate proceedings in any court of competent jurisdiction, to obtain the appointment of a Receiver for the System, which Receiver may enter upon and take possession of the System, operate and maintain the System, fix rates and collect all revenues arising therefrom in as full a manner and to the same extent as MLGW itself might do. The Receiver shall deposit all moneys collected by it in a separate account or accounts and shall dispose of such revenues in accordance with the terms and conditions of the related Supplemental Resolutions authorizing Senior Lien Revenue Obligations and the Resolution and as the court shall direct.

No delay or omission to exercise any right or remedy accruing upon any Event of Default shall impair any such right or remedy or shall be construed to be a waiver of any such Event of Default or acquiescence therein; and every such right and remedy may be exercised from time to time and as often as may be deemed expedient.

No waiver of any Event of Default under the Resolution, whether by the Paying Agent, any Credit Issuer or by the Bondholders, shall extend to or affect any subsequent or other Event of Default, or impair any rights or remedies consequent thereon.

Rights of Bondholders.

Upon the occurrence of an Event of Default and if requested so to do by the Holders of more than fifty percent (50%) in aggregate principal amount of the Senior Lien Revenue Obligations then Outstanding, and if indemnified for its costs and expenses, the Paying Agent, subject to the provisions of the Resolution, shall be obligated to exercise such one or more of the rights and remedies conferred by the

Resolution as the Paying Agent, being advised by counsel, shall deem most expedient in the interests of the Bondholders.

Right of Bondholders to Direct Proceedings.

Anything in the Resolution to the contrary notwithstanding, the Holders of more than fifty percent (50%) in aggregate principal amount of the Senior Lien Revenue Obligations then Outstanding shall have the right, at any time, by an instrument or instruments in writing executed and delivered to the Paying Agent, to direct (as between such Bondholders and the Paying Agent) the time, method and place of conducting all proceedings otherwise permitted to be taken in connection with the enforcement of the terms and conditions of the Resolution, or for the appointment of a Receiver or any other proceedings under the Resolution, provided the Paying Agent is indemnified as provided above.

Remedies Cumulative.

No remedy conferred upon or reserved to the holders of any Revenue Obligations is intended to be exclusive of any other remedy or remedies, and each and every such remedy shall be cumulative and shall be in addition to every other remedy given under the Resolution or now or hereafter existing at law or in equity or by statute.

Waiver of Default.

No delay or omission of any holder of any Revenue Obligations to exercise any right or power accruing upon any Event of Default shall impair any such right or power or shall be construed to be a waiver of any such Event of Default, or an acquiescence therein, and every power and remedy given by the Resolution to the holders of any Revenue Obligations may be exercised from time to time and as often as may be deemed expedient.

Application of Moneys After Default.

If an Event of Default occurs and shall not have been remedied, MLGW or a Receiver appointed for the System shall apply all Pledged Revenues as follows and in the following order of priority subject to the provisions of clause (d) below:

(a) Expenses of Receiver, Paying Agent and Bond Registrar - to the payment of the reasonable and proper charges, expenses, and liabilities of any Receiver, the Paying Agent and the Bond Registrar under the Resolution with the amounts payable under this subsection (a), if related to a particular series and therefore to a particular category of Revenues, first from such category of Revenues and second from other categories of Revenues in amounts as determined by the Receiver or MLGW, and if not so related to a particular series or category of Revenues, then from all Revenues as determined by the Receiver or MLGW;

(b) Operating Expenses - then, within each category of Revenues, to the payment of all reasonable and necessary related Operating Expenses;

(c) Principal or redemption price, interest, and payments on related Contracts - then, within each category of Revenues, to the payment of the interest and principal or redemption price then due on the related Senior Lien Revenue Obligations and payments then due under related Contracts, as follows:

(1) Unless the principal of all the Senior Lien Revenue Obligations related to such category of Revenues shall have become due and payable due to the maturity thereof, all such moneys shall be applied as follows:

(a) first: to the payment to the persons entitled thereto of all installments of interest then due on the Senior Lien Revenue Obligations, in the order of the maturity of such installments (with interest on defaulted installments of interest at the rate or rates borne by the Senior Lien Revenue Obligations with respect to which such interest is due, but only to the extent permitted by law), and, if the amount available shall not be sufficient to pay in full any particular installment, then to the payment ratably, according to the amounts due on such installment, to the persons entitled thereto, without any discrimination or preference. If some of the Senior Lien Revenue Obligations bear interest payable at different intervals or upon different dates and if at any time moneys from the Debt Service Reserve Account must be used to pay any such interest, the moneys in the Debt Service Reserve Account shall be applied (to the extent necessary) to the payment of all interest falling due on the dates upon which such interest is payable to and including the date six months after the date of application of such moneys. After such period, moneys in the Debt Service Reserve Account plus any other moneys available in the Interest Account shall be set aside for the payment of interest on Senior Lien Revenue Obligations of each class (a class consisting of all Senior Lien Revenue Obligations payable as to interest on the same dates) pro rata among Senior Lien Revenue Obligations of the various classes on a daily basis so that there shall accrue to each owner of a Senior Lien Revenue Obligation throughout each Fiscal Year the same proportion of the total interest payable to such owner of a Senior Lien Revenue Obligation as shall so accrue to every other owner of a Senior Lien Revenue Obligation during such Fiscal Year.

(b) second: to the payment to the persons entitled thereto of the unpaid principal of any of the Senior Lien Revenue Obligations which shall have become due at maturity or upon mandatory redemption prior to maturity (other than Senior Lien Revenue Obligations called for redemption for the payment of which moneys are held pursuant to the provisions of the Resolution), in the order of their due dates, with interest upon such Senior Lien Revenue Obligations from the respective dates upon which they became due, and, if the amount available shall not be sufficient to pay in full Senior Lien Revenue Obligations due on any particular date, together with such interest, then to the payment first of such interest, ratably according to the amount of such interest due on such date, and then to the payment of such principal, ratably according to the amount of such principal due on such date, to the persons entitled thereto without any discrimination or preference. If some of the Senior Lien Revenue Obligations mature (including mandatory redemption prior to maturity as a maturity) upon a different date or dates and if at any time moneys from the Debt Service Reserve Account must be used to pay any such principal falling due, the moneys in the Debt Service Reserve Account not required to pay interest under subsection (A) immediately above shall be applied to the extent necessary to the payment of all principal falling due prior to the date 12 months after the date of application of such moneys. After such period, moneys in the Debt Service Reserve Account not required to pay interest plus any other moneys available in the Principal Account shall be set aside for the payment of principal of Senior Lien Revenue Obligations of each class (a class consisting of all Senior Lien Revenue Obligations payable as to principal on the same date) pro rata among Senior Lien Revenue Obligations of the various classes which mature or must be redeemed pursuant to mandatory redemption prior to maturity throughout each Fiscal Year in such proportion

of the total principal payable on each such Senior Lien Revenue Obligation as shall be equal among all classes of Senior Lien Revenue Obligations maturing or subject to mandatory redemption within such Fiscal Year.

(c) third: to the payment of the redemption premium on and the principal of any Senior Lien Revenue Obligations called for optional redemption pursuant to their terms.

(d) fourth: to interest portions of Reimbursement Obligations that have not been designated as Senior Lien Revenue Obligations, but are related to Senior Lien Revenue Obligations pursuant to the terms of the related Contracts.

(e) fifth: to the payment of principal portions of Reimbursement Obligations that have not been designated as Senior Lien Revenue Obligations, but are related to Senior Lien Revenue Obligations pursuant to the terms of the related Contracts.

(f) sixth: to the payment of all other amounts then due on Contracts (excluding Termination Payments) related to Senior Lien Revenue Obligations.

(2) If the principal of all the Senior Lien Revenue Obligations shall have become due and payable, all such moneys shall be applied to the payment of the principal and interest then due and unpaid upon the Senior Lien Revenue Obligations, with interest thereon as aforesaid, and due and unpaid payments under related Contracts (excluding Termination Payments), without preference or priority of principal over interest or payments on Contracts, or of interest over principal or payments on Contracts, or of payments on Contracts over principal or interest, or of any installment of interest over any other installment of interest, or of any Senior Lien Revenue Obligation over any other Senior Lien Revenue Obligations, or of any such payment under a Contract and over any other such payment under a Contract, ratably, according to the amounts due respectively for principal, interest, and payments under Contracts (excluding Termination Payments), to the persons entitled thereto without any discrimination or preference.

(3) Following the application of moneys as set forth in clauses (1) and (2) above, all such moneys shall be applied to any due and unpaid Termination Payments payable under any Contract relating to any Senior Lien Obligations.

(d) Notwithstanding anything else in the Resolution to the contrary, payments made pursuant to subsections (b) and (c) above shall be made by category of Revenues to related Revenue Obligations such that:

(1) Amounts traceable to General Revenues are used only for General Revenue Obligations and related Contracts;

(2) Amounts traceable to Special Purpose Revenues are used only for Special Purpose Revenue Obligations and related Contracts or otherwise as permitted by the Resolution; and

(3) Amounts not traceable to particular categories of Revenues shall be used first as General Revenues for purposes of this Section, and then as Special Purpose Revenues;

(e) Subordinate Lien Obligations – last to the payment of the interest and principal or redemption price then due on the Subordinate Lien Revenue Obligations and payments under related Contracts in accordance with the Supplemental Resolutions authorizing such Subordinate Lien Revenue Obligations and related Contracts.

Rights of Credit Issuer.

Notwithstanding any other provision of the Resolution, in the event that the City or MLGW shall draw under a Credit Facility any amount for the payment of principal of or interest on any Revenue Obligations, then upon such payment the related Credit Issuer shall succeed to and become subrogated to the rights of the recipients of such payments to the extent of such payments and such principal or interest shall be deemed to continue to be unpaid and Outstanding for all purposes and shall continue to be fully secured by the Resolution until the Credit Issuer, as successor and subrogee, has been paid all amounts owing in respect of such subrogated payments of principal and interest. Such rights shall be limited and evidenced by having MLGW note the Credit Issuer's rights as successor and subrogee on its records, and MLGW shall, upon request, deliver to the Credit Issuer (a) in the case of interest on the Revenue Obligations, an acknowledgment of the Credit Issuer's ownership of interest to be paid on the Revenue Obligations specifying the amount of interest owed, the period represented by such interest, and the numbers of the Revenue Obligations on which such interest is owed and (b) in the case of principal of the Revenue Obligations, either the Revenue Obligations themselves duly assigned to the Credit Issuer or new Revenue Obligations registered in the name of the Credit Issuer or in such other name as the Credit Issuer shall specify. Whenever moneys become available for the payment of any interest or principal then overdue, the Credit Issuer shall be treated as to interest or principal owed to it as successor and subrogee as if it had been the holder of the Revenue Obligations on which such interest or principal is payable on any special record date therefor.

Rights and Remedies Vested in Paying Agent.

All rights of action and remedies under the Resolution or under any of the Senior Lien Revenue Obligations may be enforced by the Paying Agent without the possession of any of the Senior Lien Revenue Obligations or the production thereof in any trial or other proceedings relating thereto and any such suit or proceeding instituted by the Paying Agent shall be brought in its name as Paying Agent without the necessity of joining as plaintiffs or defendants any Holders of the Senior Lien Revenue Obligations or any Credit Issuer, and any recovery of judgment shall, subject to the terms of the Resolution, be for the benefit of the Holders of the Senior Lien Revenue Obligations and any Credit Issuer.

Rights and Remedies of Bondholders.

No Holder of any Senior Lien Revenue Obligation shall have any right to institute any suit, action or proceeding in equity or law for the enforcement of the Resolution, for the execution of any trust of the Resolution or for the appointment of a Receiver or to enforce any other right or remedy under the Resolution, unless (a) a Default has occurred of which the Paying Agent has been notified, or of which it is deemed to have notice, (b) such Default shall have become an Event of Default and the Holders of more than fifty percent (50%) in aggregate principal amount of Senior Lien Revenue Obligations then outstanding shall have made written request to the Paying Agent and shall have offered reasonable opportunity to the Paying Agent either to proceed to exercise the powers hereinbefore granted or to institute such action, suit or proceeding in its own name, and (c) such Bondholders have offered to the Paying Agent indemnity as provided in the Resolution and the Paying Agent shall thereafter fail or refuse to exercise the powers granted in the Resolution, or to institute such action, suit or proceeding in its own name. Such notification, request and offer of indemnity are thereby declared in every case at the option of the Paying Agent to be conditions precedent to the execution of the powers and trusts of the Resolution, and to any action or cause of action for the enforcement thereof, or for the appointment of a Receiver or for any other right or remedy hereunder; it being understood and intended that no one or more Holders of the Senior Lien Revenue Obligations shall have any right in any manner whatsoever to affect, disturb or prejudice the lien of the Resolution by its, his or their action or to enforce any right or remedy

under the Resolution except in the manner therein provided, and that all proceedings at law or in equity shall be instituted, had and maintained in the manner therein provided and for the benefit, first, of the Holders of all Senior Lien Revenue Obligations and, second, of any Credit Issuer.

Termination of Proceedings.

If the Paying Agent shall have proceeded to enforce any right or remedy hereunder by any action at law or in equity, by the appointment of a Receiver or otherwise, and such proceedings shall have been discontinued or abandoned for any reason, or shall have been determined adversely to the Paying Agent, then and in every such case MLGW, the Paying Agent, any Credit Issuer and the Bondholders shall be restored to their former positions and rights hereunder, respectively, with respect to the Pledged Revenues, and all rights, remedies and powers of the Paying Agent, any Credit Issuer and the Bondholders, respectively, shall continue as if no such proceedings had been taken.

Waivers of Events of Default.

The Paying Agent shall waive any Event of Default under the Resolution and its consequences upon the written request of the Holders of more than fifty percent (50%) in aggregate principal amount of all Senior Lien Revenue Obligations then Outstanding, provided, however, there shall not be waived:

(a) any Event of Default pertaining to the payment of the principal or redemption price of any Senior Lien Revenue Obligation at its maturity or redemption date; or

(b) any Event of Default pertaining to the payment when due of the interest on any Senior Lien Revenue Obligation unless prior to such waiver, all arrears of interest and all principal or redemption price payments in respect of which such Event of Default shall have occurred, with interest thereon (to the extent permitted by law) for the period from the occurrence of such Event of Default until paid in full at a rate per annum equal to the interest rate payable on the Senior Lien Revenue Obligations from time to time during such period in accordance with the terms of the Senior Lien Revenue Obligations, and all expenses of the Paying Agent in connection with such Event of Default, shall have been paid or provided for, and in case of any such waiver, or in case any proceeding taken by the Paying Agent on account of any such Event of Default shall have been discontinued or abandoned or for any reason, or shall have been determined adversely to the Paying Agent, then and in every such case MLGW, the Paying Agent, the Credit Issuer, any Qualified Hedge Provider and the Bondholders shall be restored to their former positions and rights under the Resolution, respectively, but no such waiver shall extend to or affect any subsequent or other Event of Default, or impair any rights or remedies consequent thereon.

The Paying Agent

Acceptance of Duties.

With respect to the Senior Lien Revenue Obligations issued under the Resolution, the Paying Agent, by participating in the closing of the initial series of Senior Lien Revenue Obligations, shall be deemed to have accepted the duties imposed upon it under the Resolution, and to have agreed to perform said duties, but only upon and subject to the following express terms and conditions:

(a) The Paying Agent, prior to the occurrence of an Event of Default and after the curing of all Events of Default which may have occurred undertakes to perform such duties and only such duties as are specifically set forth in the Resolution, and no implied agreements or obligations shall be read into the Resolution against the Paying Agent. In case an Event of Default has occurred and is continuing, the

Paying Agent shall exercise such of the rights and powers vested in it by the Resolution and use the same degree of care and skill in their exercise as a prudent corporate trustee would exercise or use under the circumstances.

(b) The Paying Agent may execute any of the trusts or powers of the Resolution and perform any of its duties by or through attorneys, agents, Receivers or employees but shall be answerable for the conduct of the same in accordance with the standard specified in subsection (a) above, and shall be entitled to advice of counsel concerning all matters relating to its duties thereunder, and may in all cases pay reasonable compensation to all such attorneys, agents, Receivers and employees as may reasonably be employed in connection with the trusts thereof. The Paying Agent may act upon the opinion or advice of any attorney (who may be the attorney or attorneys for MLGW), approved by the Paying Agent in the exercise of reasonable care. The Paying Agent shall not be responsible for any loss or damage resulting from any action or non-action in good faith in reliance upon such opinion or advice.

(c) The Paying Agent shall not be responsible for any recital in the Resolution, or in the Senior Lien Revenue Obligations (except with respect to the authentication certificate of the Paying Agent endorsed on the Senior Lien Revenue Obligations), or for the recording or rerecording, filing or re-filing of the Resolution or any other document, or for the validity of the execution or approval hereof by MLGW or of any supplements thereto or instruments of further assurance, or for the sufficiency of the security for the Senior Lien Revenue Obligations, or for the value of or title in and to the Pledged Revenues or any part of the Pledged Revenues or otherwise as to the maintenance of the security hereof, and the Paying Agent shall not be bound to ascertain or inquire as to the performance or observance of any agreements or conditions on the part of MLGW except as set forth in the Resolution.

(d) Except to the extent specifically provided in the Resolution, the Paying Agent shall not be accountable for the use of the proceeds of any of the Senior Lien Revenue Obligations. The Paying Agent, in its individual capacity, may in good faith buy, sell, own, hold or deal in any of the Revenue Obligations issued under the Resolution, and may join in any action which any Bondholder may be entitled to take with like effect as if such Person did not act in any capacity thereunder. The Paying Agent, in its individual capacity, either as principal or agent, may also engage in or be interested in any financial or other transaction with any Credit Issuer, and may act as depository, Paying Agent or agent for any committee or body of Bondholders in connection with any other resolution or similar agreement to which MLGW or any Credit Issuer is a party and hold any bonds secured thereby or other obligations of MLGW as freely as if such Person did not act in any capacity under the Resolution.

(e) Except as is otherwise provided in subsection (a) above:

(1) The Paying Agent shall be protected in acting upon opinions of counsel and upon any notice, request, consent, certificate, order, affidavit, letter, telegram or other paper or document believed to be genuine and correct and to have been signed or sent by the proper Person or Persons. Any action taken by the Paying Agent, pursuant to the Resolution upon the request, authority or consent of the Bond Registrar acting at the direction of any Person who at the time of making such request or giving such authority or consent is the Holder of any Senior Lien Revenue Obligation, shall be conclusive and binding upon all future Holders of the same Senior Lien Revenue Obligation and upon Senior Lien Revenue Obligations issued in exchange therefor or in place thereof. The Paying Agent may conclusively rely upon a certificate furnished by any Credit Issuer as to amounts owing with respect to any Credit Facility.

(2) As to the existence or non-existence of any fact or as to the sufficiency or validity of any instrument, paper or proceeding, the Paying Agent shall be entitled to rely upon a certificate of MLGW as sufficient evidence of the facts therein contained and prior to the

occurrence of an Event of Default of which the Paying Agent has been notified as provided in subsection (e)(4) of this Section, or of which by said subsection it is deemed to have notice, shall also be at liberty to accept a similar certificate to the effect that any particular dealing, transaction or action is necessary or expedient, but may at its discretion secure such further evidence deemed necessary or advisable, but shall in no case be bound to secure the same. The Paying Agent may accept a certificate of MLGW to the effect that a resolution in the form therein set forth has been adopted as conclusive evidence that such resolution has been adopted and is in full force and effect.

(3) The right of the Paying Agent to do things enumerated in the Resolution shall not be construed as a duty and the Paying Agent shall not be answerable for other than its negligence or willful misconduct.

(4) Unless a Responsible Officer of the Paying Agent shall be specifically notified in writing of an Event of Default by MLGW, any Credit Issuer or by the Holders of more than fifty percent (50%) in aggregate principal amount of Outstanding Senior Lien Revenue Obligations, the Paying Agent shall not be required to take notice or be deemed to have notice of any Default under the Resolution except failure to pay the principal or redemption price of or interest on the Senior Lien Revenue Obligations when due. All notices or other instruments required to be delivered to the Paying Agent must, in order to be effective, be delivered at the principal corporate trust office of the Paying Agent, and in the absence of such notice so delivered the Paying Agent may conclusively assume there is no Event of Default except as aforesaid. In the event that any payment referred to above is not paid when due, the Paying Agent shall give immediate notice to MLGW and any Credit Issuer, by telephone, electronic mail or facsimile transmitter (with confirmed receipt), that such payment has not been made and shall immediately confirm such notice by registered or certified mail to MLGW and any Credit Issuer.

(f) The Paying Agent shall not be required to give any bond or surety in respect of the execution of the said trusts and powers or otherwise in respect of the premises.

(g) Notwithstanding anything elsewhere contained in the Resolution, the Paying Agent shall have the right, but shall not be required, to demand, in respect of the authentication of any Senior Lien Revenue Obligations, the taking of any action reasonably within the purview hereof, as a condition of such action by the Paying Agent.

(h) Before taking any action under the Resolution (other than acting on a Credit Facility) at the request or direction of any Holder of a Revenue Obligation, the Paying Agent may require that satisfactory security or indemnity be furnished by the Holders of the Senior Lien Revenue Obligations for the reimbursement of all expenses to which it may be put and to protect it against all liability, except liability which is adjudicated to have resulted from the negligence or willful misconduct of the Paying Agent, by reason of any action so taken.

(i) All moneys received by the Paying Agent or the Bond Registrar for the Senior Lien Revenue Obligations shall, until used or applied or invested as herein provided, be held in trust for the purposes for which they were received but need not be segregated from other funds except to the extent required in the Resolution or by law.

(j) No provision of the Resolution shall require the Paying Agent to expend or risk its own funds or otherwise incur any financial liability in the performance of any of its duties under the Resolution, or in the exercise of any of its rights or powers, if it shall have reasonable grounds for believing that repayment of such funds or adequate security or indemnity against such risk or liability is not reasonably assured to it.

(k) The Paying Agent shall be entitled to pay any amount to a Credit Issuer required hereunder upon written notice from the Credit Issuer that such amount is due and owed by MLGW to the Credit Issuer pursuant to this Resolution, a Credit Facility or other related documents, and the Paying Agent shall have no obligation to determine whether such amount is in fact owed to the Credit Issuer.

Fees, Charges and Expenses of Paying Agent.

MLGW shall pay and/or reimburse the Paying Agent reasonable compensation for its ordinary services and extraordinary services rendered under the Resolution.

Notice by Paying Agent and Division.

(a) If an Event of Default occurs of which the Paying Agent is by the terms of the Resolution required to take notice or if notice of an Event of Default be given as provided in the Resolution, then the Paying Agent shall give written notice thereof by electronic mail, by first-class, registered or certified mail, postage prepaid, or in any other manner as set forth in the related Supplemental Resolution, to any Credit Issuer, MLGW and the Holders of all Senior Lien Revenue Obligations then Outstanding of the applicable series.

(b) At any time that any series of Senior Lien Revenue Obligations are rated by a Rating Agency, MLGW, shall promptly give notice to such Rating Agency, at such address as the Rating Agency shall have furnished to MLGW, of:

- (1) any change in the identity of the Paying Agent,
- (2) any amendments or supplements of the Resolution or the Senior Lien Revenue Obligations,
- (3) any redemption of all the Senior Lien Revenue Obligations or any mandatory purchase of all the Senior Lien Revenue Obligations,
- (4) any amendment, renewal, substitution, termination or expiration of any Credit Facility; and
- (5) any other information that the Rating Agency may reasonably request.

Removal of the Paying Agent.

The Paying Agent may be removed at any time, by an instrument or concurrent instruments in writing delivered to the Paying Agent and (as applicable) to MLGW and any Credit Issuer, and signed either by MLGW (if no Event of Default has occurred and is continuing) or by the Holders of more than fifty percent (50%) in aggregate principal amount of the outstanding Senior Lien Revenue Obligations (if an Event of Default has occurred and is continuing); provided, however, that such removal shall take effect only upon the appointment of a successor Paying Agent as provided in the Resolution and provided further if the removal is by MLGW, that there shall not then exist an Event of Default under the Resolution.

Defeasance

Provision for Payment.

Except as otherwise set forth in the Supplemental Resolution authorizing Revenue Obligations, all or any portion of the Revenue Obligations for the payment, prepayment or redemption of which

sufficient moneys or sufficient Defeasance Obligations shall have been deposited with the Paying Agent or an escrow agent selected by MLGW (whether upon or prior to the maturity or the redemption date of such Revenue Obligations) shall be deemed to be paid and no longer Outstanding under the Resolution; provided, however, that if such Revenue Obligations are to be redeemed prior to the maturity thereof, notice of such redemption shall have been duly given as provided in Article III of the Resolution or firm and irrevocable arrangements shall have been made for the giving of such notice. Defeasance Obligations shall be considered sufficient for purposes of Article IX of the Resolution only: (a) if such Defeasance Obligations are not callable by the issuer of the Defeasance Obligations prior to their stated maturity, and (b) if such Defeasance Obligations fall due and bear interest in such amounts and at such times as will assure sufficient cash (whether or not such Defeasance Obligations are redeemed by MLGW pursuant to any right of redemption) to pay currently maturing interest and to pay principal and redemption premiums, if any, when due on the Revenue Obligations without rendering the interest on any Tax-Exempt Obligations includable in gross income of any owner thereof for federal income tax purposes. Notwithstanding the foregoing, the lien of the Resolution will not be released and discharged until MLGW has received an opinion of Bond Counsel to the effect that all conditions precedent to such discharge have been satisfied and, in the event of an advance refunding, MLGW has received a verification of the sufficiency of funds held to discharge Revenue Obligations from an Independent Certified Public Accountant.

MLGW may at any time surrender to the Bond Registrar for cancellation by it any Bonds previously authenticated and delivered under the Resolution which MLGW may have acquired in any manner whatsoever. All such Bonds, upon such surrender and cancellation, shall be deemed to be paid and retired.

Release of Pledge.

If all Revenue Obligations and obligations secured by a lien on a category of Revenues have been paid or provision for payment thereof made pursuant to the Resolution and the related Supplemental Resolution, then at the option of MLGW, the terms and provisions of the Resolution relating solely to such category of Revenues may be determined as void and of no further force or effect; provided the other terms and provisions of the Resolution shall remain in effect until the election of MLGW after payment or provision for payment of all Revenue Obligations and obligations secured by a lien created pursuant to the Resolution on any Revenues.

Supplemental Resolutions

Supplemental Resolutions Not Requiring Consent of Bondholders.

MLGW and the City, from time to time and at any time, subject to the conditions and restrictions in the Resolution, may adopt one or more Supplemental Resolutions which thereafter shall form a part of the Resolution, without the consent of or notice to Holders for any one or more or all of the following purposes:

(a) to add to the covenants and agreements in the Resolution other covenants and agreements thereafter to be observed or to surrender, restrict, or limit any right or power reserved in the Resolution to or conferred upon MLGW or the City (including but not limited to the right to issue Additional Obligations);

(b) to make such provisions for the purpose of curing any ambiguity, or of curing, correcting, or supplementing any defective provision contained in the Resolution, or in regard to matters or questions

arising under the Resolution, as MLGW may deem necessary or desirable and not materially adverse to the interests of Holders of related Senior Lien Revenue Obligations;

(c) to subject to the lien and pledge of the Resolution additional revenues, receipts, properties, or other collateral;

(d) to evidence the appointment of successors to any Paying Agent(s) or Bond Registrar(s);

(e) to modify, amend, or supplement the Resolution in such manner as to permit the qualification of the Resolution under the Trust Indenture Act of 1939 or any federal statute hereinafter in effect, and similarly to add to the Resolution such other terms, conditions, and provisions as may be permitted or required by such Trust Indenture Act of 1939 or any similar federal statute;

(f) to make any modification or amendment of the Resolution required in order to make any Revenue Obligations eligible for acceptance by DTC or any similar holding institution or to permit the issuance of any Revenue Obligations or interests therein in book-entry form;

(g) to modify any of the provisions of the Resolution in any respect if such modification shall not become effective until after all the Outstanding Revenue Obligations immediately prior to the effective date of such Supplemental Resolution shall cease to be Outstanding and if any Revenue Obligations issued contemporaneously with or after the effective date of such Supplemental Resolution shall contain a specific reference to the modifications contained in such subsequent proceedings;

(h) to modify the provisions of the Resolution with respect to the disposition of any moneys remaining in the Project Fund upon the completion of any Project or to revise, enlarge or reduce the definition or description of any particular Project;

(i) to create additional subaccounts or to abolish any subaccounts within any account;

(j) to modify the Resolution to permit the qualification of any Revenue Obligations for offer or sale under the securities laws of any state in the United States of America;

(k) to modify the Resolution in connection with the issuance of Additional Obligations or Subordinate Lien Obligations permitted to be issued under the Resolution prior to such modification, and such modification may deal with any subjects and make any provisions relating to the Additional Obligations or Subordinate Lien Obligations which MLGW deems necessary or desirable for that purpose and not materially adverse to the interests of Holders of related Senior Lien Revenue Obligations;

(l) to make such modifications in the provisions of the Resolution as may be deemed necessary by MLGW to accommodate the issuance of Revenue Obligations which bear interest at a Variable Rate;

(m) to make such modifications as are necessary to permit the combination of the System with the other utility systems operated by MLGW for purposes of collecting and accounting for revenues; or

(n) to modify any of the provisions of the Resolution in any respect in a manner which MLGW deems necessary or desirable and not materially adverse to the interests of Holders of related Senior Lien Revenue Obligations (other than a modification of the type described in the Resolution requiring the unanimous written consent of the holders); provided that for (1) any Outstanding Revenue

Obligations which are assigned a Rating and which are not secured by a Credit Facility providing for the payment of the full amount of principal and interest to be paid thereon, each Rating Agency shall have given written notification to MLGW that such modification will not cause the then applicable Rating on any Revenue Obligations to be reduced or withdrawn, and (2) any Outstanding Revenue Obligations which are secured by Credit Facilities providing for the payment of the full amount of the principal and interest to be paid thereon, each Credit Issuer shall have consented in writing to such modification.

Any Supplemental Resolution authorized by the provisions of this Section may be adopted by MLGW and the City without the consent of or notice to the owners of any of the Revenue Obligations (except as otherwise set forth in such Supplemental Resolution) at the time Outstanding, notwithstanding any of the provisions of the Resolution described under “Supplemental Resolutions Requiring Consent of Holders of Revenue Obligations,” below. Any such Supplemental Resolution may modify the provisions of the Resolution in such a manner, and to such extent and containing such provisions, as MLGW may deem necessary or desirable to effect any of the purposes stated above. As used in this Section, the term “modify” shall mean “modify, amend, or supplement” and the term “modification” shall mean “modification, amendment, or supplement.” MLGW and the City may agree in any Supplemental Resolution authorizing Revenue Obligations not to exercise its right to modify the Resolution pursuant to any of the provisions above without the consent of a requisite number of holders of the Revenue Obligations being issued.

The provisions of this Section and the Section regarding Supplemental Resolutions Requiring Consent of Holders of Revenue Obligations shall be interpreted by category of Revenues such that each provision of any Supplemental Resolution shall be reviewed for compliance with such sections upon its effect on the Revenue Obligations secured by the related category of Revenues and whether the consent of any holders, of a majority of holders of a certain category of Revenue Obligations or the consent of all such holders shall be determined with respect to each category of Revenues. Supplemental Resolutions may be adopted containing provisions which (A) do not require the consents of any holders, (B) require the consents of some but not all holders of Revenue Obligations related to a category of Revenues, (C) require the consents of some but not all holders of Revenue Obligations related to several categories of Revenues, (D) require the consents of all holders of Revenue Obligations related to a category of Revenues, (E) require the consents of all holders of Revenue Obligations, or (F) are covered in a combination of some or all of (A) through (E).

Supplemental Resolutions Requiring Consent of Holders of Revenue Obligations.

Exclusive of Supplemental Resolutions covered under “Supplemental Resolutions Requiring Consent of Holders of Revenue Obligations,” above, with the consent (evidenced as provided in Article VIII of the Resolution) of the owners of not less than a majority in aggregate principal amount of the Outstanding Revenue Obligations of each affected class (senior and subordinate, as applicable), voting separately by affected class, of each series of Revenue Obligations related to an affected category of Revenues or related Revenue Obligations, MLGW and the City may from time to time and at any time adopt a Supplemental Resolution for the purpose of adding any provisions to or changing in any manner or eliminating any of the provisions of the Resolution or of any Supplemental Resolution; provided, however, that no such Supplemental Resolution shall: (a) extend the maturity date or due date of any mandatory sinking fund redemption with respect to any Revenue Obligations Outstanding under the Resolution; (b) reduce or extend the time for payment of principal of, redemption premium, or interest on any Revenue Obligations Outstanding under the Resolution; (c) reduce any premium payable upon the redemption of any Revenue Obligations under the Resolution or advance the date upon which any Revenue Obligations may first be called for redemption prior to its stated maturity date; (d) give to any Revenue Obligation or Revenue Obligations (or related Contracts) a preference over any other Revenue Obligation or Revenue Obligations (or related Contracts) not already permitted by the Resolution; (e)

permit the creation of any lien or any other encumbrance on the Pledged Revenues having a lien equal to or prior to the lien created under the Resolution for the Senior Lien Revenue Obligations; (f) reduce the percentage of owners of Revenue Obligations required to approve any such Supplemental Resolution; or (g) deprive the owners of the Revenue Obligations of the right to payment of the Revenue Obligations or from the Pledged Revenues, without, in each case, the consent of the owners of all the Revenue Obligations then Outstanding of the category of Revenue Obligations affected thereby. No amendment may be made under this Section which affects the rights or duties of any Credit Issuer securing any of the Revenue Obligations or any Qualified Hedge Provider under any Hedge Agreement without its written consent. The provisions of this paragraph shall be strictly construed such that Supplemental Resolutions requiring the consents of owners of Revenue Obligations shall be limited to those clearly falling within one of the enumerated categories.

If MLGW intends to enter into or adopt any Supplemental Resolution as described in this Section, MLGW shall mail, by registered or certified mail, to the registered owners and/or holders of the Revenue Obligations at their addresses as shown on the Bond Register or as otherwise set forth in any Revenue Obligations, a notice of such intention along with a description of such Supplemental Resolution not less than 30 days prior to the proposed effective date of such Supplemental Resolution. The consents of the registered owners and/or holders of the Revenue Obligations need not approve the particular form of wording of the proposed Supplemental Resolution, but it shall be sufficient if such consents approve the substance thereof. Failure of the registered owner and/or holder of any Revenue Obligation to receive the notice required in the Resolution shall not affect the validity of any Supplemental Resolution if the required number of registered owners and/or holders of the Revenue Obligations of each class shall provide their written consent to such Supplemental Resolution. In connection with the issuance of any Revenue Obligations, the underwriter of such Revenue Obligations shall be deemed to be the initial holder of such Revenue Obligations for all purposes under the Resolution, whether or not such Revenue Obligations are delivered in book-entry form through DTC or another securities depository, and the consent of such underwriter to any Supplemental Resolution shall be fully binding on all subsequent holders of such Revenue Obligations.

Notwithstanding any provision of the Resolution to the contrary, upon the issuance of a Credit Facility to secure any Revenue Obligations and for the period in which such Credit Facility is outstanding, the Credit Issuer may have the consent rights of the owners of the Revenue Obligations which are secured by such Credit Facility pertaining to some or all of the amendments or modifications of the Resolution, to the extent provided in the applicable Supplemental Resolution. Notwithstanding the foregoing, if a Credit Issuer is granted the consent rights of the owners of any Revenue Obligations in a Supplemental Resolution and refuses to exercise such consent rights, either affirmatively or negatively, then the registered owners of the Revenue Obligations secured by the related Credit Facility may exercise such consent rights.

Notice of Supplemental Resolutions.

MLGW shall cause the Bond Registrar to mail a notice by registered or certified mail to the registered owners of all Revenue Obligations Outstanding, at their addresses shown on the Bond Register or at such other address as has been furnished in writing by such registered owner to the Bond Registrar, or as otherwise set forth in any Revenue Obligation, setting forth in general terms the substance of any Supplemental Resolution which has been: (a) adopted by MLGW pursuant to the Resolution; or (b) approved by holders or any Credit Issuer and adopted by MLGW pursuant to the Resolution.

Bond Opinion for Supplemental Resolutions.

Prior to the effectiveness of any Supplemental Resolution referred to and permitted or authorized by the Resolution, MLGW and the City shall secure an opinion from Bond Counsel stating that such Supplemental Resolution has been duly and lawfully adopted in accordance with the provisions of the Resolution, is authorized or permitted by the Resolution, and is valid and binding upon each of MLGW and the City in accordance with its terms. So long as there are Tax-Exempt Obligations Outstanding, no Supplemental Resolution may become effective prior to the filing by MLGW of an opinion from Bond Counsel that such Supplemental Resolution will have no adverse effect on the tax status of any Tax-Exempt Obligations and the adoption of such Supplemental Resolution was permitted by the terms of the Resolution.

APPENDIX H

SUMMARY OF CERTAIN PROVISIONS OF THE WATER SYSTEM RESOLUTION

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Summary of Certain Provisions of the Water System Resolution

The following briefly summarizes certain terms and provisions of the Master Resolution adopted by MLGW on December 5, 2013, and by the City on December 17, 2013; as supplemented by the First Supplemental Resolution adopted by MLGW on April 8, 2014, and by the City on April 15, 2014; and as supplemented by the Second Supplemental Resolution adopted by MLGW on June 1, 2016, and by the City on July 5, 2016; and as supplemented by the Third Supplemental Resolution adopted by MLGW on July 19, 2017, and by the City on August 22, 2017; and as supplemented by the Fourth Supplemental Resolution adopted by MLGW on June 30, 2020, and by the City on August 4, 2020 (collectively, the “Resolution”). This summary is not a complete explanation of the terms and conditions of the Resolution. Investors should refer to the Resolution for a complete statement of the terms, provisions and conditions thereof.

Definitions of Certain Terms

“**Acquired System**” means any other water system or facility acquired by the City or MLGW pursuant to State law.

“**Acts**” mean Chapter 34 of Title 7 and Chapter 21 of Title 9 of the Tennessee Code Annotated, as amended.

“**Additional Interest**” means, for any period during which any Credit Facility Bonds are owned by a Credit Issuer pursuant to a Credit Facility or Credit Facility Agreement, the amount of interest accrued on such Credit Facility Bonds at the Credit Facility Bond Rate less the amount of interest which would have accrued during such period on an equal principal amount of Bonds at the Bond Rate.

“**Additional Obligations**” means Revenue Obligations issued in accordance with and pursuant to the Resolution.

“**Annual Budget**” means the annual budget of MLGW relating to the System (which shall specify all costs, obligations, and expenses properly allocable to the System), as amended or supplemented in accordance with established procedures of the Board, adopted by the Board and approved by the Council or otherwise in effect for a particular Fiscal Year.

“**Balloon Date**” means any Principal Maturity Date or Put Date for Balloon Obligations in a Balloon Year.

“**Balloon Obligations**” means any Revenue Obligations 25% or more of the original principal amount of which (a) is due in any 12-month period or (b) may, at the option of the holders thereof, be required to be redeemed, prepaid, purchased directly or indirectly by the City or MLGW, or otherwise paid in any 12-month period; provided that, in calculating the principal amount of such Revenue Obligations due or required to be redeemed, prepaid, purchased, or otherwise paid in any 12-month period, such principal amount shall be reduced to the extent that all or any portion of such amount is required to be redeemed or amortized prior to such 12-month period.

“**Balloon Year**” means any 12-month period in which more than 25% of the original principal amount of related Balloon Obligations mature or are subject to mandatory redemption or could, at the option of the holders thereof, be required to be redeemed, prepaid, purchased directly or indirectly by the City or MLGW, or otherwise paid.

“**Beneficiaries**” means the holders of any Revenue Obligations and the parties to Contracts.

“Board” means the Board of Light, Gas and Water Commissioners operating as the governing body of MLGW.

“Bond Counsel” means any firm of nationally recognized bond counsel experienced in matters relating to tax-exempt financing retained by MLGW.

“Bondholder” or **“holder”** means the registered owner or the holder of one or more Revenue Obligations.

“Bond Rate” means the rate of interest per annum payable on specified Revenue Obligations other than Credit Facility Bonds.

“Bond Register” means the registration books maintained and to be maintained by the Bond Registrar.

“Bond Registrar” means any bank or trust company designated as such by MLGW with respect to any of the Bonds. Such Bond Registrar shall perform the duties required of the Bond Registrar in the Resolution.

“Bonds” means any revenue bonds or notes authorized by and authenticated and delivered pursuant to the Resolution.

The term **“category”** or **“category of Revenues”** means an objectively definable portion of Revenues related to a particular type of service, activity or facility, including the categories of General Revenues, Released Revenues and Special Purpose Revenues and subcategories within such categories. A “category of Revenues,” unless otherwise determined by MLGW, includes Investment Earnings or other moneys in funds or amounts derived from such portion of Revenues.

“City” means the City of Memphis, Tennessee, a municipal corporation created and existing under the laws of the State.

“City Payments” means (a) the payments in lieu of taxes payable by MLGW to the City provided for in that certain PILOT Agreement dated as of June 1, 2001, by and between the City and MLGW, (b) the payments in lieu of taxes payable by MLGW to the City provided for in that certain Resolution adopted by the Council on April 16, 2013 and that certain Resolution adopted by the Board on May 17, 2013, and (c) any other similar amounts payable by MLGW to the City, whether such payments are payments in lieu of taxes set forth in any agreement between the City and MLGW or any ordinance or resolution of the City or any dividend payments resulting from any equity investment by the City in the System.

“Code” means the Internal Revenue Code of 1986, as amended, and any applicable regulations thereunder.

“Commitment,” when used with respect to Balloon Obligations, means a binding written commitment from a financial institution, surety, or insurance company to refinance such Balloon Obligations on or prior to any Balloon Date thereof, including without limitation any Credit Facility for such Balloon Obligations.

“Consulting Engineer” means (a) an engineering firm or individual engineer employed by MLGW with substantial experience in advising utilities similar to the System operated by MLGW as to the construction and maintenance of the System and in the projection of relative costs of, and revenues

resulting from, expansion in the System or (b) an engineer or engineers who are employees of MLGW whose reports or projections are certified by a Municipal Advisor.

“Contract Payments Account” means the Contract Payments Account within the Sinking Fund established pursuant to the Resolution.

“Contracts” means all Credit Facility Agreements, including any related Reimbursement Obligations, all agreements with respect to Reserve Account Credit Facilities, including any related Reimbursement Obligations, all Qualified Hedge Agreements, and any agreement made pursuant to the Resolution.

“Costs,” with respect to any Project, means the total cost, paid or incurred, to study, plan, design, finance, acquire, construct, reconstruct, install, equip or otherwise implement the Project including improvements to another Project, and shall include, but shall not be limited to, the following costs and expenses relating to such Project and the reimbursement to MLGW for any such items previously paid by MLGW;

(a) the cost of all lands, real or personal properties, rights, easements and franchises acquired;

(b) the cost of all financing charges incurred and interest occurring prior to and during construction and, subject to approval by Bond Counsel and otherwise not prohibited by law, the cost of all financing charges incurred and interest occurring after construction;

(c) the cost of the acquisition, construction, reconstruction, implementation, installation or equipping of any Project;

(d) the cost of engineering, architectural, planning, development, and supervisory services, fiscal agents' and legal expenses, plans and specifications, and other expenses necessary or incident to determining the feasibility or practicability of any Project, administrative expenses, and such other expenses as may be necessary or incident to any financing with proceeds of Revenue Obligations;

(e) the cost of placing any Project in operation;

(f) the cost of condemnation of property necessary for construction implementation and operation;

(g) the costs of issuing any Revenue Obligations to finance or to refinance any Project;

(h) any other costs which may be incident to any Project prior to completion and implementation;

(i) interest on the Revenue Obligations during the construction and installation of any Project and, subject to approval by Bond Counsel, interest on the Revenue Obligations for up to six (6) months thereafter; and

(j) any other costs permitted by the Acts.

“Council” means the governing body of the City.

“Credit Facility” means any letter of credit, insurance policy, guaranty, surety bond, standby bond purchase agreement, line of credit, revolving credit agreement, or similar obligation, arrangement, or instrument issued by a bank, insurance company, or any entity that is used by MLGW to perform one or more of the following tasks: (a) enhancing MLGW's credit by assuring owners of any of the Revenue Obligations that principal of and interest on such Revenue Obligations will be paid promptly when due; (b) providing liquidity for the owners of Revenue Obligations through undertaking to cause Revenue Obligations to be bought from the owners thereof when submitted pursuant to an arrangement prescribed by a Supplemental Resolution; or (c) remarketing any Revenue Obligations so submitted to the Credit Issuer (whether or not the same Credit Issuer is remarketing the Revenue Obligations). The term Credit Facility shall not include a Reserve Account Credit Facility.

“Credit Facility Agreement” means an agreement between the City, at the request of the Board and/or MLGW and a Credit Issuer pursuant to which the Credit Issuer issues a Credit Facility and may include a related Reimbursement Obligation. The term Credit Facility Agreement shall not include an agreement with respect to a Reserve Account Credit Facility.

“Credit Facility Bond” means any Revenue Obligation purchased and held by a Credit Issuer pursuant to a Credit Facility Agreement. A Revenue Obligation shall be deemed a Credit Facility Bond only for the actual period during which such Revenue Obligation is owned by a Credit Issuer pursuant to a Credit Facility Agreement.

“Credit Facility Bond Rate” means the rate of interest payable on Credit Facility Bonds, as may be provided in a Credit Facility or Credit Facility Agreement.

“Credit Issuer” means any issuer of a Credit Facility then in effect for all or part of the Revenue Obligations. The term Credit Issuer shall not include any Reserve Account Credit Facility Provider. Whenever in the Resolution the consent of the Credit Issuer is required, such consent shall only be required from the Credit Issuer whose Credit Facility is issued with respect to the Revenue Obligations for which the consent is required.

“Debt Service Requirement” means, with respect to Revenue Obligations, the total principal and interest coming due, whether at maturity or upon mandatory redemption (less any amount of interest that is capitalized and payable with the proceeds of debt on deposit with MLGW or any Paying Agent), in any specified period, provided:

(a) If any Revenue Obligations Outstanding or proposed to be issued shall bear interest at a Variable Rate, including Hedged Obligations if the interest thereon calculated as set forth below is expected to vary and Revenue Obligations secured by a Credit Facility if the interest thereon calculated as set forth below is expected to vary, the interest coming due in any specified future period shall be determined as if the Variable Rate in effect at all times during such future period equaled, at the option of MLGW either (1) the average of the actual Variable Rates which were in effect (weighted according to the length of the period during which each such Variable Rate was in effect) for the most recent 12-month period immediately preceding the date of calculation for which such information is available (or shorter period if such information is not available for a 12-month period), or (2) the current average annual fixed rate of interest on securities of similar quality having a similar maturity date as certified by a Municipal Advisor.

(b) With respect to any Revenue Obligations secured by a Credit Facility, the Debt Service Requirement therefor shall include (1) any commission or commitment fee obligations with respect to such Credit Facility, (2) the outstanding amount of any Reimbursement Obligation and interest thereon, (3) any Additional Interest owed on Credit Facility Bonds, and (4) any remarketing agent fees; provided if

(A) the Credit Facility requires the Credit Issuer to make all interest payments on the Revenue Obligations, (B) the Reimbursement Obligation provides for payments by MLGW or the Credit Issuer based on levels of, or changes or differences in, interest rates, currency exchange rates, or stock or other indices, and (C) the Credit Issuer, upon the execution of the Credit Facility Agreement, would qualify as a Qualified Hedge Provider if the Credit Facility Agreement were to be construed as a Hedge Agreement and the related Revenue Obligations as Hedged Obligations, then interest on such Revenue Obligations shall be calculated by adding (x) the amount of interest payable on such Revenue Obligations pursuant to their terms and (y) the amount of payments for interest to be made by the City or MLGW under the Credit Facility Agreement, and subtracting (z) the amounts payable by the Credit Issuer to the City or MLGW or as interest on such Revenue Obligations as specified in the Credit Facility Agreement; but only to the extent the Credit Issuer is not in default under the Credit Facility and if such default has occurred and is continuing, interest on such Revenue Obligations shall be calculated as if there were no Credit Facility. In determining the amounts described in this paragraph for any future period, MLGW (i) may assume that any Credit Facility presently in effect will remain in effect even if such Credit Facility has an expiration date prior to the maturity of the related Revenue Obligations and (ii) may assume that the current payments relating to the Credit Facility will remain in effect or may estimate such payments in the future provided that MLGW obtains a certificate from a Municipal Advisor that such estimates are reasonable.

(c) With respect to any Hedged Obligations, the interest on such Hedged Obligations during any Hedge Period and for so long as the provider of the related Hedge Agreement has not defaulted on its payment obligations thereunder shall be calculated by adding (1) the amount of interest payable by the City or MLGW on such Hedged Obligations pursuant to their terms and (2) the amount of Hedge Payments payable by the City or MLGW under the related Hedge Agreement and subtracting (3) the amount of Hedge Receipts payable by the provider of the related Hedge Agreement at the rate specified in the related Hedge Agreement; provided, however, that to the extent that the provider of any Hedge Agreement is in default thereunder, the amount of interest payable by the City or MLGW on the related Hedged Obligations shall be the interest calculated as if such Hedge Agreement had not been executed. In determining the amount of Hedge Payments or Hedge Receipts that are not fixed throughout the Hedge Period (i.e., which are variable), and that are payable or receivable for any future period, such Hedge Payments or Hedge Receipts for any period of calculation (the "Determination Period") shall be computed by assuming that the variables comprising the calculation (e.g., indices) applicable to the Determination Period are equal to the average of the actual variables which were in effect (weighted according to the length of the period during which each such variable was in effect) for the most recent 12- month period immediately preceding the date of calculation for which such information is available (or shorter period if such information is not available for a 12-month period).

(d) For the purpose of calculating the Debt Service Requirement on Balloon Obligations (1) which are subject to a Commitment or (2) which do not have a Balloon Year commencing within 12 months from the date of calculation or (3) which are issued in anticipation of the issuance of Bonds that are not Balloon Obligations or (4) which are issued pursuant to a Supplemental Resolution which contemplates that the principal of Revenue Obligations tendered for payment at the option of the holder thereof prior to the stated maturity of such Revenue Obligations will be paid from the proceeds of the remarketing of such tendered Revenue Obligations (or from the issuance of new Revenue Obligations authorized by such Supplemental Resolution), in each such case, at the option of MLGW, (A) the actual principal and interest on such Balloon Obligations in any specified period shall be included in the Debt Service Requirement, subject to the other assumptions contained therein, or (B) the principal on such Balloon Obligations shall be assumed to be amortized in such amounts as to require substantially equal annual amounts to be paid for principal and interest over an assumed amortization period of 20 years at an assumed interest rate (which shall be the interest rate certified by a Municipal Advisor to be the interest rate at which MLGW could reasonably expect to borrow the same amount by issuing Bonds with the same priority of lien as such Balloon Obligations and with a 20-year term); provided, however, that if the

maturity of such Balloon Obligations (taking into account the term of any Commitment) is in excess of 20 years from the date of issuance, then such Balloon Obligations shall be assumed to be amortized in substantially equal annual amounts to be paid for principal and interest over an assumed amortization period of years equal to the number of years from the date of issuance of such Balloon Obligations to maturity (including the Commitment) and at the interest rate applicable to such Balloon Obligations. For the purpose of calculating the Debt Service Requirement on Balloon Obligations not described in the preceding sentence, the principal payable on such Bonds during the Balloon Year shall be calculated as if paid on the Balloon Date.

(e) The principal of and interest on Revenue Obligations, amounts for interest under a Credit Facility and Hedge Payments shall be excluded from the determination of Debt Service Requirement to the extent that the same were or are expected to be paid with amounts on deposit on the date of calculation (or proceeds of Revenue Obligations to be deposited on the date of issuance of proposed Revenue Obligations) in a fund under the Resolution.

“Debt Service Reserve Account” means the Debt Service Reserve Account within the Sinking Fund established in the Resolution.

“Debt Service Reserve Requirement” means an amount determined from time to time by MLGW as a reasonable reserve, if any, for the payment of principal of and interest on Revenue Obligations for which a subaccount in the Debt Service Reserve Account is created or added to pursuant to a Supplemental Resolution.

“Defeasance Obligations” means Government Obligations and such other investments that are from time to time permitted by applicable law to be used by the City or MLGW to provide for the payment of Revenue Obligations in connection with the defeasance or refunding of such Revenue Obligations.

“Depository” means any depository of a fund established under the Resolution selected by MLGW in its discretion.

“DTC” means The Depository Trust Company, New York, New York, or its nominee, or its successors and assigns, or any other depository performing similar functions under the Resolution.

“Fiscal Year” means the 12-month period used by MLGW for its general accounting purposes, as it may be changed from time to time. The Fiscal Year at the time the Resolution was adopted began on January 1, and ended on December 31.

“Forecast Period” means a period beginning with the first Fiscal Year beginning after the later of (a) the Fiscal Year in which any proposed Additional Obligations are to be issued or (b) the Fiscal Year in which any Project to be financed with the proceeds of any proposed Additional Obligations is, in the judgment of MLGW, expected to be completed and ending on the last day of the fifth (5th) Fiscal Year thereafter.

“General Revenue Account” means the General Revenue Account within the Revenue Fund established by the Resolution.

“General Revenue Obligations” means Revenue Obligations secured by a Senior Lien on General Revenues.

“General Revenue Facilities” means the System, but not including any Special Purpose Facilities or Released Revenue Facilities

“General Revenues” means all Revenues other than Released Revenues and Special Revenues.

“Government Obligations” means (a) direct obligations of the United States of America for the full and timely payment of which the full faith and credit of the United States of America is pledged, or (b) obligations issued by a person controlled or supervised by and acting as an instrumentality of the United States of America, the full and timely payment of the principal of and the interest on which is fully and unconditionally guaranteed as a full faith and credit obligation of the United States of America (including any securities described in (a) or (b) issued or held in book-entry form on the books of the Department of the Treasury of the United States of America), which obligations, in either case, (y) are not subject to redemption or prepayment prior to maturity except at the option of the holder of such obligations and (z) may include U.S. Treasury Trust Receipts.

“Hedge Agreement” means, without limitation, (a) any contract known as or referred to or which performs the function of an interest rate swap agreement, currency swap agreement, forward payment conversion agreement, or futures contract; (b) any contract providing for payments based on levels of, or changes or differences in, interest rates, currency exchange rates, or stock or other indices; (c) any contract to exchange cash flows or payments or series of payments; (d) any type of contract called, or designed to perform the function of, interest rate floors, collars, or caps, options, puts, or calls, to hedge or minimize any type of financial risk, including, without limitation, payment, currency, rate, or other financial risk; and (e) any other type of contract or arrangement that MLGW determines is to be used, or is intended to be used, to manage or reduce the cost of any Revenue Obligations, to convert any element of any Revenue Obligations from one form to another, to maximize or increase investment return, to minimize investment return risk, or to protect against any type of financial risk or uncertainty.

“Hedge Payments” means amounts payable by the City or MLGW pursuant to any Hedge Agreement, other than Termination Payments, fees, expenses, and indemnity payments.

“Hedge Payments Account” means the Hedge Payments Account within the Sinking Fund established pursuant to the Resolution.

“Hedge Period” means the period during which a Hedge Agreement is in effect.

“Hedge Receipts” means amounts payable by any provider of a Hedge Agreement pursuant to such Hedge Agreement, other than Termination Payments, fees, expenses, and indemnity payments.

“Hedged Obligations” means any Revenue Obligations for which the City or MLGW shall have entered into a Qualified Hedge Agreement.

“Independent Certified Public Accountant” means a certified public accountant, or a firm of certified public accountants, who or which are “independent” as that term is defined in Rule 101 and related interpretations of the Code of Professional Ethics of the American Institute of Certified Public Accountants, of recognized standing, who or which does not devote their full time to MLGW (but who or which may be regularly retained by MLGW).

“Interest Payment Date” means each date on which interest is to become due on any Revenue Obligations, as established in the Supplemental Resolution for such Revenue Obligations.

“Interest Account” means the Interest Account within the Sinking Fund established pursuant to the Resolution.

“Investment Earnings” means all interest received on and profits derived from investments made with Revenues or any other moneys in the funds and accounts established under the Resolution.

“Master Resolution” means the Master Resolution adopted on December 6, 2013, by MLGW and on December 17, 2013, by the City, as amended from time to time.

“MLGW” or **“Division”** means the Memphis Light, Gas and Water Division of the City of Memphis, a division of the City of Memphis, established pursuant to Chapter 381 of the 1939 Private Acts of Tennessee, as amended.

“Municipal Advisor” means an investment banking or financial advisory firm, commercial bank, or any other Person who or which is retained by MLGW for the purpose of passing on questions relating to the availability and terms of specified types of Revenue Obligations or the financial condition or operation of the System and is actively engaged in and in the good faith opinion of MLGW, has a favorable reputation for skill and experience in providing financial advisory services of the type with respect to which the Municipal Advisor has been retained.

“Net General Revenues” means Net Revenues that are General Revenues.

“Net Revenues” means, for each category of Revenues, Revenues net of related Operating Expenses.

“Operating Expenses” means the current costs and expenses of MLGW for operation, maintenance and repair applicable to the System, salaries and wages, employees' health, hospitalization, actuarially required pension and retirement expenses, actuarially required post-employment benefits, fees for services, materials and supplies, rents, administrative and general expenses (including legal, engineering, accounting and financial advisory fees and expenses and costs of other consulting or technical services not funded with proceeds of Revenue Obligations), insurance expenses, taxes and other governmental charges, the imposition or amount of which is not subject to control of MLGW or the City. Operating Expenses do not include depreciation or obsolescence charges or reserves therefor, amortization of intangibles or other bookkeeping entries of a similar nature, payment on Revenue Obligations or Contracts of MLGW or the City, on behalf of MLGW, payable from Net Revenues of the System, costs or charges made therefor, capital additions, replacements, betterments, extensions or improvements to or retirement from the System which under generally accepted accounting principles are properly chargeable to the capital account or the reserve for depreciation, or City Payments or any other payments to a political subdivision or public body, and do not include losses from the sale, abandonment, reclassification, revaluation or other disposition of any properties of the System, nor such property items, including taxes and fuels, which are capitalized pursuant to the then existing accounting practices of the Board or expenses of an Acquired System if revenues of the Acquired System are not included in Revenues at the election of MLGW.

“Other System Obligations” means obligations of any kind, including but not limited to, revenue bonds, capital leases. Hedge Agreements which are not Qualified Hedge Agreements, installment purchase agreements, or notes (but excluding Revenue Obligations and Contracts), incurred or issued by MLGW to finance or refinance the cost of acquiring, constructing, reconstructing, improving, bettering, or extending any part of the System or any other cost relating to the System, which do not have a lien on, or are not secured by a pledge of, any category of Revenues.

“Outstanding” means, when used in reference to the Revenue Obligations, all Revenue Obligations that have been duly authenticated and/or delivered under the Resolution, with the exception of (a) Revenue Obligations in lieu of which other Revenue Obligations have been issued under agreement to replace lost, mutilated, stolen, or destroyed obligations, (b) Bonds surrendered by the owners in exchange for other Bonds under the Resolution, and (c) Revenue Obligations for the payment of which provision has been made in accordance with Article IX of the Resolution.

The term **“parity”** or “parity secured” when applied to two or more series of Revenue Obligations means each such Revenue Obligation has a lien or pledge of equal rank on the same category of Revenues.

“Paying Agent” means a bank, trust company, or any other Person designated as such by MLGW with respect to the Revenue Obligations issued under the Resolution and authorized to pay the principal of, premium, if any, or interest on such Revenue Obligations on behalf of MLGW. Such Paying Agent shall perform the duties required of the Paying Agent in the Resolution and any Supplemental Resolution authorizing Revenue Obligations. MLGW may designate itself as Paying Agent with respect to any Revenue Obligations; provided, however, if an Event of Default has occurred and is ongoing under the Resolution, then any Bondholder of Revenue Obligations to which the Event of Default relates may petition a court of competent jurisdiction for appointment of a replacement Paying Agent.

“Permitted Investments” means obligations selected by MLGW in which MLGW is permitted to invest moneys pursuant to applicable law.

“Person” or **“person”** means any individual, corporation, partnership, limited liability company, joint venture, association, joint stock company, trust, unincorporated organization, body, government, or agency or political subdivision thereof.

“Pledged Revenues” means all Net Revenues and all moneys paid or required to be paid into, and all moneys and securities on deposit from time to time in, the funds and accounts specified in the Resolution, but excluding (a) amounts in the Revenue Fund required to be used to pay Operating Expenses and (b) any amounts required in the Resolution to be set aside pending, or used for, rebate to the United States government pursuant to Section 148(f) of the Code, including, but not limited to, amounts in the Rebate Fund.

“President and CEO” means the individual appointed by the Mayor, confirmed by the Council, as the chief executive officer of MLGW.

The term **“principal”** means the principal amount of any Revenue Obligations.

“Principal Account” means the Principal Account within the Sinking Fund established pursuant to the Resolution.

“Principal Maturity Date” means each date on which principal is to become due on any Revenue Obligations, by maturity or mandatory sinking fund redemption, as established in the Supplemental Resolution for such Revenue Obligations.

“Project” means the construction of improvements and extensions to and the equipping of improvements and extensions to the System, in whole or in part, and the acquisition of all property, real and personal, related thereto, with the proceeds of any Revenue Obligations.

“Project Fund” means the Division’s Water System Project Fund established pursuant to the Resolution.

“Put Date” means any date on which a holder may elect to have Balloon Obligations redeemed, prepaid, purchased directly or indirectly by the City or MLGW, or otherwise paid.

“Qualified Hedge Agreement” means any Hedge Agreement with a Qualified Hedge Provider.

“Qualified Hedge Provider” means an entity whose senior unsecured long term obligations, financial program rating, counterparty rating, or claims paying ability, or whose payment obligations under the related Hedge Agreement are absolutely and unconditionally guaranteed or insured or collateralized by an entity whose senior unsecured long term obligations, financial program rating, counterparty rating, or claims paying ability, are rated either (a) at least as high as the third highest Rating category of each Rating Agency (ignoring any gradations within a Rating category), but, if there is no Credit Facility with respect to the related Hedged Obligations, in no event lower than any Rating on the related Hedged Obligations at the time of execution of the Hedge Agreement, (b) in any such lower Rating categories which each Rating Agency indicates in writing to MLGW will not, by itself, result in a reduction or withdrawal of its Rating on the related Hedged Obligations that is in effect prior to entering into the Hedge Agreement, or (c) in such higher Rating category as may be specified in a Supplemental Resolution. An entity's status as a “Qualified Hedge Provider” is determined only at the time MLGW or the City, at the direction of MLGW, enters into a Hedge Agreement with such entity and will not be redetermined with respect to that Hedge Agreement.

“Rate Covenant” means, collectively, the covenants set forth under the heading “Rate Covenant” in this summary of the Resolution, as such covenants may be explicitly supplemented or amended in any Supplemental Resolution.

“Rate Stabilization Fund” means the Rate Stabilization Fund, established in the Resolution.

“Rating” means a rating in one of the categories by a Rating Agency, disregarding pluses, minuses, and numerical gradations.

“Rating Agencies” or **“Rating Agency”** means Fitch, Moody's, and Standard & Poor's or any successors thereto and any other nationally recognized credit rating agency then maintaining a rating on any Revenue Obligations at the request of MLGW. If at any time a particular Rating Agency does not have a rating outstanding with respect to the relevant Revenue Obligations, then a reference to Rating Agency or Rating Agencies shall not include such Rating Agency.

“Rebate Fund” means the Rebate Fund, established pursuant to the Resolution.

“Receiver” means any receiver for the System appointed in accordance with the applicable laws of the State.

“Record Date” means any record date designated in a Supplemental Resolution for any Revenue Obligations.

“Reimbursement Obligation” means the obligation of the Board or of the City, on behalf of the Board, to directly reimburse any Credit Issuer for amounts paid by such Credit Issuer under a Credit Facility, whether or not such obligation to so reimburse is evidenced by a promissory note or other similar instrument. The term Reimbursement Obligation includes obligations pursuant to a Credit Facility Agreement either to make payments for interest based on levels of, or changes or differences in, interest

rates, currency exchange rates, or stock or other indices, in return for the Credit Issuer's fixed obligations under the Credit Facility or to make fixed payments for interest in return for the Credit Issuer's payments based on such variables.

The term “**related**” means, when used to refer to Revenue Obligations, subaccounts, categories of Revenues or liens, the item modified by such term has a definite relationship to the subject as described in the Resolution. The term “related” means, when used to refer to Operating Expenses, (a) for Released Revenue Obligations or Released Revenues, Operating Expenses with respect to Released Revenue Facilities, (b) for Special Purpose Revenue Obligations or Special Purpose Revenues, Operating Expenses with respect to Special Purpose Facilities, and (c) for General Revenue Obligations or General Revenues, all Operating Expenses of the System less Operating Expenses with respect to Related Revenue Facilities and Special Purpose Facilities.

“**Released Revenue Account**” means the Released Revenue Account within the Revenue Fund established pursuant to the Resolution.

“**Released Revenue Facilities**” means the portion of the System with respect to which Released Revenues arise or from which they are generated.

“**Released Revenue Obligations**” means Revenue Obligations secured by a Senior Lien on one or more categories of Released Revenues.

“**Released Revenues**” mean particular categories of Revenues which would otherwise be General Revenues, but have been identified by MLGW in accordance with the Resolution as not constituting General Revenues.

“**Renewal and Extension Fund**” means any System Renewal and Extension Fund established pursuant to the Resolution.

“**Reserve Account Credit Facility**” means any letter of credit, insurance policy, line of credit, surety bond, or similar obligation, arrangement or instrument issued by a bank, insurance company or other financial institution, together with any substitute or replacement therefore, if any, complying with the provisions of the Resolution, thereby fulfilling all or a portion of a Debt Service Reserve Requirement, if any.

“**Reserve Account Credit Facility Provider**” means any provider of a Reserve Account Credit Facility.

“**Resolution**” means the Master Resolution as it may from time to time be modified, supplemented, or amended by Supplemental Resolutions.

“**Revenue Fund**” means the Revenue Fund established pursuant to the Resolution.

“**Revenue Obligations**” means any revenue bonds, notes or other obligations authorized by and authenticated and delivered or any loan agreement executed and delivered pursuant to the Resolution.

“**Revenues**” means (a) all revenues, fees, rentals, income, receipts, accounts receivable and money derived from the ownership and operation of the System, received by MLGW, Investment Earnings and all other income earned and accreted from, and deferred gain from, securities and other investments and amounts earned on amounts deposited in funds and accounts under the Resolution or otherwise maintained with respect to the System, computed in accordance with generally accepted

accounting principles (excluding any investment earnings from construction or improvement funds created for the deposit of Revenue Obligation proceeds pending use, to the extent such income is applied to the purposes for which the Revenue Obligations were issued, and funds created to refund any outstanding obligations payable from Revenues of the System), and (b) all gifts, grants, reimbursements or payments received from governmental units or public agencies for the benefit of the System which are (1) not restricted by law or the payor to application for a particular purpose and (2) otherwise lawfully available for payment of Revenue Obligations or Contracts. The term “Revenues” does not include (A) any revenues or other money received by MLGW and derived from the ownership and operation of MLGW of its electric system or its gas system, (B) proceeds of insurance so long as such proceeds are to be paid to a party separate from MLGW in respect of a liability or are to be used to repair or replace portions of the System and (C) extraordinary gains from the sale of assets or similar one-time sources of income. The computation of Revenues with respect to any period of time shall be increased by the amount of transfers during such period from the Rate Stabilization Fund to the Revenue Fund, and decreased by the amount of any transfers during such period from the Revenue Fund to the Rate Stabilization Fund.

“**SEC**” means the Securities and Exchange Commission.

“**Secretary-Treasurer**” means the individual appointed by the Board and confirmed by the Council as the secretary-treasurer of MLGW.

“**Senior Lien**” means a lien on or pledge of one or more categories of Revenues that entitles the Beneficiaries of such lien or pledge to have a claim on such Revenues prior to any other Person and ahead of the use of such Revenues for any purpose other than payment of Operating Expenses; provided one or more series of Revenue Obligations, Contracts and related Beneficiaries may have parity Senior Liens on the same categories of Revenues pursuant to the terms of the Resolution.

“**Senior Lien Revenue Obligations**” means General Revenue Obligations, Special Purpose Revenue Obligations and Released Revenue Obligations but not Subordinate Lien Obligations provided that “Senior Lien Revenue Obligations” also includes Additional Senior Lien Obligations issued in compliance with the provisions of the Resolution and obligations secured by a Senior Lien pursuant to the Resolution.

“**Series 2020 Bonds**” means the not to exceed \$75,000,000 Water System Revenue Bonds, Series 2020 of the City, to be dated the date of issuance.

“**Sinking Fund**” means the Sinking Fund established pursuant to the Resolution.

“**Special Purpose Facilities**” means facilities which (a) will not result, upon completion or acquisition, in a material reduction in Net General Revenues in the judgment of the Board, (b) will not be of such a type or design that the subsequent closing thereof will materially impair the general operations of the System and (iii) the Board has designated in a Supplemental Resolution, as “Special Purpose Facilities” and may include an Acquired System.

“**Special Purpose Revenues**” means Revenues arising from or generated by one or more Special Purpose Facilities. At the election of MLGW, Special Purpose Revenues shall include all fees, notes, rates, charges and income received from an Acquired System.

“**Special Purpose Revenue Account**” means the Special Purpose Revenue Account within the Revenue Fund established pursuant to the Resolution.

“Special Purpose Revenue Obligations” means Obligations secured by a Senior Lien on Special Purpose Revenues.

“Subordinate Lien” means a lien on or pledge of one or more categories of Revenues which is not a Senior Lien.

“State” means the State of Tennessee.

“Subordinate Lien Obligations” means Revenue Obligations which only have a Subordinate Lien and obligations secured by a Subordinate Lien pursuant to the Resolution.

“Supplemental Resolution” means a resolution supplemental to the Master Resolution (which itself may be supplemented by one or more resolutions) to be adopted prior to and authorizing the issuance and delivery of any series of Revenue Obligations. Such a resolution as supplemented shall establish, or shall establish a method or procedure for establishing, the date or dates of the pertinent series of Revenue Obligations, the schedule of maturities of such Revenue Obligations, the rate or rates of interest to be borne thereby (or a range thereof), whether fixed or variable, the interest payment dates for such Revenue Obligations, the terms and conditions, if any, under which such Revenue Obligations may be made subject to redemption (mandatory or optional) prior to maturity, the form of such Revenue Obligations, the liens relating to such Revenue Obligations, the Contracts, if any, relating to such Revenue Obligations, and such other details as MLGW may determine.

“System” means the complete water system of MLGW, together with all water system properties of every nature hereafter owned by MLGW, including all improvements and extensions made by MLGW while the Revenue Obligations remain outstanding, and including all real and personal property of every nature comprising part of or used or useful in connection with the water system, all administrative and operational support facilities, and including all appurtenances, contracts, leases, franchises and other intangibles; provided, however, at the election of MLGW, an Acquired System may be included within the System as defined in the Resolution and become a part thereof or, at the election of MLGW, not become a part of the System but be operated as a separate and independent system by MLGW with the continuing right, upon the election of MLGW, to incorporate such separately Acquired System within the System.

“Tax-Exempt Obligations” means any Revenue Obligations the interest on which has been determined, in an unqualified opinion of Bond Counsel, to be excludable from the gross income of the owners thereof for federal income tax purposes.

“Termination Payments” means an amount payable by MLGW or the City on behalf of MLGW or a Qualified Hedge Provider upon termination of a Hedge Agreement.

“U.S. Treasury Trust Receipts” means receipts or certificates which evidence an undivided ownership interest in the right to payment or portions of the principal of or interest on obligations described in clauses (a) and (b) of the term Government Obligations, provided that such obligations are held by a bank or trust company organized under the laws of the United States acting as custodian of such obligations, in a special account separate from the general assets of such custodian.

“Variable Rate” means a rate of interest applicable to the Revenue Obligations, other than a fixed rate of interest which applies to a particular maturity of Revenue Obligations so long as that maturity of Revenue Obligations remains Outstanding.

Pledged Revenues and Flow of Funds

Pledge of Revenues: Limited Obligations; Contract Liens

(a) All Pledged Revenues shall be and are pledged to the prompt payment of the principal of, premium, if any, and interest on the Revenue Obligations, obligations treated as Senior Lien Revenue Obligations or Subordinate Lien Obligations pursuant to the Resolution and the obligations under the Contracts; provided:

(1) General Revenues shall secure only (A) General Revenue Obligations, (B) Subordinate Lien Obligations which have a lien on General Revenues, and (C) any Contracts with respect to such General Revenue Obligations;

(2) Released Revenues shall secure only (A) the related Released Revenue Obligations, (B) Subordinate Lien Obligations which have a lien on any related Released Revenues, (C) any Contracts with respect to such Released Revenue Obligations, and (D) separate agreements pursuant to the provisions of the Resolution;

(3) Special Purpose Revenues shall secure only (A) the related Special Purpose Revenue Obligations, (B) Subordinate Lien Obligations which have a lien on any related Special Purpose Revenues, and (C) any Contracts with respect to such Special Purpose Revenue Obligations; and

(4) A Contract may have a Senior Lien or a Subordinate Lien on a related category of Revenues, or no lien at all on Revenues, but (A) no Contract shall have a lien on Revenues that is senior to the lien on the category of Revenues securing the Revenue Obligations related to the Contract, and (B) the lien of the Contract shall be on parity with the lien of the related Revenue Obligations only to the extent the payment of principal of, premium, if any, and interest on such Revenue Obligations is made through such Contract as evidenced by Reimbursement Obligations or through a Qualified Hedge; provided other amounts due on a Contract may be secured by a lien ranking immediately thereafter with the effect set forth in the Resolution.

Pledged Revenues shall immediately be subject to the lien of this pledge for the benefit of the Beneficiaries without any physical delivery thereof or further act, and the lien of this pledge shall be valid and binding against MLGW and the City and against all other persons having claims against MLGW and the City, whether such claims shall have arisen in tort, contract, or otherwise, and regardless of whether such persons have notice of the lien of this pledge. This pledge shall rank superior to all other pledges which may hereafter be made of any Pledged Revenues. The lien of this pledge does not secure any obligation of MLGW other than the Revenue Obligations, obligations treated as Senior Lien Revenue Obligations or Subordinate Lien Obligations pursuant to the Resolution and the Contracts.

(b) None of the Revenue Obligations nor any related Contracts shall constitute a debt of the City or MLGW within the meaning of any Constitutional, City Charter or statutory limitation. Neither the full faith and credit nor the taxing power of the State or any political subdivision thereof, including the City, shall be pledged to the payment of the Revenue Obligations or any Contracts, and no Holder of any Revenue Obligations issued under the Resolution nor any counterparty to any related Contracts shall have the right to compel any exercise of the taxing powers of the City to pay the Revenue Obligations, or the interest thereon, or any related Contracts, and the Revenue Obligations, including the interest thereon, and the related Contracts shall be limited obligations of the City and MLGW as provided therein payable solely from the particular Revenues pledged thereto. The Revenue Obligations and related Contracts do not constitute a charge, lien or encumbrance upon any other property of the City excepting only the

Pledged Revenues expressly pledged under the Resolution. The City has no authority to levy any taxes to pay the Revenue Obligations or the Contracts. Neither the members of the Board nor any person executing the Revenue Obligations shall be liable personally on the Revenue Obligations by reason of the issuance thereof or on the Contracts by reason of the execution thereof.

(c) Other System Obligations (other than obligations treated as Senior Lien Revenue Obligations or Subordinate Lien Obligations pursuant to the Resolution) are not secured by a lien on any category of Revenues, but such obligations, prior to an Event of Default, may be paid from Revenues as described in the Resolution.

(d) City Payments are not secured by a lien on any category of Revenues, but such City Payments, prior to an Event of Default, may be paid from Revenues as described in the Resolution.

Funds, Accounts, and Subaccounts

The following funds, accounts, and subaccounts are established under the Master Resolution, and the moneys deposited in such funds, accounts, and subaccounts shall be held in trust for the purposes set forth in the Master Resolution:

(a) Water System Revenue Fund, to be held by MLGW, and within the Revenue Fund:

- (1) General Revenue Account.
- (2) Released Revenue Account.
- (3) Special Purpose Revenue Account.

(b) Water System Sinking Fund, to be held by MLGW, and within the Sinking Fund:

(1) Interest Account, with further subaccounts therein for each series of Revenue Obligations; provided a subaccount therein may be utilized for more than one series of Revenue Obligations if all such series of Revenue Obligations share exactly the same lien status on the same categories of Revenues.

(2) Hedge Payments Account, with further subaccounts therein for each series of Revenue Obligations; provided a subaccount therein may be utilized for more than one series of Revenue Obligations if all such series share exactly the same lien status on the same categories of Revenues and are secured in parity by the same or identical Qualified Hedge Agreements with the same provider.

(3) Contract Payments Account, with further subaccounts therein for each series of Revenue Obligations; provided a subaccount therein may be utilized for more than one series of Revenue Obligations if all such series of Revenue Obligations share exactly the same lien status on the same categories of Revenues and are secured in parity by the same or identical Contracts with the same provider.

(4) Principal Account, with further subaccounts therein for each series of Revenue Obligations; provided a subaccount therein may be utilized for more than one series of Revenue Obligations if all such series of Revenue Obligations share exactly the same lien status on the same categories of Revenues.

(5) Debt Service Reserve Account, with a subaccount for each series of Revenue Obligations which has a Debt Service Reserve Requirement; provided a subaccount therein may be utilized for more than one series of Revenue Obligations if all such series of Revenue Obligations are specified in the related Supplemental Resolutions to share a pledge of such account and have a combined Debt Service Reserve Requirement.

(c) Water System Renewal and Extension Fund, if one is created by MLGW, to be held by MLGW.

(d) Water System Rate Stabilization Fund, to be held by MLGW.

(e) Water System Rebate Fund, to be held by MLGW.

(f) Water System Project Fund, to be held by MLGW.

Each account listed above shall be held within the fund under which it is created. Each subaccount listed above shall be held within the account under which it is created. MLGW reserves the right, in its sole discretion, to create additional subaccounts or to abolish any subaccounts within any account from time to time.

Revenue Fund

(a) All Revenues shall be deposited to the Revenue Fund established under the Resolution from time to time as and when received. The amounts deposited shall be immediately allocated to the account within the Revenue Fund designated therefor as follows: General Revenues other than Special Purpose Revenues and Released Revenues to the General Revenue Account; Released Revenues to the Released Revenue Account; and Special Purpose Revenues to the Special Purpose Revenue Account. Moneys in the Revenue Fund shall be applied from time to time to the following purposes and in the following order of priority; provided, however, prior to the occurrence and continuation of an Event of Default, MLGW, in its sole discretion, may elect to change the order of priority in a Supplemental Resolution:

- (1) to pay Operating Expenses;
- (2) to deposit into the Sinking Fund the amounts required by the Resolution;
- (3) to deposit into the Debt Service Reserve Account the amounts required by the Resolution;
- (4) to deposit into the Rebate Fund the amounts required by the Resolution;
- (5) to pay to any party to a Contract the amounts due thereon, including Additional Interest, continuing commission or commitment fees, remarketing agent fees and repayment of amounts equivalent to principal on related Bonds;
- (6) to pay any amounts required to be paid with respect to any Other System Obligations;
- (7) for transfer to the Renewal and Extension Fund, if any, any amounts required by a Supplemental Resolution and any amounts otherwise determined by MLGW in its discretion are needed for the purposes set forth in the Resolution;

(8) to pay any amounts required to be paid with respect to any City Payments;

(9) to deposit into the Rate Stabilization Fund the amount, if any, budgeted for deposit into such Rate Stabilization Fund at the time set forth in the current Annual Budget of MLGW or in any amount at any time as otherwise determined by the Secretary-Treasurer; and

(10) for any other lawful purpose;

(b) The following limitations and qualifications shall govern all applicable uses of Revenues under the Resolution:

(1) For Operating Expenses, (A) amounts in the Released Revenue Account shall be used only for Operating Expenses of Released Revenue Facilities, (B) amounts in the Special Purpose Revenue Account shall be used only for Operating Expenses of Special Purpose Revenue Facilities, and (C) Operating Expenses related to General Revenues shall be paid first from amounts in the General Revenue Account;

(2) For deposits to the Sinking Fund, the Debt Service Reserve Account or the Rebate Fund, (A) amounts in the Released Revenue Account shall be used only for deposits to subaccounts relating to Revenue Obligations which have a lien on any Released Revenues or for other purposes pursuant to the Resolution, (B) amounts in the Special Purpose Revenue Account shall be used only for deposits to subaccounts relating to Revenue Obligations having a lien on Special Purpose Revenues, and (C) deposits to subaccounts relating to Revenue Obligations which have a lien on General Revenues shall be made first from amounts in the General Revenue Account;

(3) For any payments on a Contract, amounts may be drawn only from the account or accounts relating to the Revenues securing the Revenue Obligations related to such Contract, only in accordance with the requirements of subparagraph (2) above and, unless otherwise provided in the related Supplemental Resolution because a Credit Facility is intended to be drawn on for payments on Revenue Obligations, only after all payments then due with respect to the related Revenue Obligations have been made;

(4) For any payments with respect to any Other System Obligations, (A) if such Other System Obligations relate to Released Revenue Facilities, then from the Released Revenue Account; (B) if such Other System Obligations relate to Special Purpose Revenue Facilities, from the Special Purpose Revenue Account, and (C) otherwise, first from the General Revenue Account;

(5) Notwithstanding any provision of the Resolution to the contrary, (A) no payments may be made to a subaccount of the Sinking Fund related to Subordinate Lien Obligations unless all required payments have been or are being made to other subaccounts related to Revenue Obligations, or Contracts related to Revenue Obligations, in each case which have a lien on a category of Revenues ahead of or in parity with the lien of such Subordinate Lien Obligations, (B) no payments may be made with respect to any Other System Obligations unless all required payments have been made to each subaccount with respect to all Revenue Obligations and all Contracts, and (C) no City Payments may be made unless all required payments have been made to each subaccount with respect to all Revenue Obligations, all Contracts and all Other System Obligations; provided if required by the terms thereof, obligations treated as Senior Lien Revenue Obligations or Subordinate Lien Obligations pursuant to the Resolution shall be paid with the other Senior Lien Revenue Obligations or Subordinate Lien Obligations;

(6) If at any time the amounts in any subaccount of the Sinking Fund are less than the amounts required by the Resolution, and there are not on deposit in any Renewal and Extension Fund available moneys sufficient to cure any such deficiency, then MLGW shall withdraw from subaccounts related to Subordinate Lien Obligations (taking such amounts first from subaccounts related to Subordinate Lien Obligations, pro rata,) and deposit in such subaccount of the Sinking Fund, as the case may be, the amount necessary (or all the moneys in such funds and accounts, if less than the amount required) to make up such deficiency.

Sinking Fund

(a) General. Sufficient moneys shall be transferred in periodic installments from the Revenue Fund into the Interest Account, the Hedge Payments Account, the Contracts Payments Account and the Principal Account for the purpose of paying the Revenue Obligations as they become due and payable and for the purpose of making payments under Contracts. Notwithstanding any provision under this heading to the contrary, the qualifications set forth in clause (b)(5) and (b)(6) under the previous section describing the Revenue Fund shall control as to any transfers to or withdrawals from any Account or subaccount of the Sinking Fund established with respect to Subordinate Lien Obligations.

(b) Interest Account. Unless otherwise provided in a related Supplemental Resolution, on or after the first day of the month next succeeding the date of issuance of any series of Revenue Obligations, but not later than the last day of such month, and each month thereafter, MLGW shall deposit in the related subaccount of the Interest Account an amount such that, if the same amount were so deposited into and credited to the related subaccount of the Interest Account each succeeding month thereafter prior to the next Interest Payment Date, the aggregate of the amounts so deposited into and credited to the related subaccount of the Interest Account is not less than the interest (excluding Additional Interest) coming due on such Revenue Obligations on such Interest Payment Date. Moneys in the related subaccount of the Interest Account shall be used solely to pay interest (excluding Additional Interest) on the Revenue Obligations when due or to pay Reimbursement Obligations for Credit Facilities under which the Credit Issuer makes all interest payments on the Revenue Obligations. MLGW shall also deposit and continue to deposit all Hedge Receipts under related Qualified Hedge Agreements and any payments from a Credit Issuer under a Credit Facility Agreement in the related subaccount of the Interest Account from time to time as and when received.

(c) Hedge Payments Account and Contract Payments Account. Unless otherwise provided in a related Supplemental Resolution or a Hedge Agreement, on or before each payment date for Hedge Payments under Qualified Hedge Agreements, MLGW shall deposit in the related subaccount of the Hedge Payments Account an amount which, together with any Hedge Receipts on deposit in the Interest Account and other moneys already on deposit in the Hedge Payments Account and available to make any Hedge Payment on such payment date, is not less than such Hedge Payments coming due on such payment date. Moneys in the related subaccount of the Hedge Payments Account shall be used solely to pay Hedge Payments under Qualified Hedge Agreements when due. Unless otherwise provided in a Supplemental Resolution or a Contract, on or before each payment date for amounts, other than for Reimbursement Obligations, due on Contracts other than Qualified Hedge Agreements, including Additional Interest, continuing commission or commitment fees and remarketing fees, MLGW shall deposit in the related subaccount of the Contract Payments Account an amount which, together with any other moneys already on deposit therein and available to make such payment, is not less than the amount coming due on such payment date. Moneys in the related subaccount of the Contract Payments Account shall be used solely for such payments when due.

(d) Principal Account. Unless otherwise provided in a Supplemental Resolution, on or after the first day of the month next succeeding the date of issuance of any series of Revenue Obligations, but

not later than the last day of such month, and each month thereafter, MLGW shall deposit in the related subaccount of the Principal Account an amount such that, if the same amount were so deposited into and credited to the related subaccount of the Principal Account each succeeding month thereafter prior to the next Principal Maturity Date, the aggregate of the amounts so deposited into and credited to the related subaccount of the Principal Account is not less than the principal coming due on such Revenue Obligations on such Principal Maturity Date. Moneys in the related subaccount of the Principal Account shall be used solely for the payment of principal of the Revenue Obligations as the same shall become due and payable at maturity or upon redemption or to pay Reimbursement Obligations for Credit Facilities under which the Credit Issuer makes all principal payments on the Revenue Obligations.

(e) Further Payments. No further payments need be made into a subaccount of the Interest Account or the Principal Account whenever the amount available in such subaccount of the Interest Account and the related subaccount of the Principal Account, if added to the amount then in the related subaccount of the Debt Service Reserve Account, if any (without taking into account any amount available to be drawn on any applicable Reserve Account Credit Facility), is sufficient to retire all the Revenue Obligations then Outstanding and Contracts to which such subaccounts relate and to pay all unpaid interest accrued and to accrue prior to such retirement. No moneys in any subaccount of the Interest Account or the Principal Account shall be used or applied to the optional purchase or redemption of or prepayment of Revenue Obligations prior to maturity unless: (1) provision shall have been made for the payment of all of the Revenue Obligations to which such subaccount relates and all other Revenue Obligations having a parity or higher ranking lien on any category of Revenues securing such Revenue Obligations; or (2) the Revenue Obligations to which such subaccount relates are Senior Lien Revenue Obligations and such moneys are applied to the purchase and cancellation of such Revenue Obligations which are subject to mandatory redemption on the next mandatory redemption date, which falls due within 12 months, such Revenue Obligations are purchased at a price not more than would be required for mandatory redemption, and such Revenue Obligations are canceled upon purchase and credited against the redemption otherwise to be made on such mandatory redemption date; or (3) the Revenue Obligations to which such subaccount relates are Senior Lien Revenue Obligations and such moneys are applied to the purchase and cancellation of such Revenue Obligations at a price less than the amount of principal which would be payable on such Revenue Obligations, together with interest accrued through the date of purchase, and such Revenue Obligations are canceled upon purchase; or (iv) the Revenue Obligations to which such subaccount relates are Senior Lien Revenue Obligations and such moneys are in excess of the then required balance of the related subaccount in the Interest Account or the Principal Account and are applied to redeem or prepay a part of such Revenue Obligations on the next succeeding redemption date for which the required notice of redemption may be given.

(g) Debt Service Reserve Account.

(1) There shall be deposited into the same or separate subaccount of the Debt Service Reserve Account the amounts specified, if any, in Supplemental Resolutions with respect to the first series of Revenue Obligations and any Additional Obligations. MLGW may establish by Supplemental Resolution a subaccount within the Debt Service Reserve Account for each separately issued series of Revenue Obligations; provided, however, that MLGW shall not be required to establish a subaccount of the Debt Service Reserve Account for any Revenue Obligations, and any such subaccount shall only be established if required by the Supplemental Resolution authorizing the issuance of the Revenue Obligations. Each such subaccount shall be for the benefit and security of one or more series of Revenue Obligations as specified in the related Supplemental Resolution and need not secure all Revenue Obligations. Each such subaccount shall be initially funded, maintained and replenished as prescribed by Supplemental Resolution.

(2) The balance of each subaccount of the Debt Service Reserve Account shall be maintained at an amount equal to the Debt Service Reserve Requirement for the related Revenue Obligations (or such lesser amount that is required to be accumulated in such subaccount of the Debt Service Reserve Account in connection with any periodic accumulation to the Debt Service Reserve Requirement provided in the Resolution or in any Supplemental Resolution). Whenever for any reason the amount in the related subaccounts of the Interest Account or the Principal Account is insufficient to pay all interest or principal falling due on any related Revenue Obligations, MLGW shall make up any deficiency by transfers from the Renewal and Extension Fund, if any. Whenever, after compliance with the immediately preceding sentence, on the date that such interest or principal is due on any Revenue Obligations, there are insufficient moneys in the related subaccounts of the Interest Account or the Principal Account available to make such payment, MLGW shall, without further instructions, apply so much as may be needed of the moneys in the related subaccount, if any, of the Debt Service Reserve Account to prevent default in the payment of such interest or principal, with priority to interest payments. Whenever by reason of any such application or otherwise the amount remaining to the credit of the related subaccount of the Debt Service Reserve Account is less than the amount then required to be in such subaccount of the Debt Service Reserve Account, such deficiency shall be remedied in the amounts and at the times prescribed by the related Supplemental Resolution establishing such related subaccount of the Debt Service Reserve Account. Notwithstanding anything in the Resolution to the contrary, a subaccount in the Debt Service Reserve Account that secures General Revenue Obligations shall only be funded with General Revenues, a subaccount in the Debt Service Reserve Account that secures Special Purpose Revenue Obligations shall only be funded with related Special Purpose Revenues, and a subaccount in the Debt Service Reserve Account that secures Released Revenue Obligations shall only be funded with related Released Revenues. No Revenues shall be used to fund a subaccount in the Debt Service Reserve Account to secure Subordinate Lien Obligations if the Rate Covenant under the Resolution has not been satisfied or an Event of Default has occurred under the Resolution with respect to the related category of Revenue Obligations or with respect to any Senior Lien Obligations.

(3) If at the times set forth in any Supplemental Resolution the moneys on deposit in any subaccount in the Debt Service Reserve Account established by such Resolution shall exceed the Debt Service Reserve Requirement related thereto, and after giving effect to any Reserve Fund Credit Facility that may be credited to such subaccount in accordance with the provisions of such Supplemental Resolution, such excess shall be transferred from such subaccount of the Debt Service Reserve Account to the Sinking Fund to redeem Revenue Obligations allocable thereto or to such other Fund or Account as may be directed by MLGW, subject to an opinion from Bond Counsel to the effect that such application is permitted by applicable law and will not adversely affect any applicable exemption from federal income taxation of the interest on any Tax-Exempt Obligations.

(4) Whenever the amount in a subaccount within the Debt Service Reserve Account attributable to a series of Senior Lien Revenue Obligations, together with the amount in the Sinking Fund for such series, is sufficient to pay in full all such Senior Lien Revenue Obligations secured thereby in accordance with their terms (including the maximum amount of principal or applicable sinking fund redemption price and interest which could become payable thereon), the applicable funds on deposit in such subaccount of the Debt Service Reserve Account shall be transferred to the Debt Service Fund and applied to the timely payment of principal or redemption price, if applicable, and interest on the outstanding Senior Lien Revenue Obligations secured thereby.

(5) In the event of the refunding or defeasance of any Revenue Obligations secured by a subaccount of the Debt Service Reserve Account, MLGW may withdraw from the separate subaccount in the Debt Service Reserve Account established for the benefit of such series of Revenue Obligations all or any portion of the amounts accumulated therein and deposit such amounts with any escrow agent for the Revenue Obligations being refunded or defeased to be held for the payment of the principal or redemption price, if applicable, and interest on the Revenue Obligations being refunded or defeased; provided that such withdrawal shall not be made unless the amount thereafter remaining in such separate subaccount shall not be less than the remaining Debt Service Reserve Requirement related thereto.

(6) MLGW may elect to satisfy in whole or in part the Debt Service Reserve Requirement for any Revenue Obligations by means of a Reserve Account Credit Facility, subject to the following requirements: (A) the Reserve Account Credit Facility Provider must have a credit rating issued by a Rating Agency not less than the greater of the then current Rating on the related series of Revenue Obligations or the second highest long-term Rating of such Rating Agency; (B) no obligation to the Reserve Account Credit Facility Provider shall be secured by a lien equal to or superior to the lien granted to the related series of Revenue Obligations; (C) each Reserve Account Credit Facility shall have a term of at least one (1) year (or, if less, the remaining term of the related series of Revenue Obligations) and shall entitle MLGW to draw upon or demand payment and receive the amount so requested in immediately available funds the date of such draw or demand; (D) the Reserve Account Credit Facility shall permit a drawing by MLGW for the full stated amount in the event (i) the Reserve Account Credit Facility expires or terminates for any reason prior to the final maturity of the related series of Revenue Obligations, and (ii) MLGW fails to satisfy the Debt Service Reserve Requirement by the deposit to the Debt Service Reserve Account of cash, obligations, a substitute Reserve Account Credit Facility, or any combination thereof, on or before the date of such expiration or termination; (E) if the Rating issued by the Rating Agency to the Reserve Account Credit Facility Provider is withdrawn or reduced below the greater of the Rating assigned to the related series of Revenue Obligations immediately prior to such action by the Rating Agency or the second highest long-term Rating of such Rating Agency, MLGW shall provide a substitute Reserve Account Credit Facility within sixty (60) days after such rating change, and, if no substitute Reserve Account Credit Facility is obtained by such date, shall fund the Debt Service Reserve Requirement in the amounts and at the times prescribed by the related Supplemental Resolution pursuant to which the Reserve Fund Credit Facility is delivered; and (F) if the Reserve Account Credit Facility Provider commences any insolvency proceedings or is determined to be insolvent or fails to make payments when due on its obligations, MLGW shall provide a substitute Reserve Account Credit Facility within sixty (60) days thereafter, and, if no substitute Reserve Account Credit Facility is obtained by such date, shall fund the Debt Service Reserve Requirement in the amounts and at the times prescribed by the related Supplemental Resolution pursuant to which the Reserve Fund Credit Facility is delivered. If the events described in either clauses (E) or (F) above occur, MLGW shall not relinquish the Reserve Account Credit Facility at issue until after the Debt Service Reserve Requirement is fully satisfied by the provision of cash, obligations, or a substitute Reserve Account Credit Facility or any combination thereof. Any amounts received from a Reserve Account Credit Facility for the purpose of paying principal and/or interest on related Revenue Obligations shall be deposited directly into the related subaccounts of the Interest Account and the Principal Account, and such deposit shall constitute the application of amounts in the related subaccount of the Debt Service Reserve Account. Any amounts received from a Reserve Account Credit Facility drawn upon as a result of expiration or termination of such Reserve Account Credit Facility shall be deposited to the related subaccount of the Debt Service Reserve Account. MLGW may provide for the repayment of any draw-down on a Reserve Account Credit Facility from amounts required to be deposited to the related subaccount of the Debt

Service Reserve Account, all as may be set forth in a Supplemental Resolution. All repayments of any draw-down on the Reserve Account Credit Facility and any interest or fees due the Reserve Account Credit Facility Provider under such Reserve Account Credit Facility (excluding any Subordinate Lien Reserve Account Credit Facility) shall be secured by a lien on related Revenues subordinate to the lien of the related Revenue Obligations for payments into the related subaccounts of the Sinking Fund, the Rebate Fund and payments on any Credit Facility Agreement securing the related Revenue Obligations.

(7) Any such Reserve Account Credit Facility shall be pledged to the benefit of the owners of all of the Revenue Obligations secured by it. MLGW reserves the right, if it deems it necessary in order to acquire such a Reserve Account Credit Facility, to amend the Resolution without the consent of any of the owners of the Revenue Obligations in order to grant to the Reserve Account Credit Facility Provider such additional rights as it may demand, provided that such amendment shall not, in the written opinion of Bond Counsel filed with the Division, impair or reduce the security granted to the owners of Revenue Obligations or any of them.

Rate Stabilization Fund

MLGW may, from time to time, withdraw amounts on deposit in the Rate Stabilization Fund and (a) transfer such amounts to the Revenue Fund, (b) use such amounts to purchase or redeem Revenue Obligations, (c) use such amounts to otherwise provide for the payment of Revenue Obligations or interest thereon or (d) use such funds to make any other lawful payments.

Project Fund

(a) Project Fund. There shall be established within the Project Fund a separate account for each series of Revenue Obligations used to finance Costs of Projects. Moneys in the Project Fund shall be held by MLGW and applied to the payment of the Costs of Projects financed with such series of Revenue Obligations, or for the repayment of advances made for that purpose in accordance with and subject to the provisions and restrictions set forth in the Resolution and in the related Supplemental Resolution. MLGW covenants that it will not cause or permit to be paid from the Project Fund any sums except in accordance with such provisions and restrictions; provided, however, that any moneys in the Project Fund not presently needed for the payment of current obligations during the course of construction may be invested in Permitted Investments maturing or otherwise available not later than (1) the date upon which such moneys will be needed according to a schedule of anticipated payments from the Project Fund prepared by MLGW in connection with the Project, if any, or, (2) in the absence of such schedule, 36 months from the date of issuance of the related Revenue Obligations, in either case upon written direction of MLGW. Any such investments shall be held by MLGW, in trust, for the account of the Project Fund until maturity or until sold, and at maturity or upon such sale the proceeds received therefrom including accrued interest and premium, if any, shall be immediately deposited by the Depository in the Project Fund and shall be disposed of in the manner and for the purposes provided in the Resolution.

(b) Purposes of Payments. Moneys in each separate account in the Project Fund shall be used for the payment or reimbursement of the Costs of the Project for which such account was established as provided in the Resolution.

(c) Documentation of Payments. MLGW shall maintain records with respect to the expenditure of such funds. Unless otherwise specifically instructed in a written opinion of Bond Counsel, MLGW will retain such records for a period ending not earlier than six (6) years following the final maturity of any Revenue Obligations issued under the Resolution.

(d) Funds Remaining on Completion of Projects. Funds remaining upon completion of a Project shall be used as set forth in the related Supplemental Resolution.

Renewal and Extension Fund

MLGW may deposit, in its sole discretion, funds in a Renewal and Extension Fund or any account or subaccount created by MLGW, which may be created by MLGW in its sole discretion. All sums accumulated and retained in the Renewal and Extension Fund shall be used first to prevent default in the payment of interest on or principal of any General Revenue Obligations when due and then shall be applied by MLGW from time to time, as and when MLGW shall determine, to the following purposes and, prior to the occurrence and continuation of an Event of Default, in the order of priority determined by MLGW in its sole discretion: (a) for the purposes for which moneys held in the Revenue Fund may be applied under the Resolution, (b) to pay any amounts which may then be due and owing under any Hedge Agreement (including fees, expenses, and indemnity payments) and any Termination Payments due under a Hedge Agreement, (c) to pay any governmental charges and assessments against the System or any part thereof which may then be due and owing, (d) to make acquisitions, betterments, extensions, repairs, or replacements or other capital improvements (including the purchase of equipment) to the System deemed necessary by MLGW (including payments under contracts with vendors, suppliers, and contractors for the foregoing purposes), and (e) to acquire Revenue Obligations (other than Special Purpose Revenue Obligations) by redemption or by purchase in the open market prior to their respective maturities, and when so used for such purposes the moneys shall be withdrawn from the Renewal and Extension Fund and deposited into the related subaccounts of the Interest Account and the Principal Account for the Revenue Obligations to be so redeemed or purchased.

Deposits and Security of Funds and Accounts

All moneys in the funds and accounts established under the Resolution shall be held by the Board in one or more Depositories qualified for use by MLGW. Uninvested moneys shall, at least to the extent not guaranteed by the Federal Deposit Insurance Corporation, be secured to the fullest extent required by the laws of the State for the security of public funds.

Investment of Funds and Accounts

Moneys in the funds and accounts established under the Resolution shall be invested and reinvested in Permitted Investments and containing such maturities as are deemed suitable by MLGW.

Investment Earnings in each fund and account (except the Debt Service Reserve Account) shall be retained therein. Investment Earnings from the investment of moneys in each subaccount of the Debt Service Reserve Account shall be retained in such subaccount of the Debt Service Reserve Account at all times if the balance (taking into account the current market value of the Investments held in the Debt Service Reserve Account) is less than the respective Debt Service Reserve Requirement; thereafter and at all times if the balance of such subaccount of the Debt Service Reserve Account is equal to or greater than the respective Debt Service Reserve Requirement (taking into account the current market value of the investments held in the Debt Service Reserve Account), such Investment Earnings shall be transferred to the related account in the Revenue Fund.

The Supplemental Resolution authorizing the issuance of any Revenue Obligations may specify maturity limitations and different allocations of Investment Earnings on investments of moneys in the funds and accounts relating to such Revenue Obligations.

Moneys in each of such funds shall be accounted for as a separate and special fund apart from all other funds, provided that investments of moneys therein may be made in a pool of investments together with other moneys of MLGW so long as sufficient Permitted Investments in such pool, not allocated to other investments of contractually or legally limited duration, are available to meet the requirements of the foregoing provisions.

Valuation of Investments

All investments made for any fund, account or subaccount shall, for purposes of the Resolution, be valued at fair market value on the last day of Fiscal Year or as otherwise required by law.

Application of Excess in Sinking Fund

Whenever at the end of each Fiscal Year the amount of moneys in any account or subaccount of the Sinking Fund, including the Debt Service Reserve Account, exceeds the amount then currently required to be held therein, the excess shall be transferred to the related account in the Revenue Fund.

Disposition of Moneys After Payment of Revenue Obligations and Contracts

Any amounts remaining in any fund or account established under the Resolution after payment in full of the principal of, redemption premium, if any, and interest on the Revenue Obligations (or after provision for payment thereof has been made) and obligations treated as Senior Lien Revenue Obligations or Subordinate Lien Obligations pursuant to the Resolution, the fees, charges, and expenses of the Paying Agent and Bond Registrar, all amounts owing to any Credit Issuer, any Reserve Account Credit Facility Provider, and any Qualified Hedge Provider or other party to a Contract, and all other amounts required to be paid under the Resolution (including amounts required to be paid into the Rebate Fund), shall be promptly paid to MLGW.

Additional Revenue Obligations

No Revenue Obligations Except as Permitted in the Resolution

No Revenue Obligations may be issued and no other obligations, except Contracts, which are secured by any interest in or lien on Pledged Revenues may be entered into except pursuant to the Resolution; provided, however, the City or MLGW may issue an initial series of Senior Lien Revenue Obligations pursuant to a Supplemental Resolution without meeting the requirements of the Resolution.

Additional Senior Lien Revenue Obligations

(a) Any portion (including any maturities or portions thereof whether or not in chronological order and any amounts subject to mandatory redemption) or all of a series of Senior Lien Revenue Obligations may be refunded at maturity, upon redemption in accordance with their terms, or upon payment, prepayment or redemption with the consent of the owners of such Senior Lien Revenue Obligations, and the refunding Revenue Obligations so issued shall constitute Senior Lien Revenue Obligations secured on a parity with any Revenue Obligations secured on a parity with the refunded Revenue Obligations, if all of the following conditions are satisfied:

- (1) MLGW shall have obtained a report from an Independent Certified Public Accountant or a Municipal Advisor demonstrating that the refunding will reduce the total debt service payments on Outstanding Senior Lien Revenue Obligations, including payments on

related Contracts, which are parity secured with the Revenue Obligations to be refunded on a present value basis; or

(2) as an alternative to, and in lieu of, satisfying the requirements of (1), all Outstanding Senior Lien Revenue Obligations which are secured on a parity with the Revenue Obligations to be refunded are being refunded under arrangements which immediately result in making provision for the payment of such Revenue Obligations; and

(3) all applicable laws and regulations of the State, including without limitation laws and regulations pertaining to the issuance by municipalities of revenue refunding bonds, are complied with; and

(4) requirements of (b)(2), (b)(5), and (b)(6) immediately below are met with respect to such refunding Revenue Obligations.

(b) Additional Senior Lien Revenue Obligations (including refunding Revenue Obligations which do not meet the requirements of (a)) may also be issued on a parity with Outstanding Senior Lien Revenue Obligations pursuant to a Supplemental Resolution, and the Revenue Obligations so issued shall be secured on a parity with such Outstanding Senior Lien Revenue Obligations, if all of the following conditions are satisfied:

(1) There shall have been procured and filed with MLGW either:

(A) a report by a Municipal Advisor or a certificate by the Secretary-Treasurer of MLGW to the effect that the historical related Net Revenues for either (i) a period of 12 consecutive months of the most recent 18 consecutive months prior to the issuance of the proposed Additional Obligations or (ii) the most recent audited Fiscal Year, were equal to at least 120% of the maximum Debt Service Requirement for any Fiscal Year, commencing with the first Fiscal Year after the Fiscal Year in which the Additional Obligations are issued, on all related Senior Lien Revenue Obligations which will be Outstanding immediately after the issuance of the proposed Additional Obligations and secured on a parity therewith, provided, however, (x) the report or certificate may contain pro forma adjustments to historical related Net Revenues equal to 100% of the increased annual amount attributable to any revision in the schedule of rates, fees, and charges for the services and facilities furnished by the System, imposed prior to the date of delivery of the proposed Additional Obligations and not fully reflected in the historical related Net Revenues actually received during such historical period used; (y) if MLGW or City has a contract to purchase or otherwise acquire an Acquired System that will become part of the System, the historical Net Revenues may be adjusted to include the anticipated Net Revenues from the Acquired System as certified in the report or certificate; and (z) if MLGW has entered into a contract to furnish services of the System that is not fully reflected in the historical Net Revenues of the System, such historical Net Revenues may be adjusted to include the anticipated Net Revenues from such contract as certified in the report or certificate; or

(B) a report by a Municipal Advisor or a certificate by the Secretary-Treasurer of MLGW to the effect that in each Fiscal Year of the Forecast Period the forecasted related Net Revenues (which forecast can take into account (i) any planned increases in the rates, fees and charges for the services and facilities furnished by the System and (ii) any revenues forecasted to be received from any Acquired Systems as to which the City or MLGW has entered into a contract to purchase or otherwise acquire),

are expected to equal at least 120% of the Debt Service Requirement during such period on all related Senior Lien Revenue Obligations which will be Outstanding immediately after the issuance of the proposed Additional Obligations and secured on a parity therewith.

(2) MLGW shall have received, at or before issuance of the Additional Obligations, a report from a Municipal Advisor or a certificate of the Secretary-Treasurer of MLGW to the effect that the payments required to be made into each account or subaccount of the Sinking Fund have been made and the balance in each account or subaccount of the Sinking Fund is not less than the balance required by the Resolution as of the date of issuance of the proposed Additional Obligations.

(3) The Supplemental Resolution authorizing the proposed Additional Obligations must require (A) that the amount, if any, to be deposited to or accumulated in, and maintained in, the subaccounts of the Debt Service Reserve Account for Senior Lien Revenue Obligations which are to be secured on a parity with such Additional Obligations be increased to not less than 100% of the Debt Service Reserve Requirement, if any, computed on a basis which includes all Senior Lien Revenue Obligations which will be Outstanding and secured on a parity with the Additional Obligations immediately after the issuance of the proposed Additional Obligations and (B) that the amount of such increase be deposited in such subaccounts prior to or at the end of the period and at least as fast as the rate specified in the Resolution or any applicable Supplemental Resolution.

(4) The Supplemental Resolution authorizing the proposed Additional Obligations must require the proceeds of such proposed Additional Obligations to be used to make capital improvements to or capital acquisitions for the System, to fund interest on the proposed Additional Obligations, to refund other obligations issued for such purposes (whether or not such refunding Revenue Obligations satisfy the requirements of (a)), for any other legal purpose under applicable law as evidenced by an opinion of Bond Counsel, and/or to pay expenses incidental thereto and to the issuance of the proposed Additional Obligations.

(5) The Secretary-Treasurer shall have certified, by written certificate dated as of the date of issuance of the Additional Obligations, that MLGW is in compliance in all material respects with the requirements of the Resolution.

(6) MLGW shall have received an opinion of Bond Counsel, dated as of the date of issuance of the Additional Obligations, to the effect that the Supplemental Resolution authorizing the issuance of Additional Obligations has been duly adopted by MLGW or by the City, as the case may be.

(c) Obligations which would be Other System Obligations but for the existence of a Senior Lien on a category of Revenues securing such obligations may be issued and so secured, and thereafter will be treated as Senior Lien Revenue Obligations, if all of the conditions of (b)(2) through (b)(6) are satisfied treating such obligations as Additional Obligations and the issuance and security documents therefore as Supplemental Resolutions.

Additional Subordinate Lien Obligations

(a) Revenue Obligations also may be issued on a Subordinate Lien basis pursuant to a Supplemental Resolution or a resolution otherwise adopted by MLGW payable from moneys which

would otherwise be available for any other lawful purpose, and the Revenue Obligations so issued shall constitute Subordinate Lien Obligations, if:

(1) the Supplemental Resolution authorizing the Subordinate Lien Obligations shall provide that such Subordinate Lien Obligations shall be junior and subordinate in lien and right of payment directly to any Outstanding Senior Lien Revenue Obligations or Senior Lien Revenue Obligations issued in the future which have a Senior Lien on a category of Revenues as to which such proposed Additional Obligations have a Subordinate Lien;

(2) there shall have been procured and filed with MLGW either:

(A) a report by a Municipal Advisor or a certificate by the Secretary-Treasurer of MLGW to the effect that the historical related Net Revenues for either (i) a period of 12 consecutive months of the most recent 18 consecutive months prior to the issuance of the proposed Additional Obligations or (ii) the most recent audited Fiscal Year, were equal to at least 120% of the maximum Debt Service Requirement for any Fiscal Year, commencing with the first Fiscal Year after the Fiscal Year in which the Additional Obligations are issued, on all Senior Lien Revenue Obligations which will be Outstanding immediately after the issuance of the proposed Additional Obligations and at least 100% of the maximum Debt Service Requirement for any Fiscal Year, commencing with the first Fiscal Year after the Fiscal Year in which the Additional Obligations are issued, on all other Revenue Obligations which will be Outstanding immediately after the issuance of the proposed Additional Obligations, provided, however, (x) the report or certificate may contain pro forma adjustments to historical related Net Revenues equal to 100% of the increased annual amount attributable to any revision in the schedule of rates, fees, and charges for the services and facilities furnished by the System, imposed prior to the date of delivery of the proposed Additional Obligations and not fully reflected in the historical related Net Revenues actually received during such historical period used; (y) if MLGW or City has a contract to purchase or otherwise acquire an Acquired System that will become part of the System, the historical Net Revenues may be adjusted to include the anticipated Net Revenues from the Acquired System as certified in the report or certificate; and (z) if MLGW has entered into a contract to furnish services of the System that is not fully reflected in the historical Net Revenues of the System, such historical Net Revenues may be adjusted to include the anticipated Net Revenues from such contract as certified in the report or certificate; or

(B) a report by a Municipal Advisor or a certificate by the Secretary-Treasurer of MLGW to the effect that in each Fiscal Year of the Forecast Period the forecasted related Net Revenues (which forecast can take into account (i) any planned increases in the rates, fees and charges for the services and facilities furnished by the System and (ii) any revenues forecasted to be received from any Acquired Systems as to which the City or MLGW has entered into a contract to purchase or otherwise acquire), are expected to equal at least 120% of the Debt Service Requirement during such period on all Senior Lien Revenue Obligations which will be Outstanding immediately after the issuance of the proposed Additional Obligations and at least 100% of the Debt Service Requirement during such period on all other Revenue Obligations which will be Outstanding immediately after the issuance of the proposed Additional Obligations; and

(3) MLGW shall have received a report from a Municipal Advisor or a certificate of the Secretary-Treasurer to the effect that the payments required to be made into each account or subaccount of the Sinking Fund have been made and the balance in each account or subaccount of the Sinking Fund is not less than the balance required for any Senior Lien Revenue Obligations as of the date of issuance of any Subordinate Lien Obligations.

(b) In the event of any insolvency or bankruptcy proceedings, and any receivership, liquidation, reorganization, or other similar proceedings in connection therewith, relative to MLGW or to its creditors, as such, or to its property, and in the event of any proceedings for voluntary liquidation, dissolution, or other winding up of MLGW, whether or not involving insolvency or bankruptcy, the owners of all Senior Lien Revenue Obligations then Outstanding and parties to related Contracts shall be entitled to receive payment in full of all principal and interest due on all such Senior Lien Revenue Obligations and all payments due under related Contracts in accordance with the provisions of the Resolution before the owners of any Subordinate Lien Obligations having a Subordinate Lien on a category of Revenues as to which such Senior Lien Revenue Obligations have a Senior Lien or related Contracts are entitled to receive any payment from the Pledged Revenues or the amounts held in the funds and accounts created under the Resolution on account of principal of, premium, if any, or interest on the Subordinate Lien Obligations or related Contracts.

(c) If any Event of Default shall have occurred and be continuing (under circumstances when the provisions of paragraph (b) shall not be applicable), the owners of all Senior Lien Revenue Obligations then Outstanding and parties to related Contracts shall be entitled to receive payment in full of all principal and interest then due on all such Senior Lien Revenue Obligations and all payments due on related Contracts before the owners of the Subordinate Lien Obligations or parties to Contracts related to Senior Lien Obligations or which are subordinate to Senior Lien Revenue Obligations are entitled to receive any payment from the Pledged Revenues or the amounts held in the funds and accounts created under the Resolution of principal of, premium, if any, or interest on the Subordinate Lien Obligations or payments under related Contracts.

(d) No owner of Senior Lien Revenue Obligations or party to any related Contract shall be prejudiced in its right to enforce subordination of the Subordinate Lien Obligations and related Contracts by any act or failure to act on the part of MLGW or the City.

(e) The obligations of MLGW and the City to pay to the owners of the Subordinate Lien Obligations the principal of, premium, if any, and interest thereon in accordance with their terms and to pay parties to related Contracts in accordance with the terms of the related Contracts shall be unconditional and absolute. Nothing in the Resolution shall prevent the owners of the Subordinate Lien Obligations or parties to related Contracts from exercising all remedies otherwise permitted by applicable law or under the Resolution or the related Contracts upon default thereunder, subject to the rights contained in the Resolution of the owners of Senior Lien Revenue Obligations and parties to related Contracts to receive cash, property, or securities otherwise payable or deliverable to the owners of the Subordinate Lien Obligations and parties to related Contracts, and any Supplemental Resolution authorizing Subordinate Lien Obligations may provide that, insofar as a trustee or paying agent for the Subordinate Lien Obligations is concerned, the foregoing provisions shall not prevent the application by such trustee or paying agent of any moneys deposited with such trustee or paying agent for the purpose of the payment of or on account of the principal or premium, if any, and interest on such Subordinate Lien Obligations and payments under related Contracts if such trustee or paying agent did not have knowledge at the time of such application that such payment was prohibited by the foregoing provisions.

(f) Any series of Subordinate Lien Obligations and related Contracts may have such rank or priority with respect to any other series of Subordinate Lien Obligations and related Contracts as may be

provided in the Supplemental Resolution or other resolution authorizing such series of Subordinate Lien Obligations and may contain such other provisions as are not in conflict with the provisions of the Resolution.

(g) Obligations which would be Other System Obligations but for the existence of a Subordinate Lien on a category of Revenues securing such obligations may be issued and so secured, and thereafter will be treated as Subordinate Lien Obligations, if all of the conditions of paragraphs (a) through (c) above are satisfied treating such obligations as Subordinate Lien Obligations and the issuance and security documents therefor as Supplemental Resolutions.

Additional Special Purpose Revenue Obligations

Additional Special Purpose Revenue Obligations may be issued after compliance with any requirements therefor set forth in any Supplemental Resolution related to such Special Purpose Obligations or Outstanding Special Purpose Obligations which will be secured on a parity with such Additional Special Purpose Obligations.

Released Revenue Obligations; Accession of Subordinate Lien Obligations to Senior Lien Status

For so long as any Series 2020 Bonds are Outstanding, each of the City and the Division hereby agrees that it shall not (a) cause a separable category or portion of revenues, income, receipts and money relating to a definable service, facility or program of the System to be withdrawn from General Revenues and thereafter treated as Released Revenues or (b) cause the accession of any Subordinate Lien Obligations to the status of complete parity with any Senior Lien Revenue Obligations.

Adoption of Proceedings

MLGW, or the City at the request of MLGW, shall adopt a Supplemental Resolution authorizing the issuance of any Additional Obligations and, except for the first Supplemental Resolution, reciting that the requirements of this Article have been satisfied, and shall set forth in such proceedings, among other things, the security therefor, the date or dates such Additional Obligations shall bear interest, the rate or rates of interest, the interest payment date or dates, the maturity date or dates, the redemption provisions with respect to such Additional Obligations and any other matters applicable to such Additional Obligations as MLGW may deem advisable.

Any such Supplemental Resolution shall restate and reaffirm, by reference, all of the applicable terms, conditions, and provisions of the Resolution not modified by the Supplemental Resolution.

Proceedings Authorizing Additional Obligations

No Supplemental Resolution authorizing the issuance of Additional Obligations shall conflict with the terms and conditions of the Resolution, except to the extent that the Supplemental Resolution is adopted for one of the purposes set forth in the Resolution and complies with the provisions of the Resolution for the adoption of Supplemental Resolutions without the consent of holders of the Revenue Obligations.

Applicability to Additional Obligations

The provisions of the Resolution shall be construed as including and being applicable to any future series of Revenue Obligations, and any such Revenue Obligations shall be treated, unless otherwise

specifically stated, just as if they had been issued pursuant to the terms of the Master Resolution and the first Supplemental Resolution.

Credit Facilities and Hedge Agreements

(a) In connection with the issuance of any Revenue Obligations, MLGW may obtain or cause to be obtained one or more Credit Facilities providing for payment of all or a portion of the principal of, premium, if any, or interest due or to become due on such Revenue Obligations, providing for the purchase of such Revenue Obligations by the Credit Issuer, or providing funds for the purchase of such Revenue Obligations by MLGW. In connection therewith MLGW, or the City on behalf of MLGW, shall enter into Credit Facility Agreements with such Credit Issuers providing for, among other things, (1) the payment of fees and expenses to such Credit Issuers for the issuance of such Credit Facilities; (2) the terms and conditions of such Credit Facilities and the Revenue Obligations affected thereby; and (3) the security, if any, to be provided for the issuance of such Credit Facilities. MLGW, or the City on behalf of MLGW, may secure any Credit Facility by an agreement providing for the purchase of the Revenue Obligations secured thereby with such adjustments to the rate of interest, method of determining interest, maturity, or redemption provisions as are specified by MLGW, in the applicable Supplemental Resolution. MLGW may in a Credit Facility Agreement agree to directly reimburse such Credit Issuer for amounts paid under the terms of such Credit Facility, together with interest thereon; provided, however, that no Reimbursement Obligation shall be created for purposes of the Resolution until amounts are paid under such Credit Facility. Any such Reimbursement Obligation shall be deemed to be a part of the Revenue Obligations to which the Credit Facility relates which gave rise to such Reimbursement Obligation, and references to principal and interest payments with respect to such Revenue Obligations shall include principal and interest (except for Additional Interest and principal amortization requirements with respect to the Reimbursement Obligation that are more accelerated than the amortization requirements for the related Revenue Obligations, without acceleration) due on the Reimbursement Obligation incurred as a result of payment of such Revenue Obligations with the Credit Facility. All other amounts payable under the Credit Facility Agreement (including any Additional Interest and principal amortization requirements with respect to the Reimbursement Obligation that are more accelerated than the amortization requirements for the related Revenue Obligations, without acceleration) shall be fully subordinate to the payment of debt service on the related class of Revenue Obligations. Any such Credit Facility shall be for the benefit of and secure such Revenue Obligations or portion thereof as specified in the applicable Supplemental Resolution. Notwithstanding the other provisions of the Resolution, MLGW's obligations under a Credit Facility which requires the Credit Issuer to make all interest payments due on the Revenue Obligations may be secured to the extent of such amounts by a pledge of, and lien on, the Pledged Revenues on a parity with the lien created by the Resolution to secure the related Revenue Obligations, or may be wholly or partially subordinate in lien and right of payment to the payment of the Revenue Obligations, as determined by MLGW.

(b) In connection with the issuance of any Revenue Obligations or at any time thereafter so long as such Revenue Obligations remain Outstanding, MLGW may enter into Hedge Agreements with Qualified Hedge Providers, and no other providers, with respect to any Revenue Obligations. MLGW shall authorize the execution, delivery, and performance of each Qualified Hedge Agreement in a Supplemental Resolution, in which it shall designate the related Hedged Obligations. MLGW's obligation to pay Hedge Payments on a Qualified Hedge Agreement may be secured by a pledge of, and lien on, the Pledged Revenues on a parity with the lien created by the Resolution to secure the related Hedged Obligations (other than Termination Payments), or may be wholly or partially subordinate in lien and right of payment to the payment of the Revenue Obligations, as determined by MLGW.

Other Obligations

MLGW expressly reserves the right, at any time, to adopt one or more other bond resolutions and reserves the right, at any time, to issue any other obligations not secured by the amounts pledged under the Resolution.

General Provisions

Rate Covenant

MLGW shall continuously own the System, and MLGW shall continuously control, operate, and maintain the System in an efficient and economical manner and on a revenue producing basis and shall at all times prescribe, fix, maintain and collect, and the City shall approve, rates, fees, and other charges for the services and facilities furnished by the System fully sufficient at all times:

(a) for 100% of the Operating Expenses and for the accumulation in the Revenue Fund of a reasonable reserve therefor, in an amount, if any, as shall be determined from time to time by MLGW; and

(b) such that Net Revenues in each Fiscal Year:

(1) will equal at least 120% of the Debt Service Requirement on all Senior Lien Revenue Obligations and 100% of the Debt Service Requirement on all other Revenue Obligations then Outstanding for such Fiscal Year;

(2) will enable MLGW to make all required payments, if any, into the Debt Service Reserve Account and the Rebate Fund and on any Contract or Other System Obligation;

(3) will enable MLGW to accumulate an amount to be held in the Renewal and Extension Fund, if any such Renewal and Extension Fund has been established by MLGW, which in the judgment of MLGW is adequate to meet the costs of major renewals, replacements, repairs, additions, betterments and improvements to the System, necessary to keep the same in good operating condition or as is required by any governmental agency having jurisdiction over the System;

(4) will remedy all deficiencies in required payments into any of the funds and accounts mentioned in the Resolution from prior Fiscal Years;

(6) will enable MLGW to make all required City Payments when due.

provided for purposes of (a), (b)(1) and (b)(2) each category of Net Revenues shall be compared to the required payments with respect to, or for accounts related to, related Operating Expenses, Revenue Obligations, Contracts and Other System Obligations.

In order to ensure compliance with the Rate Covenant set forth under this heading, and in order to comply with its obligations in the Resolution regarding the preparation of its Annual Budget, prior to the commencement of each Fiscal Year, the Board will adopt and submit to the Council for approval an Annual Budget for MLGW that includes reasonable and expressly stated assumptions as to usage, collections and similar factors and that fixes, establishes or maintains rates, fees and other charges for the services and facilities furnished by the System in order to generate funds sufficient at all times to comply with the Rate Covenant. Upon receipt of the final Annual Budget adopted by the Board and submitted to

the Council, the Council promptly shall, by separate resolution, approve and/or amend and approve the Annual Budget; provided, however, the Council covenants in the Resolution to approve an Annual Budget prior to the commencement of each Fiscal Year that is in full compliance with all applicable requirements contained in the Resolution, including, without limitation, such rates, fees and other charges for the services and facilities furnished by the System as will be sufficient at all times to comply with the Rate Covenant, all in accordance with the statutory obligations of the City and Council set forth in Section 2-20-3 of the Memphis City Code and Section 7-34-114(a) of the Revenue Bond Law. If, during any Fiscal Year, the Secretary-Treasurer determines that Revenues in any Fiscal Year are or will be less than the total amount required in order to comply with the Rate Covenant, then the Secretary-Treasurer shall make, or MLGW shall promptly request the Consulting Engineer or Municipal Advisor to make, written recommendations as to a revision in such rates, fees, charges or methods of operating the System which will result in the generation of the required amount of Revenues in order to comply with the Rate Covenant. Upon receipt of such recommendations, the Board shall, subject to applicable requirements imposed by law, immediately take action to revise, and the Council shall, subject to applicable requirements imposed by law, immediately take action to approve, such rates, fees and charges in accordance with such recommendations and take such other actions respecting the methods of operation of the System as shall in the discretion of the Secretary-Treasurer be deemed necessary in order to comply with the Rate Covenant. If the Board fails to prescribe, fix, maintain and collect, and/or the Council fails to approve, rates, fees and other charges in accordance with the provisions of this Section in any Fiscal Year, but each of the Board and the Council in the immediately following Fiscal Year has promptly taken all available measures to revise such rates, fees and other charges as advised by the Secretary-Treasurer, a Consulting Engineer and/or a Municipal Advisor, there shall be no Event of Default under the Resolution solely as a result of the aforesaid failure until at least the end of such immediately following Fiscal Year and only then if Revenues and Net Revenues during such immediately following Fiscal Year are less than the amounts required to satisfy the Rate Covenant.

The rates, fees, and other charges shall be classified in a reasonable manner to cover users of the services and facilities furnished by the System so that, as nearly as practicable, such rates, fees, and other charges shall be uniform in application to all users falling within any reasonable class.

Maintenance of the System in Good Condition

MLGW covenants that it has and will continue to enforce reasonable rules and regulations governing the System and the operation thereof, that all compensation, salaries, fees, and wages paid by it in connection with the operation, maintenance, and repair of the System will be reasonable, that no more persons will be employed by it than are necessary, that it will operate the System in an efficient and economical manner and will at all times maintain the System in good repair and in sound operating condition, that it will make all necessary repairs, renewals, and replacements to the System, and that it will comply with all valid acts, rules, regulations, orders, and directions of any legislative, executive, administrative, or judicial body applicable to the System and MLGW's operation thereof.

Insurance

With respect to the System, MLGW will carry adequate public liability, fidelity, and property insurance, such as is maintained by similar systems as the System; provided, MLGW shall not be required to insure beyond the limits of immunity provided by Sections 29-20-101 et seq., Tennessee Code Annotated, as amended, and provided further, MLGW may self-insure against any risks that the Board deems appropriate provided MLGW maintains adequate reserves, in such amounts as MLGW determines is reasonable, for such self-insurance.

MLGW, without in any way limiting the generality of the following, shall: (a) require each construction contractor and each subcontractor to furnish a bond, or bonds, of such type and in amounts adequate to assure the faithful performance of their contracts and the payment of all bills and claims for labor and material arising by virtue of such contracts; and (b) require each construction contractor or the subcontractor to maintain at all times until the completion and acceptance of any Project adequate compensation insurance for all of their employees and adequate public liability and property damage insurance for the full and complete protection of MLGW from any and all claims of every kind and character which may arise by virtue of the operations under their contracts, whether such operations be by themselves or by anyone directly or indirectly for them, or under their control.

All such policies shall be for the benefit of and made payable to MLGW and shall be on deposit with MLGW.

All moneys received for losses under any such insurance policies, except public liability policies, are pledged by MLGW, as security for the Revenue Obligations until and unless such proceeds are paid out in making good the loss or damage in respect of which such proceeds are received, either by repairing the property damaged or replacing the property destroyed or by depositing the same in the Renewal and Extension Fund. Adequate provision for making good such loss and damage shall be made within 120 days from the date of the loss, and insurance proceeds not used in making such provision shall be deposited in the Renewal and Extension Fund on the expiration of such 120-day period. Such insurance proceeds shall be payable to MLGW by appropriate clause to be attached to or inserted in the policies.

No Sale, Lease, or Encumbrance; Exceptions

MLGW will not sell, lease, mortgage, or in any manner dispose of the System, or any part thereof, including any and all extensions and additions that may be made thereto, or any facility necessary for the operation thereof except as follows:

(a) The use of any of the System facilities may at any time be permanently abandoned or the System or any portion of the System or of the System facilities sold or otherwise disposed of, provided that;

(1) All covenants and undertakings in connection with all Revenue Obligations then outstanding and payable from the Revenues of the System are in compliance and any required reserve funds have been fully established and contributions thereto are current;

(2) After the abandonment, sale or other disposal of all or a portion of the System, (i) provision is made for the payment of all the outstanding Revenue Obligations or (ii) the remaining Revenues of the System after such sale shall be sufficient to pay principal of, premium, if any, and interest on the remaining Revenue Obligations and sufficient to be in compliance with the covenants set forth in the Resolution as certified by the Secretary-Treasurer, a Consulting Engineer or Municipal Advisor;

(3) The abandonment, sale or disposition is for the purpose of disposing of facilities which are no longer necessary or no longer useful to the operation of the System or it is otherwise in the best interests of MLGW to dispose of all or a part of the System as determined by the Board; and

(4) MLGW receives an opinion of Bond Counsel to the effect that the disposition of the System or any portion thereof and use of the proceeds therefrom will not adversely affect the

exclusion of interest on the Tax-Exempt Obligations from gross income of the holders thereof for purposes of federal income taxation.

(b) Nothing in the Resolution is intended to prohibit the lease or purchase of equipment or facilities of the System hereafter to be put in service or to prohibit the transfer or exchange of service areas to provide for more efficient operation of the System so long as MLGW is in full compliance with the covenants set forth in the Resolution immediately following such transfer or exchange.

(c) In addition to the transfers permitted above, MLGW shall have the right to sell, lease, transfer or otherwise dispose of the System as a whole or substantially as a whole, to any municipal corporation, county, political subdivision, governmental corporation or governmental agency (each of which shall be included within the term "Transferee" as used in the Resolution), provided the transferee thus acquiring the System from MLGW will assume the performance of and be bound by all of MLGW's and the City's obligations to the holders of the Revenue Obligations to make the payments into the funds required by the resolutions authorizing the Revenue Obligations and the Resolution and to pay the principal of, premium, if any, and interest on the Revenue Obligations as provided in the covenants and provisions of the Resolution.

(d) Nothing contained in the Resolution shall prohibit MLGW from transferring any property or facilities constituting a part of the System to any of MLGW's other utility systems so long as such transfer will not materially impair the ability of MLGW to comply during the current or any future Fiscal Year with the Rate Covenant and will not result in the noncompliance by MLGW with any of the covenants in the Resolution with respect to Tax-Exempt Obligations or any covenants in any tax regulatory agreements or non-arbitrage certificates executed by MLGW in connection with the issuance of any Tax-Exempt Obligations.

Combined System

For so long as any Series 2016 Bonds are Outstanding, each of the City and the Division hereby agrees that it shall not combine any or all of the Division's utility systems into a single unified operation (the "Combined System") or commingle the revenues of the systems so combined in the Combined System.

No Impairment of Rights

MLGW shall not enter into any contract or contracts, nor take any action, the results of which might materially impair the rights of the holders of any Revenue Obligations.

Books and Accounts

MLGW shall keep proper books and accounts in compliance with applicable laws and regulations, if any, and shall cause such books and accounts to be audited for each Fiscal Year by an Independent Certified Public Accountant. A copy of each annual audit report showing in reasonable detail the financial condition of the System at the close of the Fiscal Year, the income and expenses for such Fiscal Year, including the transactions relating to any and all funds and accounts created pursuant to the Resolution, shall be available to any Bondholder upon request.

Enforcement of Charges and Connections

MLGW shall compel the prompt payment of rates, fees, and charges imposed for service connected with the System, and to that end will vigorously enforce all of the provisions of any resolution or ordinance of MLGW having to do with the same, and all of the rights and remedies permitted MLGW under law. MLGW expressly covenants and agrees that such charges will be enforced and promptly collected to the full extent permitted by law.

Payments

All payments falling due on the Revenue Obligations and related Contracts shall be made by MLGW, from the Pledged Revenues or, at MLGW's option, other legally available revenues to the owners thereof when due in full, and all reasonable and authorized charges made by the Bond Registrar and any Paying Agent shall be paid by MLGW, when due.

No Loss of Lien on Revenues

MLGW and the City shall not do, or omit to do, or permit to be done or to be omitted any matter or thing whatsoever whereby the lien of the Resolution on the Pledged Revenues or any part thereof might or could be lost or impaired.

Annual Budget

Each of the Board and the Council agrees to adopt an Annual Budget for MLGW for each Fiscal Year in compliance with the Rate Covenant. Prior to the commencement of each Fiscal Year, the Board will adopt and submit to the Council for approval an Annual Budget for MLGW adopted by the Board for the coming Fiscal Year that includes reasonable and expressly stated assumptions as to usage, collections and similar factors and that fixes, establishes or maintains rates, fees and other charges for the services and facilities furnished by the System in order to generate funds sufficient at all times to comply with the Rate Covenant. Promptly upon receipt of the final Annual Budget adopted by the Board, but in any event no later than the commencement of the coming Fiscal Year, the Council shall, by separate resolution, adopt and/or amend and approve the Annual Budget of MLGW; provided, however, the Council shall approve as a part of its approval of any such Annual Budget all rates, fees and other charges as are necessary to meet the requirements contained in the Resolution, including, without limitation, the Rate Covenant, and all other the bond resolutions, which bond resolutions have been approved by the Council.

Tax Provisions

MLGW recognizes that the purchasers and owners of Tax-Exempt Obligations will have accepted the Tax-Exempt Obligations on, and paid for the Tax-Exempt Obligations a price which reflects, the understanding that interest on such Tax-Exempt Obligations is not included in the gross income of the owners thereof for federal income tax purposes under laws in force at the time the Tax-Exempt Obligations shall have been delivered.

MLGW shall take any and all action which may be required from time to time in order to assure that interest on the Tax-Exempt Obligations shall remain excludable from the gross income of the owners of the Tax-Exempt Obligations for federal income tax purposes and shall refrain from taking any action which would adversely affect such status.

The covenants, certifications, representations, and warranties contained under this heading shall survive payment in full or provision for payment in full of the Tax-Exempt Obligations until the end of

the statute of limitations following the later of final payment of such Revenue Obligations (without regard to any defeasance or other provision for the payment thereof) or the last date as of which payments under Section 148(f) of the Code could be due to the United States.

Continuing Disclosure

Each of the City and MLGW shall comply with any and all federal or state securities law requirements applicable to any Revenue Obligations, including, without limitation, Rule 15c2-12 of the SEC if and to the extent applicable to any Revenue Obligations, and each of the City and MLGW will enter into such undertakings, covenants and/or agreements as may be required in any Supplemental Resolution in order to ensure such compliance. Notwithstanding any provision in the Resolution to the contrary, no default under any continuing disclosure undertaking will constitute a default or Event of Default under the Resolution.

Events of Default and Remedies

Definition of Events of Default

An “Event of Default” shall mean the occurrence of any one or more of the following:

(a) a failure to pay the principal or redemption price of any Senior Lien Revenue Obligation when the same shall become due and payable, either at maturity or by proceedings for redemption or otherwise; or

(b) a failure to pay any installment of interest on any Senior Lien Revenue Obligation when and as such installment of interest shall become due and payable; or

(c) a court of competent jurisdiction shall enter an order, judgment, or decree appointing a Receiver of the System or any of the funds or accounts established under the Resolution, or approving a petition seeking reorganization of MLGW under the federal bankruptcy laws or any other applicable law or statute of the United States of America or the State, and such order, judgment, or decree shall not be vacated or set aside or stayed within 60 days from the date of the entry thereof; or

(d) the City or MLGW shall fail to perform any of the other covenants, conditions, agreements, and provisions contained in the Senior Lien Revenue Obligations or in the Resolution with respect to Senior Lien Revenue Obligations on the part of the City or MLGW to be performed, and such failure shall continue for 90 days after written notice specifying such failure and requiring it to be remedied shall have been given to MLGW by the Paying Agent or by the owners of not less than or any Credit Issuer securing not less than twenty-five percent (25%) in aggregate principal amount of the Senior Lien Revenue Obligations; provided, however, if the failure stated in such notice can be corrected, but not within such 90 day period, MLGW shall have 180 days after such written notice to cure such default if corrective action is instituted by MLGW within such 90 day period and diligently pursued until the failure is corrected; or

(e) an Event of Default under any Supplemental Resolution relating to Senior Lien Revenue Obligations shall occur;

provided if the Event of Default relates solely to Senior Lien Revenue Obligations related to a particular category of Revenues and no other event has occurred which, with the lapse of time or the delivery of notice or both, could become an Event of Default with respect to any other Senior Lien Revenue Obligations then Outstanding, such Event of Default shall be deemed to apply solely to the related Senior

Lien Revenue Obligations and Contracts and the provisions of the Resolution shall otherwise remain in full force and effect with respect to all other Senior Lien Revenue Obligations and related Contracts.

Remedies

Upon the occurrence of an Event of Default, the Paying Agent shall have the power to proceed with any right or remedy available at law or in equity or by statute, as it may deem best, including without limitation any suit, action or special proceeding in equity or at law for the collection of amounts due and to become due under the Resolution and under the Senior Lien Revenue Obligations or the performance of any covenant or agreement contained therein or for the enforcement of any proper legal or equitable remedy as the Paying Agent shall deem most effectual to protect the rights aforesaid, insofar as such may be authorized by law. The rights specified in the Resolution are to be cumulative to all other available rights, remedies or powers.

Without limiting the foregoing, upon the request of the holders of not less than, or any Credit Issuer securing not less than, twenty-five percent (25%) of the Outstanding Senior Lien Revenue Obligations, the Paying Agent shall, in addition to all other remedies and rights upon or under the Resolution, have the right, by appropriate proceedings in any court of competent jurisdiction, to obtain the appointment of a Receiver for the System, which Receiver may enter upon and take possession of the System, operate and maintain the System, fix rates and collect all revenues arising therefrom in as full a manner and to the same extent as MLGW itself might do. The Receiver shall deposit all moneys collected by it in a separate account or accounts and shall dispose of such revenues in accordance with the terms and conditions of the related Supplemental Resolutions authorizing Senior Lien Revenue Obligations and the Resolution and as the court shall direct.

No delay or omission to exercise any right or remedy accruing upon any Event of Default shall impair any such right or remedy or shall be construed to be a waiver of any such Event of Default or acquiescence therein; and every such right and remedy may be exercised from time to time and as often as may be deemed expedient.

No waiver of any Event of Default under the Resolution, whether by the Paying Agent, any Credit Issuer or by the Bondholders, shall extend to or affect any subsequent or other Event of Default, or impair any rights or remedies consequent thereon.

Rights of Bondholders

Upon the occurrence of an Event of Default and if requested so to do by the Holders of more than fifty percent (50%) in aggregate principal amount of the Senior Lien Revenue Obligations then Outstanding and if indemnified for its costs and expenses, the Paying Agent, subject to the provisions under "Right of Bondholders to Direct Proceedings" as provided below, shall be obligated to exercise such one or more of the rights and remedies conferred by the Resolution as the Paying Agent, being advised by counsel, shall deem most expedient in the interests of the Bondholders.

Right of Bondholders to Direct Proceedings

Anything to the contrary in the Resolution notwithstanding, the Holders of more than fifty percent (50%) in aggregate principal amount of the Senior Lien Revenue Obligations then Outstanding shall have the right, at any time, by an instrument or instruments in writing executed and delivered to the Paying Agent, to direct (as between such Bondholders and the Paying Agent) the time, method and place of conducting all proceedings otherwise permitted to be taken in connection with the enforcement of the

terms and conditions of the Resolution, or for the appointment of a Receiver or any other proceedings thereunder, provided the Paying Agent is indemnified as provided above.

Remedies Cumulative

No remedy conferred upon or reserved to the holders of any Revenue Obligations is intended to be exclusive of any other remedy or remedies, and each and every such remedy shall be cumulative and shall be in addition to every other remedy given under the Resolution or now or hereafter existing at law or in equity or by statute.

Waiver of Default

No delay or omission of any holder of any Revenue Obligations to exercise any right or power accruing upon any Event of Default shall impair any such right or power or shall be construed to be a waiver of any such Event of Default, or an acquiescence therein, and every power and remedy given by the Resolution to the holders of any Revenue Obligations may be exercised from time to time and as often as may be deemed expedient.

Application of Moneys After Default

If an Event of Default occurs and shall not have been remedied, MLGW or a Receiver appointed for the System shall apply all Pledged Revenues as follows and in the following order of priority (subject to clause (d) of this section):

(a) Expenses of Receiver, Paying Agent and Bond Registrar - to the payment of the reasonable and proper charges, expenses, and liabilities of any Receiver, the Paying Agent and the Bond Registrar under the Resolution with the amounts payable under this subsection (a), if related to a particular series and therefore to a particular category of Revenues, first from such category of Revenues and second from other categories of Revenues in amounts as determined by the Receiver or MLGW, and if not so related to a particular series or category of Revenues, then from all Revenues as determined by the Receiver or MLGW;

(b) Operating Expenses - then, within each category of Revenues, to the payment of all reasonable and necessary related Operating Expenses;

(c) Principal or redemption price, interest, and payments on related Contracts - then, within each category of Revenues, to the payment of the interest and principal or redemption price then due on the related Senior Lien Revenue Obligations and payments then due under related Contracts, as follows:

(1) Unless the principal of all the Senior Lien Revenue Obligations related to such category of Revenues shall have become due and payable due to the maturity thereof, all such moneys shall be applied as follows:

(A) first: to the payment to the persons entitled thereto of all installments of interest then due on the Senior Lien Revenue Obligations, in the order of the maturity of such installments (with interest on defaulted installments of interest at the rate or rates borne by the Senior Lien Revenue Obligations with respect to which such interest is due, but only to the extent permitted by law), and, if the amount available shall not be sufficient to pay in full any particular installment, then to the payment ratably, according to the amounts due on such installment, to the persons entitled thereto, without any discrimination or preference. If some of the Senior Lien Revenue Obligations bear

interest payable at different intervals or upon different dates and if at any time moneys from the Debt Service Reserve Account must be used to pay any such interest, the moneys in the Debt Service Reserve Account shall be applied (to the extent necessary) to the payment of all interest falling due on the dates upon which such interest is payable to and including the date six months after the date of application of such moneys. After such period, moneys in the Debt Service Reserve Account plus any other moneys available in the Interest Account shall be set aside for the payment of interest on Senior Lien Revenue Obligations of each class (a class consisting of all Senior Lien Revenue Obligations payable as to interest on the same dates) pro rata among Senior Lien Revenue Obligations of the various classes on a daily basis so that there shall accrue to each owner of a Senior Lien Revenue Obligation throughout each Fiscal Year the same proportion of the total interest payable to such owner of a Senior Lien Revenue Obligation as shall so accrue to every other owner of a Senior Lien Revenue Obligation during such Fiscal Year.

(B) second: to the payment to the persons entitled thereto of the unpaid principal of any of the Senior Lien Revenue Obligations which shall have become due at maturity or upon mandatory redemption prior to maturity (other than Senior Lien Revenue Obligations called for redemption for the payment of which moneys are held pursuant to the provisions of Article IX of the Resolution), in the order of their due dates, with interest upon such Senior Lien Revenue Obligations from the respective dates upon which they became due, and, if the amount available shall not be sufficient to pay in full Senior Lien Revenue Obligations due on any particular date, together with such interest, then to the payment first of such interest, ratably according to the amount of such interest due on such date, and then to the payment of such principal, ratably according to the amount of such principal due on such date, to the persons entitled thereto without any discrimination or preference. If some of the Senior Lien Revenue Obligations mature (including mandatory redemption prior to maturity as a maturity) upon a different date or dates and if at any time moneys from the Debt Service Reserve Account must be used to pay any such principal falling due, the moneys in the Debt Service Reserve Account not required to pay interest under subsection (A) above shall be applied to the extent necessary to the payment of all principal falling due prior to the date 12 months after the date of application of such moneys. After such period, moneys in the Debt Service Reserve Account not required to pay interest plus any other moneys available in the Principal Account shall be set aside for the payment of principal of Senior Lien Revenue Obligations of each class (a class consisting of all Senior Lien Revenue Obligations payable as to principal on the same date) pro rata among Senior Lien Revenue Obligations of the various classes which mature or must be redeemed pursuant to mandatory redemption prior to maturity throughout each Fiscal Year in such proportion of the total principal payable on each such Senior Lien Revenue Obligation as shall be equal among all classes of Senior Lien Revenue Obligations maturing or subject to mandatory redemption within such Fiscal Year.

(C) third: to the payment of the redemption premium on and the principal of any Senior Lien Revenue Obligations called for optional redemption pursuant to their terms.

(D) fourth: to interest portions of Reimbursement Obligations that have not been designated as Senior Lien Revenue Obligations, but are related to Senior Lien Revenue Obligations pursuant to the terms of the related Contracts.

(E) fifth: to the payment of the principal portions of Reimbursement Obligations that have not been designated as Senior Lien Revenue Obligations but are related to Senior Lien Revenue Obligations pursuant to the terms of the related Contracts.

(F) sixth: to the payment of all other amounts then due on Contracts (excluding Termination Payments) related to Senior Lien Revenue Obligations.

(2) If the principal of all the Senior Lien Revenue Obligations shall have become due and payable, all such moneys shall be applied to the payment of the principal and interest then due and unpaid upon the Senior Lien Revenue Obligations, with interest thereon as aforesaid, and due and unpaid payments under related Contracts (excluding Termination Payments), without preference or priority of principal over interest or payments on Contracts, or of interest over principal or payments on Contracts, or of payments on Contracts over principal or interest, or of any installment of interest over any other installment of interest, or of any Senior Lien Revenue Obligation over any other Senior Lien Revenue Obligations, or of any such payment under a Contract over any other such payment under a Contract, ratably, according to the amounts due respectively for principal, interest, and payments under Contracts (excluding Termination Payments), to the persons entitled thereto without any discrimination or preference.

(d) Notwithstanding anything else in the Resolution to the contrary, payments made pursuant to (b) and (c) shall be made by category of Revenues to related Revenue Obligations such that:

(1) Amounts traceable to General Revenues are used only for General Revenue Obligations and related Contracts;

(2) Amounts traceable to Released Revenues are used only for Released Revenue Obligations and related Contracts or otherwise as permitted by the Resolution;

(3) Amounts traceable to Special Purpose Revenues are used only for Special Purpose Revenue Obligations and related Contracts or otherwise as permitted by the Resolution; and

(4) Amounts not traceable to particular categories of Revenues shall be used first as General Revenues for purposes of this section, then as other Released Revenues, and then as Special Purpose Revenues.

(e) Subordinate Lien Obligations – last to the payment of the interest and principal or redemption price then due on the Subordinate Lien Revenue Obligations and payments under related Contracts in accordance with the Supplemental Resolutions authorizing such Subordinate Lien Revenue Obligations and related Contracts.

Rights of Credit Issuer

Notwithstanding any other provision of the Resolution, in the event that the City or MLGW shall draw under a Credit Facility any amount for the payment of principal of or interest on any Revenue Obligations, then upon such payment the related Credit Issuer shall succeed to and become subrogated to the rights of the recipients of such payments to the extent of such payments and such principal or interest shall be deemed to continue to be unpaid and Outstanding for all purposes and shall continue to be fully secured by the Resolution until the Credit Issuer, as successor and subrogee, has been paid all amounts owing in respect of such subrogated payments of principal and interest. Such rights shall be limited and evidenced by having MLGW note the Credit Issuer's rights as successor and subrogee on its records, and

MLGW shall, upon request, deliver to the Credit Issuer (a) in the case of interest on the Revenue Obligations, an acknowledgment of the Credit Issuer's ownership of interest to be paid on the Revenue Obligations specifying the amount of interest owed, the period represented by such interest, and the numbers of the Revenue Obligations on which such interest is owed and (b) in the case of principal of the Revenue Obligations, either the Revenue Obligations themselves duly assigned to the Credit Issuer or new Revenue Obligations registered in the name of the Credit Issuer or in such other name as the Credit Issuer shall specify. Whenever moneys become available for the payment of any interest or principal then overdue, the Credit Issuer shall be treated as to interest or principal owed to it as successor and subrogee as if it had been the holder of the Revenue Obligations on which such interest or principal is payable on any special record date therefor.

Rights and Remedies Vested in Paying Agent

All rights of action and remedies under the Resolution or under any of the Senior Lien Revenue Obligations may be enforced by the Paying Agent without the possession of any of the Senior Lien Revenue Obligations or the production thereof in any trial or other proceedings relating thereto and any such suit or proceeding instituted by the Paying Agent shall be brought in its name as Paying Agent without the necessity of joining as plaintiffs or defendants any Holders of the Senior Lien Revenue Obligations or any Credit Issuer, and any recovery of judgment shall, subject to the terms of the Resolution, be for the benefit of the Holders of the Senior Lien Revenue Obligations and any Credit Issuer.

Rights and Remedies of Bondholders

No Holder of any Senior Lien Revenue Obligation shall have any right to institute any suit, action or proceeding in equity or law for the enforcement of the Resolution, for the execution of any trust thereof or for the appointment of a Receiver or to enforce any other right or remedy thereunder, unless (a) a Default has occurred of which the Paying Agent has been notified, or of which it is deemed to have notice, (b) such Default shall have become an Event of Default and the Holders of more than fifty percent (50%) in aggregate principal amount of Senior Lien Revenue Obligations then outstanding shall have made written request to the Paying Agent and shall have offered reasonable opportunity to the Paying Agent either to proceed to exercise the powers granted in the Resolution or to institute such action, suit or proceeding in its own name, and (c) such Bondholders have offered to the Paying Agent indemnity as provided in the Resolution and the Paying Agent shall thereafter fail or refuse to exercise the powers therein granted, or to institute such action, suit or proceeding in its own name. Such notification, request and offer of indemnity are declared in every case at the option of the Paying Agent to be conditions precedent to the execution of the powers and trusts of the Resolution, and to any action or cause of action for the enforcement thereof, or for the appointment of a Receiver or for any other right or remedy thereunder; it being understood and intended that no one or more Holders of the Senior Lien Revenue Obligations shall have any right in any manner whatsoever to affect, disturb or prejudice the lien thereof by its, his or their action or to enforce any right or remedy thereunder except in the manner therein provided, and that all proceedings at law or in equity shall be instituted, had and maintained in the manner therein provided and for the benefit, first, of the Holders of all Senior Lien Revenue Obligations and, second, of any Credit Issuer.

Termination of Proceedings

If the Paying Agent shall have proceeded to enforce any right or remedy under the Resolution by any action at law or in equity, by the appointment of a Receiver or otherwise, and such proceedings shall have been discontinued or abandoned for any reason, or shall have been determined adversely to the Paying Agent, then and in every such case MLGW, the Paying Agent, any Credit Issuer and the

Bondholders shall be restored to their former positions and rights under the Resolution, respectively, with respect to the Pledged Revenues, and all rights, remedies and powers of the Paying Agent, any Credit Issuer and the Bondholders, respectively, shall continue as if no such proceedings had been taken.

Waivers of Events of Default

The Paying Agent shall waive any Event of Default under the Resolution and its consequences upon the written request of the Holders of more than fifty percent (50%) in aggregate principal amount of all Senior Lien Revenue Obligations then Outstanding, provided, however, there shall not be waived:

(a) any Event of Default pertaining to the payment of the principal or redemption price of any Senior Lien Revenue Obligation at its maturity or Redemption Date; or

(b) any Event of Default pertaining to the payment when due of the interest on any Senior Lien Revenue Obligation unless prior to such waiver, all arrears of interest and all principal or redemption price payments in respect of which such Event of Default shall have occurred, with interest thereon (to the extent permitted by law) for the period from the occurrence of such Event of Default until paid in full at a rate per annum equal to the interest rate payable on the Senior Lien Revenue Obligations from time to time during such period in accordance with the terms of the Senior Lien Revenue Obligations, and all expenses of the Paying Agent in connection with such Event of Default, shall have been paid or provided for, and in case of any such waiver, or in case any proceeding taken by the Paying Agent on account of any such Event of Default shall have been discontinued or abandoned or for any reason, or shall have been determined adversely to the Paying Agent, then and in every such case MLGW, the Paying Agent, the Credit Issuer and the Bondholders shall be restored to their former positions and rights under the Resolution, respectively, but no such waiver shall extend to or affect any subsequent or other Event of Default, or impair any rights or remedies consequent thereon.

Paying Agent

Acceptance of Duties

With respect to the Senior Lien Revenue Obligations issued under the Resolution, the Paying Agent by participating in the closing of the initial series of Senior Lien Revenue Obligations, shall be deemed to have accepted the duties imposed upon it by the Resolution, and to have agreed to perform said duties, but only upon and subject to the following express terms and conditions;

(a) The Paying Agent, prior to the occurrence of an Event of Default and after the curing of all Events of Default which may have occurred undertakes to perform such duties and only such duties as are specifically set forth in the Resolution, and no implied agreements or obligations shall be read into the Resolution against the Paying Agent. In case an Event of Default has occurred and is continuing, the Paying Agent shall exercise such of the rights and powers vested in it by the Resolution and use the same degree of care and skill in their exercise as a prudent corporate trustee would exercise or use under the circumstances.

(b) The Paying Agent may execute any of the trusts or powers of the Resolution and perform any of its duties by or through attorneys, agents, Receivers or employees but shall be answerable for the conduct of the same in accordance with the standard specified in subsection (a) above, and shall be entitled to advice of counsel concerning all matters relating to its duties thereunder, and may in all cases pay reasonable compensation to all such attorneys, agents, Receivers and employees as may reasonably be employed in connection with the trusts thereof. The Paying Agent may act upon the opinion or advice of any attorney (who may be the attorney or attorneys for MLGW), approved by the Paying Agent in the

exercise of reasonable care. The Paying Agent shall not be responsible for any loss or damage resulting from any action or non-action in good faith in reliance upon such opinion or advice.

(c) The Paying Agent shall not be responsible for any recital in the Resolution, or in the Senior Lien Revenue Obligations (except with respect to the authentication certificate of the Paying Agent endorsed on the Senior Lien Revenue Obligations), or for the recording or rerecording, filing or re-filing of the Resolution or any other document, or for the validity of the execution or approval hereof by MLGW or of any supplements thereto or instruments of further assurance, or for the sufficiency of the security for the Senior Lien Revenue Obligations, or for the value of or title in and to the Pledged Revenues or any part of the Pledged Revenues or otherwise as to the maintenance of the security hereof, and the Paying Agent shall not be bound to ascertain or inquire as to the performance or observance of any agreements or conditions on the part of MLGW except as set forth in the Resolution.

(d) Except to the extent specifically provided in the Resolution, the Paying Agent shall not be accountable for the use of the proceeds of any of the Senior Lien Revenue Obligations. The Paying Agent, in its individual capacity, may in good faith buy, sell, own, hold or deal in any of the Revenue Obligations issued under the Resolution, and may join in any action which any Bondholder may be entitled to take with like effect as if such Person did not act in any capacity thereunder. The Paying Agent, in its individual capacity, either as principal or agent, may also engage in or be interested in any financial or other transaction with any Credit Issuer, and may act as depository. Paying Agent or agent for any committee or body of Bondholders in connection with any other resolution or similar agreement to which MLGW or any Credit Issuer is a party and hold any bonds secured thereby or other obligations of MLGW as freely as if such Person did not act in any capacity under the Resolution.

(e) Except as is otherwise provided in subsection (a) above:

(1) The Paying Agent shall be protected in acting upon opinions of counsel and upon any notice, request, consent, certificate, order, affidavit, letter, telegram or other paper or document believed to be genuine and correct and to have been signed or sent by the proper Person or Persons. Any action taken by the Paying Agent, pursuant to the Resolution upon the request, authority or consent of the Bond Registrar acting at the direction of any Person who at the time of making such request or giving such authority or consent is the Holder of any Senior Lien Revenue Obligation, shall be conclusive and binding upon all future Holders of the same Senior Lien Revenue Obligation and upon Senior Lien Revenue Obligations issued in exchange therefor or in place thereof. The Paying Agent may conclusively rely upon a certificate furnished by any Credit Issuer as to amounts owing with respect to any Credit Facility.

(2) As to the existence or non-existence of any fact or as to the sufficiency or validity of any instrument, paper or proceeding, the Paying Agent shall be entitled to rely upon a certificate of MLGW as sufficient evidence of the facts therein contained and prior to the occurrence of an Event of Default of which the Paying Agent has been notified as provided in subsection (e)(4) of this Section, or of which by said subsection it is deemed to have notice, shall also be at liberty to accept a similar certificate to the effect that any particular dealing, transaction or action is necessary or expedient, but may at its discretion secure such further evidence deemed necessary or advisable, but shall in no case be bound to secure the same. The Paying Agent may accept a certificate of MLGW to the effect that a resolution in the form therein set forth has been adopted as conclusive evidence that such resolution has been adopted and is in full force and effect.

(3) The right of the Paying Agent to do things enumerated in the Resolution shall not be construed as a duty and the Paying Agent shall not be answerable for other than its gross negligence or willful misconduct.

(4) Unless a Responsible Officer of the Paying Agent shall be specifically notified in writing of an Event of Default by MLGW, any Credit Issuer or by the Holders of more than fifty percent (50%) in aggregate principal amount of Outstanding Senior Lien Revenue Obligations, the Paying Agent shall not be required to take notice or be deemed to have notice of any Default under the Resolution except failure to pay the principal or redemption price of or interest on the Senior Lien Revenue Obligations when due. All notices or other instruments required to be delivered to the Paying Agent must, in order to be effective, be delivered at the principal corporate trust office of the Paying Agent, and in the absence of such notice so delivered the Paying Agent may conclusively assume there is no Event of Default except as aforesaid. In the event that any payment referred to above is not paid when due, the Paying Agent shall give immediate notice to MLGW and any Credit Issuer, by telephone, electronic mail or facsimile transmitter (with confirmed receipt), that such payment has not been made and shall immediately confirm such notice by registered or certified mail to MLGW and any Credit Issuer.

(f) The Paying Agent shall not be required to give any bond or surety in respect of the execution of the said trusts and powers or otherwise in respect of the premises.

(g) Notwithstanding anything elsewhere therein contained, the Paying Agent shall have the right, but shall not be required, to demand, in respect of the authentication of any Senior Lien Revenue Obligations, the taking of any action reasonably within the purview of the Resolution, as a condition of such action by the Paying Agent.

(h) Before taking any action under the Resolution (other than acting on a Credit Facility) at the request or direction of any Holder of a Revenue Obligation, the Paying Agent may require that satisfactory security or indemnity be furnished by the Holders of the Senior Lien Revenue Obligations for the reimbursement of all expenses to which it may be put and to protect it against all liability, except liability which is adjudicated to have resulted from the negligence or willful misconduct of the Paying Agent, by reason of any action so taken.

(i) All moneys received by the Paying Agent or the Bond Registrar for the Senior Lien Revenue Obligations shall, until used or applied or invested as therein provided, be held in trust for the purposes for which they were received but need not be segregated from other funds except to the extent required in the Resolution or by law.

(j) No provision of the Resolution shall require the Paying Agent to expend or risk its own funds or otherwise incur any financial liability in the performance of any of its duties thereunder, or in the exercise of any of its rights or powers, if it shall have reasonable grounds for believing that repayment of such funds or adequate security or indemnity against such risk or liability is not reasonably assured to it.

(k) The Paying Agent shall be entitled to pay any amount to a Credit Issuer required under the Resolution upon written notice from the Credit Issuer that such amount is due and owed by MLGW to the Credit Issuer pursuant to the Resolution, a Credit Facility or other related documents, and the Paying Agent shall have no obligation to determine whether such amount is in fact owed to the Credit Issuer.

Fees, Charges and Expenses of Paying Agent

MLGW shall pay and/or reimburse the Paying Agent reasonable compensation for its ordinary services and extraordinary services rendered under the Resolution.

Notice by Paying Agent and Division

(a) If an Event of Default occurs of which the Paying Agent is by the terms of the Resolution required to take notice or if notice of an Event of Default be given as provided in the Resolution, then the Paying Agent shall give written notice thereof by electronic mail, by first-class, registered or certified mail, postage prepaid, or in any other manner as set forth in the related Supplemental Resolution, to any Credit Issuer, MLGW and the Holders of all Senior Lien Revenue Obligations then Outstanding of the applicable series.

(b) At any time that any series of Senior Lien Revenue Obligations are rated by a Rating Agency, MLGW shall promptly give notice to such Rating Agency, at such address as the Rating Agency shall have furnished to MLGW of:

- (1) any change in the identity of the Paying Agent,
- (2) any amendments or supplements of the Resolution or the Senior Lien Revenue Obligations,
- (3) any redemption of all the Senior Lien Revenue Obligations or any mandatory purchase of all the Senior Lien Revenue Obligations,
- (4) any amendment, renewal, substitution, termination or expiration of any Credit Facility; and
- (5) any other information that the Rating Agency may reasonably request.

Removal of the Paying Agent

The Paying Agent may be removed at any time, by an instrument or concurrent instruments in writing delivered to the Paying Agent and (as applicable) to MLGW and any Credit Issuer, and signed either by MLGW (if no Event of Default has occurred and is continuing) or by the Holders of more than fifty percent (50%) in aggregate principal amount of the outstanding Senior Lien Revenue Obligations (if an Event of Default has occurred and is continuing); provided, however, that such removal shall take effect only upon the appointment of a successor Paying Agent as provided in the Resolution and provided further if the removal is by MLGW, that there shall not then exist an Event of Default under the Resolution.

Defeasance

Provision for Payment

Except as otherwise set forth in the Supplemental Resolution authorizing Revenue Obligations, all or any portion of the Revenue Obligations for the payment, prepayment or redemption of which sufficient moneys or sufficient Defeasance Obligations shall have been deposited with the Paying Agent or an escrow agent selected by MLGW (whether upon or prior to the maturity or the redemption date of such Revenue Obligations) shall be deemed to be paid and no longer Outstanding under the Resolution;

provided, however, that if such Revenue Obligations are to be redeemed prior to the maturity thereof, notice of such redemption shall have been duly given as provided in Article III of the Resolution or firm and irrevocable arrangements shall have been made for the giving of such notice. Defeasance Obligations shall be considered sufficient for purposes of Article IX of the Resolution only; (a) if such Defeasance Obligations are not callable by the issuer of the Defeasance Obligations prior to their stated maturity, and (b) if such Defeasance Obligations fall due and bear interest in such amounts and at such times as will assure sufficient cash (whether or not such Defeasance Obligations are redeemed by MLGW pursuant to any right of redemption) to pay currently maturing interest and to pay principal and redemption premiums, if any, when due on the Revenue Obligations without rendering the interest on any Tax-Exempt Obligations includable in gross income of any owner thereof for federal income tax purposes. Notwithstanding the foregoing, the lien of the Resolution will not be released and discharged until MLGW has received an opinion of Bond Counsel to the effect that all conditions precedent to such discharge have been satisfied and, in the event of an advance refunding, MLGW has received a verification of the sufficiency of funds held to discharge Revenue Obligations from an Independent Certified Public Accountant.

MLGW may at any time surrender to the Bond Registrar for cancellation by it any Bonds previously authenticated and delivered under the Resolution which MLGW may have acquired in any manner whatsoever. All such Bonds, upon such surrender and cancellation, shall be deemed to be paid and retired.

Release of Pledge

If all Revenue Obligations and obligations secured by a lien on a category of Revenues have been paid or provision for payment thereof made pursuant to the Resolution and the related Supplemental Resolution, then at the option of MLGW, the terms and provisions of the Resolution relating solely to such category of Revenues may be determined as void and of no further force or effect; provided the other terms and provisions of the Resolution shall remain in effect until the election of MLGW, after payment or provision for payment of all Revenue Obligations and obligations secured by a lien created pursuant to the Resolution on any Revenues.

Supplemental Resolutions

Supplemental Resolutions Not Requiring Consent of Bondholders

MLGW and the City, from time to time and at any time, subject to the conditions and restrictions in the Resolution, may adopt one or more Supplemental Resolutions which thereafter shall form a part of the Resolution, without the consent of or notice to Holders for any one or more or all of the following purposes:

(a) to add to the covenants and agreements in the Resolution other covenants and agreements thereafter to be observed or to surrender, restrict, or limit any right or power reserved in the Resolution to or conferred upon MLGW or the City (including but not limited to the right to issue Additional Obligations);

(b) to make such provisions for the purpose of curing any ambiguity, or of curing, correcting, or supplementing any defective provision contained in the Resolution, or in regard to matters or questions arising under the Resolution, as MLGW may deem necessary or desirable and not materially adverse to the interests of the Holders of related Senior Lien Revenue Obligations;

(c) to subject to the lien and pledge of the Resolution additional revenues, receipts, properties, or other collateral;

(d) to evidence the appointment of successors to any Paying Agent(s) or Bond Registrars);

(e) to modify, amend, or supplement the Resolution in such manner as to permit the qualification of the Resolution under the Trust Indenture Act of 1939 or any federal statute hereinafter in effect, and similarly to add to the Resolution such other terms, conditions, and provisions as may be permitted or required by such Trust Indenture Act of 1939 or any similar federal statute;

(f) to make any modification or amendment of the Resolution required in order to make any Revenue Obligations eligible for acceptance by DTC or any similar holding institution or to permit the issuance of any Revenue Obligations or interests therein in book-entry form;

(g) to modify any of the provisions of the Resolution in any respect if such modification shall not become effective until after all the Outstanding Revenue Obligations immediately prior to the effective date of such Supplemental Resolution shall cease to be Outstanding and if any Revenue Obligations issued contemporaneously with or after the effective date of such Supplemental Resolution shall contain a specific reference to the modifications contained in such subsequent proceedings;

(h) to modify the provisions of the Resolution with respect to the disposition of any moneys remaining in the Project Fund upon the completion of any Project or to revise, enlarge or reduce the definition or description of any particular Project;

(i) to create additional subaccounts or to abolish any subaccounts within any account;

(j) to modify the Resolution to permit the qualification of any Revenue Obligations for offer or sale under the securities laws of any state in the United States of America;

(k) to modify the Resolution in connection with the issuance of Additional Obligations or Subordinate Lien Obligations permitted to be issued under the Resolution prior to such modification, and such modification may deal with any subjects and make any provisions relating to the Additional Obligations or Subordinate Lien Obligations which MLGW deems necessary or desirable for that purpose and not materially adverse to the interests of the Holders of related Senior Lien Revenue Obligations;

(l) to make such modifications in the provisions of the Resolution as may be deemed necessary by MLGW to accommodate the issuance of Revenue Obligations which bear interest at a Variable Rate;

(m) to make such modifications as are necessary to permit the combination of the System with the other utility systems operated by MLGW for purposes of collecting and accounting for revenues; or

(n) to modify any of the provisions of the Resolution in any respect in a manner which MLGW deems necessary or desirable and not materially adverse to the interests of the Holders of related Senior Lien Revenue Obligations (other than a modification of the type described in the Resolution requiring the unanimous written consent of the holders); provided that for (1) any Outstanding Revenue Obligations which are assigned a Rating and which are not secured by a Credit Facility providing for the payment of the full amount of principal and interest to be paid thereon, each Rating Agency shall have given written notification to MLGW that such modification will not cause the then applicable Rating on any Revenue Obligations to be reduced or withdrawn, and (2) any Outstanding Revenue Obligations

which are secured by Credit Facilities providing for the payment of the full amount of the principal and interest to be paid thereon, each Credit Issuer shall have consented in writing to such modification.

Any Supplemental Resolution authorized by the provisions of this Section may be adopted by MLGW and the City without the consent of or notice to the owners of any of the Revenue Obligations (except as otherwise set forth in such Supplemental Resolution) at the time Outstanding, notwithstanding any of the provisions of the Resolution described under “Supplemental Resolutions Requiring Consent of Holders of Revenue Obligations” below. Any such Supplemental Resolution may modify the provisions of the Resolution in such a manner, and to such extent and containing such provisions, as MLGW may deem necessary or desirable to effect any of the purposes stated above. As used in this Section, the term “modify” shall mean “modify, amend, or supplement” and the term “modification” shall mean “modification, amendment, or supplement.” MLGW and the City may agree in any Supplemental Resolution authorizing Revenue Obligations not to exercise its right to modify the Resolution pursuant to any of the provisions above without the consent of a requisite number of holders of the Revenue Obligations being issued.

The provisions of this Section and described under “Supplemental Resolutions Requiring Consent of Holders of Revenue Obligations” below of the Resolution shall be interpreted by category of Revenues such that each provision of any Supplemental Resolution shall be reviewed for compliance with such sections upon its effect on the Revenue Obligations secured by the related category of Revenues and whether the consent of any holders, of a majority of holders of a certain category of Revenue Obligations or the consent of all such holders shall be determined with respect to each category of Revenues. Supplemental Resolutions may be adopted containing provisions which (A) do not require the consents of any holders, (B) require the consents of some but not all holders of Revenue Obligations related to a category of Revenues, (C) require the consents of some but not all holders of Revenue Obligations related to several categories of Revenues, (D) require the consents of all holders of Revenue Obligations related to a category of Revenues, (E) require the consents of all holders of Revenue Obligations, or (F) are covered in a combination of some or all of (A) through (E).

Supplemental Resolutions Requiring Consent of Holders of Revenue Obligations

Exclusive of Supplemental Resolutions covered under “Supplemental Resolutions Not Requiring Consent of Bondholders” above, with the consent (evidenced as provided in Article VIII of the Resolution) of the owners of not less than a majority in aggregate principal amount of the Outstanding Revenue Obligations of each affected class (senior and subordinate, as applicable), voting separately by affected class, of each series of Revenue Obligations related to an affected category of Revenues or related Revenue Obligations, MLGW and the City may from time to time and at any time adopt a Supplemental Resolution for the purpose of adding any provisions to or changing in any manner or eliminating any of the provisions of the Resolution or of any Supplemental Resolution; provided, however, that no such Supplemental Resolution shall: (a) extend the maturity date or due date of any mandatory sinking fund redemption with respect to any Revenue Obligations Outstanding under the Resolution; (b) reduce or extend the time for payment of principal of, redemption premium, or interest on any Revenue Obligations Outstanding under the Resolution; (c) reduce any premium payable upon the redemption of any Revenue Obligations under the Resolution or advance the date upon which any Revenue Obligations may first be called for redemption prior to its stated maturity date; (d) give to any Revenue Obligation or Revenue Obligations (or related Contracts) a preference over any other Revenue Obligation or Revenue Obligations (or related Contracts) not already permitted by the Resolution; (e) permit the creation of any lien or any other encumbrance on the Pledged Revenues having a lien equal to or prior to the lien created under the Resolution for the Senior Lien Revenue Obligations; (f) reduce the percentage of owners of Revenue Obligations required to approve any such Supplemental Resolution; or (g) deprive the owners of the Revenue Obligations of the right to payment of the Revenue Obligations or

from the Pledged Revenues, without, in each case, the consent of the owners of all the Revenue Obligations then Outstanding of the category of Revenue Obligations affected thereby. No amendment may be made under this Section which affects the rights or duties of any Credit Issuer securing any of the Revenue Obligations or any Qualified Hedge Provider under any Hedge Agreement without its written consent. The provisions of this paragraph shall be strictly construed such that Supplemental Resolutions requiring the consents of owners of Revenue Obligations shall be limited to those clearly falling within one of the enumerated categories.

If MLGW intends to enter into or adopt any Supplemental Resolution as described in this Section, MLGW shall mail, by registered or certified mail, to the registered owners and/or holders of the Revenue Obligations at their addresses as shown on the Bond Register or as otherwise set forth in any Revenue Obligations, a notice of such intention along with a description of such Supplemental Resolution not less than 30 days prior to the proposed effective date of such Supplemental Resolution. The consents of the registered owners and/or holders of the Revenue Obligations need not approve the particular form of wording of the proposed Supplemental Resolution, but it shall be sufficient if such consents approve the substance thereof. Failure of the registered owner and/or holder of any Revenue Obligation to receive the notice required in the Resolution shall not affect the validity of any Supplemental Resolution if the required number of registered owners and/or holders of the Revenue Obligations of each class shall provide their written consent to such Supplemental Resolution. In connection with the issuance of any Revenue Obligations, the underwriter of such Revenue Obligations shall be deemed to be the initial holder of such Revenue Obligations for all purposes under the Resolution, whether or not such Revenue Obligations are delivered in book-entry form through DTC or another securities depository, and the consent of such underwriter to any Supplemental Resolution shall be fully binding on all subsequent holders of such Revenue Obligations.

Notwithstanding any provision of the Resolution to the contrary, upon the issuance of a Credit Facility to secure any Revenue Obligations and for the period in which such Credit Facility is outstanding, the Credit Issuer may have the consent rights of the owners of the Revenue Obligations which are secured by such Credit Facility pertaining to some or all of the amendments or modifications of the Resolution, to the extent provided in the applicable Supplemental Resolution. Notwithstanding the foregoing, if a Credit Issuer is granted the consent rights of the owners of any Revenue Obligations in a Supplemental Resolution and refuses to exercise such consent rights, either affirmatively or negatively, then the registered owners of the Revenue Obligations secured by the related Credit Facility may exercise such consent rights.

Notice of Supplemental Resolutions

MLGW shall cause the Bond Registrar to mail a notice by registered or certified mail to the registered owners of all Revenue Obligations Outstanding, at their addresses shown on the Bond Register or at such other address as has been furnished in writing by such registered owner to the Bond Registrar, or as otherwise set forth in any Revenue Obligation, setting forth in general terms the substance of any Supplemental Resolution which has been: (a) adopted by MLGW pursuant to the Resolution; or (b) approved by holders or any Credit Issuer and adopted by MLGW pursuant to the Resolution.

Bond Opinion for Supplemental Resolutions

Prior to the effectiveness of any Supplemental Resolution referred to and permitted or authorized by the Resolution, MLGW and the City shall secure an opinion from Bond Counsel stating that such Supplemental Resolution has been duly and lawfully adopted in accordance with the provisions of the Resolution, is authorized or permitted by the Resolution, and is valid and binding upon each of MLGW and the City in accordance with its terms. So long as there are Tax-Exempt Obligations Outstanding, no

Supplemental Resolution may become effective prior to the filing by MLGW of an opinion from Bond Counsel that such Supplemental Resolution will have no adverse effect on the tax status of any Tax-Exempt Obligations and the adoption of such Supplemental Resolution was permitted by the terms of the Resolution

APPENDIX I-1

**FORM OF THE CONTINUING DISCLOSURE CERTIFICATE RELATING TO THE
SERIES 2020A ELECTRIC SYSTEM BONDS**

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CONTINUING DISCLOSURE CERTIFICATE

\$148,000,000

**CITY OF MEMPHIS, TENNESSEE
ELECTRIC SYSTEM REVENUE BONDS
SERIES 2020A**

This **CONTINUING DISCLOSURE CERTIFICATE** dated September __, 2020 (this "Disclosure Certificate") is executed and delivered by the **CITY OF MEMPHIS, TENNESSEE** (the "City") and the **MEMPHIS LIGHT, GAS AND WATER DIVISION** ("MLGW") in connection with the issuance of the City's Electric System Revenue Bonds, Series 2020A (the "Series 2020A Electric System Bonds"). The Series 2020A Electric System Bonds are being issued pursuant to the Electric System Revenue Obligations Master Resolution adopted by the Board of Light, Gas and Water Commissioners (the "Board") of MLGW on June 20, 2002, and by the City Council (the "City Council") of the City on July 2, 2002, and as previously amended and supplemented (the "Master Electric System Resolution") and particularly as supplemented in respect to the Series 2020A Electric System Bonds by that certain Eighth Supplemental Resolution (the "Eighth Supplemental Resolution") adopted by the Board of MLGW on June 30, 2020, and by the City Council on July 21, 2020. The Master Electric System Resolution, as particularly supplemented by the Eighth Supplemental Resolution, is hereinafter referred to as (the "Electric System Resolution"). The City and MLGW covenant and agree as follows:

RECITALS:

A. Contemporaneously with the execution and delivery of this Disclosure Certificate, the City, on behalf of MLGW will issue its Series 2020A Electric System Bonds, pursuant to the Electric System Resolution.

B. The City authorized the preparation and distribution of the Preliminary Official Statement dated August 21, 2020 with respect to the Series 2020A Electric System Bonds (the "Preliminary Official Statement").

C. The City authorized the preparation, distribution and use of the Official Statement dated September 4, 2020 with respect to the Series 2020A Electric System Bonds (the "Official Statement") by the underwriter named on the cover of the Official Statement (the "Underwriter").

NOW THEREFORE, in consideration of the purchase of the Series 2020A Electric System Bonds by the Underwriter and the mutual promises and agreements made herein, the receipt and sufficiency of which consideration is hereby mutually acknowledged, the City and MLGW do hereby certify and agree as follows:

SECTION 1. Incorporation of Recitals and Purpose. The above recitals are true and correct and are incorporated into and made a part hereof. This Disclosure Certificate is being executed and delivered by the City for the benefit of the Beneficial Owners of the Series 2020A Electric System Bonds and in order to assist the Underwriters in complying with the Rule.

SECTION 2. Definitions. Capitalized terms used, but not otherwise defined, in this Disclosure Certificate shall have the meanings assigned thereto in the Electric System Resolution or the Official Statement, as applicable. In addition to the terms defined elsewhere herein, the following capitalized terms shall have the following meanings for the purposes of this Disclosure Certificate:

“Annual Filing Date” means the date, set forth in Section 3(a) of this Disclosure Certificate, by which the Annual Report is to be filed with the Repository.

“Annual Report” shall mean any annual report provided by MLGW on behalf of the City pursuant to, and as described in Section 3 and Section 4 of this Disclosure Certificate.

“Audited Financial Statements” shall mean the financial statements of MLGW for the prior Fiscal Year ended December 31, 2019, certified by an independent auditor and prepared in accordance with Generally Accepted Accounting Principles (GAAP), as in effect from time to time, audited by an independent certified public accountant in accordance with auditing standards applicable to financial audits contained in Government Auditing Standards issued by the Comptroller General of the United States.

“Beneficial Owner” shall mean any beneficial owner of the Series 2020A Electric System Bonds. Beneficial ownership is to be determined consistent with the definition thereof contained in Rule 13d-3 of the SEC, or, in the event such provisions do not adequately address the situation at hand (in the opinion of nationally recognized bond counsel), beneficial ownership is to be determined based upon ownership for federal income tax purposes.

“Business Day” means a day other than a Saturday or a Sunday or a day on which banks in the State of Tennessee are authorized or required by law to close.

“Disclosure Representative” means the Chief Financial Officer of the City or MLGW or their designee, or such other person as the City shall designate in writing from time to time as the person responsible for providing the information.

“Dissemination Agent” shall mean any dissemination agent appointed or engaged by the City to assist in carrying out its obligations under this Disclosure Certificate pursuant to Section 7 hereof.

“EMMA” means the MSRB's Electronic Municipal Market Access system, as described in 1934 Act Release No. 59062 and maintained by the MSRB for purposes of the Rule. Further information regarding EMMA can be retrieved by visiting the website <http://emma.msrb.org/>.

“Financial Obligation” means a: (i) debt obligation; (ii) derivative instrument entered into in connection with or pledged as security or a source of payment for, an existing or planned debt obligation; or (iii) guarantee of (i) or (ii). The term "Financial Obligation" does not include municipal securities as to which a final official statement has been provided to the MSRB consistent with the Rule.

“Fiscal Year” shall mean any period of twelve consecutive months adopted by MLGW as its fiscal year for financial reporting purposes and shall initially mean the period beginning January 1 of each calendar year and ending December 31 of the same calendar year.

“GAAP” means generally accepted accounting principles promulgated by the Government and Financial Accounting Standards Boards, as in effect from time to time in the United States.

“Holder” means any person (i) having the power, directly or indirectly, to vote or consent with respect to, or to dispose of ownership of, any Series 2020A Electric System Bond (including persons holding Series 2020A Electric System Bonds through nominees, depositories or other intermediaries) or (b) treated as the owner of any Series 2020A Electric System Bond for federal income tax purposes.

“Notice Event” means an event listed in Section 5(a) of this Disclosure Certificate.

“Notice Event Filing” shall have the meaning specified in Section 5(c) of this Disclosure Certificate.

“Obligated Person” means the City, MLGW and any person who is either generally or through an enterprise, fund or account of such person committed by contract or other arrangement to support payment of all or part of the obligations on the Series 2020A Electric System Bonds (other than providers of municipal bond insurance, letters of credit or other liquidity facilities). The City and MLGW confirms that currently it is the only Obligated Person with respect to the Series 2020A Electric System Bonds.

“Official Statement” shall mean the official statement, dated September 4, 2020 relating to the Series 2020A Electric System Bonds.

“Repository” means each entity authorized and approved by the SEC from time to time to act as a repository for purposes of the Rule, as reflected on the website of the SEC at www.sec.gov. Currently, the sole Repository is the MSRB, which currently accepts continuing disclosure submissions through EMMA. MSRB means the Municipal Securities Rulemaking Board established pursuant to Section 15B(b)(1) of the Securities Exchange Act of 1934. Currently, MSRB's address, phone number and fax number for purposes of the Rule is:

MSRB
c/o CDINet
1900 Duke Street
Suite 600
Alexandria, VA 22314
Phone: (703) 797-6000
Fax: (703) 683-1930

“Rule” shall mean Rule 15c2-12 of the SEC, promulgated pursuant to the Securities Exchange Act of 1934, as the same may be amended from time to time.

“SEC” shall mean the United States Securities and Exchange Commission.

“State” shall mean the State of Tennessee.

“Underwriters” shall mean any of the original underwriters of the Series 2020A Electric System Bonds who are required to comply with the Rule in connection with the offering of the Series 2020A Electric System Bonds.

“Voluntary Report” means the information provided to the Disclosure Dissemination Agent by the City pursuant to Section 8 of this Disclosure Certificate.

SECTION 3. Provision of Annual Report.

(a) The City or MLGW shall provide, annually, an electronic copy of the Annual Report and a Certification to the Disclosure Dissemination Agent on or before the Annual Filing Date. Promptly upon receipt of an electronic copy of the Annual Report and the Certification, the Disclosure Dissemination Agent shall provide the Annual Report to each Repository not later than June 30 following the end of each Fiscal Year, commencing with the Fiscal Year ending December 31, 2020. If June 30 falls on a day that is not a Business Day, the Annual Report will be due on the first Business Day thereafter. Such date and each anniversary thereof is the Annual Filing Date. The Annual Report may be submitted as a single document or as separate documents and may cross-reference other information available to the public on the MSRB’s website, filed with the SEC or otherwise provided under Section 4 of this Disclosure Certificate.

(b) If the City, MLGW or the Dissemination Agent is unable to provide the Repository the Annual Report by the date required in subsection (a) above, the City, MLGW or the Dissemination Agent shall send, in a timely manner, a notice to the Repository in electronic format as prescribed by the Repository, in substantially the form attached at **EXHIBIT A** hereto.

(c) The City, MLGW or the Dissemination Agent shall:

(i) Determine each year prior to the date for providing the Annual Report the name and address of the Repository to which the Annual Report is to be filed; and

(ii) File a report with the City certifying that the Annual Report has been provided pursuant to this Disclosure Certificate, stating the date on which it was provided to the Repository.

SECTION 4. Content of Annual Reports. The Annual Report shall contain or incorporate by reference the following:

(a) Each Annual Report shall contain Annual Financial Information with respect to MLGW, consisting of or cross-referencing the following:

(i) the Audited Financial Statements; provided, however, that if the Audited Financial Statements are not available by the time the Annual Report is required to be filed,

the Annual Report shall contain unaudited financial statements of MLGW in a format similar to the Audited Financial Statements and the Audited Financial Statements shall be filed in the same manner as the Annual Report when they become available;

(ii) If the accounting principles used by MLGW have changed during the previous Fiscal Year and such changes are material to MLGW, a narrative description of the impact of the change, as required by Section 8 of this Disclosure Certificate;

(iii) A statement indicating that the Fiscal Year has not changed or, if the Fiscal Year has changed, a statement defining the new Fiscal Year;

(iv) An update of the following operating data and financial information contained in **APPENDIX A** – “**OPERATING INFORMATION REGARDING THE ELECTRIC DIVISION**” in the Official Statement:

(A) Historical usage information relating to the Electric System contained in the table entitled "Historical and Forecasted Electric System Use";

(B) The table entitled "Ten Largest Electric Customers";

(C) The tables entitled "Average Number of Electric Customers" and "Megawatt Hours of Electricity Sold";

(D) The table entitled "Historical Power and Energy Requirements";

(E) The table entitled "Historical Debt Service Coverage"; and

(F) The tables entitled "Electric Division Statement of Revenues, Expenses and Changes in Net Position" and "Electric Division Selected Statement of Net Position Data".

(b) Any or all of the items listed above may be included by specific reference to other documents, including official statements of debt issues with respect to which the City or MLGW is an "obligated person" (as defined by the Rule), which have been previously filed with the MSRB or the SEC. If the document incorporated by reference is a final official statement, it must be available from the MSRB. The City or MLGW will clearly identify each such document so incorporated by reference.

SECTION 5. Reporting of Notice Events.

(a) In accordance with the Rule, the City, MLGW or the Dissemination Agent shall file with the Repository, in the appropriate format required by the Repository and in a timely manner not in excess of ten (10) Business Days after the occurrence of the following Notice Events, notices of

the occurrence of any of the following Notice Events with respect to the Series 2020A Electric System Bonds:

1. Principal and interest payment delinquencies;
2. Non-Payment related defaults, if material;
3. Unscheduled draws on debt service reserves reflecting financial difficulties;
4. Unscheduled draws on credit enhancements reflecting financial difficulties;
5. Substitution of credit or liquidity providers, or their failure to perform;
6. Adverse tax opinions, the issuance by the Internal Revenue Service of proposed or final determinations of taxability, Notices of Proposed Issue (IRS Form 5701-TEB) or other material notices or determinations with respect to the tax status of the Series 2020A Electric System Bonds, or other material events affecting the tax status of the Series 2020A Electric System Bonds;
7. Modifications to rights of securities Holders;
8. Bond calls, if material and tender offers;
9. Defeasances;
10. Release, substitution, or sale of property securing repayment of the Series 2020A Electric System Bonds;
11. Ratings changes;
12. Bankruptcy, insolvency, receivership or similar event of the Obligated Person (of the type described in the Note to Paragraph (b)(5)(i)(C)(12) of the Rule);
13. The consummation of a merger, consolidation, or acquisition involving the Obligated Person or the sale of all or substantially all of the assets of the Obligated Person, other than in the ordinary course of business, the entry into a definitive agreement to undertake such an action or the termination of a definitive agreement relating to any such actions, other than pursuant to its terms, if material; and
14. Appointment of a successor or additional trustee or a change in the name of a trustee;
15. Incurrence of a Financial Obligation or agreement to covenants, events of default, remedies, priority rights, or other similar terms of a Financial Obligation;

16. Default, event of acceleration, termination event, modification of terms, or other similar events under the terms of a Financial Obligation;

17. Failure to provide annual financial information as required, together with a completed notice substantially in the form set forth in **EXHIBIT A** to this Disclosure Certificate.

SECTION 6. CUSIP Numbers. Whenever providing information to the Repositories, including but not limited to Annual Reports, documents incorporated by reference into the Annual Reports, Audited Financial Statements, notices of Notice Events and Voluntary Reports filed pursuant to this Disclosure Certificate, the City or MLGW shall indicate the full name of the Series 2020A Electric System Bonds and, to the best of its knowledge, the 9-digit CUSIP numbers for the Series 2020A Electric System Bonds as to which the provided information relates. The City or MLGW, by providing the CUSIP numbers is not representing or certifying as to the accuracy thereof.

SECTION 7. Dissemination Agent. The City may, from time to time, appoint or engage a dissemination agent to assist it in carrying out its obligations under this Disclosure Certificate, and may discharge any such dissemination agent, with or without appointing a successor dissemination agent.

SECTION 8. Voluntary Reports.

(a) The City or MLGW may file any information with the Repositories from time to time, pursuant to a Certification of the Disclosure Representative accompanying such information (a "Voluntary Report").

(b) Nothing in this Disclosure Certificate shall be deemed to prevent the City or MLGW from disseminating any other information using the means of dissemination set forth in this Disclosure Certificate or including any other information in any Annual Report, Annual Financial Statement, Voluntary Report or Notice Event notice, in addition to that required by this Disclosure Certificate. If the City or MLGW chooses to include any information in any Annual Report, Annual Financial Statement, Voluntary Report or Notice Event notice in addition to that which is specifically required by this Disclosure Certificate, the City or MLGW shall have no obligation under this Disclosure Certificate to update such information or include it in any future Annual Report, Annual Financial Statement, Voluntary Report or Notice Event notice.

SECTION 9. Termination of Reporting Obligation.

(a) The obligations of the City, MLGW and the Disclosure Dissemination Agent under this Disclosure Certificate shall terminate with respect to the Series 2020A Electric System Bonds (i) upon the legal defeasance, prior redemption or payment in full of all of the Series 2020A Electric System Bonds, (ii) when the City or MLGW is no longer an Obligated Person with respect to the Series 2020A Electric System Bonds, or (iii) upon the termination of the continuing disclosure requirements of the Rule by legislative, judicial or administrative action.

(b) If in the opinion of nationally recognized bond counsel satisfactory to the City or MLGW, the Rule shall be amended, modified or changed so that all or any part of the information currently required to be provided thereunder shall no longer be required to be provided thereunder, then such information shall no longer be required to be provided hereunder and, if and to the extent in the opinion of nationally recognized bond counsel satisfactory to the City, MLGW the Rule or any provisions thereof shall be declared by a federal court of competent and final, non-appealable jurisdiction to be, in whole or in part, invalid, unconstitutional, null and void or otherwise inapplicable to the Series 2020A Electric System Bonds, then the information required to be provided hereunder, insofar as it was required to be provided by a provision of the Rule so declared, shall no longer be required to be provided hereunder.

SECTION 10. Default; Remedies. In the event of a failure of the City, MLGW or the Disclosure Dissemination Agent to comply with any provision of this Disclosure Certificate, the Holders' rights to enforce the provisions of this Agreement shall be limited solely to a right, by action in mandamus or for specific performance, to compel performance of the parties' obligation under this Disclosure Certificate, it being the City's and MLGW's position that money damages would be inadequate recompense and difficult to ascertain. A default under this Disclosure Certificate shall not constitute a default on the Series 2020A Electric System Bonds or be deemed to be a default under the Bond Resolution or under any other document relating to the Series 2020A Electric System Bonds and all rights and remedies shall be limited to those expressly stated herein.

SECTION 11. Amendment; Waiver.

(a) Notwithstanding any other provision of this Disclosure Certificate, the City or MLGW may amend this Disclosure Certificate and any provision of this Disclosure Certificate may be waived, if:

(i) Such amendment or waiver is made in connection with a change in circumstances that arises from a change in legal requirements, change in law or change in the identity, nature or status of the Obligated Person with respect to the Series 2020A Electric System Bonds or the type of business conducted by the Obligated Person;

(ii) Such amendment or waiver is supported by an opinion of counsel expert in federal securities laws to the effect that such amendment or waiver would have complied with the requirements of the Rule if such amendment or waiver had been effective on the date hereof, after taking into account any amendments or interpretations of the Rule, as well as any change in circumstances; and

(iii) Such amendment or waiver does not materially impair the interests of the beneficial owners of the Series 2020A Electric System Bonds, as determined either by an unqualified opinion of nationally recognized bond counsel filed with the City, MLGW or by the approving vote of the Holders of the Series 2020A Electric System Bonds pursuant to the terms of the Electric System Resolution at the time of the amendment.

(b) If any provision of Section 4 hereof is amended or waived, the first Annual Report containing any amended, or omitting any waived, operating data or financial information shall explain, in narrative form, the reasons for the amendment or waiver and the impact of the change in the type of operating data or financial information being provided.

(c) If the provisions of this Disclosure Certificate specifying the accounting principles to be followed in preparing the Audited Financial Statements are amended or waived, the Annual Report for the year in which the change is made shall present a comparison between the financial statements or information prepared on the basis of the new accounting principles and those prepared on the basis of the former accounting principles. The comparison should include a qualitative discussion of the differences in the accounting principles and the impact of the change in the accounting principles on the presentation of the financial information, in order to provide information to investors to enable them to evaluate the ability of the Obligated Person to meet its obligations. To the extent reasonably feasible, the comparison shall also be quantitative. The City or MLGW shall file a notice of the change in the accounting principles with the Repository on or before the effective date of any such amendment or waiver.

(d) Notwithstanding the preceding paragraphs, the City or MLGW shall have the right to adopt amendments to this Disclosure Certificate necessary to comply with modifications to and interpretations of the provisions of the Rule as announced by the SEC from time to time by giving not less than twenty (20) days written notice of its intent to do so, together with a copy of the proposed amendment, to the Disclosure Dissemination Agent.

SECTION 12. Beneficiaries. This Disclosure Certificate shall inure solely to the benefit of the City, MLGW, the Dissemination Agent, if any, the Underwriter and the Holders from time to time of the Series 2020A Electric System Bonds and shall create no rights in any other person or entity.

SECTION 13. Obligated Persons. Any change in Obligated Persons shall be reported by the City or MLGW in connection with the Annual Report. If any person other than the City becomes an Obligated Person relating to the Series 2020A Electric System Bonds, the City shall use its reasonable best efforts to require such Obligated Person to comply with all provisions of the Rule applicable to such Obligated Person; provided, however, the City takes no responsibility for the accuracy or completeness of any financial information or operating data or other filings by any future Obligated Person.

SECTION 14. No Personal Liability. None of the members or employees of the City or MLGW shall be charged personally with any liability or held liable under any term or provision of this Disclosure Certificate because of its execution or attempted execution or because of any breach or attempted or alleged breach thereof.

SECTION 15. Identifying Information. In accordance with the Rule, all disclosure filings submitted to the Repository pursuant to this Disclosure Certificate must be accompanied by identifying information as prescribed by the Repository.

SECTION 16. Severability. In case any part of this Disclosure Certificate is held to be illegal or invalid, such illegality or invalidity shall not affect the remainder or any other section of this Disclosure Certificate, nor shall the illegality or invalidity of any application of this Disclosure Certificate affect any legal and valid application. This Disclosure Certificate shall be construed or enforced as if such illegal or invalid portion were not contained herein.

SECTION 17. Counterparts. This Disclosure Certificate may be executed in several counterparts, each of which shall be an original and all of which shall constitute but one and the same instrument.

SECTION 18. Governing Law. This Disclosure Certificate shall be governed by and construed in accordance with the internal laws of the State (without regard to conflict of law principles thereof), provided that, to the extent this Disclosure Certificate addresses matters of federal securities laws, including the Rule, this Disclosure Certificate shall be construed in accordance with such federal securities laws and official interpretations thereof.

[Signatures on Following Pages]

[Signature Page for the Electric Division Continuing Disclosure Certificate]

IN WITNESS WHEREOF, the City has caused this Disclosure Certificate to be executed on its behalf by its authorized representative on the date first above written.

CITY OF MEMPHIS, TENNESSEE

By: _____
Jim Strickland
Mayor

[Signature Page for the Electric Division Continuing Disclosure Certificate]

IN WITNESS WHEREOF, MLGW has caused this Disclosure Certificate to be executed on its behalf by its authorized representative on the date first above written.

**MEMPHIS LIGHT, GAS AND WATER
DIVISION**, on behalf of the City of Memphis,
Tennessee

By: _____
Jarl T. Young
President and Chief Executive Officer

EXHIBIT A

NOTICE OF FAILURE TO FILE ANNUAL REPORT

Name of Issuer: City of Memphis, Tennessee

Name of Bond Issue: \$_____ City of Memphis, Tennessee Electric System
Revenue Bonds, Series 2020A

Date of Issuance: [_____, 2020]

NOTICE IS HEREBY GIVEN that the City of Memphis, Tennessee (the "City") has not provided the Annual Report with respect to the above-named bonds as required by the Continuing Disclosure Certificate dated [_____, 2020]. The City expects that the Annual Report will be filed by _____.

Dated: _____

**MEMPHIS LIGHT, GAS AND WATER
DIVISION**, on behalf of the City of Memphis,
Tennessee

By: _____
Jarl T. Young
President and Chief Executive Officer

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APPENDIX I-2

**FORM OF THE CONTINUING DISCLOSURE CERTIFICATE RELATING TO THE
SERIES 2020B ELECTRIC SYSTEM REFUNDING BONDS**

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CONTINUING DISCLOSURE CERTIFICATE

\$29,000,000
CITY OF MEMPHIS, TENNESSEE
ELECTRIC SYSTEM REVENUE
REFUNDING BONDS
SERIES 2020B

This **CONTINUING DISCLOSURE CERTIFICATE** dated September __, 2020 (this "Disclosure Certificate") is executed and delivered by the **CITY OF MEMPHIS, TENNESSEE** (the "City") and the **MEMPHIS LIGHT, GAS AND WATER DIVISION** ("MLGW") in connection with the issuance of the City's Electric System Revenue Bonds, Series 2020B (the "Series 2020B Electric System Refunding Bonds"). The Series 2020B Electric System Refunding Bonds are being issued pursuant to the Electric System Revenue Obligations Master Resolution adopted by the Board of Light, Gas and Water Commissioners (the "Board") of MLGW on June 20, 2002, and by the City Council (the "City Council") of the City on July 2, 2002, and as previously amended and supplemented (the "Master Electric System Resolution") and particularly as supplemented in respect to the Series 2020B Electric System Refunding Bonds by that certain Ninth Supplemental Resolution (the "Ninth Supplemental Resolution") adopted by the Board of MLGW on June 30, 2020, and by the City Council on July 21, 2020. The Master Electric System Resolution, as particularly supplemented by the Ninth Supplemental Resolution, is hereinafter referred to as (the "Electric System Resolution"). The City and MLGW covenant and agree as follows:

RECITALS:

A. Contemporaneously with the execution and delivery of this Disclosure Certificate, the City, on behalf of MLGW will issue its Series 2020B Electric System Refunding Bonds, pursuant to the Electric System Resolution.

B. The City authorized the preparation and distribution of the Preliminary Official Statement dated August 21, 2020 with respect to the Series 2020B Electric System Refunding Bonds (the "Preliminary Official Statement").

C. The City authorized the preparation, distribution and use of the Official Statement dated September 4, 2020 with respect to the Series 2020B Electric System Refunding Bonds (the "Official Statement") by the underwriter named on the cover of the Official Statement (the "Underwriter").

NOW THEREFORE, in consideration of the purchase of the Series 2020B Electric System Refunding Bonds by the Underwriter and the mutual promises and agreements made herein, the receipt and sufficiency of which consideration is hereby mutually acknowledged, the City and MLGW do hereby certify and agree as follows:

SECTION 1. Incorporation of Recitals and Purpose. The above recitals are true and correct and are incorporated into and made a part hereof. This Disclosure Certificate is being executed and delivered by the City for the benefit of the Beneficial Owners of the Series 2020B

Electric System Refunding Bonds and in order to assist the Underwriters in complying with the Rule.

SECTION 2. Definitions. Capitalized terms used, but not otherwise defined, in this Disclosure Certificate shall have the meanings assigned thereto in the Electric System Resolution or the Official Statement, as applicable. In addition to the terms defined elsewhere herein, the following capitalized terms shall have the following meanings for the purposes of this Disclosure Certificate:

“Annual Filing Date” means the date, set forth in Section 3(a) of this Disclosure Certificate, by which the Annual Report is to be filed with the Repository.

“Annual Report” shall mean any annual report provided by MLGW on behalf of the City pursuant to, and as described in Section 3 and Section 4 of this Disclosure Certificate.

“Audited Financial Statements” shall mean the financial statements of MLGW for the prior Fiscal Year ended December 31, 2019, certified by an independent auditor and prepared in accordance with Generally Accepted Accounting Principles (GAAP), as in effect from time to time, audited by an independent certified public accountant in accordance with auditing standards applicable to financial audits contained in Government Auditing Standards issued by the Comptroller General of the United States.

“Beneficial Owner” shall mean any beneficial owner of the Series 2020B Electric System Refunding Bonds. Beneficial ownership is to be determined consistent with the definition thereof contained in Rule 13d-3 of the SEC, or, in the event such provisions do not adequately address the situation at hand (in the opinion of nationally recognized bond counsel), beneficial ownership is to be determined based upon ownership for federal income tax purposes.

“Business Day” means a day other than a Saturday or a Sunday or a day on which banks in the State of Tennessee are authorized or required by law to close.

“Disclosure Representative” means the Chief Financial Officer of the City or MLGW or their designee, or such other person as the City shall designate in writing from time to time as the person responsible for providing the information.

“Dissemination Agent” shall mean any dissemination agent appointed or engaged by the City to assist in carrying out its obligations under this Disclosure Certificate pursuant to Section 7 hereof.

“EMMA” means the MSRB's Electronic Municipal Market Access system, as described in 1934 Act Release No. 59062 and maintained by the MSRB for purposes of the Rule. Further information regarding EMMA can be retrieved by visiting the website <http://emma.msrb.org/>.

“Financial Obligation” means a: (i) debt obligation; (ii) derivative instrument entered into in connection with or pledged as security or a source of payment for, an existing or planned debt obligation; or (iii) guarantee of (i) or (ii). The term "Financial Obligation" does not include

municipal securities as to which a final official statement has been provided to the MSRB consistent with the Rule.

“Fiscal Year” shall mean any period of twelve consecutive months adopted by MLGW as its fiscal year for financial reporting purposes and shall initially mean the period beginning January 1 of each calendar year and ending December 31 of the same calendar year.

“GAAP” means generally accepted accounting principles promulgated by the Government and Financial Accounting Standards Boards, as in effect from time to time in the United States.

“Holder” means any person (i) having the power, directly or indirectly, to vote or consent with respect to, or to dispose of ownership of, any Series 2020B Electric System Refunding Bond (including persons holding Series 2020B Electric System Refunding Bonds through nominees, depositories or other intermediaries) or (b) treated as the owner of any Series 2020B Electric System Refunding Bond for federal income tax purposes.

“Notice Event” means an event listed in Section 5(a) of this Disclosure Certificate.

“Notice Event Filing” shall have the meaning specified in Section 5(c) of this Disclosure Certificate.

“Obligated Person” means the City, MLGW and any person who is either generally or through an enterprise, fund or account of such person committed by contract or other arrangement to support payment of all or part of the obligations on the Series 2020B Electric System Refunding Bonds (other than providers of municipal bond insurance, letters of credit or other liquidity facilities). The City and MLGW confirms that currently it is the only Obligated Person with respect to the Series 2020B Electric System Refunding Bonds.

“Official Statement” shall mean the official statement, dated September 4, 2020 relating to the Series 2020B Electric System Refunding Bonds.

“Repository” means each entity authorized and approved by the SEC from time to time to act as a repository for purposes of the Rule, as reflected on the website of the SEC at www.sec.gov. Currently, the sole Repository is the MSRB, which currently accepts continuing disclosure submissions through EMMA. MSRB means the Municipal Securities Rulemaking Board established pursuant to Section 15B(b)(1) of the Securities Exchange Act of 1934. Currently, MSRB's address, phone number and fax number for purposes of the Rule is:

MSRB
c/o CDINet
1900 Duke Street
Suite 600
Alexandria, VA 22314
Phone: (703) 797-6000
Fax: (703) 683-1930

“Rule” shall mean Rule 15c2-12 of the SEC, promulgated pursuant to the Securities Exchange Act of 1934, as the same may be amended from time to time.

“SEC” shall mean the United States Securities and Exchange Commission.

“State” shall mean the State of Tennessee.

“Underwriters” shall mean any of the original underwriters of the Series 2020B Electric System Refunding Bonds who are required to comply with the Rule in connection with the offering of the Series 2020B Electric System Refunding Bonds.

“Voluntary Report” means the information provided to the Disclosure Dissemination Agent by the City pursuant to Section 8 of this Disclosure Certificate.

SECTION 3. Provision of Annual Report.

(a) The City or MLGW shall provide, annually, an electronic copy of the Annual Report and a Certification to the Disclosure Dissemination Agent on or before the Annual Filing Date. Promptly upon receipt of an electronic copy of the Annual Report and the Certification, the Disclosure Dissemination Agent shall provide the Annual Report to each Repository not later than June 30 following the end of each Fiscal Year, commencing with the Fiscal Year ending December 31, 2020. If June 30 falls on a day that is not a Business Day, the Annual Report will be due on the first Business Day thereafter. Such date and each anniversary thereof is the Annual Filing Date. The Annual Report may be submitted as a single document or as separate documents and may cross-reference other information available to the public on the MSRB’s website, filed with the SEC or otherwise provided under Section 4 of this Disclosure Certificate.

(b) If the City, MLGW or the Dissemination Agent is unable to provide the Repository the Annual Report by the date required in subsection (a) above, the City, MLGW or the Dissemination Agent shall send, in a timely manner, a notice to the Repository in electronic format as prescribed by the Repository, in substantially the form attached at **EXHIBIT A** hereto.

(c) The City, MLGW or the Dissemination Agent shall:

(i) Determine each year prior to the date for providing the Annual Report the name and address of the Repository to which the Annual Report is to be filed; and

(ii) File a report with the City certifying that the Annual Report has been provided pursuant to this Disclosure Certificate, stating the date on which it was provided to the Repository.

SECTION 4. Content of Annual Reports. The Annual Report shall contain or incorporate by reference the following:

(a) Each Annual Report shall contain Annual Financial Information with respect to MLGW, consisting of or cross-referencing the following:

(i) the Audited Financial Statements; provided, however, that if the Audited Financial Statements are not available by the time the Annual Report is required to be filed, the Annual Report shall contain unaudited financial statements of MLGW in a format similar to the Audited Financial Statements and the Audited Financial Statements shall be filed in the same manner as the Annual Report when they become available;

(ii) If the accounting principles used by MLGW have changed during the previous Fiscal Year and such changes are material to MLGW, a narrative description of the impact of the change, as required by Section 8 of this Disclosure Certificate;

(iii) A statement indicating that the Fiscal Year has not changed or, if the Fiscal Year has changed, a statement defining the new Fiscal Year;

(iv) An update of the following operating data and financial information contained in **APPENDIX A** – “**OPERATING INFORMATION REGARDING THE ELECTRIC DIVISION**” in the Official Statement:

(A) Historical usage information relating to the Electric System contained in the table entitled "Historical and Forecasted Electric System Use";

(B) The table entitled "Ten Largest Electric Customers";

(C) The tables entitled "Average Number of Electric Customers" and "Megawatt Hours of Electricity Sold";

(D) The table entitled "Historical Power and Energy Requirements";

(E) The table entitled "Historical Debt Service Coverage"; and

(F) The tables entitled "Electric Division Statement of Revenues, Expenses and Changes in Net Position" and "Electric Division Selected Statement of Net Position Data".

(b) Any or all of the items listed above may be included by specific reference to other documents, including official statements of debt issues with respect to which the City or MLGW is an "obligated person" (as defined by the Rule), which have been previously filed with the MSRB or the SEC. If the document incorporated by reference is a final official statement, it must be available from the MSRB. The City or MLGW will clearly identify each such document so incorporated by reference.

SECTION 5. Reporting of Notice Events.

(a) In accordance with the Rule, the City, MLGW or the Dissemination Agent shall file with the Repository, in the appropriate format required by the Repository and in a timely manner not in excess of ten (10) Business Days after the occurrence of the following Notice Events, notices of

the occurrence of any of the following Notice Events with respect to the Series 2020B Electric System Refunding Bonds:

1. Principal and interest payment delinquencies;
2. Non-Payment related defaults, if material;
3. Unscheduled draws on debt service reserves reflecting financial difficulties;
4. Unscheduled draws on credit enhancements reflecting financial difficulties;
5. Substitution of credit or liquidity providers, or their failure to perform;
6. Adverse tax opinions, the issuance by the Internal Revenue Service of proposed or final determinations of taxability, Notices of Proposed Issue (IRS Form 5701-TEB) or other material notices or determinations with respect to the tax status of the Series 2020B Electric System Refunding Bonds, or other material events affecting the tax status of the Series 2020B Electric System Refunding Bonds;
7. Modifications to rights of securities Holders;
8. Bond calls, if material and tender offers;
9. Defeasances;
10. Release, substitution, or sale of property securing repayment of the Series 2020B Electric System Refunding Bonds;
11. Ratings changes;
12. Bankruptcy, insolvency, receivership or similar event of the Obligated Person (of the type described in the Note to Paragraph (b)(5)(i)(C)(12) of the Rule);
13. The consummation of a merger, consolidation, or acquisition involving the Obligated Person or the sale of all or substantially all of the assets of the Obligated Person, other than in the ordinary course of business, the entry into a definitive agreement to undertake such an action or the termination of a definitive agreement relating to any such actions, other than pursuant to its terms, if material; and
14. Appointment of a successor or additional trustee or a change in the name of a trustee;
15. Incurrence of a Financial Obligation or agreement to covenants, events of default, remedies, priority rights, or other similar terms of a Financial Obligation;

16. Default, event of acceleration, termination event, modification of terms, or other similar events under the terms of a Financial Obligation;

17. Failure to provide annual financial information as required, together with a completed notice substantially in the form set forth in **EXHIBIT A** to this Disclosure Certificate.

SECTION 6. CUSIP Numbers. Whenever providing information to the Repositories, including but not limited to Annual Reports, documents incorporated by reference into the Annual Reports, Audited Financial Statements, notices of Notice Events and Voluntary Reports filed pursuant to this Disclosure Certificate, the City or MLGW shall indicate the full name of the Series 2020B Electric System Refunding Bonds and, to the best of its knowledge, the 9-digit CUSIP numbers for the Series 2020B Electric System Refunding Bonds as to which the provided information relates. The City or MLGW, by providing the CUSIP numbers is not representing or certifying as to the accuracy thereof.

SECTION 7. Dissemination Agent. The City may, from time to time, appoint or engage a dissemination agent to assist it in carrying out its obligations under this Disclosure Certificate, and may discharge any such dissemination agent, with or without appointing a successor dissemination agent.

SECTION 8. Voluntary Reports.

(a) The City or MLGW may file any information with the Repositories from time to time, pursuant to a Certification of the Disclosure Representative accompanying such information (a "Voluntary Report").

(b) Nothing in this Disclosure Certificate shall be deemed to prevent the City or MLGW from disseminating any other information using the means of dissemination set forth in this Disclosure Certificate or including any other information in any Annual Report, Annual Financial Statement, Voluntary Report or Notice Event notice, in addition to that required by this Disclosure Certificate. If the City or MLGW chooses to include any information in any Annual Report, Annual Financial Statement, Voluntary Report or Notice Event notice in addition to that which is specifically required by this Disclosure Certificate, the City or MLGW shall have no obligation under this Disclosure Certificate to update such information or include it in any future Annual Report, Annual Financial Statement, Voluntary Report or Notice Event notice.

SECTION 9. Termination of Reporting Obligation.

(a) The obligations of the City, MLGW and the Disclosure Dissemination Agent under this Disclosure Certificate shall terminate with respect to the Series 2020B Electric System Refunding Bonds (i) upon the legal defeasance, prior redemption or payment in full of all of the Series 2020B Electric System Refunding Bonds, (ii) when the City or MLGW is no longer an Obligated Person with respect to the Series 2020B Electric System Refunding Bonds, or (iii) upon

the termination of the continuing disclosure requirements of the Rule by legislative, judicial or administrative action.

(b) If in the opinion of nationally recognized bond counsel satisfactory to the City or MLGW, the Rule shall be amended, modified or changed so that all or any part of the information currently required to be provided thereunder shall no longer be required to be provided thereunder, then such information shall no longer be required to be provided hereunder and, if and to the extent in the opinion of nationally recognized bond counsel satisfactory to the City, MLGW the Rule or any provisions thereof shall be declared by a federal court of competent and final, non-appealable jurisdiction to be, in whole or in part, invalid, unconstitutional, null and void or otherwise inapplicable to the Series 2020B Electric System Refunding Bonds, then the information required to be provided hereunder, insofar as it was required to be provided by a provision of the Rule so declared, shall no longer be required to be provided hereunder.

SECTION 10. Default; Remedies. In the event of a failure of the City, MLGW or the Disclosure Dissemination Agent to comply with any provision of this Disclosure Certificate, the Holders' rights to enforce the provisions of this Agreement shall be limited solely to a right, by action in mandamus or for specific performance, to compel performance of the parties' obligation under this Disclosure Certificate, it being the City's and MLGW's position that money damages would be inadequate recompense and difficult to ascertain. A default under this Disclosure Certificate shall not constitute a default on the Series 2020B Electric System Refunding Bonds or be deemed to be a default under the Bond Resolution or under any other document relating to the Series 2020B Electric System Refunding Bonds and all rights and remedies shall be limited to those expressly stated herein.

SECTION 11. Amendment; Waiver.

(a) Notwithstanding any other provision of this Disclosure Certificate, the City or MLGW may amend this Disclosure Certificate and any provision of this Disclosure Certificate may be waived, if:

(i) Such amendment or waiver is made in connection with a change in circumstances that arises from a change in legal requirements, change in law or change in the identity, nature or status of the Obligated Person with respect to the Series 2020B Electric System Refunding Bonds or the type of business conducted by the Obligated Person;

(ii) Such amendment or waiver is supported by an opinion of counsel expert in federal securities laws to the effect that such amendment or waiver would have complied with the requirements of the Rule if such amendment or waiver had been effective on the date hereof, after taking into account any amendments or interpretations of the Rule, as well as any change in circumstances; and

(iii) Such amendment or waiver does not materially impair the interests of the beneficial owners of the Series 2020B Electric System Refunding Bonds, as determined either by an unqualified opinion of nationally recognized bond counsel filed with the City, MLGW or by the approving vote of the Holders of the Series 2020B Electric System

Refunding Bonds pursuant to the terms of the Electric System Resolution at the time of the amendment.

(b) If any provision of Section 4 hereof is amended or waived, the first Annual Report containing any amended, or omitting any waived, operating data or financial information shall explain, in narrative form, the reasons for the amendment or waiver and the impact of the change in the type of operating data or financial information being provided.

(c) If the provisions of this Disclosure Certificate specifying the accounting principles to be followed in preparing the Audited Financial Statements are amended or waived, the Annual Report for the year in which the change is made shall present a comparison between the financial statements or information prepared on the basis of the new accounting principles and those prepared on the basis of the former accounting principles. The comparison should include a qualitative discussion of the differences in the accounting principles and the impact of the change in the accounting principles on the presentation of the financial information, in order to provide information to investors to enable them to evaluate the ability of the Obligated Person to meet its obligations. To the extent reasonably feasible, the comparison shall also be quantitative. The City or MLGW shall file a notice of the change in the accounting principles with the Repository on or before the effective date of any such amendment or waiver.

(d) Notwithstanding the preceding paragraphs, the City or MLGW shall have the right to adopt amendments to this Disclosure Certificate necessary to comply with modifications to and interpretations of the provisions of the Rule as announced by the SEC from time to time by giving not less than twenty (20) days written notice of its intent to do so, together with a copy of the proposed amendment, to the Disclosure Dissemination Agent.

SECTION 12. Beneficiaries. This Disclosure Certificate shall inure solely to the benefit of the City, MLGW, the Dissemination Agent, if any, the Underwriter and the Holders from time to time of the Series 2020B Electric System Refunding Bonds and shall create no rights in any other person or entity.

SECTION 13. Obligated Persons. Any change in Obligated Persons shall be reported by the City or MLGW in connection with the Annual Report. If any person other than the City becomes an Obligated Person relating to the Series 2020B Electric System Refunding Bonds, the City shall use its reasonable best efforts to require such Obligated Person to comply with all provisions of the Rule applicable to such Obligated Person; provided, however, the City takes no responsibility for the accuracy or completeness of any financial information or operating data or other filings by any future Obligated Person.

SECTION 14. No Personal Liability. None of the members or employees of the City or MLGW shall be charged personally with any liability or held liable under any term or provision of this Disclosure Certificate because of its execution or attempted execution or because of any breach or attempted or alleged breach thereof.

SECTION 15. Identifying Information. In accordance with the Rule, all disclosure filings submitted to the Repository pursuant to this Disclosure Certificate must be accompanied by identifying information as prescribed by the Repository.

SECTION 16. Severability. In case any part of this Disclosure Certificate is held to be illegal or invalid, such illegality or invalidity shall not affect the remainder or any other section of this Disclosure Certificate, nor shall the illegality or invalidity of any application of this Disclosure Certificate affect any legal and valid application. This Disclosure Certificate shall be construed or enforced as if such illegal or invalid portion were not contained herein.

SECTION 17. Counterparts. This Disclosure Certificate may be executed in several counterparts, each of which shall be an original and all of which shall constitute but one and the same instrument.

SECTION 18. Governing Law. This Disclosure Certificate shall be governed by and construed in accordance with the internal laws of the State (without regard to conflict of law principles thereof), provided that, to the extent this Disclosure Certificate addresses matters of federal securities laws, including the Rule, this Disclosure Certificate shall be construed in accordance with such federal securities laws and official interpretations thereof.

[Signatures on Following Pages]

[Signature Page for the Electric Division Refunding Continuing Disclosure Certificate]

IN WITNESS WHEREOF, the City has caused this Disclosure Certificate to be executed on its behalf by its authorized representative on the date first above written.

CITY OF MEMPHIS, TENNESSEE

By: _____
Jim Strickland
Mayor

[Signature Page for the Electric Division Refunding Continuing Disclosure Certificate]

IN WITNESS WHEREOF, MLGW has caused this Disclosure Certificate to be executed on its behalf by its authorized representative on the date first above written.

**MEMPHIS LIGHT, GAS AND WATER
DIVISION**, on behalf of the City of Memphis,
Tennessee

By: _____
Jarl T. Young
President and Chief Executive Officer

EXHIBIT A

NOTICE OF FAILURE TO FILE ANNUAL REPORT

Name of Issuer: City of Memphis, Tennessee

Name of Bond Issue: \$_____ City of Memphis, Tennessee Electric System
Revenue Refunding Bonds, Series 2020B

Date of Issuance: [_____, 2020]

NOTICE IS HEREBY GIVEN that the City of Memphis, Tennessee (the "City") has not provided the Annual Report with respect to the above-named bonds as required by the Continuing Disclosure Certificate dated [_____, 2020]. The City expects that the Annual Report will be filed by _____.

Dated: _____

**MEMPHIS LIGHT, GAS AND WATER
DIVISION**, on behalf of the City of Memphis,
Tennessee

By: _____
Jarl T. Young
President and Chief Executive Officer

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APPENDIX I-3

**FORM OF THE CONTINUING DISCLOSURE CERTIFICATE RELATING TO THE
SERIES 2020 GAS SYSTEM BONDS**

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CONTINUING DISCLOSURE CERTIFICATE

\$63,000,000
CITY OF MEMPHIS, TENNESSEE
GAS SYSTEM REVENUE BONDS
SERIES 2020

This **CONTINUING DISCLOSURE CERTIFICATE** dated September ___, 2020] (this "Disclosure Certificate") is executed and delivered by the **CITY OF MEMPHIS, TENNESSEE** (the "City") and the **MEMPHIS LIGHT, GAS AND WATER DIVISION** ("MLGW") in connection with the issuance of the City's Gas System Revenue Bonds, Series 2020 (the "Series 2020 Gas System Bonds"). The Series 2020 Gas System Bonds are being issued pursuant to the Gas System Revenue Obligations Master Resolution adopted by the Board of Light, Gas and Water Commissioners (the "Board") of the Division on June 1, 2016, and by the City Council (the "City Council") of the City on July 5, 2016 (the "Master Gas System Resolution") and particularly as supplemented in respect to the Series 2020 Gas System Bonds by that certain Third Supplemental Resolution (the "Third Supplemental Resolution") adopted by the Board of MLGW on June 30, 2020, and by the City Council on July 21, 2020. The Master Gas System Resolution, as particularly supplemented by the Third Supplemental Resolution, is hereinafter referred to as (the "Gas System Resolution"). The City and MLGW covenant and agree as follows:

RECITALS:

A. Contemporaneously with the execution and delivery of this Disclosure Certificate, the City, on behalf of MLGW will issue its Series 2020 Gas System Bonds, pursuant to the Gas System Resolution.

B. The City authorized the preparation and distribution of the Preliminary Official Statement dated August 21, 2020 with respect to the Series 2020 Gas System Bonds (the "Preliminary Official Statement").

C. The City authorized the preparation, distribution and use of the Official Statement dated September 4, 2020 with respect to the Series 2020 Gas System Bonds (the "Official Statement") by the underwriter named on the cover of the Official Statement (the "Underwriter").

NOW THEREFORE, in consideration of the purchase of the Series 2020 Gas System Bonds by the Underwriter and the mutual promises and agreements made herein, the receipt and sufficiency of which consideration is hereby mutually acknowledged, the City and MLGW do hereby certify and agree as follows:

SECTION 1. Incorporation of Recitals and Purpose. The above recitals are true and correct and are incorporated into and made a part hereof. This Disclosure Certificate is being executed and delivered by the City for the benefit of the Beneficial Owners of the Series 2020 Gas System Bonds and in order to assist the Underwriters in complying with the Rule.

SECTION 2. Definitions. Capitalized terms used, but not otherwise defined, in this Disclosure Certificate shall have the meanings assigned thereto in the Gas System Resolution or the Official Statement, as applicable. In addition to the terms defined elsewhere herein, the following capitalized terms shall have the following meanings for the purposes of this Disclosure Certificate:

“Annual Filing Date” means the date, set forth in Section 3(a) of this Disclosure Certificate, by which the Annual Report is to be filed with the Repository.

“Annual Report” shall mean any annual report provided by MLGW on behalf of the City pursuant to, and as described in Section 3 and Section 4 of this Disclosure Certificate.

“Audited Financial Statements” shall mean the financial statements of MLGW for the prior Fiscal Year ended December 31, 2019, certified by an independent auditor and prepared in accordance with Generally Accepted Accounting Principles (GAAP), as in effect from time to time, audited by an independent certified public accountant in accordance with auditing standards applicable to financial audits contained in Government Auditing Standards issued by the Comptroller General of the United States.

“Beneficial Owner” shall mean any beneficial owner of the Series 2020 Gas System Bonds. Beneficial ownership is to be determined consistent with the definition thereof contained in Rule 13d-3 of the SEC, or, in the event such provisions do not adequately address the situation at hand (in the opinion of nationally recognized bond counsel), beneficial ownership is to be determined based upon ownership for federal income tax purposes.

“Business Day” means a day other than a Saturday or a Sunday or a day on which banks in the State of Tennessee are authorized or required by law to close.

“Disclosure Representative” means the Chief Financial Officer of the City or MLGW or their designee, or such other person as the City shall designate in writing from time to time as the person responsible for providing the information.

“Dissemination Agent” shall mean any dissemination agent appointed or engaged by the City to assist in carrying out its obligations under this Disclosure Certificate pursuant to Section 7 hereof.

“EMMA” means the MSRB's Electronic Municipal Market Access system, as described in 1934 Act Release No. 59062 and maintained by the MSRB for purposes of the Rule. Further information regarding EMMA can be retrieved by visiting the website <http://emma.msrb.org/>.

“Financial Obligation” means a: (i) debt obligation; (ii) derivative instrument entered into in connection with or pledged as security or a source of payment for, an existing or planned debt obligation; or (iii) guarantee of (i) or (ii). The term "Financial Obligation" does not include municipal securities as to which a final official statement has been provided to the MSRB consistent with the Rule.

“Fiscal Year” shall mean any period of twelve consecutive months adopted by MLGW as its fiscal year for financial reporting purposes and shall initially mean the period beginning January 1 of each calendar year and ending December 31 of the same calendar year.

“GAAP” means generally accepted accounting principles promulgated by the Government and Financial Accounting Standards Boards, as in effect from time to time in the United States.

“Holder” means any person (i) having the power, directly or indirectly, to vote or consent with respect to, or to dispose of ownership of, any Series 2020 Gas System Bond (including persons holding Series 2020 Gas System Bonds through nominees, depositories or other intermediaries) or (b) treated as the owner of any Series 2020 Gas System Bond for federal income tax purposes.

“Notice Event” means an event listed in Section 5(a) of this Disclosure Certificate.

“Notice Event Filing” shall have the meaning specified in Section 5(c) of this Disclosure Certificate.

“Obligated Person” means the City, MLGW and any person who is either generally or through an enterprise, fund or account of such person committed by contract or other arrangement to support payment of all or part of the obligations on the Series 2020 Gas System Bonds (other than providers of municipal bond insurance, letters of credit or other liquidity facilities). The City and MLGW confirms that currently it is the only Obligated Person with respect to the Series 2020 Gas System Bonds.

“Official Statement” shall mean the official statement, dated September 4, 2020 relating to the Series 2020 Gas System Bonds.

“Repository” means each entity authorized and approved by the SEC from time to time to act as a repository for purposes of the Rule, as reflected on the website of the SEC at www.sec.gov. Currently, the sole Repository is the MSRB, which currently accepts continuing disclosure submissions through EMMA. MSRB means the Municipal Securities Rulemaking Board established pursuant to Section 15B(b)(1) of the Securities Exchange Act of 1934. Currently, MSRB's address, phone number and fax number for purposes of the Rule is:

MSRB
c/o CDINet
1900 Duke Street
Suite 600
Alexandria, VA 22314
Phone: (703) 797-6000
Fax: (703) 683-1930

“Rule” shall mean Rule 15c2-12 of the SEC, promulgated pursuant to the Securities Exchange Act of 1934, as the same may be amended from time to time.

“SEC” shall mean the United States Securities and Exchange Commission.

“State” shall mean the State of Tennessee.

“Underwriters” shall mean any of the original underwriters of the Series 2020 Gas System Bonds who are required to comply with the Rule in connection with the offering of the Series 2020 Gas System Bonds.

“Voluntary Report” means the information provided to the Disclosure Dissemination Agent by the City pursuant to Section 8 of this Disclosure Certificate.

SECTION 3. Provision of Annual Report.

(a) The City or MLGW shall provide, annually, an electronic copy of the Annual Report and a Certification to the Disclosure Dissemination Agent on or before the Annual Filing Date. Promptly upon receipt of an electronic copy of the Annual Report and the Certification, the Disclosure Dissemination Agent shall provide the Annual Report to each Repository not later than June 30 following the end of each Fiscal Year, commencing with the Fiscal Year ending December 31, 2020. If June 30 falls on a day that is not a Business Day, the Annual Report will be due on the first Business Day thereafter. Such date and each anniversary thereof is the Annual Filing Date. The Annual Report may be submitted as a single document or as separate documents and may cross-reference other information available to the public on the MSRB’s website, filed with the SEC or otherwise provided under Section 4 of this Disclosure Certificate.

(b) If the City, MLGW or the Dissemination Agent is unable to provide the Repository the Annual Report by the date required in subsection (a) above, the City, MLGW or the Dissemination Agent shall send, in a timely manner, a notice to the Repository in electronic format as prescribed by the Repository, in substantially the form attached at **EXHIBIT A** hereto.

(c) The City, MLGW or the Dissemination Agent shall:

(i) Determine each year prior to the date for providing the Annual Report the name and address of the Repository to which the Annual Report is to be filed; and

(ii) File a report with the City certifying that the Annual Report has been provided pursuant to this Disclosure Certificate, stating the date on which it was provided to the Repository.

SECTION 4. Content of Annual Reports. The Annual Report shall contain or incorporate by reference the following:

(a) Each Annual Report shall contain Annual Financial Information with respect to MLGW, consisting of or cross-referencing the following:

(i) the Audited Financial Statements; provided, however, that if the Audited Financial Statements are not available by the time the Annual Report is required to be filed, the Annual Report shall contain unaudited financial statements of MLGW in a format similar

to the Audited Financial Statements and the Audited Financial Statements shall be filed in the same manner as the Annual Report when they become available;

(ii) If the accounting principles used by MLGW have changed during the previous Fiscal Year and such changes are material to MLGW, a narrative description of the impact of the change, as required by Section 8 of this Disclosure Certificate;

(iii) A statement indicating that the Fiscal Year has not changed or, if the Fiscal Year has changed, a statement defining the new Fiscal Year;

(iv) An update of the following operating data and financial information contained in **APPENDIX B** – “**OPERATING INFORMATION REGARDING THE GAS DIVISION**” in the Official Statement:

(A) Historical usage information relating to the Electric System contained in the table entitled "Historical and Forecasted Gas System Use";

(B) The tables entitled "Ten Largest Gas Customers" and "Ten Largest Transport Gas Customers";

(C) The tables entitled "Average Number of Gas Customers" and "Thousands of Cubic Feet of Gas Sold";

(D) The table entitled "Historical Gas Demand and Sales Requirements";

(E) The table entitled "Historical Debt Service Coverage"; and

(F) The tables entitled "Gas Division Statement of Revenues, Expenses and Changes in Net Position" and "Gas Division Selected Statement of Net Position Data".

(b) Any or all of the items listed above may be included by specific reference to other documents, including official statements of debt issues with respect to which the City or MLGW is an "obligated person" (as defined by the Rule), which have been previously filed with the MSRB or the SEC. If the document incorporated by reference is a final official statement, it must be available from the MSRB. The City or MLGW will clearly identify each such document so incorporated by reference.

SECTION 5. Reporting of Notice Events.

(a) In accordance with the Rule, the City, MLGW or the Dissemination Agent shall file with the Repository, in the appropriate format required by the Repository and in a timely manner not in excess of ten (10) Business Days after the occurrence of the following Notice Events, notices of

the occurrence of any of the following Notice Events with respect to the Series 2020 Gas System Bonds:

1. Principal and interest payment delinquencies;
2. Non-Payment related defaults, if material;
3. Unscheduled draws on debt service reserves reflecting financial difficulties;
4. Unscheduled draws on credit enhancements reflecting financial difficulties;
5. Substitution of credit or liquidity providers, or their failure to perform;
6. Adverse tax opinions, the issuance by the Internal Revenue Service of proposed or final determinations of taxability, Notices of Proposed Issue (IRS Form 5701-TEB) or other material notices or determinations with respect to the tax status of the Series 2020 Gas System Bonds, or other material events affecting the tax status of the Series 2020 Gas System Bonds;
7. Modifications to rights of securities Holders;
8. Bond calls, if material and tender offers;
9. Defeasances;
10. Release, substitution, or sale of property securing repayment of the Series 2020 Gas System Bonds;
11. Ratings changes;
12. Bankruptcy, insolvency, receivership or similar event of the Obligated Person (of the type described in the Note to Paragraph (b)(5)(i)(C)(12) of the Rule);
13. The consummation of a merger, consolidation, or acquisition involving the Obligated Person or the sale of all or substantially all of the assets of the Obligated Person, other than in the ordinary course of business, the entry into a definitive agreement to undertake such an action or the termination of a definitive agreement relating to any such actions, other than pursuant to its terms, if material; and
14. Appointment of a successor or additional trustee or a change in the name of a trustee;
15. Incurrence of a Financial Obligation or agreement to covenants, events of default, remedies, priority rights, or other similar terms of a Financial Obligation;

16. Default, event of acceleration, termination event, modification of terms, or other similar events under the terms of a Financial Obligation;

17. Failure to provide annual financial information as required, together with a completed notice substantially in the form set forth in **EXHIBIT A** to this Disclosure Certificate.

SECTION 6. CUSIP Numbers. Whenever providing information to the Repositories, including but not limited to Annual Reports, documents incorporated by reference into the Annual Reports, Audited Financial Statements, notices of Notice Events and Voluntary Reports filed pursuant to this Disclosure Certificate, the City or MLGW shall indicate the full name of the Series 2020 Gas System Bonds and, to the best of its knowledge, the 9-digit CUSIP numbers for the Series 2020 Gas System Bonds as to which the provided information relates. The City or MLGW, by providing the CUSIP numbers is not representing or certifying as to the accuracy thereof.

SECTION 7. Dissemination Agent. The City may, from time to time, appoint or engage a dissemination agent to assist it in carrying out its obligations under this Disclosure Certificate, and may discharge any such dissemination agent, with or without appointing a successor dissemination agent.

SECTION 8. Voluntary Reports.

(a) The City or MLGW may file any information with the Repositories from time to time, pursuant to a Certification of the Disclosure Representative accompanying such information (a "Voluntary Report").

(b) Nothing in this Disclosure Certificate shall be deemed to prevent the City or MLGW from disseminating any other information using the means of dissemination set forth in this Disclosure Certificate or including any other information in any Annual Report, Annual Financial Statement, Voluntary Report or Notice Event notice, in addition to that required by this Disclosure Certificate. If the City or MLGW chooses to include any information in any Annual Report, Annual Financial Statement, Voluntary Report or Notice Event notice in addition to that which is specifically required by this Disclosure Certificate, the City or MLGW shall have no obligation under this Disclosure Certificate to update such information or include it in any future Annual Report, Annual Financial Statement, Voluntary Report or Notice Event notice.

SECTION 9. Termination of Reporting Obligation.

(a) The obligations of the City, MLGW and the Disclosure Dissemination Agent under this Disclosure Certificate shall terminate with respect to the Series 2020 Gas System Bonds (i) upon the legal defeasance, prior redemption or payment in full of all of the Series 2020 Gas System Bonds, (ii) when the City or MLGW is no longer an Obligated Person with respect to the Series 2020 Gas System Bonds, or (iii) upon the termination of the continuing disclosure requirements of the Rule by legislative, judicial or administrative action.

(b) If in the opinion of nationally recognized bond counsel satisfactory to the City or MLGW, the Rule shall be amended, modified or changed so that all or any part of the information currently required to be provided thereunder shall no longer be required to be provided thereunder, then such information shall no longer be required to be provided hereunder and, if and to the extent in the opinion of nationally recognized bond counsel satisfactory to the City, MLGW the Rule or any provisions thereof shall be declared by a federal court of competent and final, non-appealable jurisdiction to be, in whole or in part, invalid, unconstitutional, null and void or otherwise inapplicable to the Series 2020 Gas System Bonds, then the information required to be provided hereunder, insofar as it was required to be provided by a provision of the Rule so declared, shall no longer be required to be provided hereunder.

SECTION 10. Default; Remedies. In the event of a failure of the City, MLGW or the Disclosure Dissemination Agent to comply with any provision of this Disclosure Certificate, the Holders' rights to enforce the provisions of this Agreement shall be limited solely to a right, by action in mandamus or for specific performance, to compel performance of the parties' obligation under this Disclosure Certificate, it being the City's and MLGW's position that money damages would be inadequate recompense and difficult to ascertain. A default under this Disclosure Certificate shall not constitute a default on the Series 2020 Gas System Bonds or be deemed to be a default under the Bond Resolution or under any other document relating to the Series 2020 Gas System Bonds and all rights and remedies shall be limited to those expressly stated herein.

SECTION 11. Amendment; Waiver.

(a) Notwithstanding any other provision of this Disclosure Certificate, the City or MLGW may amend this Disclosure Certificate and any provision of this Disclosure Certificate may be waived, if:

(i) Such amendment or waiver is made in connection with a change in circumstances that arises from a change in legal requirements, change in law or change in the identity, nature or status of the Obligated Person with respect to the Series 2020 Gas System Bonds or the type of business conducted by the Obligated Person;

(ii) Such amendment or waiver is supported by an opinion of counsel expert in federal securities laws to the effect that such amendment or waiver would have complied with the requirements of the Rule if such amendment or waiver had been effective on the date hereof, after taking into account any amendments or interpretations of the Rule, as well as any change in circumstances; and

(iii) Such amendment or waiver does not materially impair the interests of the beneficial owners of the Series 2020 Gas System Bonds, as determined either by an unqualified opinion of nationally recognized bond counsel filed with the City, MLGW or by the approving vote of the Holders of the Series 2020 Gas System Bonds pursuant to the terms of the Electric System Resolution at the time of the amendment.

(b) If any provision of Section 4 hereof is amended or waived, the first Annual Report containing any amended, or omitting any waived, operating data or financial information shall

explain, in narrative form, the reasons for the amendment or waiver and the impact of the change in the type of operating data or financial information being provided.

(c) If the provisions of this Disclosure Certificate specifying the accounting principles to be followed in preparing the Audited Financial Statements are amended or waived, the Annual Report for the year in which the change is made shall present a comparison between the financial statements or information prepared on the basis of the new accounting principles and those prepared on the basis of the former accounting principles. The comparison should include a qualitative discussion of the differences in the accounting principles and the impact of the change in the accounting principles on the presentation of the financial information, in order to provide information to investors to enable them to evaluate the ability of the Obligated Person to meet its obligations. To the extent reasonably feasible, the comparison shall also be quantitative. The City or MLGW shall file a notice of the change in the accounting principles with the Repository on or before the effective date of any such amendment or waiver.

(d) Notwithstanding the preceding paragraphs, the City or MLGW shall have the right to adopt amendments to this Disclosure Certificate necessary to comply with modifications to and interpretations of the provisions of the Rule as announced by the SEC from time to time by giving not less than twenty (20) days written notice of its intent to do so, together with a copy of the proposed amendment, to the Disclosure Dissemination Agent.

SECTION 12. Beneficiaries. This Disclosure Certificate shall inure solely to the benefit of the City, MLGW, the Dissemination Agent, if any, the Underwriter and the Holders from time to time of the Series 2020 Gas System Bonds and shall create no rights in any other person or entity.

SECTION 13. Obligated Persons. Any change in Obligated Persons shall be reported by the City or MLGW in connection with the Annual Report. If any person other than the City becomes an Obligated Person relating to the Series 2020 Gas System Bonds, the City shall use its reasonable best efforts to require such Obligated Person to comply with all provisions of the Rule applicable to such Obligated Person; provided, however, the City takes no responsibility for the accuracy or completeness of any financial information or operating data or other filings by any future Obligated Person.

SECTION 14. No Personal Liability. None of the members or employees of the City or MLGW shall be charged personally with any liability or held liable under any term or provision of this Disclosure Certificate because of its execution or attempted execution or because of any breach or attempted or alleged breach thereof.

SECTION 15. Identifying Information. In accordance with the Rule, all disclosure filings submitted to the Repository pursuant to this Disclosure Certificate must be accompanied by identifying information as prescribed by the Repository.

SECTION 16. Severability. In case any part of this Disclosure Certificate is held to be illegal or invalid, such illegality or invalidity shall not affect the remainder or any other section of this Disclosure Certificate, nor shall the illegality or invalidity of any application of this Disclosure

Certificate affect any legal and valid application. This Disclosure Certificate shall be construed or enforced as if such illegal or invalid portion were not contained herein.

SECTION 17. Counterparts. This Disclosure Certificate may be executed in several counterparts, each of which shall be an original and all of which shall constitute but one and the same instrument.

SECTION 18. Governing Law. This Disclosure Certificate shall be governed by and construed in accordance with the internal laws of the State (without regard to conflict of law principles thereof), provided that, to the extent this Disclosure Certificate addresses matters of federal securities laws, including the Rule, this Disclosure Certificate shall be construed in accordance with such federal securities laws and official interpretations thereof.

[Signatures on Following Pages]

[Signature Page for the Gas Division Continuing Disclosure Certificate]

IN WITNESS WHEREOF, the City has caused this Disclosure Certificate to be executed on its behalf by its authorized representative on the date first above written.

CITY OF MEMPHIS, TENNESSEE

By: _____
Jim Strickland
Mayor

[Signature Page for the Gas Division Continuing Disclosure Certificate]

IN WITNESS WHEREOF, MLGW has caused this Disclosure Certificate to be executed on its behalf by its authorized representative on the date first above written.

**MEMPHIS LIGHT, GAS AND WATER
DIVISION**, on behalf of the City of Memphis,
Tennessee

By: _____
Jarl T. Young
President and Chief Executive Officer

EXHIBIT A

NOTICE OF FAILURE TO FILE ANNUAL REPORT

Name of Issuer: City of Memphis, Tennessee

Name of Bond Issue: \$_____ City of Memphis, Tennessee Gas System
Revenue Bonds, Series 2020

Date of Issuance: [_____, 2020]

NOTICE IS HEREBY GIVEN that the City of Memphis, Tennessee (the "City") has not provided the Annual Report with respect to the above-named bonds as required by the Continuing Disclosure Certificate dated [_____, 2020]. The City expects that the Annual Report will be filed by _____.

Dated: _____

**MEMPHIS LIGHT, GAS AND WATER
DIVISION**, on behalf of the City of Memphis,
Tennessee

By: _____
Jarl T. Young
President and Chief Executive Officer

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APPENDIX I-4

**FORM OF THE CONTINUING DISCLOSURE CERTIFICATE RELATING TO THE
SERIES 2020 WATER SYSTEM BONDS**

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CONTINUING DISCLOSURE CERTIFICATE

\$68,000,000

**CITY OF MEMPHIS, TENNESSEE
WATER SYSTEM REVENUE BONDS
SERIES 2020**

This **CONTINUING DISCLOSURE CERTIFICATE** dated September ___, 2020 (this "Disclosure Certificate") is executed and delivered by the **CITY OF MEMPHIS, TENNESSEE** (the "City") and the **MEMPHIS LIGHT, GAS AND WATER DIVISION** ("MLGW") in connection with the issuance of the City's Water System Revenue Bonds, Series 2020 (the "Series 2020 Water System Bonds"). The Series 2020 Water System Bonds are being issued pursuant to the Water System Revenue Obligations Master Resolution adopted by the Board of Light, Gas and Water Commissioners (the "Board") of MLGW on December 5, 2013, and by the City Council (the "City Council") of the City on December 17, 2013, and as previously amended and supplemented (the "Master Water System Resolution") and particularly as supplemented in respect to the Series 2020 Water System Bonds by that certain Fourth Supplemental Resolution (the "Fourth Supplemental Resolution") adopted by the Board of MLGW on June 30, 2020, and by the City Council on July 21, 2020. The Master Water System Resolution, as particularly supplemented by the Fourth Supplemental Resolution, is hereinafter referred to as (the "Water System Resolution"). The City and MLGW covenant and agree as follows:

RECITALS:

A. Contemporaneously with the execution and delivery of this Disclosure Certificate, the City, on behalf of MLGW will issue its Series 2020 Water System Bonds, pursuant to the Water System Resolution.

B. The City authorized the preparation and distribution of the Preliminary Official Statement dated August 21, 2020 with respect to the Series 2020 Water System Bonds (the "Preliminary Official Statement").

C. The City authorized the preparation, distribution and use of the Official Statement dated September 4, 2020 with respect to the Series 2020 Water System Bonds (the "Official Statement") by the underwriter named on the cover of the Official Statement (the "Underwriter").

NOW THEREFORE, in consideration of the purchase of the Series 2020 Water System Bonds by the Underwriter and the mutual promises and agreements made herein, the receipt and sufficiency of which consideration is hereby mutually acknowledged, the City and MLGW do hereby certify and agree as follows:

SECTION 1. Incorporation of Recitals and Purpose. The above recitals are true and correct and are incorporated into and made a part hereof. This Disclosure Certificate is being executed and delivered by the City for the benefit of the Beneficial Owners of the Series 2020 Water System Bonds and in order to assist the Underwriters in complying with the Rule.

SECTION 2. Definitions. Capitalized terms used, but not otherwise defined, in this Disclosure Certificate shall have the meanings assigned thereto in the Water System Resolution or the Official Statement, as applicable. In addition to the terms defined elsewhere herein, the following capitalized terms shall have the following meanings for the purposes of this Disclosure Certificate:

“Annual Filing Date” means the date, set forth in Section 3(a) of this Disclosure Certificate, by which the Annual Report is to be filed with the Repository.

“Annual Report” shall mean any annual report provided by MLGW on behalf of the City pursuant to, and as described in Section 3 and Section 4 of this Disclosure Certificate.

“Audited Financial Statements” shall mean the financial statements of MLGW for the prior Fiscal Year ended December 31, 2019, certified by an independent auditor and prepared in accordance with Generally Accepted Accounting Principles (GAAP), as in effect from time to time, audited by an independent certified public accountant in accordance with auditing standards applicable to financial audits contained in Government Auditing Standards issued by the Comptroller General of the United States.

“Beneficial Owner” shall mean any beneficial owner of the Series 2020 Water System Bonds. Beneficial ownership is to be determined consistent with the definition thereof contained in Rule 13d-3 of the SEC, or, in the event such provisions do not adequately address the situation at hand (in the opinion of nationally recognized bond counsel), beneficial ownership is to be determined based upon ownership for federal income tax purposes.

“Business Day” means a day other than a Saturday or a Sunday or a day on which banks in the State of Tennessee are authorized or required by law to close.

“Disclosure Representative” means the Chief Financial Officer of the City or MLGW or their designee, or such other person as the City shall designate in writing from time to time as the person responsible for providing the information.

“Dissemination Agent” shall mean any dissemination agent appointed or engaged by the City to assist in carrying out its obligations under this Disclosure Certificate pursuant to Section 7 hereof.

“EMMA” means the MSRB's Electronic Municipal Market Access system, as described in 1934 Act Release No. 59062 and maintained by the MSRB for purposes of the Rule. Further information regarding EMMA can be retrieved by visiting the website <http://emma.msrb.org/>.

“Financial Obligation” means a: (i) debt obligation; (ii) derivative instrument entered into in connection with or pledged as security or a source of payment for, an existing or planned debt obligation; or (iii) guarantee of (i) or (ii). The term "Financial Obligation" does not include municipal securities as to which a final official statement has been provided to the MSRB consistent with the Rule.

“Fiscal Year” shall mean any period of twelve consecutive months adopted by MLGW as its fiscal year for financial reporting purposes and shall initially mean the period beginning January 1 of each calendar year and ending December 31 of the same calendar year.

“GAAP” means generally accepted accounting principles promulgated by the Government and Financial Accounting Standards Boards, as in effect from time to time in the United States.

“Holder” means any person (i) having the power, directly or indirectly, to vote or consent with respect to, or to dispose of ownership of, any Series 2020 Water System Bond (including persons holding Series 2020 Water System Bonds through nominees, depositories or other intermediaries) or (b) treated as the owner of any Series 2020 Water System Bond for federal income tax purposes.

“Notice Event” means an event listed in Section 5(a) of this Disclosure Certificate.

“Notice Event Filing” shall have the meaning specified in Section 5(c) of this Disclosure Certificate.

“Obligated Person” means the City, MLGW and any person who is either generally or through an enterprise, fund or account of such person committed by contract or other arrangement to support payment of all or part of the obligations on the Series 2020 Water System Bonds (other than providers of municipal bond insurance, letters of credit or other liquidity facilities). The City and MLGW confirms that currently it is the only Obligated Person with respect to the Series 2020 Water System Bonds.

“Official Statement” shall mean the official statement, dated September 4, 2020 relating to the Series 2020 Water System Bonds.

“Repository” means each entity authorized and approved by the SEC from time to time to act as a repository for purposes of the Rule, as reflected on the website of the SEC at www.sec.gov. Currently, the sole Repository is the MSRB, which currently accepts continuing disclosure submissions through EMMA. MSRB means the Municipal Securities Rulemaking Board established pursuant to Section 15B(b)(1) of the Securities Exchange Act of 1934. Currently, MSRB's address, phone number and fax number for purposes of the Rule is:

MSRB
c/o CDINet
1900 Duke Street
Suite 600
Alexandria, VA 22314
Phone: (703) 797-6000
Fax: (703) 683-1930

“Rule” shall mean Rule 15c2-12 of the SEC, promulgated pursuant to the Securities Exchange Act of 1934, as the same may be amended from time to time.

“SEC” shall mean the United States Securities and Exchange Commission.

“State” shall mean the State of Tennessee.

“Underwriters” shall mean any of the original underwriters of the Series 2020 Water System Bonds who are required to comply with the Rule in connection with the offering of the Series 2020 Water System Bonds.

“Voluntary Report” means the information provided to the Disclosure Dissemination Agent by the City pursuant to Section 8 of this Disclosure Certificate.

SECTION 3. Provision of Annual Report.

(a) The City or MLGW shall provide, annually, an electronic copy of the Annual Report and a Certification to the Disclosure Dissemination Agent on or before the Annual Filing Date. Promptly upon receipt of an electronic copy of the Annual Report and the Certification, the Disclosure Dissemination Agent shall provide the Annual Report to each Repository not later than June 30 following the end of each Fiscal Year, commencing with the Fiscal Year ending December 31, 2020. If June 30 falls on a day that is not a Business Day, the Annual Report will be due on the first Business Day thereafter. Such date and each anniversary thereof is the Annual Filing Date. The Annual Report may be submitted as a single document or as separate documents and may cross-reference other information available to the public on the MSRB’s website, filed with the SEC or otherwise provided under Section 4 of this Disclosure Certificate.

(b) If the City, MLGW or the Dissemination Agent is unable to provide the Repository the Annual Report by the date required in subsection (a) above, the City, MLGW or the Dissemination Agent shall send, in a timely manner, a notice to the Repository in electronic format as prescribed by the Repository, in substantially the form attached at **EXHIBIT A** hereto.

(c) The City, MLGW or the Dissemination Agent shall:

(i) Determine each year prior to the date for providing the Annual Report the name and address of the Repository to which the Annual Report is to be filed; and

(ii) File a report with the City certifying that the Annual Report has been provided pursuant to this Disclosure Certificate, stating the date on which it was provided to the Repository.

SECTION 4. Content of Annual Reports. The Annual Report shall contain or incorporate by reference the following:

(a) Each Annual Report shall contain Annual Financial Information with respect to MLGW, consisting of or cross-referencing the following:

(i) the Audited Financial Statements; provided, however, that if the Audited Financial Statements are not available by the time the Annual Report is required to be filed,

the Annual Report shall contain unaudited financial statements of MLGW in a format similar to the Audited Financial Statements and the Audited Financial Statements shall be filed in the same manner as the Annual Report when they become available;

(ii) If the accounting principles used by MLGW have changed during the previous Fiscal Year and such changes are material to MLGW, a narrative description of the impact of the change, as required by Section 8 of this Disclosure Certificate;

(iii) A statement indicating that the Fiscal Year has not changed or, if the Fiscal Year has changed, a statement defining the new Fiscal Year;

(iv) An update of the following operating data and financial information contained in **APPENDIX C – “OPERATING INFORMATION REGARDING THE WATER DIVISION”** in the Official Statement:

(A) Historical usage information relating to the Water System contained in the table entitled "Historical and Forecasted Water System Use";

(B) The table entitled "Ten Largest Water Customers";

(C) The tables entitled "Average Number of Water Customers" and "Water Sales By Customer Class Hundred Cubic Feet of Water Sold";

(D) The table entitled "Historical Pumpage Requirements";

(E) The table entitled "Historical Debt Service Coverage"; and

(F) The tables entitled "Water Division Statement of Revenues, Expenses and Changes in Net Position" and "Water Division Selected Statement of Net Position Data".

(b) Any or all of the items listed above may be included by specific reference to other documents, including official statements of debt issues with respect to which the City or MLGW is an "obligated person" (as defined by the Rule), which have been previously filed with the MSRB or the SEC. If the document incorporated by reference is a final official statement, it must be available from the MSRB. The City or MLGW will clearly identify each such document so incorporated by reference.

SECTION 5. Reporting of Notice Events.

(a) In accordance with the Rule, the City, MLGW or the Dissemination Agent shall file with the Repository, in the appropriate format required by the Repository and in a timely manner not in excess of ten (10) Business Days after the occurrence of the following Notice Events, notices of

the occurrence of any of the following Notice Events with respect to the Series 2020 Water System Bonds:

1. Principal and interest payment delinquencies;
2. Non-Payment related defaults, if material;
3. Unscheduled draws on debt service reserves reflecting financial difficulties;
4. Unscheduled draws on credit enhancements reflecting financial difficulties;
5. Substitution of credit or liquidity providers, or their failure to perform;
6. Adverse tax opinions, the issuance by the Internal Revenue Service of proposed or final determinations of taxability, Notices of Proposed Issue (IRS Form 5701-TEB) or other material notices or determinations with respect to the tax status of the Series 2020 Water System Bonds, or other material events affecting the tax status of the Series 2020 Water System Bonds;
7. Modifications to rights of securities Holders;
8. Bond calls, if material and tender offers;
9. Defeasances;
10. Release, substitution, or sale of property securing repayment of the Series 2020 Water System Bonds;
11. Ratings changes;
12. Bankruptcy, insolvency, receivership or similar event of the Obligated Person (of the type described in the Note to Paragraph (b)(5)(i)(C)(12) of the Rule);
13. The consummation of a merger, consolidation, or acquisition involving the Obligated Person or the sale of all or substantially all of the assets of the Obligated Person, other than in the ordinary course of business, the entry into a definitive agreement to undertake such an action or the termination of a definitive agreement relating to any such actions, other than pursuant to its terms, if material; and
14. Appointment of a successor or additional trustee or a change in the name of a trustee;
15. Incurrence of a Financial Obligation or agreement to covenants, events of default, remedies, priority rights, or other similar terms of a Financial Obligation;

16. Default, event of acceleration, termination event, modification of terms, or other similar events under the terms of a Financial Obligation;

17. Failure to provide annual financial information as required, together with a completed notice substantially in the form set forth in **EXHIBIT A** to this Disclosure Certificate.

SECTION 6. CUSIP Numbers. Whenever providing information to the Repositories, including but not limited to Annual Reports, documents incorporated by reference into the Annual Reports, Audited Financial Statements, notices of Notice Events and Voluntary Reports filed pursuant to this Disclosure Certificate, the City or MLGW shall indicate the full name of the Series 2020 Water System Bonds and, to the best of its knowledge, the 9-digit CUSIP numbers for the Series 2020 Water System Bonds as to which the provided information relates. The City or MLGW, by providing the CUSIP numbers is not representing or certifying as to the accuracy thereof.

SECTION 7. Dissemination Agent. The City may, from time to time, appoint or engage a dissemination agent to assist it in carrying out its obligations under this Disclosure Certificate, and may discharge any such dissemination agent, with or without appointing a successor dissemination agent.

SECTION 8. Voluntary Reports.

(a) The City or MLGW may file any information with the Repositories from time to time, pursuant to a Certification of the Disclosure Representative accompanying such information (a "Voluntary Report").

(b) Nothing in this Disclosure Certificate shall be deemed to prevent the City or MLGW from disseminating any other information using the means of dissemination set forth in this Disclosure Certificate or including any other information in any Annual Report, Annual Financial Statement, Voluntary Report or Notice Event notice, in addition to that required by this Disclosure Certificate. If the City or MLGW chooses to include any information in any Annual Report, Annual Financial Statement, Voluntary Report or Notice Event notice in addition to that which is specifically required by this Disclosure Certificate, the City or MLGW shall have no obligation under this Disclosure Certificate to update such information or include it in any future Annual Report, Annual Financial Statement, Voluntary Report or Notice Event notice.

SECTION 9. Termination of Reporting Obligation.

(a) The obligations of the City, MLGW and the Disclosure Dissemination Agent under this Disclosure Certificate shall terminate with respect to the Series 2020 Water System Bonds (i) upon the legal defeasance, prior redemption or payment in full of all of the Series 2020 Water System Bonds, (ii) when the City or MLGW is no longer an Obligated Person with respect to the Series 2020 Water System Bonds, or (iii) upon the termination of the continuing disclosure requirements of the Rule by legislative, judicial or administrative action.

(b) If in the opinion of nationally recognized bond counsel satisfactory to the City or MLGW, the Rule shall be amended, modified or changed so that all or any part of the information currently required to be provided thereunder shall no longer be required to be provided thereunder, then such information shall no longer be required to be provided hereunder and, if and to the extent in the opinion of nationally recognized bond counsel satisfactory to the City, MLGW the Rule or any provisions thereof shall be declared by a federal court of competent and final, non-appealable jurisdiction to be, in whole or in part, invalid, unconstitutional, null and void or otherwise inapplicable to the Series 2020 Water System Bonds, then the information required to be provided hereunder, insofar as it was required to be provided by a provision of the Rule so declared, shall no longer be required to be provided hereunder.

SECTION 10. Default; Remedies. In the event of a failure of the City, MLGW or the Disclosure Dissemination Agent to comply with any provision of this Disclosure Certificate, the Holders' rights to enforce the provisions of this Agreement shall be limited solely to a right, by action in mandamus or for specific performance, to compel performance of the parties' obligation under this Disclosure Certificate, it being the City's and MLGW's position that money damages would be inadequate recompense and difficult to ascertain. A default under this Disclosure Certificate shall not constitute a default on the Series 2020 Water System Bonds or be deemed to be a default under the Bond Resolution or under any other document relating to the Series 2020 Water System Bonds and all rights and remedies shall be limited to those expressly stated herein.

SECTION 11. Amendment; Waiver.

(a) Notwithstanding any other provision of this Disclosure Certificate, the City or MLGW may amend this Disclosure Certificate and any provision of this Disclosure Certificate may be waived, if:

(i) Such amendment or waiver is made in connection with a change in circumstances that arises from a change in legal requirements, change in law or change in the identity, nature or status of the Obligated Person with respect to the Series 2020 Water System Bonds or the type of business conducted by the Obligated Person;

(ii) Such amendment or waiver is supported by an opinion of counsel expert in federal securities laws to the effect that such amendment or waiver would have complied with the requirements of the Rule if such amendment or waiver had been effective on the date hereof, after taking into account any amendments or interpretations of the Rule, as well as any change in circumstances; and

(iii) Such amendment or waiver does not materially impair the interests of the beneficial owners of the Series 2020 Water System Bonds, as determined either by an unqualified opinion of nationally recognized bond counsel filed with the City, MLGW or by the approving vote of the Holders of the Series 2020 Water System Bonds pursuant to the terms of the Electric System Resolution at the time of the amendment.

(b) If any provision of Section 4 hereof is amended or waived, the first Annual Report containing any amended, or omitting any waived, operating data or financial information shall

explain, in narrative form, the reasons for the amendment or waiver and the impact of the change in the type of operating data or financial information being provided.

(c) If the provisions of this Disclosure Certificate specifying the accounting principles to be followed in preparing the Audited Financial Statements are amended or waived, the Annual Report for the year in which the change is made shall present a comparison between the financial statements or information prepared on the basis of the new accounting principles and those prepared on the basis of the former accounting principles. The comparison should include a qualitative discussion of the differences in the accounting principles and the impact of the change in the accounting principles on the presentation of the financial information, in order to provide information to investors to enable them to evaluate the ability of the Obligated Person to meet its obligations. To the extent reasonably feasible, the comparison shall also be quantitative. The City or MLGW shall file a notice of the change in the accounting principles with the Repository on or before the effective date of any such amendment or waiver.

(d) Notwithstanding the preceding paragraphs, the City or MLGW shall have the right to adopt amendments to this Disclosure Certificate necessary to comply with modifications to and interpretations of the provisions of the Rule as announced by the SEC from time to time by giving not less than twenty (20) days written notice of its intent to do so, together with a copy of the proposed amendment, to the Disclosure Dissemination Agent.

SECTION 12. Beneficiaries. This Disclosure Certificate shall inure solely to the benefit of the City, MLGW, the Dissemination Agent, if any, the Underwriter and the Holders from time to time of the Series 2020 Water System Bonds and shall create no rights in any other person or entity.

SECTION 13. Obligated Persons. Any change in Obligated Persons shall be reported by the City or MLGW in connection with the Annual Report. If any person other than the City becomes an Obligated Person relating to the Series 2020 Water System Bonds, the City shall use its reasonable best efforts to require such Obligated Person to comply with all provisions of the Rule applicable to such Obligated Person; provided, however, the City takes no responsibility for the accuracy or completeness of any financial information or operating data or other filings by any future Obligated Person.

SECTION 14. No Personal Liability. None of the members or employees of the City or MLGW shall be charged personally with any liability or held liable under any term or provision of this Disclosure Certificate because of its execution or attempted execution or because of any breach or attempted or alleged breach thereof.

SECTION 15. Identifying Information. In accordance with the Rule, all disclosure filings submitted to the Repository pursuant to this Disclosure Certificate must be accompanied by identifying information as prescribed by the Repository.

SECTION 16. Severability. In case any part of this Disclosure Certificate is held to be illegal or invalid, such illegality or invalidity shall not affect the remainder or any other section of this Disclosure Certificate, nor shall the illegality or invalidity of any application of this Disclosure

Certificate affect any legal and valid application. This Disclosure Certificate shall be construed or enforced as if such illegal or invalid portion were not contained herein.

SECTION 17. Counterparts. This Disclosure Certificate may be executed in several counterparts, each of which shall be an original and all of which shall constitute but one and the same instrument.

SECTION 18. Governing Law. This Disclosure Certificate shall be governed by and construed in accordance with the internal laws of the State (without regard to conflict of law principles thereof), provided that, to the extent this Disclosure Certificate addresses matters of federal securities laws, including the Rule, this Disclosure Certificate shall be construed in accordance with such federal securities laws and official interpretations thereof.

[Signatures on Following Pages]

[Signature Page for the Water Division Continuing Disclosure Certificate]

IN WITNESS WHEREOF, the City has caused this Disclosure Certificate to be executed on its behalf by its authorized representative on the date first above written.

CITY OF MEMPHIS, TENNESSEE

By: _____
Jim Strickland
Mayor

[Signature Page for the Water Division Continuing Disclosure Certificate]

IN WITNESS WHEREOF, MLGW has caused this Disclosure Certificate to be executed on its behalf by its authorized representative on the date first above written.

**MEMPHIS LIGHT, GAS AND WATER
DIVISION**, on behalf of the City of Memphis,
Tennessee

By: _____
Jarl T. Young
President and Chief Executive Officer

EXHIBIT A

NOTICE OF FAILURE TO FILE ANNUAL REPORT

Name of Issuer: City of Memphis, Tennessee

Name of Bond Issue: \$_____ City of Memphis, Tennessee Water System
Revenue Bonds, Series 2020

Date of Issuance: [_____, 2020]

NOTICE IS HEREBY GIVEN that the City of Memphis, Tennessee (the "City") has not provided the Annual Report with respect to the above-named bonds as required by the Continuing Disclosure Certificate dated [_____, 2020]. The City expects that the Annual Report will be filed by _____.

Dated: _____

**MEMPHIS LIGHT, GAS AND WATER
DIVISION**, on behalf of the City of Memphis,
Tennessee

By: _____
Jarl T. Young
President and Chief Executive Officer

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APPENDIX J-1

**PROPOSED FORM OF CO-BOND COUNSEL OPINIONS FOR THE
SERIES 2020A ELECTRIC SYSTEM BONDS**

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September __, 2020

City Council
Memphis, Tennessee 38103
Board of Light, Gas & Water
Commissioners of the City of Memphis
Memphis, Tennessee 38103

\$148,000,000
City of Memphis, Tennessee
Electric System Revenue Bonds
Series 2020

Ladies and Gentlemen:

We have acted as co-bond counsel in connection with the issuance by the City of Memphis, Tennessee (the “City”), a municipal corporation of the State of Tennessee (the “State”), of the City of Memphis, Tennessee, Electric System Revenue Bonds, Series 2020, in the original aggregate principal amount of \$148,000,000 (the “Series 2020 Bonds”). In such capacity, we have examined: (a) the Constitution and the statutes of the State, including specifically Title 7, Chapter 34, Tennessee Code Annotated, as amended (the “Act”); (b) the Charter of the City; (c) a certified copy of that certain Electric System Revenue Obligations Master Resolution adopted by the Council of the City (the “Council”) on July 2, 2002 (as supplemented and amended from time to time heretofore in accordance with its terms, the “Master Resolution”); (d) a certified copy of that certain Eighth Supplemental Resolution Relating to Electric System Revenue Bonds, Series 2020, adopted by the Council on _____, 2020 (the “Eighth Supplemental Resolution”); (e) the Bond Series Certificate of the City and the Division relating to the Series 2020 Bonds (the “Bond Series Certificate”); and (f) such other laws, documents and proofs as we have deemed necessary as a basis for this opinion. The Master Resolution as supplemented and amended from time to time, including as supplemented by the Eighth Supplemental Resolution and the Bond Series Certificate, being referred to herein as the “Resolution.” Capitalized terms used, but not defined, herein shall have the meanings assigned thereto in the Resolution.

The Series 2020 Bonds are being issued to provide moneys to finance certain Costs of acquisition, expansion and/or improvements to the electric system and facilities (the “System”) of the City operated by the Memphis Light, Gas and Water Division of the City (the “Division”), and to pay the costs of issuance and sale of the Series 2020 Bonds. The Series 2020 Bonds constitute Senior Lien Revenue Obligations under the Resolution. The City heretofore has issued certain other Revenue Obligations under the Resolution and the City reserves the right to issue Additional Obligations under the Resolution on the terms and conditions and for the purposes stated therein.

For the purposes of this opinion letter, we have not made any independent investigation into any financial matters of the City, the Division or the System, and we have not prepared or investigated any financial information that has been or may be furnished to any purchaser of the Series 2020 Bonds. Accordingly, we express no opinion whatsoever herein as to the accuracy or completeness of any such financial information furnished in connection with the issuance and delivery of the Series 2020 Bonds.

In rendering our opinions set forth below, we have (a) relied as to questions of fact material to our opinion, without undertaking to verify the same by independent investigation, upon certified proceedings, certifications and representations of public officials, including representations of officials and representatives of the City and the Division, including, without limitation, representations as to the use and investment of the proceeds of the Series 2020 Bonds and the priority of the lien on the Pledged Revenues of the System created under the Resolution, and (b) assumed continuous compliance by each of the City and the Division of its covenants contained in the Resolution and documents related thereto, including, without limitation, covenants as to the use and investment of the proceeds of the Series 2020 Bonds.

Each of the City and the Division has covenanted in the Resolution and in certain certificates dated the date hereof that it will not use any proceeds of the Series 2020 Bonds to acquire higher yielding investments or to replace funds which were used directly or indirectly to acquire higher yielding investments except as may be otherwise permitted by Section 148 of the Internal Revenue Code of 1986, as amended (the "Code," and all applicable regulations promulgated under the Code, including any proposed or temporary regulations, are collectively referred to herein as the "Regulations"), that it will comply with the arbitrage rebate requirements of Section 148(f) of the Code and the Regulations, and that it will comply with all other applicable provisions of the Code and the Regulations with respect to the Series 2020 Bonds.

Based on the foregoing, and subject to the qualifications contained herein, we are of the opinion that, on the date hereof:

1. The City has the right and power under the Act to adopt the Resolution, and the Resolution has been duly and lawfully adopted by the Council of the City, is in full force and effect, is valid and binding upon the City and is enforceable in accordance with its terms, and no other authorization for the Resolution is required. The Resolution creates the valid pledge which it purports to create for the benefit of the holders of the Series 2020 Bonds of the Pledged Revenues, subject only to the payment of the reasonable and necessary costs of operating, maintaining, repairing, and insuring the System. We express no opinion as to the sufficiency of such Pledged Revenues for the payment of principal of or interest on the Series 2020 Bonds, subject only to the provisions of the Eighth Supplemental Resolution permitting the application thereof for the purposes and on the terms and conditions set forth in the Eighth Supplemental Resolution.

2. The City is duly authorized and entitled to issue the Series 2020 Bonds and the Series 2020 Bonds have been duly and validly authorized and issued by the City in accordance with the Constitution and laws of the State, the Act and the Resolution, and constitute the valid and binding obligations of the City as provided in the Resolution, enforceable in accordance with their terms and

the terms of the Resolution and entitled to the benefits of the Act and the Resolution. The Series 2020 Bonds are special obligations of the City payable from and secured exclusively by a pledge of the Pledged Revenues, and neither the faith and credit nor the taxing power of the City is pledged to the payment of the principal of and premium, if any, or interest on the Series 2020 Bonds.

3. Based on existing statutes, regulations, rulings and court decisions and assuming compliance by the City and the Division with the above-described covenants, interest on the Series 2020 Bonds is excludable from gross income for federal income tax purposes and is excludable from federal alternative minimum taxable income as defined in Section 55(b)(2) of the Code. The opinion set forth in the immediately preceding sentence assumes and is subject to the accuracy of the representations and certifications of the City and the Division and continuous compliance by the City and the Division with the covenants contained in the official proceedings related to the Series 2020 Bonds, including covenants to the effect that the City and the Division will comply with all requirements of the Code and the Regulations promulgated thereunder that must be satisfied subsequent to the issuance of the Series 2020 Bonds in order that interest thereon be, and continue to be, excludable from gross income of the recipients thereof for federal income tax purposes. Failure to comply with certain of such requirements may cause interest on the Series 2020 Bonds to be includable in gross income for federal income tax purposes retroactive to the date of the issuance of the Series 2020 Bonds.

4. Under existing law, the Series 2020 Bonds and the income therefrom are exempt from all present State, county and municipal taxes in the State except (a) inheritance, transfer and estate taxes, (b) State excise taxes on all or a portion of the interest on the Series 2020 Bonds during the period the Series 2020 Bonds are held or beneficially owned by any organization or entity, other than a sole proprietorship or general partnership, doing business in the State, and (c) State franchise taxes by reason of the inclusion of the book value of the Series 2020 Bonds in the State franchise tax base of any organization or entity, other than a sole proprietorship or general partnership, doing business in the State.

We express no opinion regarding other federal or state tax consequences arising with respect to the Series 2020 Bonds or any other matter with respect to the Series 2020 Bonds except as set forth herein. Ownership of the Series 2020 Bonds may result in other collateral federal or state income tax consequences to certain taxpayers depending on the particular taxpayer's tax status and other items of income or deduction. We express no opinion regarding any federal or state collateral tax consequences related to the Series 2020 Bonds.

The rights of the owners of the Series 2020 Bonds and the enforceability of the Series 2020 Bonds and the Resolution may be subject to bankruptcy, insolvency, reorganization, moratorium and other similar laws affecting the enforcement of creditors' rights generally and principles of equity applicable to the availability of specific performance and other equitable relief.

In rendering this opinion letter, we have not considered the laws of any jurisdiction other than the laws of the State and the federal income tax laws of the United States of America, and we are not rendering any opinion, by implication or otherwise, regarding the laws of any jurisdiction other than the laws of the State and such federal income tax laws.

This opinion letter is an expression of professional judgment regarding the matters expressly addressed herein. It is neither a guarantee of result nor an insurance policy with respect to the transaction or the future actions or performance of any party or entity. Our services have not included any financial or other non-legal advice. We express no opinion other than as herein expressly stated in this letter, and no expansion of our opinion may be made by implication or otherwise. The opinions herein are given as of the date hereof and are based upon statutes, regulations, rulings and court decisions in effect on the date hereof and not as of any future date. We assume no responsibility to update or supplement this opinion to reflect any facts or circumstances that may hereafter come to our attention or any changes in law that may occur hereafter.

Sincerely,

APPENDIX J-2

**PROPOSED FORM OF CO-BOND COUNSEL OPINIONS FOR THE
SERIES 2020B ELECTRIC SYSTEM REFUNDING BONDS**

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September __, 2020

City Council
Memphis, Tennessee 38103
Board of Light, Gas & Water
Commissioners of the City of Memphis
Memphis, Tennessee 38103

\$29,000,000
City of Memphis, Tennessee
Electric System Revenue Refunding Bonds
Series 2020B
(Federally Taxable)

Ladies and Gentlemen:

We have acted as co-bond counsel in connection with the issuance by the City of Memphis, Tennessee (the “City”), a municipal corporation of the State of Tennessee (the “State”), of the City of Memphis, Tennessee, Electric System Revenue Refunding Bonds, Series 2020B (Federally Taxable), in the original aggregate principal amount of \$29,000,000 (the “Series 2020 Bonds”). In such capacity, we have examined: (a) the Constitution and the statutes of the State, including specifically Title 7, Chapter 34, Tennessee Code Annotated, as amended (the “Act”); (b) the Charter of the City; (c) a certified copy of that certain Electric System Revenue Obligations Master Resolution adopted by the Council of the City (the “Council”) on July 2, 2002 (as supplemented and amended from time to time heretofore in accordance with its terms, the “Master Resolution”); (d) a certified copy of that certain Ninth Supplemental Resolution Relating to Electric System Revenue Refunding Bonds, Series 2020 (Federally Taxable) adopted by the Council on _____, 2020 (the “Ninth Supplemental Resolution”); (e) the Bond Series Certificate of the City and the Division relating to the Series 2020 Bonds (the “Bond Series Certificate”); and (f) such other laws, documents and proofs as we have deemed necessary as a basis for this opinion. The Master Resolution as supplemented and amended from time to time, including as supplemented by the Ninth Supplemental Resolution and the Bond Series Certificate, being referred to herein as the “Resolution.” Capitalized terms used, but not defined, herein shall have the meanings assigned thereto in the Resolution.

The Series 2020 Bonds are being issued to provide moneys to advance refund the City’s outstanding Electric System Revenue Bonds, Series 2014 (the “Series 2014 Bonds”) maturing [____], and to pay the costs of issuance and sale of the Series 2020 Bonds. The Series 2014 Bonds were issued to provide moneys to finance certain Costs of acquisition, expansion, and/or improvements to the electric system and facilities (the “System”) of the City operated by the Memphis Light, Gas and Water Division of the City (the “Division”). The Series 2020 Bonds

constitute Senior Lien Revenue Obligations under the Resolution. The City heretofore has issued certain other Revenue Obligations under the Resolution and the City reserves the right to issue Additional Obligations under the Resolution on the terms and conditions and for the purposes stated therein.

For the purposes of this opinion letter, we have not made any independent investigation into any financial matters of the City, the Division or the System, and we have not prepared or investigated any financial information that has been or may be furnished to any purchaser of the Series 2020 Bonds. Accordingly, we express no opinion whatsoever herein as to the accuracy or completeness of any such financial information furnished in connection with the issuance and delivery of the Series 2020 Bonds.

In rendering our opinions set forth below, we have (a) relied as to questions of fact material to our opinion, without undertaking to verify the same by independent investigation, upon certified proceedings, certifications and representations of public officials, including representations of officials and representatives of the City and the Division, including, without limitation, representations as to the use and investment of the proceeds of the Series 2020 Bonds and the Series 2014 Bonds and the priority of the lien on the Pledged Revenues of the System created under the Resolution, and (b) assumed continuous compliance by each of the City and the Division of its covenants contained in the Resolution and documents related thereto, including, without limitation, covenants as to the use and investment of the proceeds of the Series 2020 Bonds.

Based on the foregoing, and subject to the qualifications contained herein, we are of the opinion that, on the date hereof:

1. The City has the right and power under the Act to adopt the Resolution, and the Resolution has been duly and lawfully adopted by the Council of the City, is in full force and effect, is valid and binding upon the City and is enforceable in accordance with its terms, and no other authorization for the Resolution is required. The Resolution creates the valid pledge which it purports to create for the benefit of the holders of the Series 2020 Bonds of the Pledged Revenues, subject only to the payment of the reasonable and necessary costs of operating, maintaining, repairing, and insuring the System. We express no opinion as to the sufficiency of such Pledged Revenues for the payment of principal of or interest on the Series 2020 Bonds, subject only to the provisions of the Ninth Supplemental Resolution permitting the application thereof for the purposes and on the terms and conditions set forth in the Ninth Supplemental Resolution.

2. The City is duly authorized and entitled to issue the Series 2020 Bonds and the Series 2020 Bonds have been duly and validly authorized and issued by the City in accordance with the Constitution and laws of the State, the Act and the Resolution, and constitute the valid and binding obligations of the City as provided in the Resolution, enforceable in accordance with their terms and the terms of the Resolution and entitled to the benefits of the Act and the Resolution. The Series 2020 Bonds are special obligations of the City payable from and secured exclusively by a pledge of the Pledged Revenues, and neither the faith and credit nor the taxing power of the City is pledged to the payment of the principal of and premium, if any, or interest on the Series 2020 Bonds.

3. Under existing law, the Series 2020 Bonds and the income therefrom are exempt from all present State, county and municipal taxes in the State except (a) inheritance, transfer and estate taxes, (b) State excise taxes on all or a portion of the interest on the Series 2020 Bonds during the period the Series 2020 Bonds are held or beneficially owned by any organization or entity, other than a sole proprietorship or general partnership, doing business in the State, and (c) State franchise taxes by reason of the inclusion of the book value of the Series 2020 Bonds in the State franchise tax base of any organization or entity, other than a sole proprietorship or general partnership, doing business in the State.

The rights of the owners of the Series 2020 Bonds and the enforceability of the Series 2020 Bonds and the Resolution may be subject to bankruptcy, insolvency, reorganization, moratorium and other similar laws affecting the enforcement of creditors' rights generally and principles of equity applicable to the availability of specific performance and other equitable relief.

In rendering this opinion letter, we have not considered the laws of any jurisdiction other than the laws of the State and the federal income tax laws of the United States of America, and we are not rendering any opinion, by implication or otherwise, regarding the laws of any jurisdiction other than the laws of the State and such federal income tax laws.

This opinion letter is an expression of professional judgment regarding the matters expressly addressed herein. It is neither a guarantee of result nor an insurance policy with respect to the transaction or the future actions or performance of any party or entity. Our services have not included any financial or other non-legal advice. We express no opinion other than as herein expressly stated in this letter, and no expansion of our opinion may be made by implication or otherwise. The opinions herein are given as of the date hereof and are based upon statutes, regulations, rulings and court decisions in effect on the date hereof and not as of any future date. We assume no responsibility to update or supplement this opinion to reflect any facts or circumstances that may hereafter come to our attention or any changes in law that may occur hereafter.

Sincerely,

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APPENDIX J-3

**PROPOSED FORM OF CO-BOND COUNSEL OPINIONS FOR THE
SERIES 2020 GAS SYSTEM BONDS**

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September __, 2020

City Council
Memphis, Tennessee 38103
Board of Light, Gas & Water
Commissioners of the City of Memphis
Memphis, Tennessee 38103

\$63,000,000
City of Memphis, Tennessee
Gas System Revenue Bonds
Series 2020

Ladies and Gentlemen:

We have acted as co-bond counsel in connection with the issuance by the City of Memphis, Tennessee (the “City”), a municipal corporation of the State of Tennessee (the “State”), of the City of Memphis, Tennessee, Gas System Revenue Bonds, Series 2020, in the original aggregate principal amount of \$63,000,000 (the “Series 2020 Bonds”). In such capacity, we have examined: (a) the Constitution and the statutes of the State, including specifically Title 7, Chapter 34, Tennessee Code Annotated, as amended (the “Act”); (b) the Charter of the City; (c) a certified copy of that certain Gas System Revenue Obligations Master Resolution adopted by the Council of the City (the “Council”) on July 5, 2016 (as supplemented and amended from time to time heretofore in accordance with its terms, the “Master Resolution”); (d) a certified copy of that certain Third Supplemental Resolution Relating to Gas System Revenue Bonds, Series 2020, adopted by the Council on _____, 2020 (the “Third Supplemental Resolution”); (e) the Bond Series Certificate of the City and the Division relating to the Series 2020 Bonds (the “Bond Series Certificate”); and (f) such other laws, documents and proofs as we have deemed necessary as a basis for this opinion. The Master Resolution as supplemented and amended from time to time, including as supplemented by the Third Supplemental Resolution and the Bond Series Certificate, being referred to herein as the “Resolution.” Capitalized terms used, but not defined, herein shall have the meanings assigned thereto in the Resolution.

The Series 2020 Bonds are being issued to provide moneys to finance certain Costs of acquisition, expansion and/or improvements to the gas system and facilities (the “System”) of the City operated by the Memphis Light, Gas and Water Division of the City (the “Division”), and to pay the costs of issuance and sale of the Series 2020 Bonds. The Series 2020 Bonds constitute Senior Lien Revenue Obligations under the Resolution. The City heretofore has issued certain other Revenue Obligations under the Resolution and the City reserves the right to issue Additional Obligations under the Resolution on the terms and conditions and for the purposes stated therein.

For the purposes of this opinion letter, we have not made any independent investigation into any financial matters of the City, the Division or the System, and we have not prepared or investigated any financial information that has been or may be furnished to any purchaser of the Series 2020 Bonds. Accordingly, we express no opinion whatsoever herein as to the accuracy or completeness of any such financial information furnished in connection with the issuance and delivery of the Series 2020 Bonds.

In rendering our opinions set forth below, we have (a) relied as to questions of fact material to our opinion, without undertaking to verify the same by independent investigation, upon certified proceedings, certifications and representations of public officials, including representations of officials and representatives of the City and the Division, including, without limitation, representations as to the use and investment of the proceeds of the Series 2020 Bonds and the priority of the lien on the Pledged Revenues of the System created under the Resolution, and (b) assumed continuous compliance by each of the City and the Division of its covenants contained in the Resolution and documents related thereto, including, without limitation, covenants as to the use and investment of the proceeds of the Series 2020 Bonds.

Each of the City and the Division has covenanted in the Resolution and in certain certificates dated the date hereof that it will not use any proceeds of the Series 2020 Bonds to acquire higher yielding investments or to replace funds which were used directly or indirectly to acquire higher yielding investments except as may be otherwise permitted by Section 148 of the Internal Revenue Code of 1986, as amended (the "Code," and all applicable regulations promulgated under the Code, including any proposed or temporary regulations, are collectively referred to herein as the "Regulations"), that it will comply with the arbitrage rebate requirements of Section 148(f) of the Code and the Regulations, and that it will comply with all other applicable provisions of the Code and the Regulations with respect to the Series 2020 Bonds.

Based on the foregoing, and subject to the qualifications contained herein, we are of the opinion that, on the date hereof:

1. The City has the right and power under the Act to adopt the Resolution, and the Resolution has been duly and lawfully adopted by the Council of the City, is in full force and effect, is valid and binding upon the City and is enforceable in accordance with its terms, and no other authorization for the Resolution is required. The Resolution creates the valid pledge which it purports to create for the benefit of the holders of the Series 2020 Bonds of the Pledged Revenues, subject only to the payment of the reasonable and necessary costs of operating, maintaining, repairing, and insuring the System. We express no opinion as to the sufficiency of such Pledged Revenues for the payment of principal of or interest on the Series 2020 Bonds, subject only to the provisions of the Third Supplemental Resolution permitting the application thereof for the purposes and on the terms and conditions set forth in the Third Supplemental Resolution.

2. The City is duly authorized and entitled to issue the Series 2020 Bonds and the Series 2020 Bonds have been duly and validly authorized and issued by the City in accordance with the Constitution and laws of the State, the Act and the Resolution, and constitute the valid and binding obligations of the City as provided in the Resolution, enforceable in accordance with their terms and

the terms of the Resolution and entitled to the benefits of the Act and the Resolution. The Series 2020 Bonds are special obligations of the City payable from and secured exclusively by a pledge of the Pledged Revenues, and neither the faith and credit nor the taxing power of the City is pledged to the payment of the principal of and premium, if any, or interest on the Series 2020 Bonds.

3. Based on existing statutes, regulations, rulings and court decisions and assuming compliance by the City and the Division with the above-described covenants, interest on the Series 2020 Bonds is excludable from gross income for federal income tax purposes and is excludable from federal alternative minimum taxable income as defined in Section 55(b)(2) of the Code. The opinion set forth in the immediately preceding sentence assumes and is subject to the accuracy of the representations and certifications of the City and the Division and continuous compliance by the City and the Division with the covenants contained in the official proceedings related to the Series 2020 Bonds, including covenants to the effect that the City and the Division will comply with all requirements of the Code and the Regulations promulgated thereunder that must be satisfied subsequent to the issuance of the Series 2020 Bonds in order that interest thereon be, and continue to be, excludable from gross income of the recipients thereof for federal income tax purposes. Failure to comply with certain of such requirements may cause interest on the Series 2020 Bonds to be includable in gross income for federal income tax purposes retroactive to the date of the issuance of the Series 2020 Bonds.

4. Under existing law, the Series 2020 Bonds and the income therefrom are exempt from all present State, county and municipal taxes in the State except (a) inheritance, transfer and estate taxes, (b) State excise taxes on all or a portion of the interest on the Series 2020 Bonds during the period the Series 2020 Bonds are held or beneficially owned by any organization or entity, other than a sole proprietorship or general partnership, doing business in the State, and (c) State franchise taxes by reason of the inclusion of the book value of the Series 2020 Bonds in the State franchise tax base of any organization or entity, other than a sole proprietorship or general partnership, doing business in the State.

We express no opinion regarding other federal or state tax consequences arising with respect to the Series 2020 Bonds or any other matter with respect to the Series 2020 Bonds except as set forth herein. Ownership of the Series 2020 Bonds may result in other collateral federal or state income tax consequences to certain taxpayers depending on the particular taxpayer's tax status and other items of income or deduction. We express no opinion regarding any federal or state collateral tax consequences related to the Series 2020 Bonds.

The rights of the owners of the Series 2020 Bonds and the enforceability of the Series 2020 Bonds and the Resolution may be subject to bankruptcy, insolvency, reorganization, moratorium and other similar laws affecting the enforcement of creditors' rights generally and principles of equity applicable to the availability of specific performance and other equitable relief.

In rendering this opinion letter, we have not considered the laws of any jurisdiction other than the laws of the State and the federal income tax laws of the United States of America, and we are not rendering any opinion, by implication or otherwise, regarding the laws of any jurisdiction other than the laws of the State and such federal income tax laws.

This opinion letter is an expression of professional judgment regarding the matters expressly addressed herein. It is neither a guarantee of result nor an insurance policy with respect to the transaction or the future actions or performance of any party or entity. Our services have not included any financial or other non-legal advice. We express no opinion other than as herein expressly stated in this letter, and no expansion of our opinion may be made by implication or otherwise. The opinions herein are given as of the date hereof and are based upon statutes, regulations, rulings and court decisions in effect on the date hereof and not as of any future date. We assume no responsibility to update or supplement this opinion to reflect any facts or circumstances that may hereafter come to our attention or any changes in law that may occur hereafter.

Sincerely,

APPENDIX J-4

**PROPOSED FORM OF CO-BOND COUNSEL OPINIONS FOR THE
SERIES 2020 WATER SYSTEM BONDS**

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September __, 2020

City Council
Memphis, Tennessee 38103
Board of Light, Gas & Water
Commissioners of the City of Memphis
Memphis, Tennessee 38103

\$68,000,000
City of Memphis, Tennessee
Water System Revenue Bonds
Series 2020

Ladies and Gentlemen:

We have acted as co-bond counsel in connection with the issuance by the City of Memphis, Tennessee (the “City”), a municipal corporation of the State of Tennessee (the “State”), of the City of Memphis, Tennessee, Water System Revenue Bonds, Series 2020, in the original aggregate principal amount of \$68,000,000 (the “Series 2020 Bonds”). In such capacity, we have examined: (a) the Constitution and the statutes of the State, including specifically Title 7, Chapter 34, Tennessee Code Annotated, as amended (the “Act”); (b) the Charter of the City; (c) a certified copy of that certain Water System Revenue Obligations Master Resolution adopted by the Council of the City (the “Council”) on December 17, 2013 (as supplemented and amended from time to time heretofore in accordance with its terms, the “Master Resolution”); (d) a certified copy of that certain Fourth Supplemental Resolution Relating to Water System Revenue Bonds, Series 2020 adopted by the Council on _____, 2020 (the “Fourth Supplemental Resolution”); (e) the Bond Series Certificate of the City and the Division relating to the Series 2020 Bonds (the “Bond Series Certificate”); and (f) such other laws, documents and proofs as we have deemed necessary as a basis for this opinion. The Master Resolution as supplemented and amended from time to time, including as supplemented by the Fourth Supplemental Resolution and the Bond Series Certificate, being referred to herein as the “Resolution.” Capitalized terms used, but not defined, herein shall have the meanings assigned thereto in the Resolution.

The Series 2020 Bonds are being issued to provide moneys to finance certain Costs of acquisition, expansion and/or improvements to the water system and facilities (the “System”) of the City operated by the Memphis Light, Gas and Water Division of the City (the “Division”), and to pay the costs of issuance and sale of the Series 2020 Bonds. The Series 2020 Bonds constitute Senior Lien Revenue Obligations under the Resolution. The City heretofore has issued certain other Revenue Obligations under the Resolution and the City reserves the right to issue Additional Obligations under the Resolution on the terms and conditions and for the purposes stated therein.

For the purposes of this opinion letter, we have not made any independent investigation into any financial matters of the City, the Division or the System, and we have not prepared or investigated any financial information that has been or may be furnished to any purchaser of the Series 2020 Bonds. Accordingly, we express no opinion whatsoever herein as to the accuracy or completeness of any such financial information furnished in connection with the issuance and delivery of the Series 2020 Bonds.

In rendering our opinions set forth below, we have (a) relied as to questions of fact material to our opinion, without undertaking to verify the same by independent investigation, upon certified proceedings, certifications and representations of public officials, including representations of officials and representatives of the City and the Division, including, without limitation, representations as to the use and investment of the proceeds of the Series 2020 Bonds and the priority of the lien on the Pledged Revenues of the System created under the Resolution, and (b) assumed continuous compliance by each of the City and the Division of its covenants contained in the Resolution and documents related thereto, including, without limitation, covenants as to the use and investment of the proceeds of the Series 2020 Bonds.

Each of the City and the Division has covenanted in the Resolution and in certain certificates dated the date hereof that it will not use any proceeds of the Series 2020 Bonds to acquire higher yielding investments or to replace funds which were used directly or indirectly to acquire higher yielding investments except as may be otherwise permitted by Section 148 of the Internal Revenue Code of 1986, as amended (the "Code," and all applicable regulations promulgated under the Code, including any proposed or temporary regulations, are collectively referred to herein as the "Regulations"), that it will comply with the arbitrage rebate requirements of Section 148(f) of the Code and the Regulations, and that it will comply with all other applicable provisions of the Code and the Regulations with respect to the Series 2020 Bonds.

Based on the foregoing, and subject to the qualifications contained herein, we are of the opinion that, on the date hereof:

1 The City has the right and power under the Act to adopt the Resolution, and the Resolution has been duly and lawfully adopted by the Council of the City, is in full force and effect, is valid and binding upon the City and is enforceable in accordance with its terms, and no other authorization for the Resolution is required. The Resolution creates the valid pledge which it purports to create for the benefit of the holders of the Series 2020 Bonds of the Pledged Revenues, subject only to the payment of the reasonable and necessary costs of operating, maintaining, repairing, and insuring the System. We express no opinion as to the sufficiency of such Pledged Revenues for the payment of principal of or interest on the Series 2020 Bonds, subject only to the provisions of the Fourth Supplemental Resolution permitting the application thereof for the purposes and on the terms and conditions set forth in the Fourth Supplemental Resolution.

2. The City is duly authorized and entitled to issue the Series 2020 Bonds and the Series 2020 Bonds have been duly and validly authorized and issued by the City in accordance with the Constitution and laws of the State, the Act and the Resolution, and constitute the valid and binding obligations of the City as provided in the Resolution, enforceable in accordance with their terms and the terms of the Resolution and entitled to the benefits of the Act and the Resolution. The Series

2020 Bonds are special obligations of the City payable from and secured exclusively by a pledge of the Pledged Revenues, and neither the faith and credit nor the taxing power of the City is pledged to the payment of the principal of and premium, if any, or interest on the Series 2020 Bonds.

3. Based on existing statutes, regulations, rulings and court decisions and assuming compliance by the City and the Division with the above-described covenants, interest on the Series 2020 Bonds is excludable from gross income for federal income tax purposes and is excludable from federal alternative minimum taxable income as defined in Section 55(b)(2) of the Code. The opinion set forth in the immediately preceding sentence assumes and is subject to the accuracy of the representations and certifications of the City and the Division and continuous compliance by the City and the Division with the covenants contained in the official proceedings related to the Series 2020 Bonds, including covenants to the effect that the City and the Division will comply with all requirements of the Code and the Regulations promulgated thereunder that must be satisfied subsequent to the issuance of the Series 2020 Bonds in order that interest thereon be, and continue to be, excludable from gross income of the recipients thereof for federal income tax purposes. Failure to comply with certain of such requirements may cause interest on the Series 2020 Bonds to be includable in gross income for federal income tax purposes retroactive to the date of the issuance of the Series 2020 Bonds.

4. Under existing law, the Series 2020 Bonds and the income therefrom are exempt from all present State, county and municipal taxes in the State except (a) inheritance, transfer and estate taxes, (b) State excise taxes on all or a portion of the interest on the Series 2020 Bonds during the period the Series 2020 Bonds are held or beneficially owned by any organization or entity, other than a sole proprietorship or general partnership, doing business in the State, and (c) State franchise taxes by reason of the inclusion of the book value of the Series 2020 Bonds in the State franchise tax base of any organization or entity, other than a sole proprietorship or general partnership, doing business in the State.

We express no opinion regarding other federal or state tax consequences arising with respect to the Series 2020 Bonds or any other matter with respect to the Series 2020 Bonds except as set forth herein. Ownership of the Series 2020 Bonds may result in other collateral federal or state income tax consequences to certain taxpayers depending on the particular taxpayer's tax status and other items of income or deduction. We express no opinion regarding any federal or state collateral tax consequences related to the Series 2020 Bonds.

The rights of the owners of the Series 2020 Bonds and the enforceability of the Series 2020 Bonds and the Resolution may be subject to bankruptcy, insolvency, reorganization, moratorium and other similar laws affecting the enforcement of creditors' rights generally and principles of equity applicable to the availability of specific performance and other equitable relief.

In rendering this opinion letter, we have not considered the laws of any jurisdiction other than the laws of the State and the federal income tax laws of the United States of America, and we are not rendering any opinion, by implication or otherwise, regarding the laws of any jurisdiction other than the laws of the State and such federal income tax laws.

This opinion letter is an expression of professional judgment regarding the matters expressly addressed herein. It is neither a guarantee of result nor an insurance policy with respect to the transaction or the future actions or performance of any party or entity. Our services have not included any financial or other non-legal advice. We express no opinion other than as herein expressly stated in this letter, and no expansion of our opinion may be made by implication or otherwise. The opinions herein are given as of the date hereof and are based upon statutes, regulations, rulings and court decisions in effect on the date hereof and not as of any future date. We assume no responsibility to update or supplement this opinion to reflect any facts or circumstances that may hereafter come to our attention or any changes in law that may occur hereafter.

Sincerely,



MUNICIPAL BOND INSURANCE POLICY

ISSUER:

BONDS: \$ in aggregate principal amount of

Policy No: -N

Effective Date:

Premium: \$

ASSURED GUARANTY MUNICIPAL CORP. ("AGM"), for consideration received, hereby UNCONDITIONALLY AND IRREVOCABLY agrees to pay to the trustee (the "Trustee") or paying agent (the "Paying Agent") (as set forth in the documentation providing for the issuance of and securing the Bonds) for the Bonds, for the benefit of the Owners or, at the election of AGM, directly to each Owner, subject only to the terms of this Policy (which includes each endorsement hereto), that portion of the principal of and interest on the Bonds that shall become Due for Payment but shall be unpaid by reason of Nonpayment by the Issuer.

On the later of the day on which such principal and interest becomes Due for Payment or the Business Day next following the Business Day on which AGM shall have received Notice of Nonpayment, AGM will disburse to or for the benefit of each Owner of a Bond the face amount of principal of and interest on the Bond that is then Due for Payment but is then unpaid by reason of Nonpayment by the Issuer, but only upon receipt by AGM, in a form reasonably satisfactory to it, of (a) evidence of the Owner's right to receive payment of the principal or interest then Due for Payment and (b) evidence, including any appropriate instruments of assignment, that all of the Owner's rights with respect to payment of such principal or interest that is Due for Payment shall thereupon vest in AGM. A Notice of Nonpayment will be deemed received on a given Business Day if it is received prior to 1:00 p.m. (New York time) on such Business Day; otherwise, it will be deemed received on the next Business Day. If any Notice of Nonpayment received by AGM is incomplete, it shall be deemed not to have been received by AGM for purposes of the preceding sentence and AGM shall promptly so advise the Trustee, Paying Agent or Owner, as appropriate, who may submit an amended Notice of Nonpayment. Upon disbursement in respect of a Bond, AGM shall become the owner of the Bond, any appurtenant coupon to the Bond or right to receipt of payment of principal of or interest on the Bond and shall be fully subrogated to the rights of the Owner, including the Owner's right to receive payments under the Bond, to the extent of any payment by AGM hereunder. Payment by AGM to the Trustee or Paying Agent for the benefit of the Owners shall, to the extent thereof, discharge the obligation of AGM under this Policy.

Except to the extent expressly modified by an endorsement hereto, the following terms shall have the meanings specified for all purposes of this Policy. "Business Day" means any day other than (a) a Saturday or Sunday or (b) a day on which banking institutions in the State of New York or the Insurer's Fiscal Agent are authorized or required by law or executive order to remain closed. "Due for Payment" means (a) when referring to the principal of a Bond, payable on the stated maturity date thereof or the date on which the same shall have been duly called for mandatory sinking fund redemption and does not refer to any earlier date on which payment is due by reason of call for redemption (other than by mandatory sinking fund redemption), acceleration or other advancement of maturity unless AGM shall elect, in its sole discretion, to pay such principal due upon such acceleration together with any accrued interest to the date of acceleration and (b) when referring to interest on a Bond, payable on the stated date for payment of interest. "Nonpayment" means, in respect of a Bond, the failure of the Issuer to have provided sufficient funds to the Trustee or, if there is no Trustee, to the Paying Agent for payment in full of all principal and interest that is Due for Payment on such Bond. "Nonpayment" shall also include, in respect of a Bond, any payment of principal or interest that is Due for Payment made to an Owner by or on behalf of the Issuer which has been recovered from such Owner pursuant to the

United States Bankruptcy Code by a trustee in bankruptcy in accordance with a final, nonappealable order of a court having competent jurisdiction. "Notice" means telephonic or telecopied notice, subsequently confirmed in a signed writing, or written notice by registered or certified mail, from an Owner, the Trustee or the Paying Agent to AGM which notice shall specify (a) the person or entity making the claim, (b) the Policy Number, (c) the claimed amount and (d) the date such claimed amount became Due for Payment. "Owner" means, in respect of a Bond, the person or entity who, at the time of Nonpayment, is entitled under the terms of such Bond to payment thereof, except that "Owner" shall not include the Issuer or any person or entity whose direct or indirect obligation constitutes the underlying security for the Bonds.

AGM may appoint a fiscal agent (the "Insurer's Fiscal Agent") for purposes of this Policy by giving written notice to the Trustee and the Paying Agent specifying the name and notice address of the Insurer's Fiscal Agent. From and after the date of receipt of such notice by the Trustee and the Paying Agent, (a) copies of all notices required to be delivered to AGM pursuant to this Policy shall be simultaneously delivered to the Insurer's Fiscal Agent and to AGM and shall not be deemed received until received by both and (b) all payments required to be made by AGM under this Policy may be made directly by AGM or by the Insurer's Fiscal Agent on behalf of AGM. The Insurer's Fiscal Agent is the agent of AGM only and the Insurer's Fiscal Agent shall in no event be liable to any Owner for any act of the Insurer's Fiscal Agent or any failure of AGM to deposit or cause to be deposited sufficient funds to make payments due under this Policy.

To the fullest extent permitted by applicable law, AGM agrees not to assert, and hereby waives, only for the benefit of each Owner, all rights (whether by counterclaim, setoff or otherwise) and defenses (including, without limitation, the defense of fraud), whether acquired by subrogation, assignment or otherwise, to the extent that such rights and defenses may be available to AGM to avoid payment of its obligations under this Policy in accordance with the express provisions of this Policy.

This Policy sets forth in full the undertaking of AGM, and shall not be modified, altered or affected by any other agreement or instrument, including any modification or amendment thereto. Except to the extent expressly modified by an endorsement hereto, (a) any premium paid in respect of this Policy is nonrefundable for any reason whatsoever, including payment, or provision being made for payment, of the Bonds prior to maturity and (b) this Policy may not be canceled or revoked. THIS POLICY IS NOT COVERED BY THE PROPERTY/CASUALTY INSURANCE SECURITY FUND SPECIFIED IN ARTICLE 76 OF THE NEW YORK INSURANCE LAW.

In witness whereof, ASSURED GUARANTY MUNICIPAL CORP. has caused this Policy to be executed on its behalf by its Authorized Officer.

ASSURED GUARANTY MUNICIPAL CORP.

By _____
Authorized Officer

A subsidiary of Assured Guaranty Municipal Holdings Inc.
1633 Broadway, New York, N.Y. 10019
(212) 974-0100

Form 500NY (5/90)

