NEW ISSUE
BOOK-ENTRY ONLY

RATINGS+:
Moody's: Aa3
S&P: AA-

In the opinion of Miller, Canfield, Paddock and Stone, P.L.C., Bond Counsel, under existing law, assuming compliance with certain covenants by the Lansing Board of Water and Light (the "Board" or the "BWL"), (i) the interest on the BWL's Utility System Revenue Bonds, Series 2019A (the "Bonds") is excludable from gross income for federal income tax purposes and (ii) the Bonds and interest thereon are exempt from all taxation by the State of Michigan (the "State") or by any taxing authority within the State except inheritance and estate taxes and taxes on gains realized from the sale, payment or other disposition thereof. See "TAX MATTERS" herein and "Appendix F – FORM OF APPROVING OPINION" for a description of certain provisions of the Internal Revenue Code of 1986, as amended (the "Code") which may affect the tax treatment of interest on the Bonds for certain Bondholders.

$319,875,000
LANSING BOARD OF WATER AND LIGHT
CITY OF LANSING, MICHIGAN
UTILITY SYSTEM REVENUE BONDS, SERIES 2019A

Dated: Date of Delivery **Due: July 1, as shown on the inside cover**

The Bonds will be issued to provide funds for the purposes of (i) paying costs to acquire and construct a natural gas combined cycle facility to produce electricity, and system improvements (collectively, the "Project"), (ii) paying a portion of the BWL's outstanding Utility System Revenue Bond Anticipation Notes, Series 2018 (the "Notes"), (iii) providing for the payment of capitalized interest on the Bonds, and (iv) paying costs of issuance of the Bonds. The Bonds are authorized to be issued pursuant to the Revenue Bond Act of 1933, Act No. 94, Public Acts of Michigan, 1933, as amended ("Act 94"), and an Amended and Restated Bond Resolution, as amended, as described herein.

The Bonds are secured by a statutory lien on, and payable solely from, Net Revenues, as defined herein, derived from the electric, water supply, steam and chilled water utilities of the BWL. The Bonds are not a general obligation of the City of Lansing, Michigan (the "City") and neither the full faith and credit nor the taxing power of the City is pledged to the payment of the principal of and interest on the Bonds. The Bonds do not constitute an indebtedness of the City within any constitutional, statutory or charter limitation.

The Bonds will be issued as fully registered bonds and, when issued, will be registered in the name of Cede & Co., as registered owner and nominee for The Depository Trust Company, New York, New York ("DTC"). So long as Cede & Co. is the registered owner of the Bonds, principal of and interest on the Bonds are payable by U.S. Bank National Association, as Transfer Agent, to Cede & Co., as nominee for DTC, and payment thereof will be made to purchasers by DTC direct participants or indirect participants, as described herein. Purchasers will acquire beneficial ownership interests in denominations of $5,000 or integral multiples thereof.

The Bonds will bear interest at the rates set forth on the inside cover of this Official Statement, payable semiannually on January 1 and July 1 of each year, commencing January 1, 2020. Certain of the Bonds are subject to optional and mandatory redemption prior to maturity as described herein. (See "The Bonds – Optional Redemption Prior to Maturity" and "The Bonds - Mandatory Redemption Prior to Maturity.")

The Bonds are authorized to be issued pursuant to an Amended and Restated Bond Resolution adopted by the Board on March 27, 2018, and as amended on March 26, 2019 (together, the "Bond Resolution"). The Bond Resolution also amends and restates the Amended and Restated Bond Resolution adopted on October 24, 1989 effective upon receipt of consent from fifty-one percent (51%) of holders of the Outstanding Bonds (as defined herein) and the Bonds. See "THE BONDS – The Bond Resolution." **By purchasing the Bonds, Bondholders and Beneficial Owners of the Bonds shall have consented to the Bond Resolution, such that the foregoing 51% consent requirement is met and the amendments set forth in the Bond Resolution are effective as of the date of delivery of the Bonds**. Certain amendments to the Bond Resolution related to the Reserve Account Requirement were adopted by the Board on March 26, 2019 and will also become effective as of the date of the delivery of the Bonds. See "THE BONDS – Bond Reserve Account" and "Appendix E – BOND RESOLUTION CONSOLIDATED VERSION."

The Bonds are offered when, and as if issued and received by the Underwriters, subject to the approving opinion of Bond Counsel, Miller, Canfield, Paddock and Stone, P.L.C., Lansing and Detroit, Michigan. PFM Financial Advisors LLC is serving as the financial advisor to the BWL in connection with the sale and issuance of the Bonds. Certain matters will be passed on for the Underwriters by their counsel, Dickinson Wright PLLC, Lansing, Michigan. It is expected that the Bonds will be available for delivery through the facilities of DTC in New York, New York on or about June 25, 2019.

This cover page contains certain information for quick reference only. It is not a summary of the Bonds. Investors must read the entire Official Statement to obtain information essential to the making of an informed investment decision.

J.P. Morgan **Citigroup**
BofA Merrill Lynch **Goldman Sachs & Co. LLC** **PiperJaffray**

Dated: June 13, 2019

+ See "Ratings" herein.

$319,875,000
LANSING BOARD OF WATER AND LIGHT
CITY OF LANSING, MICHIGAN
UTILITY SYSTEM REVENUE BONDS, SERIES 2019A

$71,810,000 Serial Bonds

Maturity July 1	Principal Amount	Interest Rate	Price	Yield	CUSIP† Base No. 516391
2022	$2,995,000	5.000%	110.659	1.380%	CH0
2023	3,150,000	5.000	113.803	1.450	CJ6
2024	3,305,000	5.000	116.800	1.510	CK3
2025	3,470,000	5.000	119.682	1.560	CL1
2026	3,645,000	5.000	122.332	1.620	CM9
2027	3,315,000	5.000	124.718	1.690	CN7
2028	3,485,000	5.000	126.523	1.800	CP2
2029	20,000	4.000	119.373	1.870	CR8
2029	3,640,000	5.000	128.469	1.870	CQ0
2030	3,840,000	5.000	127.316*	1.980	CS6
2031	4,035,000	5.000	126.279*	2.080	CT4
2032	4,240,000	5.000	125.252*	2.180	CU1
2033	4,010,000	5.000	124.437*	2.260	CV9
2034	4,215,000	5.000	124.032*	2.300	CW7
2035	4,425,000	5.000	123.227*	2.380	CX5
2036	4,645,000	5.000	122.826*	2.420	CY3
2037	4,875,000	5.000	122.428*	2.460	CZ0
2038	5,120,000	5.000	122.030*	2.500	DA4
2039	5,380,000	5.000	121.734*	2.530	DB2

$248,065,000 Term Bonds

Maturity July 1	Principal Amount	Interest Rate	Price	Yield	CUSIP† Base No. 516391
2044	$103,140,000	5.000%	120.067*	2.700%	DC0
2048	144,925,000	5.000	119.679*	2.740	DD8

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* Yield to first call date of July 1, 2029

Certain information contained in this Official Statement has been obtained by the BWL, the City and from DTC and other sources that are deemed to be reliable. No representation or warranty is made, however, as to the accuracy or completeness of such information by the Underwriters. Nothing contained in this Official Statement is or shall be relied on as a promise or representation by the Underwriters. This Official Statement is being used in connection with the sale of securities as referred to herein and may not be used, in whole or in part, for any other purpose. The delivery of this Official Statement at any time does not imply that information in it is correct as of any time subsequent to its date.

No dealer, broker, salesman, or other person has been authorized by the BWL, the City or by the Underwriters, to give any information or to make any representations other than those contained herein, and if given or made, such other information or representations must not be relied upon as having been authorized by any of the foregoing. This Official Statement does not constitute an offer to sell or the solicitation of any offer to buy, nor shall there be any sale of the Bonds, by any person in any jurisdiction in which it is unlawful for such person to make such offer, solicitation or sale.

U.S. Bank National Association, Lansing, Michigan (the "Transfer Agent"), by acceptance of its duties as Transfer Agent, has not reviewed this Official Statement and has made no representations as to the information contained herein.

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 part of, their 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.

The information and expressions of opinion herein are subject to change without notice and neither the delivery of this Official Statement nor any other sale made hereunder shall, under any circumstances, create any implication that there has been no change in the affairs of the BWL.

In connection with the offering of the Bonds, the Underwriters may over-allot or effect transactions that stabilize or maintain the market price of the Bonds at a level above the level that might otherwise prevail in the open market. Such stabilizing, if commenced, may be discontinued at any time without notice. The prices and other terms respecting the offering and sale of the Bonds may be changed from time to time by the Underwriters after the Bonds are released for sale, and the Bonds may be offered and sold at prices other than the initial offering prices, including sales to dealers who may sell the Bonds into investment accounts.

The Bonds have not been registered with the Securities and Exchange Commission under the Securities Act of 1933, as amended, in reliance upon exemptions contained in such Act. The registration or qualification of the Bonds in accordance with the applicable provisions of securities laws of the states in which the Bonds have been registered or qualified and the exemption from registration or qualification in other states cannot be regarded as a recommendation thereof. In making an investment decision, investors must rely on their own examination of the BWL's financial records and the terms of the offering, including the merits and risk involved. These securities have not been recommended by any federal or state securities commission or regulatory authority. Furthermore, the foregoing authorities have not confirmed the accuracy or determined the adequacy of this document. Any representation to the contrary is a criminal offense.

IN MAKING ANY INVESTMENT DECISION, INVESTORS MUST RELY ON THEIR OWN EXAMINATION OF THE BWL 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. FURTHERMORE, THE FOREGOING AUTHORITIES HAVE NOT CONFIRMED THE ACCURACY OR DETERMINED THE ADEQUACY OF THIS DOCUMENT. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

The Official Statement contains disclosures which contain "forward-looking statements." Forward-looking statements include all statements that do not relate solely to historical or current fact and can be identified by use of words like "may," "believe," "will," "expect," "project," "estimate," "anticipate," "plan" or "continue." These forward-looking statements are based on the current plans and expectations of the BWL and are subject to a number of known and unknown uncertainties and risks, many of which are beyond the BWL's control that could significantly affect current plans and expectations and the BWL's future financial position and results of operations. These factors include, but are not limited to, (i) changes in economic and fiscal conditions, and (ii) the outcome of pending and any future litigation. As a consequence, current plans, anticipated actions and future financial position and results of operations may differ from those expressed in any forward-looking statements made by or on behalf of the BWL. All forward-looking statements are expressly qualified by the cautionary statements contain in this paragraph. Neither the BWL nor the City undertakes any duty to update any forward-looking statements.

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CITY OF LANSING OFFICIALS
Mayor
Andy Schor

City Council

Kathie Dunbar	Jeremy Garza	Adam Hussain
Brian T. Jackson	Peter Spadafore	Patricia Spitzley
Jody Washington	Carol Wood	

LANSING BOARD OF WATER AND LIGHT OFFICIALS
Board of Commissioners

Chair	Vice Chair
David J. Price	Anthony H. Mullen

Beth Graham	David Lenz	Anthony W. McCloud
Ken Ross	Tracy Thomas	Sandra Zerkle

Non-Voting Commissioners

Dion'trae Hayes	Douglas Jester	William Long

BWL Administration

General Manager
Richard R. Peffley

Chief Financial Officer Heather Shawa	Executive Director of Strategic Planning & Development Brandie Ekren	Executive Director of of Operations David Bolan
Executive Director of Corporate Governance, Risk and Legal Compliance Mark Matus	Executive Director of Human Resources and Training Michael Flowers	Executive Director Customer Operations & Communications Stephen Serkaian

Lansing Board of Water and Light
1201 S. Washington Ave.
Lansing, Michigan 48910
Phone: (517) 702-6000
www.lbwl.com

PROFESSIONAL SERVICES

Auditor:	Baker Tilly Virchow Krause, LLP, Madison, Wisconsin
Bond Counsel:	Miller, Canfield, Paddock and Stone, P.L.C., Lansing, Michigan
Financial Advisor:	PFM Financial Advisors LLC, Philadelphia, Pennsylvania
Transfer/Paying:	U.S. Bank National Association, Lansing, Michigan
Underwriters' Counsel:	Dickinson Wright PLLC, Lansing, Michigan

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OFFICIAL STATEMENT
$319,875,000
LANSING BOARD OF WATER AND LIGHT
CITY OF LANSING, MICHIGAN
UTILITY SYSTEM REVENUE BONDS, SERIES 2019A

INTRODUCTION

The Lansing Board of Water and Light (the "Board" or the "BWL") is issuing its $319,875,000 Utility System Revenue Bonds, Series 2019A (the "Bonds") for the purposes of (i) paying costs to acquire and construct a natural gas combined cycle facility to produce electricity, and system improvements (collectively, the "Project"), (ii) paying a portion of the BWL's outstanding Utility System Revenue Bond Anticipation Notes, Series 2018 (the "Notes"), (iii) providing for the payment of capitalized interest on the Bonds, and (iv) paying costs of issuance of the Bonds.

The City of Lansing, Michigan (the "City") located in the Counties of Ingham and Eaton, is a municipal corporation of the State of Michigan (the "State"), organized and existing under the laws of the State including the City's Charter, as amended (the "Charter"). Under the Charter, the BWL is an administrative board and permanent agency of the City and has full and exclusive management of the water supply, steam and electric utility services of the City.

The Bonds are authorized to be issued pursuant to the Revenue Bond Act of 1933, Act No. 94, Public Acts of Michigan, 1933, as amended ("Act 94"), and an Amended and Restated Bond Resolution adopted by the Board on March 27, 2018, and as amended on March 26, 2019 (together, the "Bond Resolution"). U.S. Bank National Association, Lansing, Michigan, currently is the Transfer Agent and bond registrar under the Bond Resolution.

Pursuant to the Bond Resolution, all bonds issued and outstanding thereunder, except for Junior Lien Bonds and Junior Lien Notes (as defined in the Bond Resolution), are of equal standing and parity of lien and equally secured by the pledges and covenants in the Bond Resolution. (See "THE BONDS - Security.") The outstanding bonds previously or hereafter issued on a parity basis with the Bonds are called the "Outstanding Bonds" herein. Under the Bond Resolution, the BWL can issue Junior Lien Bonds and Junior Lien Notes which are of junior standing and priority of lien with respect to the Net Revenues to the claim of the Bonds. The only Junior Lien Notes the Board currently has outstanding are the Notes.

THE BONDS

General

The Bonds will be issued in the original aggregate principal amounts as shown on the cover of this Official Statement. The Bonds will be dated as of the date of delivery and will bear interest from that date. Interest on the Bonds shall be payable semiannually on January 1 and July 1 of each year commencing on January 1, 2020. Interest on the Bonds shall be computed using a 360-day year and twelve 30-day months. The Bonds will mature on the dates and in the principal amounts and will bear interest at the rates as set forth on the inside cover of this Official Statement.

The Bonds will be issued as fully registered Bonds without coupons, and when issued, will be registered in the name of Cede & Co., as nominee for The Depository Trust Company, New York, New York ("DTC"). DTC will act as securities depository for the Bonds. Purchases of beneficial interests in the Bonds will be made in book-entry only form, in the denominations of $5,000 or any integral multiple thereof. Purchasers will not receive certificates representing their beneficial interests in Bonds purchased. So long as Cede & Co. is the Bondholder, as nominee for DTC, references herein to the Bondholders or registered owners shall mean Cede & Co., as aforesaid, and shall not mean the Beneficial Owners (as defined herein) of the Bonds. See "THE BONDS - Book-Entry Only System and Transfer Outside Book-Entry Only System" herein.

The principal and interest shall be payable at the designated corporate trust office of the Transfer Agent or such other Transfer Agent as the BWL may hereafter designate by notice mailed to the Bondholders. So long as DTC or its nominee, Cede & Co., is the Bondholder, such payments will be made directly to DTC. Disbursement of such payments to the Beneficial Owners is the responsibility of DTC Direct Participants and Indirect Participants (both as defined herein), as more fully described below. Interest shall be paid when due by check or draft mailed to the registered owners of Bonds as shown on the registration books as of the fifteenth day of the calendar month preceding the payment date for each interest payment.

Optional Redemption Prior to Maturity

The Bonds maturing in the years 2022 through 2029, inclusive, shall not be subject to optional redemption prior to maturity. The Bonds, or portions of the Bonds in multiples of $5,000 maturing or subject to mandatory redemption in the years 2030 and thereafter shall be subject to redemption at the option of the Board in such order of maturity as the Board shall determine, and within a single maturity by lot, on any date on or after July 1, 2029 at par plus accrued interest to the date fixed for redemption.

Mandatory Redemption Prior to Maturity

The Term Bonds maturing on July 1, 2044 and bearing interest at 5.000% are subject to mandatory redemption prior to maturity, at a redemption price of par plus accrued interest to the date fixed for redemption, on July 1 of the years and in the principal amounts set forth below:

Year	Principal Amount
2040	$5,645,000
2041	5,925,000
2042	29,045,000
2043	30,500,000
2044 (Maturity Date)	32,025,000

The Term Bonds maturing on July 1, 2048 and bearing interest at 5.000% are subject to mandatory redemption prior to maturity, at a redemption price of par plus accrued interest to the date fixed for redemption, on July 1 of the years and in the principal amounts set forth below:

Year	Principal Amount
2045	$33,625,000
2046	35,305,000
2047	37,070,000
2048 (Maturity Date)	38,925,000

The principal amount of Bonds to be mandatorily redeemed in each year may be reduced through the earlier optional redemptions of such Bonds credited against sinking fund requirements in such order of the sinking fund payment dates as the Board may determine.

Notice and Manner of Redemption

Notice of redemption shall be given to each registered owner of Bonds or portions thereof to be redeemed by mailing such notice not less than thirty (30) days prior to the date fixed for redemption to the registered owner at the address of the registered owner as shown on the registration books of the BWL. The Bonds shall be called for redemption in multiples of $5,000, and Bonds of denominations of more than $5,000 shall be treated as representing the number of Bonds obtained by dividing the denomination of the Bonds by $5,000, and such Bonds may be redeemed in part. The notice of redemption for Bonds redeemed in part shall state that, upon surrender of the Bond to be redeemed, a new Bond or Bonds in the same aggregate principal amount equal to the unredeemed portion of the Bonds surrendered shall be issued to the registered owner thereof with the same interest rate and maturity. No further interest on Bonds or portions of Bonds called for redemption shall accrue after the date fixed for redemption, whether the Bonds have been presented for redemption or not, provided funds are on hand with the Transfer Agent to redeem the Bonds or portion thereof.

Security

The principal of, and interest and redemption premium, if any, on the Bonds are payable solely from and secured by the Net Revenues (as defined herein) of the System. The "System" is defined in the Bond Resolution as the complete facilities of the BWL for the supply and distribution of water and the generation and distribution of electricity, steam, chilled water, and heat, including all plants, works, instrumentalities and properties used or useful in connection with the supply and distribution of water and the generation and distribution of electricity, steam, chilled water, and heat, and all additions, extensions and improvements thereto existing or hereafter acquired by the BWL. Pursuant to Act 94 and the Bond Resolution, the Net Revenues are pledged to the Bonds and the Outstanding Bonds (as defined herein) on a parity basis, and there is created a statutory lien thereon which is a first lien on a parity basis. As of May 31, 2019 there were $360,980,001 aggregate outstanding principal amount of Outstanding Bonds, including the Notes, but not including the Bonds described herein.

"Revenues" is defined in the Bond Resolution as the income derived from the rates charged for the services, facilities, and commodities furnished by the System, earnings on investment of funds and accounts of the System required to be deposited in the Receiving Fund pursuant to the Bond Resolution and other revenues derived from or pledged to the operation of the System. "Net Revenues" is defined in the Bond Resolution as the Revenues remaining after deducting the reasonable expenses of administration, operation, and maintenance of the System.

The statutory lien on the Net Revenues of the System securing the Bonds and the Outstanding Bonds is senior in priority to the statutory lien on Net Revenues of the System pledged to pay any outstanding Junior Lien Bonds and Junior Lien Notes. The BWL previously issued the Notes as Junior Lien Notes under the provisions of Act 94 and the Amended and Restated Bond Resolution adopted by the BWL on October 24, 1989, as supplemented and amended by the First through Fifteenth Supplementals thereto (collectively, the "1989 Bond Resolution"). The Notes are of a junior standing and priority of lien with respect to the Net Revenues to the claim of Outstanding Bonds issued under the Bond Resolution.

The rights or remedies of Bondholders may be affected by bankruptcy, insolvency, fraudulent conveyance or other laws affecting creditors' rights generally now existing or hereafter enacted and by the application of general principles of equity, including those relating to equitable subordination.

The Bonds are not a general obligation of the City, and neither the full faith and credit nor the taxing power of the City is pledged to the payment of the principal of and interest on the Bonds. The Bonds do not constitute an indebtedness of the City within any constitutional, statutory or charter limitation.

The Bond Resolution

The Bonds are authorized to be issued pursuant to the Bond Resolution. In addition to authorizing the Bonds, the Bond Resolution also amends the 1989 Bond Resolution upon consent of fifty-one percent (51%) of holders of Outstanding Bonds (as defined herein) and the Bonds. **By purchasing the Bonds, Bondholders and Beneficial Owners of the Bonds shall have consented to the Bond Resolution, such that the foregoing 51% consent requirement is met and the amendments set forth in the Bond Resolution are effective as of the date of delivery of the Bonds.**

The following table highlights some of the key differences between the Bond Resolution and the 1989 Bond Resolution. For a summary of the Bond Resolution, including further revisions to the 1989 Bond Resolution, see "Appendix E –BOND RESOLUTION CONSOLIDATED VERSION."

Table of Changes		
	Bond Resolution	**1989 Bond Resolution**
Definition of "Aggregate Debt Service"	"Aggregate Debt Service" for any period means, as of any date of calculation by the Board, the sum of the amounts of the debt service for such period with respect to all Outstanding Bonds. In the event that any of the Outstanding Bonds bear interest at a variable rate, such Bonds shall, for purposes of calculating Aggregate Debt Service, be assumed by the Board to bear interest at a fixed rate of interest equal to the greater of the actual rate of interest then borne by such variable rate Bonds or the Certified Interest Rate applicable thereto.	"Aggregate Debt Service" for any period means, as of any date of calculation by the Board, the sum of the amounts of the debt service for such period with respect to all Outstanding Bonds. In the event that any of the Outstanding Bonds bear interest at a variable rate, such Bonds shall, for purposes of calculating Aggregate Debt Service, be assumed by the Board to bear interest at a fixed rate of interest equal to the greater of (i) 10.00% or (ii) the rate published by The Bond Buyer or any successor publication as its "Index of 25 Revenue Bonds" applicable on a date not more than 20 days prior to the date of initial issuance of any such variable interest rate Bonds.

Definition of "Government Obligations"	"Government Obligations" means (i) direct obligations of (including obligations issued or held in book entry form on the books of) the United States of America, (ii) obligations the payment on which is guaranteed by the United States of America including, but not limited to, stripped interest components of obligations issued by the Resolution Funding Corporation (REFCORP) and non-callable, non-prepayable debt obligations of the United States Agency for International Development (US AID), which pay principal and interest at least three (3) business days prior to any respective escrow requirement dates, or (iii) non-callable, senior debt obligations of any government-sponsored enterprise or federal agency, corporation, or instrumentality of the United States of America created by an act of congress including, but not limited to, the Federal Home Loan Banks, Freddie Mac, Federal Farm Credit Banks Funding Corporation, and Fannie Mae.	"Government Obligations" means direct obligations of (including obligations issued or held in book entry form on the books of) the United States of America.
Definition of "Municipal Obligation"	"Municipal Obligation" means any bonds or other obligations of any state of the United States of America or of any agency, instrumentality or local governmental unit of any such state (i) which are not callable at the option of the obligor prior to maturity or as to which irrevocable notice has been given by the obligor to call on the date specified in the notice, and (ii) which are fully secured as to principal and interest and redemption premium, if any, by a fund consisting only of cash or Government Obligations, which fund may be applied only to the payment of such principal of and interest and redemption premium, if any, on such bonds or other obligations on the maturity date or dates thereof or the specified redemption date or dates pursuant to such irrevocable instructions, as appropriate, and (iii) which fund is sufficient, as verified by an independent certified public accountant, to pay principal of and interest and redemption premium, if any, on the bonds or other obligations described in this definition of Municipal Obligation on the maturity date or dates thereof or on the redemption date or dates specified in the irrevocable instructions referred to in subclause (i) of this definition of Municipal Obligation, as appropriate, and (iv) which are rated, based on the escrow, in the highest rating category of either two of the following three ratings agencies: Standard & Poor's Corporation, Fitch Ratings, and Moody's Investors Service, Inc. or any successors thereto.	"Municipal Obligation" means any bonds or other obligations of any state of the United States of America or of any agency, instrumentality or local governmental unit of any such state (i) which are not callable at the option of the obligor prior to maturity or as to which irrevocable notice has been given by the obligor to call on the date specified in the notice, and (ii) which are fully secured as to principal and interest and redemption premium, if any, by a fund consisting only of cash or Government Obligations, which fund may be applied only to the payment of such principal of and interest and redemption premium, if any, on such bonds or other obligations on the maturity date or dates thereof or the specified redemption date or dates pursuant to such irrevocable instructions, as appropriate, and (iii) which fund is sufficient, as verified by an independent certified public accountant, to pay principal of and interest and redemption premium, if any, on the bonds or other obligations described in this definition of Municipal Obligation on the maturity date or dates thereof or on the redemption date or dates specified in the irrevocable instructions referred to in subclause (i) of this definition of Municipal Obligation, as appropriate, and (iv) which are rated, based on the escrow, in the highest rating category of Standard & Poor's Corporation and Moody's Investor Services, Inc. or any successors thereto.

Definition of "Reserve Requirement"	*"Reserve Requirement" shall mean the following: (i) if the long-term unenhanced credit ratings of the Outstanding Bonds are in at least the "A/A2" category without regard to notching factors (or an equivalent rating in at least the third highest category of nationally recognized bond rating agencies), $0, only upon the written direction of the Chief Financial Officer; or (ii) if the long-term unenhanced credit ratings of the Outstanding Bonds are reduced below the "A/A2" category without regard to notching factors (or an equivalent rating in at least the third highest category of nationally recognized bond rating agencies), the lesser of (1) 50% of the maximum annual debt service requirements on the Outstanding Bonds, (2) 62.5% of the average annual debt service requirements on the Outstanding Bonds, or (3) the total of 5% of the original aggregate face amount of each series of the Outstanding Bonds, reduced by the net original issue discount, if any; provided, however, that the Reserve Requirement shall not at any time exceed the amount allowed to be invested at an unrestricted yield pursuant to Treas. Reg. §1.148-2(f)(2) or any successor provision thereto applicable to the Bonds. For purposes of determining the Reserve Requirement, the long-term unenhanced credit ratings of the Outstanding Bonds shall be determined with regard only to the highest two long-term unenhanced ratings of such Bonds. Therefore, subsection (z)(ii) applies only if both such ratings are reduced below the "A/A2" category without regard to notching factors (or an equivalent rating as described above). The Board may rely on the advice of its financial advisor as to which rating category or categories its ratings are within. **This assumes the Amending Resolution (as defined herein) is effective, as described in "THE BONDS – Bond Reserve Account" below.*	"Reserve Requirement" shall mean the lesser of (i) the maximum annual debt service requirements on the Outstanding Bonds, (ii) 125% of the average annual debt service requirements on the Outstanding Bonds, or (iii) the total of 10% of the original aggregate face amount of each series of the Outstanding Bonds, reduced by the net original issue discount, if any; provided, however, that the Reserve Requirement shall not at any time exceed the amount allowed to be invested at an unrestricted yield pursuant to Treas. Reg. Section 1.148-2(f)(2) or any successor provision thereto as applicable to the Bonds.
Satisfaction of the "Reserve Requirement"	Section 18(B) (excerpt): The Board may satisfy the "Reserve Requirement" by purchasing a letter of credit, a surety bond, or an insurance policy provided, however, the provider or issuer thereof shall be rated by any nationally recognized bond rating agency as high or higher than the Bonds at the time of purchase of the letter of credit, surety bond, or insurance policy. The letter of credit, surety bond or insurance policy must be purchased within 180 days of a "Ratings Downgrade Event" (as defined in the Bond Resolution).	Section 11(B) (excerpt): The Board may satisfy the Reserve Requirement by a letter of credit, a surety bond, or an insurance policy if the provider or issuer thereof shall be rated Aaa by Moody's Investors Services and AAA by Standard and Poor's Corporation.

Covenants of the City and the BWL	Section 23 (excerpt): (c) The City and the Board will not grant any franchise or other rights to any person, firm or corporation to operate an electric system that will compete with the System unless required or authorized by law and the City and the Board will not operate a system that will compete with the System. (d) The Board will use their best efforts to enforce any contracts to which they are a party regarding providing of electrical service. (e) The Board will not issue additional bonds of prior standing to the Bonds. The Chief Financial Officer is authorized on behalf of the Board to make any additional covenants with the purchaser of a series of Bonds as may be deemed advisable and approved by bond counsel and the municipal advisor.	No similar provisions.
Amendment Without Consent of Registered Owners	Section 28(a)(v): The Board may adopt a supplemental or amendatory resolution to make such modifications in the provisions [of the Bond Resolution] as may be deemed advisable by the City provided that the Board has confirmed in writing with each rating agency rating Outstanding Bonds to which the provision will apply that the adoption of such provision will not result in the reduction or withdrawal of any rating on such Bonds.	No similar provision.

As described in detail in “THE BONDS – Bond Reserve Account,” on March 26, 2019, the BWL adopted a Resolution to Amend the Bond Resolution (the “Amending Resolution”), which amends the definition of “Reserve Requirement” to the version shown in the “Bond Resolution” column in the table above. The amendment set forth in the Amending Resolution is only effective upon the BWL’s receipt of written confirmation from each rating agency rating Outstanding Bonds that the amendment will not result in the reduction or withdrawal of any rating on such Bonds. On May 1, 2019 and May 22, 2019, the BWL received written evaluations from Moody’s and Standard & Poor’s, respectively, confirming that the change in definition of “Reserve Requirement” pursuant to the Amending Resolution, assuming no other changes, will not result in a rating change.

Rate Covenant

The BWL has covenanted and agreed that it will at all times fix, establish, maintain and collect rates, fees and charges for the sale of the output, capacity, use or service of the System which, together with other income, are reasonably expected to yield Net Revenues equal to at least 125% of the principal and interest due on the Bonds, the Outstanding Bonds and any Additional Bonds for the forthcoming 12-month period plus such amount as is necessary to comply with all covenants in the Bond Resolution and to pay all charges and liens whatsoever payable out of Net Revenues in such period.

Rate Setting Authority

The Charter provides that the BWL shall have full and exclusive management of the water supply, steam and electric utility services of the City and such other services as may be agreed upon by the BWL and the City. The Charter also provides that the BWL may, with proper notice and hearing, fix just and reasonable rates as it deems necessary for such services. The implementation of new rates takes approximately three months and does not require any local, state or federal regulatory approval. It is the policy of the BWL to review all rates annually and to set such rates so that each respective utility (electric, water supply, steam and chilled water) is self-supporting. Rates are set on a cost of service basis. See "THE ELECTRIC UTILITY – Rates and Charges" for a discussion of the BWL's Power Supply Cost Recovery Adjustment for customers of the Electric Utility.

Bond Reserve Account

As originally adopted on March 27, 2018, the Bond Resolution provided that the "Reserve Requirement" shall mean the lesser of (i) the maximum annual debt service requirements on the Outstanding Bonds, (ii) 125% of the average annual debt service requirements on the Outstanding Bonds, or (iii) the total of 10% of the original aggregate face amount of each series of the Outstanding Bonds, reduced by the net original issue discount, if any; provided, however, that the Reserve Requirement shall not at any time exceed the amount allowed to be invested at an unrestricted yield pursuant to Treas. Reg. Section 1.148-2(f)(2) or any successor provision thereto as applicable to the Bonds.

Section 28(a)(v) of the Bond Resolution provides, however, that the BWL may adopt an amendatory resolution to modify the provisions of the Bond Resolution as long as the BWL has confirmed in writing with each rating agency rating Outstanding Bonds that such modification will not result in a reduction or withdrawal of any rating on such Bonds. Pursuant to the foregoing Section, on March 26, 2019, the BWL adopted the Amending Resolution to provide a new definition of "Reserve Requirement". As of the date of this Official Statement, the BWL has received rating agency confirmation that adoption of the amended definition of "Reserve Requirement" will not result in a reduction or withdrawal of the ratings on its Outstanding Bonds. Therefore, upon the delivery of the Bonds, the above definition of "Reserve Requirement" will be replaced with the following definition:

"Reserve Requirement" shall mean the following: (i) if the long-term unenhanced credit ratings of the Outstanding Bonds are in at least the "A/A2" category without regard to notching factors (or an equivalent rating in at least the third highest category of nationally recognized bond rating agencies), $0, only upon the written direction of the Chief Financial Officer; or (ii) if the long-term unenhanced credit ratings of the Outstanding Bonds are reduced below the "A/A2" category without regard to notching factors (or an equivalent rating in at least the third highest category of nationally recognized bond rating agencies), the lesser of (1) 50% of the maximum annual debt service requirements on the Outstanding Bonds, (2) 62.5% of the average annual debt service requirements on the Outstanding Bonds, or (3) the total of 5% of the original aggregate face amount of each series of the Outstanding Bonds, reduced by the net original issue discount, if any; provided, however, that the Reserve Requirement shall not at any time exceed the amount allowed to be invested at an unrestricted yield pursuant to Treas. Reg. §1.148-2(f)(2) or any successor provision thereto applicable to the Bonds. For purposes of determining the Reserve Requirement, the long-term unenhanced credit ratings of the Outstanding Bonds shall be determined with regard only to the highest two long-term unenhanced ratings of such Bonds. Therefore, the foregoing section (ii) applies only if both such ratings are reduced below the "A/A2" category without regard to notching factors (or an equivalent rating as described above). The BWL may rely on the advice of its financial advisor as to which rating category or categories its ratings are within.

After delivery of the Bonds, the BWL expects to schedule a draw on the Bond Reserve Account and such monies will be released in accordance with the Bond Resolution. **Therefore, Bondholders should not expect monies to be held in the Bond Reserve Account to secure the Bonds or any other Outstanding Bonds.** Any monies released from the Bond Reserve Account will be spent on Project purposes or other capital improvements of the System.

However, in the event the Reserve Requirement is increased above $0 as a result of a reduction in the long-term unenhanced credit ratings of the Outstanding Bonds to a category below "A/A2" without regard to notching factors (or an equivalent rating in at least the third highest category of nationally recognized bond rating agencies) (a "Ratings Downgrade Event"), Section 18(B) of the Bond Resolution provides that the BWL must satisfy the Reserve Requirement either by: (i) transferring moneys to the Bond Reserve Account from an available source of funds (other than proceeds of Additional Bonds) an amount equal to the Reserve Requirement in six (6) semi-annual installments beginning on the date which is 180 days of the Ratings Downgrade Event; (ii) obtaining a letter of credit, a surety bond, or an insurance policy within 180 days of the Ratings Downgrade Event; provided, however, the provider or issuer thereof shall be rated by any nationally recognized bond rating agency as high or higher than the Bonds at the time of purchase of the letter of credit, surety bond, or insurance policy; or (iii) transferring monies to the Bond Reserve Account from proceeds of Additional Bonds within 180 days of the Ratings Downgrade Event. The BWL must adopt a plan to satisfy the Reserve Requirement within ninety (90) days of the Ratings Downgrade Event.

Except as otherwise provided in the Bond Resolution, the moneys credited to the Bond Reserve Account shall be used solely for the payment of the principal of, redemption premium, if any, and interest on the Bonds as to which there would otherwise be a default. If, at any time, it shall be necessary to use moneys credited to the Bond Reserve Account for such payment, then the moneys so used shall be replaced from the Net Revenues first received thereafter which are not required for expenses of administration, operation, and maintenance of the System or for current principal and interest requirements on any of the Bonds.

If at any time the amount in the Bond Reserve Account exceeds the Reserve Requirement, the excess may be transferred to such fund or account as the Board may direct; provided, however, if the excess is allocable to proceeds of tax-exempt Outstanding Bonds (or proceeds of tax-exempt Bonds refunded by the Outstanding Bonds) then such excess shall be transferred to a segregated account to pay the costs of the Power Plant Project (as defined in the Bond Resolution) or the System Improvements Project (as defined in the Bond Resolution), unless it is determined by nationally recognized bond counsel that such transfer is not required to maintain the tax-exempt status of each series of the Outstanding Bonds.

The Supplemental Resolution (as defined in the Bond Resolution) authorizing Additional Bonds may either (i) provide that the Additional Bonds are equally and ratably secured by the Bond Reserve Account funded according to the Reserve Requirement, or (ii) provide for the creation of a separate bond reserve account securing that series of Additional Bonds and a different reserve requirement, or state that no bond reserve account is required. See "Appendix E – BOND RESOLUTION CONSOLIDATED VERSION– Section 18. Funds and Accounts; Flow of Funds."

Flow of Funds

All Revenues of the System shall be set aside as collected and credited to the Receiving Fund. Periodically, out of the Revenues credited to the Receiving Fund there shall be first set aside in, or credited to, a fund designated Operation and Maintenance Fund, a sum sufficient to provide for the payment during the succeeding period of the next month's expenses of administration and operation of the System, including such current expenses for the maintenance thereof as may be necessary to preserve the same in good repair and working order.

After provision for the Operation and Maintenance Fund, there shall be set aside on or before the first day of each month, in the Bond and Interest Redemption Fund a sum equal to 1/6th of the interest on all Senior Lien Bonds next coming due and 1/12th of the total amount of the principal of all Senior Lien Bonds due on the next July 1 and 1/12th of the maturing amount of any capital appreciation bonds due one year or less from the 1st day of such month. If there is any deficiency in the amount previously set aside, that deficiency shall be added to the requirements for the next succeeding month.

If at any time it shall be necessary to use moneys credited to the Bond Reserve Account for such payment, then the moneys so used shall be replaced from the Net Revenues first received thereafter which are not required for expenses of administration, operation and maintenance of the system or for current principal and interest requirements on any of the Bonds.

If the BWL issues Junior Lien Bonds or Junior Lien Notes, revenues remaining in the Receiving Fund, after provision has been made for the requirements of the Operation and Maintenance Fund and of the Bond and Interest Redemption Fund, shall be set aside, but not more often than monthly, in the Junior Lien Redemption Fund for the purpose of paying the principal of, redemption premium, if any, and interest on such Junior Lien Bonds or Junior Lien Notes as they come due, in accordance with the resolution authorizing the issuance of the Junior Lien Bonds or Junior Lien Notes.

Any Revenues in the Receiving Fund after satisfying all requirements of the Operation and Maintenance Fund, the Bond and Interest Redemption Fund, the Rebate Fund and the Junior Lien Redemption Fund shall be deemed to be surplus moneys and may be used for such purposes as the BWL deems to be for the best interests of the City.

If there should be any deficit in the Operation and Maintenance Fund, Bond and Interest Redemption Fund or the Rebate Fund on account of defaults in setting aside required amounts therein, then transfers shall be made from the moneys remaining in the Receiving Fund at the end of any operating year to those funds in the priority and order specified herein, to the extent of any deficit, before any other disposition is made of the monies in the Receiving Fund at the end of any operating year.

For a complete description of the funds and accounts and flow of funds, see "BOND RESOLUTION CONSOLIDATED VERSION" attached hereto as Appendix E.

Outstanding Parity Bonds

The Bonds are being issued by the BWL on parity with its outstanding Utility System Revenue Bonds, Series 2011A (the "Outstanding 2011A Bonds"), Utility System Revenue Refunding Bonds, Series 2013A (the "Outstanding 2013A Bonds"), and Utility System Revenue Refunding Bonds, Series 2017A (the "Outstanding 2017A Bonds" and together with the Outstanding 2011A Bonds, and the Outstanding 2013A Bonds, the "Outstanding Bonds").

The BWL previously issued its Utility System Revenue Bond Anticipation Notes, Series 2018 (the "Notes") as Junior Lien Bonds under the provisions of Act 94 and the 1989 Bond Resolution. The proceeds of the Notes are being used to pay for a portion of the construction costs of the Delta Energy Park discussed below. The Notes are of a junior standing and priority of lien with respect to the Net Revenues to the claim of Outstanding Bonds issued under the Bond Resolution. The Notes are currently outstanding in the amount of $65,600,001 and are expected to be prepaid with proceeds from the Bonds.

Following the issuance of the Bonds, the BWL will have the following Outstanding Bonds in the aggregate principal amounts with final maturities set forth below:

	Par Outstanding	Final Maturity
Utility System Revenue Bonds, Series 2011A	$249,980,000	July 1, 2041
Utility System Revenue Refunding Bonds, Series 2013A	15,035,000	July 1, 2026
Utility System Revenue Refunding Bonds, Series 2017A	30,365,000	July 1, 2032
Utility System Revenue Bonds, Series 2019A	319,875,000	July 1, 2048
Total	$615,255,000	

For a description of the debt service on the Outstanding Bonds upon the issuance and sale of the Bonds, See "DEBT SERVICE REQUIREMENTS."

Additional Bonds

In accordance with the provisions of Act 94 and the Bond Resolution, the BWL may issue additional bonds payable from the Net Revenues of the System, which shall be of equal standing and priority of lien on the Net Revenues of the System with the Bonds and the Outstanding Bonds, for repairs, extensions, enlargements and improvements to the System or for the purpose of refunding all or (subject to certain conditions) part of the Bonds and the Outstanding Bonds (the "Additional Bonds"). Except as described below, no such Additional Bonds shall be issued unless the actual or augmented Net Revenues of the System for the fiscal year ending not more than 15 months prior to the sale of the Additional Bonds shall be equal to at least one hundred twenty-five percent (125%) of the maximum aggregate Debt Service Requirement in any current or future fiscal year on the Outstanding Bonds and any Additional Bonds then being issued. If the Additional Bonds are to be issued in whole or in part for refunding Outstanding Bonds, the maximum Aggregate Debt Service shall be determined by deducting from the principal and interest requirements for each operating year the annual Aggregate Debt Service Requirement of any Bonds to be refunded from the proceeds of the Additional Bonds.

In determining whether Additional Bonds can be issued in compliance with the Bond Resolution, (i) if System rates, fees or charges shall be increased at or prior to the time of authorizing Additional Bonds, the Net Revenues may be augmented by an amount which in the opinion of the BWL's financial advisor will reflect the effect of the increase had the System's billings during such time been at increased rates, and (ii) the actual Net Revenues may be augmented by the estimated increase in Net Revenues which in the opinion of the BWL's financial advisor will accrue as a result of new customers which have not been serviced during the fiscal year described above or as a result of the acquisition of the repairs, extensions enlargements and improvements to the System which have been made during or subsequent to the fiscal year described above or which will be acquired in whole or in part from the proceeds of the Additional Bonds to be issued.

Additional Bonds also may be issued to refund a part of the Outstanding Bonds and to pay costs of issuing such Additional Bonds, if after giving effect to the refunding, the maximum amount of Aggregate Debt Service in each future fiscal year shall be less than the Aggregate Debt Service in each future fiscal year prior to giving effect to the refunding.

Additional Bonds also may be issued without meeting any of the conditions and tests set forth above to pay the cost of acquisition and construction of any repairs, replacements, betterments, improvements, major renewals or corrections of any damage or loss to the System necessary, in the opinion of the Consulting Engineer (as defined in the Bond Resolution), to keep the System in good operating condition or to prevent a loss of revenues therefrom or to pay the cost of decommissioning, disposal or termination of the System.

For a complete description of the terms upon which Additional Bonds may be issued, see "BOND RESOLUTION CONSOLIDATED VERSION" attached hereto as Appendix E.

Book-Entry Only System and Transfer Outside Book-Entry Only System

DTC will act as securities depository for the Bonds. Additional information regarding DTC and the book-entry only system is attached hereto as Appendix H. In the event the book-entry only system is discontinued, the following provisions would apply to the Bonds. The Transfer Agent will act as transfer agent and bond registrar and shall keep the registration books for the Bonds (the "Bond Register") at its corporate trust office. Subject to the further conditions contained in the Bond Resolution, the Bonds may be transferred or exchanged for one or more Bonds in different authorized denominations upon surrender thereof at the corporate trust office of the Transfer Agent by the registered owners or their duly authorized attorneys; upon surrender of any Bonds to be transferred or exchanged, the Transfer Agent shall record the transfer or exchange in the Bond Register and shall authenticate replacement bonds in authorized denominations; during the 15 days immediately preceding the date of mailing of any notice of redemption or any time following the mailing of any notice of redemption, the Transfer Agent shall not be required to effect or register any transfer or exchange of any Bond which has been selected for such redemption, except the Bonds properly surrendered for partial redemption may be exchanged for new Bonds in authorized denominations equal in the aggregate to the unredeemed portion; the BWL and Transfer Agent shall be entitled to treat the registered owners of the Bonds, as their names appear in the Bond Register as of the appropriate dates, as the owner of such Bonds for all purposes under the Bond Resolution. No transfer or exchange made other than as described above and in the Bond Resolution shall be valid or effective for any purposes under the Bond Resolution.

THE FINANCING

Purpose of the Bonds

The Bonds are being issued for the purposes of paying the following:

i. The "Project"
   a. Costs to acquire and construct
      i. A natural gas combined cycle facility to produce electricity (the "Delta Energy Park") together with
         1. Any appurtenances and attachments thereto
         2. Any related site acquisitions or improvements
   b. Certain improvements to the System, including but not limited to
      i. Construction, improvement, and renovation of transmission and distribution lines and utility system facilities for the supply of electricity, water, steam, and chilled water
         1. Any appurtenances and attachments thereto
         2. Any related site acquisitions or improvements
      ii. A portion of the Notes
      iii. Capitalized interest on the Bonds
      iv. Costs of issuing the Bonds

The Delta Energy Park

Delta Energy Park: Overview. To meet evolving customer, market, and environmental demands, BWL has begun construction of Delta Energy Park. The Project consists of a 250 MW (nominal) electric generation facility and a 138-kV switchyard. The highly-efficient plant will be powered by natural gas combustion turbines capable of combined or simple cycle operation. Delta Energy Park will be built in Delta Township, at the site of BWL's existing Erickson Station. The 90-acre site is located eight miles from BWL's REO Plant & Headquarters.

Delta Energy Park will be BWL's second natural gas plant. It follows in the footsteps of BWL's REO Town Plant, which was completed on budget and on time in 2013. BWL has a Delta Energy Park Project budget of up to $500 million. The BWL's current integrated resource plan sets a goal of 30% clean energy by the end of calendar year 2020 and 40% clean energy by the end of calendar year 2030. See, "THE LANSING BOARD OF WATER AND LIGHT—Integrated Resource Plan and Strategic Plan" herein. These goals will be accomplished by reducing reliance on and retiring certain coal fired generating assets and increasing reliance on cleaner energy resources, including gas fired generating assets, like the Delta Energy Park. The BWL will meet its goals set forth in the integrated resource plan by taking the following actions:

- May 2019 – Construction commences
- June 2020 – Back feed from switchyard
- December 2020 – Simple Cycle Unit begins operation; complete shutdown of generation at coal-fired Eckert plant
- June 2021 – Delta Energy Park generation goes online
- December 2025 – Complete shutdown of generation at coal-fired Erickson plant

Delta Energy Park: Technical Details. Rated at 250 MW, Delta Energy Park will be capable of generating approximately 1.9 million megawatt hours (MWh) annually. The combined cycle portion of the plant, used for base loads, will be rated at 195 MW. By rerouting waste heat from the CTGs to the steam turbine, the combined-cycle process produces up to fifty percent more electricity.* The main generators can also employ a series of bypass stacks and dampers to shut down half the generating path during periods of low load, thus reducing fuel consumption. The simple cycle portion of the plant, which can react to periods of peak demand, adds 55 MW (nominal). In summary, Delta Energy Park was designed with improved efficiency in mind. Resulting carbon emissions are expected to significantly undercut those of BWL's aging coal stations.

The Project consists of the following major hardware components:

- Three CTGs
  - Manufacturer (Siemens Energy)
  - Warranty Period (The earlier to occur of (a) four years after delivery of the last major component of Goods or (b) for a period of two years after the date Equipment Performance Tests (or equivalent) are completed after the Goods furnished under the applicable contract are installed, subject to actual completion occurring within 180 days of the scheduled completion date.)
- One plant control system
  - Manufacturer (Siemens Energy)
  - Warranty Period (Three years after completion of delivery of the Goods or for a period of two years after the Equipment Performance Completion date, or equivalent, in which the Goods furnished under the applicable contract are installed, whichever is the later to occur, subject to actual completion occurring within 180 days of the scheduled completion date.)
- Two heat recovery steam generators (HRSGs)
  - Manufacturer (Vogt Power International)
  - Warranty Period (One year after the Project facilities' Commercial Operations Date or thirty-six months after delivery of the last major component of goods, whichever occurs first.)
- Two generator step-up transformers
  - Manufacturer (Pennsylvania Transformer Technology)
  - Warranty Period (The lesser of sixty months from erection or sixty-six months from date of shipment.)
- Three condensate pumps and four feedwater pumps
  - Manufacturer (Torishima Pump Manufacturing)
  - Warranty Period (Three years after delivery or for a period of one year after the Project facilities' commercial operations date or equivalent in which the Goods furnished under the applicable contract are installed, whichever is the later to occur. All warranty obligations of the Seller shall cease to exist four years from date of delivery of the Goods.)
- One steam turbine generator with wet cooling tower heat rejection
  - Manufacturer (Doosan Skoda Power)
  - Warranty Period (One year after the Equipment Performance Completion or thirty-six months after delivery of the last major component of Goods, whichever occurs first.)

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* https://www.ge.com/power/resources/knowledge-base/combined-cycle-power-plant-how-it-works

Delta Energy Park: Construction

Key Contractors. Kramer Management Group of Lansing, Michigan has served the BWL as Owner's Representative since 2016. Kramer provides comprehensive management and coordination of all construction activities.

Sargent & Lundy has served the BWL as Owner's Engineer since February 2017. With over 150 combustion turbine projects (including combined-cycle and cogeneration units) under their belt, the firm lends significant experience to the Delta Energy Park project.

Black & Veatch of Michigan has served the BWL as Design Engineer since 2018. Black & Veatch has an engineering track record which dates back over 100 years.

Consumers Energy Company ("Consumers") has served the BWL as Transmission Line Contractor since December 2018. Consumers will construct a pipeline for the delivery of natural gas to the Delta Energy Park. The principal subsidiary of CMS Energy Corporation, Consumers will provide ongoing transportation through the pipeline.

Lansing Power Constructors ("LPC"), a joint venture between Barton Malow and Clark Construction Company, has served the BWL as Construction Manager since January 2019. LPC is a joint venture between Barton Malow and Clark Construction Company. BWL has worked with both Barton Malow and Clark Construction Company for previous capital projects.

Major Equipment. Siemens Energy, Inc. is the supplier of the Combustion Turbine Generators and Plant Control System. The Heat Recovery Steam Generators have been purchased from Vogt Power International. The Steam Turbine Generator has been purchased from Doosan Skoda Power. Torishima will supply the Condensate and Feedwater Pumps. The Generator Step Up Transformers have been purchased from Pennsylvania Transformer.

Permits Received. The BWL has obtained the following permissions from the Michigan Department of Environment, Great Lakes, and Energy (formerly the Michigan Department of Environmental Quality): Air Permit (Permit to Install No. 74-18), Wetlands Permit (WRP015113v1), and Soil Erosion & Sedimentation Control Permit. The BWL has obtained the following permits from Delta Township: Site plan approval (allows the BWL to perform all site preparation and grading activities) and Special Land Use Permit. The BWL expects to submit requests for building permits as needed and when appropriate.

Construction Status. As of April 2019, the BWL's Construction Manager has procured subcontracts for site development and pilings, i.e. prepping the property for the deep foundations. Trees have been cleared and test piles have been completed. The Construction Manager also has subcontract packages out for bid for a reinforced steel, building shell, condenser, cooling tower, fuel gas system, auxiliary boiler, and unit auxiliary transformer. Design work is still ongoing.

Operational Integration. The combined-cycle portion of the Plant is expected to operate continually during weekdays. Delta Energy Park output will be dispatched economically during weekends and against the load requirements of the MISO market. BWL will register the new power plant as a behind-the-meter resource on the MISO market.

Payment of Notes

As of the date of this Official Statement, the principal amount of the Notes is $65,600,001. A portion of the proceeds of the Bonds will be used to provide funds to pay the Notes outstanding (currently held by JPMorgan Chase Bank, N.A.) on the date the Bonds are issued.

The Notes will be legally defeased upon issuance of the Bonds and amounts have been set aside to pay the Notes, and accordingly the junior lien on the Net Revenues under the Bond Resolution with respect to the amount of Notes that are paid will be released. The BWL will continue to have the ability to issue additional short-term Notes on a junior lien basis after the initial Notes have been paid.

ESTIMATED SOURCES AND USES OF FUNDS

The Bonds

Sources	
Principal Amount of the Bonds	$319,875,000.00
Original Issue Premium	65,458,509.35
Bond Reserve Account Release (1)	25,066,796.41
Total Sources	$410,400,305.76
Uses	
Payment of Notes	$ 65,600,001.00
Construction Fund	286,022,374.07
Other Project and System Expenditures(2)	25,066,796.41
Capitalized Interest	31,652,883.21
Costs of Issuance (3)	714,994.97
Underwriters' Discount	1,343,256.10
Total Uses	$410,400,305.76

(1) Represents the excess amount above the Bond Reserve Requirement.
(2) Paid from Bond Reserve Account Release.
(3) Includes legal, ratings, financial advisory, printing and other costs of issuance.

DEBT SERVICE REQUIREMENTS

The following table sets forth the Outstanding Bonds of the BWL following the issuance of the Bonds and the prepayment of the Notes.

		The Bonds			
Period Ending	Outstanding Bonds Debt Service*	Principal	Interest	Debt Service	Total Debt Service
7/1/2019	$21,882,750				$21,882,750
7/1/2020	21,882,600		$16,260,109	$16,260,109	38,142,709
7/1/2021	21,877,575		15,993,550	15,993,550	37,871,125
7/1/2022	21,880,575	$2,995,000	15,993,550	18,988,550	40,869,125
7/1/2023	21,879,825	3,150,000	15,843,800	18,993,800	40,873,625
7/1/2024	21,879,575	3,305,000	15,686,300	18,991,300	40,870,875
7/1/2025	21,879,225	3,470,000	15,521,050	18,991,050	40,870,275
7/1/2026	21,878,225	3,645,000	15,347,550	18,992,550	40,870,775
7/1/2027	22,389,725	3,315,000	15,165,300	18,480,300	40,870,025
7/1/2028	22,386,975	3,485,000	14,999,550	18,484,550	40,871,525
7/1/2029	22,388,225	3,660,000	14,825,300	18,485,300	40,873,525
7/1/2030	22,386,975	3,840,000	14,642,500	18,482,500	40,869,475
7/1/2031	22,386,975	4,035,000	14,450,500	18,485,500	40,872,475
7/1/2032	22,384,500	4,240,000	14,248,750	18,488,750	40,873,250
7/1/2033	22,823,000	4,010,000	14,036,750	18,046,750	40,869,750
7/1/2034	22,821,250	4,215,000	13,836,250	18,051,250	40,872,500
7/1/2035	22,823,500	4,425,000	13,625,500	18,050,500	40,874,000
7/1/2036	22,822,750	4,645,000	13,404,250	18,049,250	40,872,000
7/1/2037	22,822,250	4,875,000	13,172,000	18,047,000	40,869,250
7/1/2038	22,825,000	5,120,000	12,928,250	18,048,250	40,873,250
7/1/2039	22,821,625	5,380,000	12,672,250	18,052,250	40,873,875
7/1/2040	22,822,700	5,645,000	12,403,250	18,048,250	40,870,950
7/1/2041	22,824,925	5,925,000	12,121,000	18,046,000	40,870,925
7/1/2042		29,045,000	11,824,750	40,869,750	40,869,750
7/1/2043		30,500,000	10,372,500	40,872,500	40,872,500
7/1/2044		32,025,000	8,847,500	40,872,500	40,872,500
7/1/2045		33,625,000	7,246,250	40,871,250	40,871,250
7/1/2046		35,305,000	5,565,000	40,870,000	40,870,000
7/1/2047		37,070,000	3,799,750	40,869,750	40,869,750
7/1/2048		38,925,000	1,946,250	40,871,250	40,871,250
Totals	$514,770,725	$319,875,000	$366,779,309	$686,654,309	$1,201,425,034

* Excludes the debt service on the Notes.

THE LANSING BOARD OF WATER AND LIGHT

The City of Lansing

The City, Michigan's state capital, encompasses an area of approximately 36 square miles and has a 2017 estimated population of 115,222 people. It is located approximately 85 miles northwest of Detroit and 65 miles southeast of Grand Rapids. It is estimated that the City is within 90 miles of 90% of the State's population. Residential, commercial and industrial valuations account for approximately 58%, 30% and 6%, respectively, of the City's 2018 Taxable Valuation, as defined in Appendix A. The balance of the City's 2018 Taxable Valuation is personal property that is primarily commercial and industrial in nature. General Motors, the State of Michigan and Michigan State University, in adjacent East Lansing, are significant factors in the local economy.

The Bonds are not a general obligation of the City, and neither the full faith and credit nor the taxing power of the City is pledged to the payment of the principal of and interest on the Bonds. The Bonds do not constitute an indebtedness of the City within any constitutional, statutory or charter limitation.

History and Organization

By a vote of the City's electorate, the BWL was founded in 1885 to provide safe drinking water and fire protection. In 1892, the BWL took control of a local power plant to provide street lighting. Steam service was added in 1919 with BWL's acquisition of the Michigan Heat and Power Company.

The BWL is a combined municipal utility system. It provides electric, water, chilled water and steam services to some or all of the City, the City of East Lansing and surrounding townships. It provides services to over 100,000 unique/individual customers. The City's Charter provides that the BWL shall have full and exclusive management of the electric, water and steam utility services of the City and such other services as may be agreed upon by the BWL and the City. The Charter provides that the BWL may fix just and reasonable rates as it deems necessary for services provided by the BWL. It is the policy of the BWL to review all rates annually and to set such rates so that each respective utility within the System (water supply, steam, chilled water and electric) is self-supporting. The BWL is composed of eight commissioners, appointed by the Mayor and confirmed by the City Council. The BWL also has three non-voting commissioners representing townships served by the BWL outside of the City.

Integrated Resource Plan and Strategic Plan

Integrated Resource Plan. In September 2015, the BWL formed a Citizens Advisory Committee whereby input from the local community governed the formulation of BWL's most recent (2016) Integrated Resource Plan (the "Plan"). The Committee's nine members represented a cross-section of the populations and interests BWL serves, as well as outside experts.

1. The Plan provides that BWL will reach the following goals for improved sustainability in electric generation. Additionally, by the end of calendar year 2020, BWL generation will be composed of 20% renewables (wind and/or solar).

BWL PORTFOLIO PLANNING	
Calendar Year End	**Clean Energy***
2020	30%
2030	40%

** Clean energy includes BWL energy efficiency programs*

2. BWL will meet the goals set forth in the Plan by taking the following actions

    - Permanent retirement of BWL's coal-fired Eckert Plant no later than December 31, 2020
    - Permanent retirement of BWL's coal-fired Erickson Plant no later than December 31, 2025
    - Construction of additional natural gas generation as a stepping stone toward an increasingly renewable future
        - Delta Energy Park
            - 250 MW rated
            - Expected to begin commercial operations in June 2021
    - Addition of at least 100 MW renewable energy generation capacity (wind and/or solar) by 2030
        - BWL will complete these additions ahead of schedule due to generation from
            - Delta Solar PPAs
                - 24 MW net
                - Operating since 2018
            - Pegasus Wind PPA
                - 89 MW net
                - Currently under construction in Tuscola County, MI
                - Expected to commence commercial operations by end of calendar year 2019, subject to final zoning and permitting locally

3. BWL is currently working on an update to the Plan and expects this revision to be presented to the Board of Commissioners in early 2020.

Strategic Plan. The Board of Commissioners approved BWL's most recent strategic plan on September 27, 2016. The BWL uses its strategic plan to communicate to its employees which initiatives will be undertaken and what work will be completed in the coming years. The strategic plan serves the following purposes.

- Defines BWL's mission and values

- Defines BWL's seven goals
    - Enhanced customer experience
    - Community involvement
    - Effective acquisition and management of resources
    - Implementation of new technologies
    - Maintenance of a strong and diverse workforce
    - Maintenance of financial stability
    - Continuous improvement via BWL leadership

- Identifies future opportunities and challenges

- Recommends strategies for successfully achieving the organization's seven goals

Since BWL operates in multiple critical infrastructure sectors, BWL business practices place continued emphasis on technological security and resilience. Accordingly, BWL continues to reinforce and create redundancy among network infrastructures for both operations and information technology. Current operational technology initiatives include substation modernization to support smart grid enhancements, fiber WAN upgrades enabling improved physical security controls, and continued network hardening to comply with NERC-CIP requirements. Recently-completed information technology initiatives include implementation of a new datacenter with upgraded hardware for networking, storage and backup; and the addition of a secondary, offsite colocation data center for improved availability and disaster resilience.

In 2016, BWL information systems were interrupted by a ransomware attacker. BWL was able to continue providing electric, water, steam, and chilled water utility services to all customers during the incident. Ultimately, the breach experience resulted in BWL's digital security posture emerging more robust than ever. Since 2016, the BWL has not identified any notable instances of successful, malicious cyber-intrusion.

The BWL uses the following techniques and cutting-edge tools to turn away threats that could compromise utility services, trade secrets, or customer information*:

- Ransomware-resistant, encrypted backup technology
- Third-party security monitoring for data networks
- Participation in Department of Homeland Security (DHS) penetration testing programs
- Constant hardware patching and replacement
- Increased user awareness programs for BWL employees
- Network segmentation between operational and information technologies

Environmental Initiatives: Resource Planning for a Cleaner Energy Future

As a municipal utility, the BWL conducts business in a manner consistent with its commitments to the local communities it serves. The BWL believes that meeting or exceeding environmental standards will have a positive long-term impact on the economy and health of the greater Lansing region. Accordingly, the BWL prioritizes environmental stewardship and sustainability in each stage of planning and operations.

In 2007, as Michigan's first utility to adopt a renewable energy standard, the BWL committed to sourcing seven percent of retail electric sales from renewables by 2015. Also in 2007, the BWL embarked upon the development of a comprehensive energy efficiency program.† Both initiatives—renewable energy and energy efficiency—have been effective in reducing BWL's consumption of fossil fuels.

In 2010, the BWL owned and operated fourteen coal-fired generation units.‡ Only three years later, this number had been cut in half.§ The 2013 debut of the REO Town Plant marked an important milestone in a long-term plan to eliminate coal consumption at the BWL. A cogeneration facility powered by cleaner natural gas, REO allowed the BWL to replace seven coal-fired units.

REO Town's two combustion turbines are each paired with a heat recovery steam generator, which provides steam to a third steam turbine or central steam customers. REO's heat rate (8000 HHV) represents a thirty percent improvement in efficiency over Eckert's generating units (11,300 HHV). The REO Plant, which went on to win awards for safety and engineering, reflects the BWL's leadership in cleaner energy and energy waste reduction.

In 2016, the BWL published its most recent Integrated Resource Plan (IRP). The IRP resulted from a community-based effort which began the prior year. A community-based IRP offered interested locals the opportunity to participate in the planning process while also helping the BWL build community support for its resource plans. The Citizens Advisory Committee produced an IRP which recommended sourcing 30 percent of the BWL's electricity from clean energy sources by the end of 2020 and 40 percent by the end of 2030. The IRP is available in its entirety at www.LBWL.com/InvestorRelations. To meet the 2020 goal, the BWL is in the process of acquiring 20 percent of its retail sales from new renewable energy projects, such as wind and solar, in the mid-Michigan area.

The Citizens Advisory Committee's recommendations also included new generation from natural gas to replace the capacity of the BWL's existing generation units at the coal-fired Eckert and Erickson stations. On March 27, 2018, the BWL Board of Commissioners unanimously approved the plan to build a new natural gas-fired power plant, which will be cleaner and more efficient than the facilities it replaces. The new units, collectively known as the Delta Energy Park, will provide base-load generation, peaking support and cycling to further complement the BWL's growing investments in supplying

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* Since BWL operates in multiple critical infrastructure sectors, BWL considers its records and information related to its security software and hardware technology, including, but not limited to its organizational information system infrastructure, hardware, software, information systems, and any information systems or otherwise designed to protect ongoing security measures for BWL, as a public utility as confidential and exempt from disclosure pursuant to Michigan Compiled Laws 15.243(y) and (z).

† The BWL program predated the State of Michigan's statutory adoption of energy efficiency standards.

‡ Ten of the fourteen units generated electricity. Four of the units generated steam and were located at Moores Park. The steam generators provided for the BWL's "central steam" customers in downtown Lansing.

§ Units that came offline between 2010-2013 were three turbines comprising half of Eckert Station, and all four steam turbines at Moores Park.

renewable energy. The three remaining Eckert Station coal units are scheduled to retire in 2020. The Erickson Station and its coal unit will be retired in 2025.

With the last IRP published four years ago, the BWL is undertaking a new community-based IRP to update its long-term electric resource plans. The 2019 plan is currently in the initial stages and is expected to result in a schedule for adoption of additional renewable energy, growth in the BWL's demand-management program (energy efficiency and load management), and options which leverage the recently-deployed advanced metering infrastructure. The BWL expects the community-based IRP to be completed and presented to the Board of Commissioners in early 2020.

Energy Efficiency Programming

In 2007, the BWL began plans for a comprehensive energy efficiency program. In 2008, the State of Michigan promulgated renewable energy and energy efficiency standards for all utilities providing natural gas or electric services within Michigan.* Michigan Public Act 295 of 2008 required utilities to reach a standard of at least 10 percent clean energy in 2015, and to reduce retail electric consumption by 1 percent annually beginning 2012. The Act was amended in 2016 with the renewable energy standard increased to 12.5 percent in 2019 and 2020, and 15 percent in 2022. The 1 percent annual energy efficiency goal for municipal utilities remains unchanged. The state will no longer require annual compliance filings for municipal utilities after 2021.

The BWL has historically met or exceeded all statutory requirements related to energy efficiency savings and renewables.

Year	Actual Efficiency Savings as % of Retail Energy Sales
2009	0.35
2010	0.54
2011	0.81
2012	1.08
2013	1.25
2014	1.09
2015	1.42
2016	1.03
2017	1.31
2018	1.03

In 2016, the BWL Board of Commissioners adopted an updated Strategic Plan that requires the BWL to expand its renewable energy portfolio and its energy efficiency savings after 2020. The BWL expects the forthcoming IRP to recommend targets for future energy efficiency savings.

Environmental Initiatives

1. Dramatic Reductions in Coal Consumption and Air Emissions

With the growth of its renewable energy portfolio, continued investment in energy efficiency programming, construction of additional gas-fired generation and the closure of its coal plants in 2020 and 2025, the BWL has charted a cleaner energy future. The BWL expects its 2026 carbon dioxide emissions to be 80 percent lower than in 2005.

* The State of Michigan now refers to energy efficiency as energy waste reduction.

The BWL's efforts have already resulted in a dramatic reduction in coal consumption and air emissions.

Year	Coal Consumed at BWL Facilities (Tons)
2010	1,550,294
2011	1,478,873
2012	1,135,099
2013	1,007,603
2014	939,861
2015	883,572
2016	888,795
2017	871,601
2018	748,651
2026	0

Coal-fired power plants are significant emitters of nitrogen oxide (NO_X), sulfur dioxide (SO_2), and the greenhouse gas carbon dioxide (CO_2). By transitioning to cleaner energy sources and renewables, the BWL has simultaneously reduced both its emissions and dependence on coal. The BWL is committed to continuous progress in emission reductions, both before and after the replacement of coal.

Air Emission Reduction			
	CO_2	NO_x	SO_x
2010-2018	-41%	-52%	-57%

The BWL expects continued reduction of its annual coal consumption to culminate in the complete elimination of coal generation in Lansing after 2025. The BWL will achieve this through continued integration of additional generation from natural gas and renewables.

2. A Proactive Approach to Coal Combustion Residuals (CCR)

The BWL has fueled its power plants with coal for over 100 years. The resulting disposal of coal ash has impacted several parcels of property in the Lansing area. While those disposal practices were commonplace in the industry and entirely lawful at the time, they are no longer compatible with the BWL's increased environmental consciousness. Therefore, in 2008, the BWL began a voluntary, five-year, $15.7 million project to remove ash from two of its three legacy sites:

- Erickson Station—Excavation of ash from the storage cell adjacent to the power plant was completed in 2013. Since then, Erickson's bottom ash is transported to a licensed municipal landfill for proper disposal. A small, lined temporary storage and decanting cell was installed in 2015. BWL has initiated a CCR regulatory compliance program including inspections of the impoundment's structural integrity, maintenance of a fugitive dust plan, and beginning the installation of a groundwater-monitoring network.

- Comfort Street—Between 2009 and 2013, approximately 900,000 cubic yards of ash were excavated from this former landfill and disposed of in a licensed landfill. The entire site was backfilled with clean soil. Groundwater monitoring is underway in anticipation of obtaining approval for final site closure from the Michigan Department of Environment, Great Lakes and Energy.

- North Lansing Landfill—This former ash disposal site has been capped and contained. The BWL is meeting its remediation obligations by utilizing a slurry wall and four groundwater extraction wells. The wells discharge to the to the sanitary sewer system for treatment.

Eckert Station has never had an ash impoundment or landfill onsite and is therefore not impacted by this rule. The BWL's comprehensive approach to addressing its legacy CCR sites is not only the best approach for the good of the environment, it should also foreclose or mitigate future regulatory or citizen suit actions pertaining to the BWL's CCR.

Drinking Water Quality

In December 2016, the BWL completed a 12-year, $44.5 million-dollar Lead Service Line Replacement Program (LSLR). The BWL was the first utility in Michigan and the second in the United States to remove all its lead service lines. In 2018, the State of Michigan promulgated a more stringent Lead and Copper Rule, effectively reducing the lead action level below the federal standard. There are several revisions to the rule that will impact Michigan drinking water utilities including the BWL. However, the BWL is ahead of the regulatory curve, for example, regarding the requirement to inventory distribution system materials. The BWL can therefore take advantage of the cost savings associated with reduced sampling requirements. As a trailblazer in lead replacement, the BWL has been a go-to resource for utilities and regulatory authorities seeking to follow in BWL's footsteps.

In addition to lead, another water quality issue that has seen increased public awareness is the presence of per- and polyfluoroalkyl substances (PFAS). Instead of waiting on federal guidelines, Governor Gretchen Whitmer has directed the Michigan Department of Environment, Great Lakes and Energy to begin developing drinking water standards for PFAS. This is another instance where the BWL is positioned ahead of most utilities, as the BWL has been testing for PFAS since 2015. PFAS testing in 2015 and 2018 revealed no PFAS compounds present in the BWL's finished water.

The BWL has a demonstrated history of providing customers with safe, clean and affordable drinking water. By continually monitoring for changes in water quality, the BWL meets or exceeds state and federal standards for drinking water purity. A link to the latest annual BWL Water Quality Report may be found at www.lbwl.com/water.

Sustainability and Pollution Prevention

Since 2005, the BWL has been a member of the Michigan Business Pollution Prevention Program through the Michigan Department of Environment, Great Lakes and Energy. To remain in the program, businesses must establish, track and report goals annually to show persistent efforts to reduce their impact on the environment and promote a more sustainable future.

In 2017, the BWL implemented a composting program for employees at BWL facilities. Education on composting and recycling expanded greatly in 2018, when BWL composting volume increased 40 percent from the previous year. For every five cubic yards of compost material the BWL produces, a cubic yard of finished compost is given to a not-for-profit garden project in the Lansing area. Additional sustainability efforts have resulted in increased recycling and decreased contributions to landfills.

ACTUAL RECYCLING MEASUREMENTS FROM BWL FACILITIES (ANNUAL)

Recycling Type	2011	2012	2013	2014	2015	2016	2017	2018
Municipal (lbs)*	165,280	162,604	166,693	153,036	128,700	137,670	188,760	171,600
Scrap Metals (lbs)	509,846	733,199	739,171	530,890	1,075,274	818,192	798,254	938,426
Fluorescent lamps	970	2,751	2,283	2,063	2,726	2,751	3,001	1,920

* Municipal recycling includes paper, cardboard and plastic.

The BWL's Dye Water Conditioning Plant is the only water conditioning facility in the state to achieve Clean Corporate Citizen status as part of the Michigan Business Pollution Prevention Program. The BWL accomplished this by implementing and maintaining an Environmental Management System which has improved plant efficiency while reducing environmental impact. For example, tons of calcium carbonate sludge from Dye have been repurposed for soil products rather than being sent to a landfill.*

As of 2019, the BWL began planting native pollinators at two wellhead sites. Native pollinators are plant species that support bird, honeybee, butterfly and animal habitats, which will be reintroduced to BWL properties currently covered by grass. The conversion from grass to native pollinators has multiple benefits:

- The pollinator species being planted at the BWL sites are native to Michigan and thus contribute to reversing human damage inflicted upon natural ecosystems.
- The BWL will reduce fossil fuel consumption by discontinuing lawn mowing at the pollinator sites.
- The plants will improve groundwater quality, as their extensive roots provide greater filtration than those of grass.
- Additional sites will be evaluated for conversion to native pollinators.

Risk Management

In 2013, the BWL formally adopted an Energy Risk Management Program. The program is revised annually. The most recent revision was approved in September 2018.

The purpose of BWL's Energy Risk Management Program is to secure power supply that is adequate to meet expected retail load while maintaining sufficient reserves and minimizing costs. Additionally, the Program is responsible for the following objectives:

- Minimizing risk of wholesale price volatility to better manage budget results
- Optimizing resources and the value of BWL assets
- Minimizing the risk of high energy input costs
- Minimizing BWL's operational and financial exposure

Cash Management

The Board adopted a Minimum Cash Reserve Requirement Policy in 2018. By defining BWL's minimum cash reserve requirement, the policy bolsters financial strength, situational resilience, fiscal responsibility, and credit quality. This policy was developed through a systematic examination of the operating and economic risks to the BWL and relied on best practices from credit rating agencies, utility experts, and other municipal utilities.

The policy states that the minimum cash reserve requirement will be calculated annually for each year of the 6-year budget and forecast period. The current policy (FY2020-25) has calculated a minimum cash reserve requirement ranging from 151-163 days cash. This falls within the target range of 150-249 days cash recommended by credit rating agencies for the BWL's current credit quality.

Capital Improvement Plan

The BWL has a six-year capital improvement plan that is updated and adopted annually (the "Plan"). The Plan is designed to address current and future capital needs of the System in an effort to reliably meet existing and projected demand for the services provided by the BWL. The current plan covering the next six years (fiscal years 2020-2025) was adopted in May 2019 and consists of approximately $374.2 million in capital expenditure not including Delta Energy Park. Capital expenditures by utility are as follows: Electric: $228 million, Water: $58 million, Steam: $19 million, Chilled Water: $5 million, and Common: $65 million. These capital expenditures can also be broken down by location as follows: Dye/Cedar: $18 million, Eckert: $0.1 million, Erickson: $2 million, Moores Park: $3 million, Chiller Plant: $5 million, REO Plant: $12 million, Transmission and Distribution: $260 million, Other: $74 million.

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* Calcium carbonate sludge is a byproduct of the water-conditioning process.

Board of Water and Light Administrators

Richard Peffley joined the Board of Water and Light in 1976 and has been the General Manager since 2015. Mr. Peffley's experience at the BWL is extensive, having previously held numerous positions including Executive Director of Operations and Plant Manager of the Erickson and Eckert Power Stations. Mr. Peffley also served as project manager for the $182 million REO Cogeneration Plant & Headquarters and the $20 million Chilled Water Plant. He successfully brought both projects to completion on time and on budget. In July 2013, while Mr. Peffley was the Executive Director of Special Projects & Water Operations, BWL distributed a record-breaking one billion gallons of water in a single month.

Heather Shawa joined the Board of Water and Light in 2015 as the Chief Financial Officer. Ms. Shawa is responsible for the BWL's financial and administrative operations including finance and planning, budgeting, accounting, purchasing and warehousing, facilities, and information technology. Prior to joining the BWL, Ms. Shawa served as Vice President of Operations and Chief Financial Officer at Demmer Corporation. Ms. Shawa brings to the BWL her significant experience in accounting, municipal finance, acquisitions, and plant operations. Ms. Shawa sits on the boards of Peckham, Inc. and Big Brothers Big Sisters (Michigan Capital Region).

Dave Bolan joined the Board of Water and Light in 1987 and has been the Executive Director of Operations since 2015. Mr. Bolan is responsible for electric generation, transmission, and distribution; water production and distribution; customer projects; project engineering; market operations; and the BWL's NERC (North American Electric Reliability Corporation) compliance program. Mr. Bolan's previous titles at the BWL include Director of Transmission and Distribution and Manager of Bulk Power. Prior to joining the BWL, Mr. Bolan was part of the Electric Systems Division at Houston Lighting and Power.

Mark Matus joined the Board of Water and Light in 2011 and has served as Executive Director of Corporate Governance, Risk, and Legal Compliance since 2019. Mr. Matus advises the Board of Commissioners and executive management on environmental and legal compliance, risk, and employment matters. Mr. Matus may advise on transactional and compliance matters related to coal supply and transportation agreements, construction, power sales and purchases, consulting, development transactions and labor. Additionally, Mr. Matus manages both in-house and external legal counsel in a manner that is cost effective and efficient while supporting the BWL's business objectives and strategic plan. Mr. Matus also serves as a liaison to the Lansing City Attorney's office.

Michael Flowers joined the Board of Water and Light in 2008 and has served as Executive Director of Human Resources and Training since 2015. Mr. Flowers is responsible for human resources, labor relations, training and development, diversity and inclusion, safety and physical security at the BWL. Previously, Mr. Flowers worked in Human Resources for Accident Fund Insurance Company and Sparrow Health System. Additionally, he teaches human resources at Lansing Community College, and sits on the board of Peckham, Inc. and the Board of Education for Ingham Intermediate School District. Mr. Flowers is also a past president and current member of the advisory board for the Labor and Employment Relations Association and a Board member for the Capital Region Community Foundation and Lansing Community College Foundation.

Stephen Serkaian joined the Board of Water and Light in 2012 and has served as Executive Director of Customer Operations & Communications since 2015. Mr. Serkaian is responsible for internal and external communications, media relations, customer services including BWL call center, and governmental and community relations for the BWL. Previously, Mr. Serkaian worked for Detroit Mayor Dave Bing, the Lansing School District, Lansing Mayor David Hollister, the Michigan House of Representatives, and U.S. Senator Carl Levin. He sits on the board of the Arts Council of Greater Lansing.

Brandie Ekren joined the BWL in 2004 and has served as Executive Director of Strategic Planning & Development since 2019. As an attorney, Mrs. Ekren previously served as BWL's General Counsel. Ms. Ekren is responsible for long-term planning, strategic account management, and programs for renewable energy and energy efficiency. She sits on the board of Highfields Inc., a non-profit organization dedicated to community outreach for the benefit of housing and education.

Labor Relations and Personnel Matters

During the fiscal year ending June 30, 2018, the BWL employed 699 people, of whom, 457 people were considered general System employees. The balance was considered utility-specific employees with electric, steam and combined water operations employing 187, 5 and 52 people, respectively.

The International Brotherhood of Electric Workers, AFL-CIO, Local Union 352, represents approximately 425 BWL employees. The labor agreement covering these employees expires on October 31, 2020. Remaining BWL employees are non-union.

The BWL has three retirement plans. See "PENSION AND RETIREMENT SYSTEMS".

Collection and Enforcement

BWL's metered customers are billed monthly. Depending upon credit history, new customers may be required to submit a refundable deposit to establish services. Bills are due fifteen days after distribution. Customers who do not pay in full by the due date incur a five percent late fee monthly on the remaining balance. Except for residential electric customers during winter months, services may be disconnected when the unpaid balance is forty days past-due. Many community resources, including programs funded partly by the BWL, are available to low-income customers and those who have trouble paying their utility bills.

BWL's customer billing staff makes additional collection attempts between forty and one hundred days past due. Accounts over one hundred days past due are sold to an external collection agency. As of January 2019, uncollectable customer debts accounted for 0.44% of revenues during the previous twelve months. This measure compares favorably to 0.48% as of January 2018.

A minority of BWL revenues are derived from unmetered or non-traditional customers including pole attachments, traffic signals, and water supply for fire hydrants. Unmetered services are budgeted to account for less than 1% of revenues during fiscal year 2019.

Insurance

The BWL has purchased various property and casualty insurance policies to cover many of the risks of loss that it faces. However, the deductibles, scope and limits of the insurance coverages vary from time to time depending on such factors as pricing and availability. By way of illustration, the BWL currently has a total limit of $750 million for property losses with the majority on a replacement cost basis. The amount of deductibles currently varies, with the largest deductible being $1,000,000. There is also a combination of liability coverages that total $31 million for certain bodily injury and property damage claims.

THE ELECTRIC UTILITY

General

The Electric Utility component of the System has been operated by the BWL for over 120 years. It is the largest municipally-owned electric utility in Michigan with more than 97,000 customers in the greater Lansing area. A map of the service area of the Electric Utility is attached in Appendix B.

The Electric Utility owns two coal-fired electric generating facilities, a natural gas-fired cogeneration plant, and a solar installation. The combined solar array has less than one MW of net generating capacity. The coal-fired electric generating facilities consist of four units with a combined net generating capacity of 347 MW. The natural gas-fired cogeneration plant has net generating capacity of 100 MW. Through its participation in the Michigan Public Power Agency ("MPPA"), the Electric Utility has an additional capacity and energy entitlement of 150.8 MW (net) from the Belle River generating facilities in St. Clair County, Michigan. The Electric Utility also has a power purchase contract with two landfill gas electric generation facilities in Lansing totaling 11.1 MW (net) of capacity and a power purchase contract with a northern Michigan hydro-electric facility for 1.7 MW (net) of capacity. The Electric Utility has a purchase power contract for 19.2 MW (net) of wind generation with BEEBE 1B Renewable Energy. In addition to these projects, the BWL also has contracts for solar energy, 24 MW (net) of which became operational in 2018. The BWL also has contracted for additional wind energy and capacity of 89 MW (net) which facility is expected to be operational in 2019.

In addition to its generating facilities, the Electric Utility maintains 48 miles of transmission lines, 13 substations, 1,200 miles of overhead distribution lines and 679 miles of underground distribution lines. The 138 kilovolt ("kV") transmission lines loop through the 70 square mile service area and connect with transmission facilities owned by the International Transmission Company (the "ITC") with four lines at two locations. The bulk of the BWL's distribution lines are operated at 13.2 kV, with the balance, operated at 4.16 kV and 8.320 kV, being in the process of conversion to 13.2 kV distribution lines.

Joint Agency Participation

The BWL and 22 other Michigan municipalities which own and operate electric systems are members of MPPA. The Michigan Public Power Agency ("MPPA") is a public body politic and corporate of the State of Michigan created in late 1978 under Act 448, Public Acts of Michigan, 1976 as amended. As a trusted partner, the MPPA exists to help Members realize the benefits of joint action in the planning, development, acquisition and management of energy-related assets and services. MPPA presently consists of twenty-two Michigan municipality members and one associate member. Any Michigan municipality engaged in the generation, transmission or distribution of electricity may join MPPA if such municipality's governing body adopts an appropriate resolution and obtains unanimous approval of the MPPA's existing members. MPPA's full membership currently includes the municipalities of Bay City, Charlevoix, Chelsea, Eaton Rapids, Grand Haven, Harbor Springs, Hart, Holland, Lansing, Lowell, Marquette, Niles, Paw Paw, Petoskey, Portland, Sebewaing, South Haven, St. Louis, Sturgis, Traverse City, Wyandotte, and Zeeland. The City of Croswell is an associate member.

Purchased Power

In 1983, MPPA issued $590,370,000 of revenue bonds to purchase an interest in Detroit Edison Company's "Belle River" coal-fired generating facilities. Located in St. Clair County, Michigan, Belle River units one and two have a combined nameplate rating of 1,260 MW. Belle River commenced commercial operation in July 1985.

Due to corporate restructuring in 1996, Detroit Edison assumed the name of parent holding company DTE Energy Company ("DTE"). MPPA, through its purchase agreements with DTE, owns 18.61% of Belle River units one and two. Through its participation in MPPA, the BWL has purchased a capacity and energy entitlement of 150.8 MW. The BWL is entitled to its proportionate share of the capacity and energy from Belle River. The Electric Utility is utilizing the BWL's full capacity and energy entitlement from Belle River.

BWL has two current contracts with MPPA related to Belle River—one for power sales and one for project support. Under the terms of the power sales contract, BWL is required to pay MPPA for BWL's proportionate share of Belle River operation and maintenance expenses so long as power is available. These charges are an operating expense of the Electric Utility and, as such, have priority over the lien securing the Bonds.

Furthermore, BWL is contractually bound to assume the obligations of a defaulting participant, to an extent that does not exceed twenty-five percent (25%) of BWL's original obligation. In this scenario, the BWL would also become entitled to the capacity and energy previously allotted to the defaulted participant. To date, MPPA has not experienced any default among Belle River participants.

Under the terms of the project support contract, BWL is required to pay MPPA for BWL's proportionate share of Belle River payments as if Belle River had been in service. The obligations of the BWL under the project support contract are unconditional; payment must be made regardless of whether Belle River is in operation and notwithstanding the suspension or curtailment Belle River output. The obligations of the BWL under the project support contract are not an operating expense of the Electric Utility, and therefore, are made after payment of operating expenses of the Electric Utility and after payment of debt service on the Bonds and certain other bonds of the BWL issued pursuant to Act 94.

Previously, BWL was required to pay its proportionate share of debt service on MPPA's Belle River bonds. MPPA's Belle River bond debt was paid in full as of January 2, 2018. The payoff, which occurred part way through BWL's FY 2018, lowered the cost per kWH for MPPA/Belle River participants including BWL.

Excluding possible transmission losses, the following table projects the Belle River power cost per kilowatt hour ("kWh") at 80% availability from 2018 through 2022.

Lansing Board of Water and Light
Electric Utility
Projected Belle River Power Costs per kWh
Fiscal Years Ended or Ending June 30, 2018 through 2022

Year	Cents Per kWh
2018	5.91[1] cents
2019	4.41 cents
2020	5.19 cents
2021	4.77 cents
2022	4.84 cents

[1] Debt Service payments for Belle River were completed in the middle of FY 2018 lowering the cost per kWh for each participant. Following payoff of outstanding bonds, the members of the MPPA Belle River Project have the option to have the title to MPPA's ownership interest transferred to the individual project member. Otherwise MPPA's ownership interest remains unchanged as does the power purchase agreements with Belle River Project members.

Source: Lansing Board of Water and Light

In 2007, the Electric Utility entered into a twenty-one year power purchase agreement with Granger Electric of Lansing LLC. A leading provider of curbside waste and recycling services in mid-Michigan, the Granger group of companies owns and operates two landfill facilities in and near Lansing. Each Granger site is equipped with a generating station capable of capturing landfill gas and using it as fuel. The contract currently provides electric capacity totaling 11.1 MW. The power from both facilities meets Michigan's renewable energy portfolio standard. In 2017, Energy Developments Limited (EDL) acquired Granger's North-American landfill gas-to-energy facilities and assumed the BWL agreement.

Due to falling prices for renewable energy, BWL performed a revised cost analysis of the EDL agreement. Though an amendment of the agreement was considered, BWL determined that early termination would be the most cost-effective option. BWL estimates that premature severance of the contract, despite a one-time severance fee of approximately $14.2 million which BWL will pay to EDL, will still result in long-term net savings to the Electric Utility of $19.6 million. Consequently, BWL has arranged for termination of the landfill gas contract effective October 2020.

Since 2011, BWL has maintained a power purchase agreement with Tower Kleber Limited Partnership ("Tower Kleber") for 1.7MW of hydroelectric energy generated at a Tower Kleber site in Northern Michigan. The agreement automatically renews each year on January 1 unless notice to terminate is given by one of the parties. The BWL has no intent to terminate the agreement in the foreseeable future. The required notice to terminate the agreement is 6 months. BWL has complete entitlement to all Renewable Energy Credits arising during the term of the agreement. The power from this facility qualifies to meet Michigan's renewable energy portfolio standard.

BWL has a power purchase agreement with BEEBE 1B Renewable Energy LLC ("Beebe Wind") for 19.2 net MW of wind power generated from site location in Gratiot County, Michigan. The agreement is for 20 years with a commercial operation date of December 12, 2014.

The BWL has power purchase agreements with Delta Solar I LLC and Delta Solar II LLC ("Delta Solar", subsidiaries of CMS Energy Corporation) for 24MW of solar power generated from site locations in Delta Township, Michigan. The agreements are for 25 years with a commercial operation date of July 29, 2018.

The BWL has a power purchase agreement with NextEra Energy Marketing LLC ("Pegasus Wind") for 89MW of wind power generated from site location in Tuscola County, Michigan. The agreement is for 20 years with a commercial operation date of December 2019. This project was initially planned for Huron County, Michigan, but was moved to Tuscola County after local opposition prevented the project development. Currently, local opposition is impacting the project timeline and BWL is investigating potential replacement projects.

The BWL has a power purchase agreement with Community Energy Options, LLC ("Community Solar") for 0.345 MW (nominal) of solar power generated from a site in East Lansing, Michigan. This arrangement gives ordinary citizens a chance to participate in the leasing of solar panels. The site went live in 2018 under a 25-year agreement.

The BWL has a power purchase agreement with Solar Development North America LLC ("Invenergy") for 10MW of solar power generated from site location in Calhoun County, Michigan. The agreement is for 25 years with a commercial operation date of December 2021.

The BWL has a power purchase agreement with Assembly Solar LLC ("Ranger") for 10MW of solar power generated from site located in Shiawassee County, Michigan . The agreement is for 25 years with a commercial operation date of December 2020. The BWL is considering expansion of this project for an incremental 65MW of solar power.

Transmission Arrangements

ITC is the principal transmission owner in the lower peninsula of Michigan and a member of the Midcontinent Independent System Operator Inc. ("MISO") organization. ITC has turned operation of its transmission facilities over to MISO and operates under MISO's Open Access Transmission, Energy, and Operating Reserve Tariff ("Midwest Market").

In December 2012, the BWL became a non-transmission-owning member of MISO. Although the BWL owns transmission facilities, becoming a transmission-owning member of MISO would require the Electric Utility to reconfigure its generation and transmission assets within the Midwest Market. BWL has assessed possibilities for this asset reconfiguration and determined that such a plan is unlikely to produce a net financial benefit to the Electric Utility due to the Midwest Market transactional costs.

Unlike BWL, transmission-owning MISO participants have experienced increased transmission charges due to MISO's transmission investments and overhead costs. In the absence of the Project, it would be necessary for BWL to become a transmission-owning MISO member.

BWL's 138 kV transmission system interconnects with the ITC system and is governed by the MISO Tariff. Prior to 2016, BWL had two interconnection ties with the ITC system, one at the Davis substation and the other at the Enterprise substation, with an import capability of 480 MVA. In 2016, to cover the contingency requirements of NERC reliability standards, BWL installed two additional lines at the Enterprise Substation. This increased total interconnections to four and total import capability to 960 MVA.

Through its non-transmission-owning MISO membership, BWL's Electric Utility has secured entitlement to 12.5 MW of network transmission service and 150 MW of firm network transmission service through its membership in various MPPA projects. The 150 MW of network entitlement is a grandfathered transmission agreement ("GFA"). The Electric Utility does purchase additional point-to-point transmission from MISO during instances which are financially advantageous or to accommodate generation outages.

In September 2004, the Federal Energy Regulatory Commission ("FERC") issued an order addressing the treatment of GFAs within the Midwest Market. The order included MPPA transmission agreements relating to the Belle River Project, which were designated as GFAs and thus "carved out" of the Midwest Market. The GFA designation exempts the BWL from various Midwest Market charges and market congestion costs for the energy delivered from the Belle River Plant to the Electric Utility. The BWL does not anticipate any changes from FERC that will impact this exemption.

Electric Generation

The Electric Utility's primary assets are two coal-fired generating facilities and one natural-gas cogeneration facility. The newest generation asset BWL owns is the REO Town Plant, which has been in service since 2013. REO's construction was completed on time and within budget. The REO Town Plant replaced the aging, coal-fired Moores Park Steam Plant.

The REO Town plant is a combined-cycle cogeneration facility fueled by natural gas. The plant generates steam and electricity (100 MW net) in a two-step process. First, a gas turbine burns natural gas to directly power an electric generator. Second, hot exhaust from the gas turbine is captured and used to turn a once-through steam generator. The steam produced can be utilized by steam heating customers or for turning a second electric generator. REO can meet the projected maximum steam demand capacity of 300,000 pounds per hour even if one steam production unit is out of service.

The state-of-the-art facility is a cleaner, greener, and more efficient than BWL's coal plants. Without REO, BWL would have to burn an estimated 351,000 additional tons of coal per year. Greenhouse gas emissions from REO are 50 percent lower, mercury and SO_2 emissions are 99 percent lower, and NO_X emissions are 85 percent lower than a coal plant of similar capacity.

The Electric Utility owns multiple solar generation sites in Lansing, including the Cedar Street Solar Array, which came online in 2011. At the time the Array was constructed in 2009, it was the largest solar site in Michigan. BWL-owned solar panels generate less than 1 MW (net) in total.

The Electric Utility currently owns one hydroelectric generating unit, which is not currently operating. The hydroelectric generating unit had a rated capacity of 0.525 MW.

The Electric Utility's coal-fired electric generating facilities are known as the "Eckert Station" and the "Erickson Station." The Eckert station previously had six generating units. One unit was retired in 2014 and two additional units were placed in mothball status in 2015. The three operational coal-fired generating units at the Eckert Station have a combined dependable net capacity of 192 MW. These generating units were placed in service between 1964 and 1970. The Erickson Station has one coal-fired generating unit with a dependable net capacity of 155 MW. The Erickson Station was placed in service in 1973. Together, the Eckert and Erickson Stations have a combined dependable net capacity of 347 MW.

The Eckert and Erickson Stations burn low-sulfur (less than one percent) coal. Both facilities meet Michigan's air and water quality standards. The Eckert and Erickson Stations are also in compliance with federal and state environmental requirements. Information on the Electric Utility's coal-fired electric generating facilities is shown in the table set forth below.

Lansing Board of Water and Light
Electric Utility
Coal-Fired Generating Capacity by Station and Unit

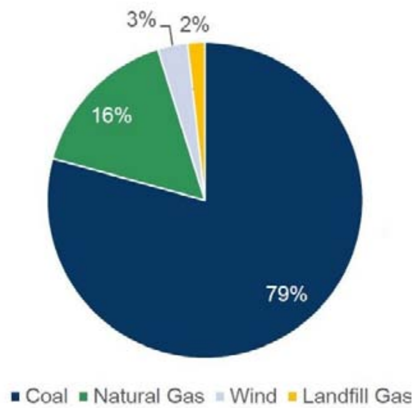
	Fuel	Year of Initial Operation	Nameplate Rating (MW)	Dependable Net Capacity (MW)
Eckert Station				
No. 4	Coal	1964	80.0	67.0
No. 5	Coal	1968	80.0	58.0
No. 6	Coal	1970	80.0	67.0
			240.0	192.0
Erickson Station				
No. 1	Coal	1973	165.0	155.0
Total			400.7	347.0

Source: Lansing Board of Water and Light

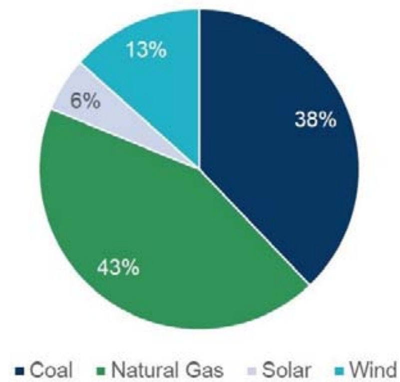
The BWL has announced plans to close the Eckert Station by 2020. This represents a proactive decision driven by environmental regulations, low-cost natural gas generation, and rising operation and maintenance costs associated with a generating plant nearing the end of its useful life. The plan to close the Eckert Station is in alignment with the BWL's strategic plan and integrated resource plan which reinforces a balanced approach and forward-looking goals, including goals for clean energy. In addition, this decision will allow further diversification of the BWL generation portfolio and proactively address market and regulatory issues. History and projections for fuel diversification are indicated in the following chart.

Moving Away from Coal: BWL Energy Resource Capacity by Fuel*

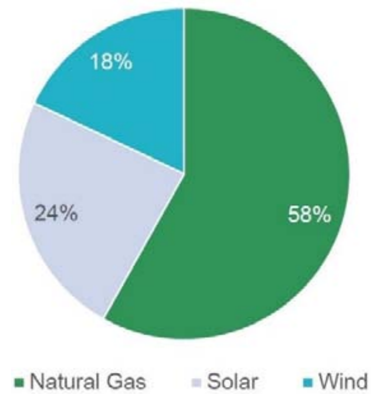
Calendar Year 2015



Calendar Year 2021



Calendar Year 2030



Operating Statistics

The following tables show the gross generation, net generation, availability factor and net capacity factor for the Eckert and Erickson Stations and the REO Town Plant for the fiscal years ended June 30, 2014 through 2018.

Lansing Board of Water and Light
Electric Utility
Eckert Station Operating Statistics
Fiscal Years Ended June 30, 2014 through 2018

Fiscal Year Ended June 30	Gross Generation (MWh) (1)	Net Generation (MWh) (2)	Availability Factor (%) (3)	Net Capacity Factor (%) (4)
2014	450,793	405,704	61.5%	23.4%
2015	661,680	597,964	72.2%	34.5%
2016	492,102	440,046	91.1%	25.3%
2017	571,378	511,601	68.5%	29.5%
2018	423,541	366,176	72.4%	21.1%

(1) Annual total of MWh produced at the Eckert Station.
(2) Annual total of MWh available for sale. The difference between gross and net generation is the MWh used to operate the Eckert Station.
(3) The annual percentage of time that the Eckert Station facility was capable of generating electricity after taking into consideration scheduled and non-scheduled outages.
(4) Annual total of MWh generated as a percentage of annual net generation capacity.
Source: Lansing Board of Water and Light

* Includes capacity from PPAs in addition to assets owned by BWL.

Lansing Board of Water and Light
Electric Utility
Erickson Station Operating Statistics
Fiscal Years Ended June 30, 2014 through 2018

Fiscal Year Ended June 30	Gross Generation (MWh) (1)	Net Generation (MWh) (2)	Availability Factor (%) (3)	Net Capacity Factor (%) (4)
2014	1,131,501	1,036,082	90.7%	77.3%
2015	932,487	854,433	74.0%	63.8%
2016	954,742	871,912	90.3%	64.9%
2017	927,709	849,954	74.7%	63.4%
2018	1,034,524	946,233	85.8%	70.6%

(1) Annual total of MWh produced at the Erickson Station.
(2) Annual total of MWh available for sale. The difference between gross and net generation is the MWh used to operate the Erickson Station.
(3) The annual percentage of time that the Erickson Station was capable of generating electricity after taking into consideration scheduled and non-scheduled outages.
(4) Annual total of MWh generated as a percentage of annual net generation capacity.
Source: Lansing Board of Water and Light

Lansing Board of Water and Light
Electric Utility
REO Town Plant Operating Statistics
Fiscal Years Ended June 30, 2014 through 2018

Fiscal Year Ended June 30	Gross Generation (MWh) (1)	Net Generation (MWh) (2)	Availability Factor (%) (3)	Net Capacity Factor (%) (4)
2014	441,509	416,519	95.5%	52.7%
2015	485,523	458,341	84.7%	57.9%
2016	554,776	525,290	92.5%	66.2%
2017	542,708	515,655	95.4	65.2%
2018	492,601	466,598	89.2	59.0%

(1) Annual total of MWh produced at the REO Town Plant.
(2) Annual total of MWh available for sale. The difference between gross and net generation is the MWh used to operate the REO Town Plant.
(3) The annual percentage of time that the REO Town Plant was capable of generating electricity after taking into consideration scheduled and non-scheduled outages.
(4) Annual total of MWh generated as a percentage of annual net generation capacity.
Source: Lansing Board of Water and Light

Lansing Board of Water and Light
Electric Utility
Energy and Capacity Mix by Fuel Type
Fiscal Years Ended June 30, 2017 through 2018

Energy Mix (MWh)	Fuel Type	FY 2017	FY 2018
Eckert	Coal	511,601	366,176
Erickson	Coal	849,954	946,233
Belle River	Coal	969,390	762,702
REO	Natural Gas	515,655	466,598
Granger/EDL	Landfill Gas	82,255	79,300
Delta Solar I	Solar	-	429
Delta Solar II	Solar	-	-
Beebe Wind	Wind	59,209	53,817
Tower Kleber	Hydro	7,099	7,409
Total		**2,995,163**	**2,682,664**

Capacity Mix (MW)	Fuel Type	FY 2017	FY 2018
Eckert	Coal	175	175
Erickson	Coal	149	154
Belle River	Coal	147	148
REO	Natural Gas	86	84
Granger/EDL	Landfill Gas	9	9
Delta Solar I	Solar	-	-
Delta Solar II	Solar	-	-
Beebe Wind	Wind	3	2
Tower Kleber	Hydro	-	-
Total		**569**	**571**

Fuel Supply and Delivery

The Eckert and Erickson Stations burn low sulfur (less than 1%) coal that contains approximately 8,800 British Thermal Units ("BTUs") per pound. The Electric Utility is currently in contract with Arch Coal for the purchase of the Utility's coal requirements, approximately 750,000 tons annually. The current price is $12.50 a ton for 2019. The contract with Arch Coal expires on December 31, 2020. Performance under the contract with Arch Coal is excused under force majeure.

Pursuant to a two-party contract dated January 9, 2014, coal is delivered by the origin rail carrier, Burlington Northern Santa Fe LLC ("BNSF") to the destination rail carrier, Canadian National Railway Company ("CN") in Chicago, IL. CN then delivers the coal to Lansing. For 2019, each rail car of coal costs the BWL Electric Utility a combined $3,759 per car before fuel surcharge. Performance under the BNSF/CN/BWL contract is excused under force majeure. The most recent contract amendment specifies a minimum of 400,000 tons per year for three years.

The current contract with BNSF & CN is scheduled to expire on December 31, 2019. BWL is exploring the possibility of renewing this contract. Additionally, BWL plans to evaluate direct negotiation opportunities with BNSF. The possibility of a BNSF contract tied to commodity pricing (of either natural gas or electricity) could additionally improve Erickson Plant's year-round market viability.

The BWL also leases 453 railcars. The BWL has one lease with Progress Rail for 453 railcars at a current cost of $560 per railcar per month. The BWL's obligation to pay the leases with Progress Rail is absolute and unconditional. The term of the Progress Rail lease runs from April 1, 2015 through March 31, 2020.

The BWL signed an agreement with Consumers Energy Company to install a natural gas pipeline to the REO Town Plant. The gas line was completed in January 2013. The BWL is a transportation customer on the Consumers Energy Company natural gas system and has firm delivery service from Consumers Energy Company. The BWL has contracted with Fellon-McCord to provide natural gas procurement services. Forward purchases of natural gas are made in accordance with the BWL's Energy Risk Management Program.

The BWL signed an agreement with Consumers Energy Company to install a natural gas pipeline to the Delta Energy Park. The gas line will be completed between June 2020 and December 2020. The BWL is a transportation customer on the Consumers Energy Company natural gas system and has firm delivery service from Consumers Energy Company. The BWL has contracted with Fellon-McCord to provide natural gas procurement services. Forward purchases of natural gas are made in accordance with the BWL's Energy Risk Management Program.

Environmental Regulations

Mercury and Air Toxics Standards Rule (MATS). After the grant of a one-year extension from the Michigan Department of Environment, Great Lakes and Energy, the BWL's compliance date for the MATS was April 15, 2016, at both Erickson and Eckert Stations. Natural gas plants such as REO Town are not included in the MATS. Although the United States Supreme Court held in June 2015, that the EPA had failed to properly promulgate the MATS, the rule remained in effect because the Court did not issue a stay of the rule.

Both Erickson and Eckert Stations are in full compliance with the rule, with one minor exception for an excessive monitoring-downtime event (noted below) at Eckert Station. The necessary emission control equipment was installed at Erickson Station well in advance of the April 15, 2016 compliance date and the plant began using the equipment in 2015. At Eckert Station, an activated carbon injection system (ACI) was installed in 2016 for units 4, 5 and 6, and was fully operational by the compliance date. Upgrades to the existing electrostatic precipitators were also made in 2015 to help ensure compliance. Compliance with the limitations on mercury emissions is monitored by sorbent traps at both plants, and compliance with the hydrogen chloride and particulate matter limitations of the rule is demonstrated by quarterly stack testing.

Cross State Air Pollution Rule (CSAPR). The Cross-State Air Pollution Rule took effect in 2015, and Michigan is one of the 23 states subject to the rule's limits on SO_2 and NO_x emissions from power plants. To help ensure compliance with the CSAPR, a Selective Non-Catalytic Reduction (SNCR) system was installed at Erickson in 2011 to reduce NO_x emissions sufficiently to cover both Erickson and Eckert emissions. Since 2017, the EPA began reducing each utility's number of NO_x allowances allocated during the summer ozone season; hence operation of the SNCR during the summer months became a standard practice. Because the BWL uses only low sulfur coal from the Powder River Basin, it anticipates it will have sufficient SO_2 allowances to meet its obligations at both plants for several years without additional control equipment.

U.S. Climate Change Regulations. The EPA's final rule on greenhouse gas emissions from existing power plants became effective on October 23, 2015 (known as the Clean Power Plan), but the United States Supreme Court stayed the implementation of the rule on February 9, 2016. The stay remains in effect. In a March 28, 2017 executive order, the Administration directed EPA to suspend, revise, or rescind any rule that was inconsistent with their policy to promote coal, oil or natural gas usage. In response, EPA proposed the Affordable Clean Energy (ACE) Rule on August 311, 2018, which establishes emission guidelines for states to develop plans to address greenhouse gas emissions from existing coal-fired plants and ultimately replaces the Clean Power Plan. BWL's future energy portfolio includes energy efficiency measures, renewable energy sources and baseload capacity from natural gas rather than coal. These measures will fulfill the requirements under both the proposed ACE and its predecessor.

Coal Combustion Residuals Rule (CCR). The Coal Combustion Residuals rule became effective October 14, 2015, and established new requirements for the disposal of Coal Combustion Residuals (CCRs) in landfills and surface impoundments. Prior to the effective date of the rule, the BWL minimized the impact of the CCR rule by excavating CCRs from two sites and modifying its bottom ash disposal practices at Erickson Station. These efforts may be summarized as follows:

- Erickson Station. Excavation of ash from the storage cell adjacent to the power plant was completed in 2013, and since then Erickson's bottom ash has been transported to a licensed municipal landfill for disposal. A small, lined temporary storage and decanting cell was installed in 2015. BWL has initiated a CCR regulation compliance program including inspections of the structural integrity of the impoundment, maintaining a fugitive dust plan and commencing the initial stages of installing a groundwater monitoring network.

- Comfort Street. Between 2009 and 2013 approximately 900,000 cubic yards of ash were excavated from the former landfill and disposed of in a licensed landfill. The entire site backfilled with clean soil and groundwater monitoring is underway in anticipation of obtaining approval for final site closure from the Michigan Department of Environment, Great Lakes and Energy.

- North Lansing Landfill. This former ash disposal site has been capped and contained, and the BWL is meeting its remediation obligations with a slurry wall and 4 groundwater extraction wells that discharge for treatment to the sanitary sewer system.

Eckert Station has never had an ash impoundment or landfill onsite and is therefore not impacted by this rule.

Cooling Water Intake Rule. Commonly referred to as the Section 316(b) Rule (section 316(b) of the Clean Water Act, 33 USC §1326), this rule took effect on October 14, 2014, and established national requirements applicable to cooling water intake structures. The requirements apply to facilities that use more than 2 million gallons per day (MMGal/day) of surface water, which includes most coal-fired power plants. The most stringent requirements apply only to facilities which exceed 125 MMGal/day.

The Rule requires the installation of the Best Technology Available for minimizing adverse environmental impacts, i.e. limiting the mortality of fish and other aquatic organisms due by impingement or entrainment in facility cooling water systems. Because Erickson Station operates a qualifying closed-loop cooling system, and actual intake flow is relatively minor at 3 MMGal/day, the existing operations represent Best Technology Available. Because Eckert Station is scheduled to retire in 2020, and because retirement is a 316(b) compliance option, the Michigan Department of Environment, Great Lakes and Energy has issued a discharge permit for Eckert through 2020 that does not require any plant upgrades for compliance.

Effluent Limitations Guidelines (ELG). On November 3, 2015, the EPA published national regulatory standards for wastewater discharge to surface waters and municipal sewage treatment plants. These ELGs regulate a variety of industrial operations including "steam electric power generators" like BWL. The guidelines forbid generation facilities from discharging any amount of bottom transport water.

The ELG limits are to be incorporated into each coal-fired power plant's National Pollution Discharge Elimination System (NPDES) permits as they come up for renewal between 2018 and 2023. The EPA is expected reconsider the rule in

Summer 2019, with the likely addition of plant closure dates as an approved compliance method (in place of the zero-discharge limitation) and further delay to the 2023 compliance deadline.

The ELGs are not applicable to Eckert Station since its current NPDES permit will not expire until after the facility's scheduled retirement in 2020. Erickson Station may become subject to ELGs upon application for renewal of its NPDES permit in 2023. BWL expects that the plant's scheduled closure in 2025 will satisfy the ELG compliance measures necessary to obtain a renewed NPDES permit.

New Source Review (NSR) & State Air Permits. The Clean Air Act requires that a permit be obtained from the regulatory authority, in this case the Michigan Department of Environment, Great Lakes and Energy, when work performed at a facility constitutes a modification that results in a significant increase in air pollution emissions. A complex and sometimes conflicting body of law pertaining to NSR litigation has developed based on years of litigation brought by the U.S. EPA, the Sierra Club and others.

On June 16, 2014, the Sierra Club served a Notice of Intent to Sue the BWL based on alleged NSR violations at Eckert and Erickson Stations, and also alleged that opacity exceedances at both facilities were in violation of the CAA as well. The BWL has denied the allegations. On August 2, 2017, BWL entered into a settlement agreement with the Sierra Club which effectively memorializes the 2016 BWL Strategic Plan measures. As part of the agreement, BWL will cease operation of its coal assets by 2020 (Eckert) and 2025 (Erickson), maintain its clean energy and energy efficiency goals and develop a sustainability program to promote energy waste reduction and pollution prevention.

On March 13, 2015, the EPA filed a Notice of Violation asserting that two projects at Erickson Station were improperly conducted without an NSR permit. Again, the BWL has denied the allegations but has engaged in an ongoing dialogue with the EPA in anticipation of resolving the dispute. Similarly, a Notice of Violation was issued by EPA on September 28, 2018 regarding failure to operate the mercury emissions monitoring system and collect data at all times at Eckert Station (i.e., excessive monitor downtime). BWL anticipates a final settlement on both accounts by the second quarter of 2019. The settlement amount is expected to be relatively minor. As part of the agreement, BWL will implement various environmental mitigation projects in the community that involve transportation electrification.

On October 12, 2018, the Michigan Department of Environment, Great Lakes and Energy issued a Violation Notice to the REO Town Cogeneration Facility regarding the small emergency engine generator (1300 kW). The air permit requires testing for particulate matter emissions every five (5) years and the September 2018 testing resulted in emissions slightly over the permit limit. A written response with corrective actions was submitted and BWL is continuing to work with the Agency and it is anticipated that resolution will be timely with little to no fines.

General. The evolving nature of environmental regulations means that practices that once met regulations, may now no longer comply with new standards. Occasionally, this requires remediation programs. To separately identify and recover the cost of these programs and new environmental related costs, the BWL has adopted an environmental surcharge. The surcharge is levied on a kWh basis and is currently $.0025 kWh.

Power Requirements

During the fiscal years ended June 30, 2014 through 2018, the Electric Utility produced between 86% and 92% of its total annual power requirements. Nearly all of the Electric Utility's remaining power requirements are met by way of the BWL's energy entitlement from Belle River. The following table sets forth the Electric Utility's total power requirements, sales and losses in MWh for the fiscal years ended June 30, 2014 through 2018.

Lansing Board of Water and Light
Electric Utility
Power Availability, Sales and Losses in MWh
Fiscal Years Ended June 30, 2014 through 2018

	Fiscal Year Ended June 30				
	2014	2015	2016	2017	2018
MWh Generated [1]	1,858,581	1,910,930	1,837,456	1,877,385	1,779,179
MWh Purchased [2]	1,057,310	990,250	978,214	1,129,910	952,516
Total MWh Available	2,915,891	2,901,180	2,815,670	3,007,295	2,731,695
Less MWh Sold [3]	2,820,879	2,808,487	2,709,158	2,927,580	2,643,780
Transmission and Distribution Losses	95,012	92,693	106,511	79,715	87,915
Losses as a percentage of MWh Available	3.26%	3.20%	3.78%	2.65%	3.22%

(1) See "Electric Generation" herein.
(2) Primarily from Belle River. See "Purchased Power" herein.
(3) Includes wholesale sales.
Source: Lansing Board of Water and Light

The following table sets forth the peak demand, total power requirements and load factor for the fiscal years ended June 30, 2014 through 2018. Peak demand is measured by MW and total power requirements are measured in MWh. Peak demand represents the highest sixty-minute interval of continuous demand during the fiscal year. Load Factor is the percentage of total power requirements to annualized peak demand.

Lansing Board of Water and Light
Electric Utility
Peak Demand, Total Power Requirement and Load Factor
Fiscal Years Ended June 30, 2014 through 2018

Fiscal Year Ended June 30	Peak Demand		Total Power Requirement		Load Factor %
	MW	% Change	MWh	% Change	
2014	470.629	-3.1%	2,268,919	-0.2%	55.0%
2015	419.726	-10.8%	2,177,914	-4.0%	59.2%
2016	433.502	3.3%	2,213,852	1.7%	58.1%
2017	454.828	4.9%	2,258,342	2.0%	56.7%
2018	420.394	-7.5%	2,174,780	-3.7%	59.1%

Power Costs

The following tables set forth the total cost of generated and purchased power and the average cost of generated and purchased power by kilowatt hour ("kWh") for the fiscal years ended June 30, 2014 through 2018.

Lansing Board of Water and Light
Electric Utility
Cost of Generated and Purchased Power [1]
Fiscal Years Ended June 30, 2014 through 2018

Source	2014	2015	2016	2017	2018
Generated………………...	$ 81,259,881	$ 98,079,875	$ 90,008,060	$88,763,259	$82,517,506
Purchased:					
Wholesale……………...	578,017	534,769	811,392	442,821	2,191,880
Green Power ………..…	6,774,291	8,706,318	9,867,671	10,158,041	9,930,521
Belle River……………..	56,988,901	57,792,606	56,247,959	59,225,184	42,020,540
Total……………………...	$145,601,090	$165,113,568	$156,935,083	$158,589,304	$136,660,447

[1] See "Electric Generation," "Purchased Power," and "Joint Agency Participation" herein.
Source: Lansing Board of Water and Light

Lansing Board of Water and Light
Electric Utility
Cost of Net Generated and Purchased Power per kWh [1]
Fiscal Years Ended June 30, 2014 through 2018

	Cost Per kWh				
Source	2014	2015	2016	2017	2018
Generated………………...	$0.044	$0.051	$0.049	$0.047	$0.046
Purchased:					
Wholesale……………...	$0.033	$0.021	$0.023	$0.037	$0.045
Green Power…………..	0.077	0.071	0.067	$0.068	$0.070
Belle River…………….	0.060	0.069	0.071	$0.061	$0.055
Average Cost Per kWh	$0.050	$0.057	$0.056	$0.053	$0.050

[1] See "Electric Generation," "Purchased Power," and "Joint Agency Participation" herein.
Source: Lansing Board of Water and Light

Service Area

The Electric Utility provides electric service to the City and Lansing Township, most of the City of East Lansing and Delta Township, and portions of Meridian, Watertown, Windsor, Delhi and DeWitt Townships. Michigan State University, which is located in the City of East Lansing, generates its own electricity and is not serviced by the Electric Utility. BWL uses a Geographic Information System (GIS) to monitor data across the Electric Utility's network, whose primary distribution lines cover approximately 99 square miles. The estimated population in the service area is 198,853 persons. By comparison, the City encompasses an area of approximately 36 square miles and has a 2017 estimated population of approximately 115,222 persons. Electric service outside of the Electric Utility's service area is provided by Consumers Energy Company.

Franchises

Article VII, Section 29 of the Michigan Constitution of 1963 provides that a utility must have a franchise to render service within a local governmental unit. A description of the Electric Utility's existing franchises is included in the table below.

Lansing Board of Water and Light
Electric Utility
Electric Franchises

Municipality	Franchise Period	Effective Date	Expiration Date
City of East Lansing	30 Years	06/06/17	06/05/47
Delhi Township	30 Years	08/01/88	08/01/18 (1)
Delta Township	30 Years	01/02/18	01/01/48
DeWitt Township	30 Years	11/10/86	11/10/16(1)
Lansing Township	30 Years	03/13/12	03/12/42
Meridian Township	30 Years	02/04/88	02/04/18(1)
Watertown Township	20 Years	05/03/89	05/15/09(1)
Windsor Township	30 Years	02/06/19	02/05/49

(1) The BWL is pursuing updates of the agreements with Delhi Township, DeWitt Township, Meridian Township and Watertown Township, and the BWL continues to provide service under the terms of the prior agreements until they are terminated or renewed.
Source: Lansing Board of Water and Light

Customers

The Electric Utility currently serves over 97,000 customers within its service area. The following tables set forth the number and percent of customers by location and classification for the fiscal years ended June 30, 2014 through 2018.

Lansing Board of Water and Light
Electric Utility
Average Number and Percent of Customers by Location
Fiscal Years Ended June 30, 2014 through 2018

	Fiscal Year Ended June 30				
Location	2014	2015	2016	2017	2018
City	59,558	59,625	59,646	59,687	59,898
Outside City	36,762	37,036	37,078	37,260	37,568
Total	96,320	96,661	96,724	96,947	97,466
City	61.8%	61.7%	61.7%	61.6%	61.5%
Outside City	38.2	38.3	38.3	38.4	38.5
Total	100.00%	100.00%	100.00%	100.0%	100.0%

Source: Lansing Board of Water and Light

Lansing Board of Water and Light
Electric Utility
Average Number and Percent of Customers by Classification
Fiscal Years Ended June 30, 2014 through 2018

	Fiscal Year Ended June 30				
Classification	2014	2015	2016	2017	2018
Residential	83,341	83,694	83,783	84,009	84,509
Commercial	12,723	12,720	12,706	12,704	12,726
Industrial	256	247	235	233	231
Total	96,320	96,661	96,724	96.946	97,466
Classification					
Residential	86.53%	86.59%	86.62%	86.66%	86.70%
Commercial	13.20	13.15	13.14	13.10	13.06
Industrial	0.27	0.26	0.24	0.24	0.24
Total	100.00%	100.00%	100.00%	100.00%	100.00%

Source: Lansing Board of Water and Light

Ten Largest Customers

The following table sets forth the ten largest customers of the Electric Utility by revenue and kWh used for the fiscal year ending June 30, 2018.

Lansing Board of Water and Light
Electric Utility
Ten Largest Customers
Fiscal Year Ended June 30, 2018

Name	Product/Service	Revenue [(1)]	% of Total Revenues [(2)]	kWh	% of Total kWh[(3)]
General Motors	Automotive Manufacturing	$26,969,398	9.20%	270,645,078	10.24%
State of Michigan	State Government	8,341,417	2.84	70,524,747	2.67
Sparrow Hospital	Healthcare	7,777,573	2.65	72,276,198	2.73
City of Lansing	Municipal Government	7,502,449	2.56	42,925,696	1.62
Meijer, Inc.	Retailing, Warehousing	7,254,224	2.47	63,989,590	2.42
Jackson National	Insurance	4,067,711	1.39	35,590,414	1.35
Liquid Web Inc.	Web Hosting Service	3,863,026	1.32	36,007,724	1.36
Auto Owners	Insurance	2,919,780	1.00	22,839,870	0.86
City of East Lansing	Municipal Government	2,898,371	0.99	20,377,333	0.77
McLaren-Greater Lansing	Healthcare	2,648,719	0.90	23,928,106	0.91
		$74,242,668	25.32%	659,104,756	24.93%

(1) City of Lansing and State of Michigan totals include Street Lighting and Traffic Signal billings, which include a capital recovery factor on Board investment in Street Lights and Traffic Signals.
(2) Based on total revenues of $293,261,408 for the fiscal year ended June 30, 2018
(3) Based on total sales of 2,643,780,034 kWH for the fiscal year ended June 30, 2018.
Source: Lansing Board of Water and Light

Rates and Charges

The Charter provides that the BWL shall have full and exclusive management of the water supply, steam and electric utility services of the City and such other services as may be agreed upon by the BWL and the City. The Charter also provides that the BWL may, with proper notice and hearing, fix just and reasonable rates as it deems necessary for such services. The implementation of new rates takes approximately three months and does not require any local, state or federal regulatory approval. It is the policy of the BWL to review all rates annually and to set such rates so that each utility is self-supporting. Rates are set on a cost of service basis.

In 2017, the BWL Board of Commissioners approved a three-year rate strategy which took effect February 1, 2018. The three-year plan will implement gradual increases in customer charges annually on February 1 during the years 2018-2020. The goal of the revised rate strategy is to better align customer rates with BWL's expense projections. As with many other utilities, BWL's rates are providing more complete coverage of fixed costs. The minor, frequent rate adjustments are designed to minimize customer impact.

BWL currently offers the following specialty electric rates:

- Time-of-use rates for the following customers
  - Commercial
  - Industrial
  - Electric Vehicles (EVs) with separate metering – BWL encourages the adoption of EVs by offering lower rates for charging during off-peak hours. This allows BWL customers to reduce the environmental impact of their transportation choices, while also saving money.
- GreenWise Power – Customers can purchase their power from 100% renewable sources for a premium of 1.3 cents per kWh. The City of Lansing recently announced that it will enroll all of its buildings/facilities in this program, making Lansing the first city in Michigan to go completely green (for electricity usage).

Customers of the Electric Utility pay basic service and capacity charges based on customer classification and an energy charge based on kWh used. All energy charges per kWh are subject to a power supply cost recovery (PSCR) adjustment ("Energy Cost Adjustment") on a monthly basis for the cost of fuel used in supplying electricity. In addition, customers are charged monthly Environmental, Renewable Energy, and Energy Optimization Surcharges. Customers are billed monthly.

Historic rate increases are set forth in the table below. These rate increases represent average system increases or increase in base rate revenue. As such, rate increases by rate class or rate component may deviate from these percentages.

Lansing Board of Water and Light
Electric Utility
Historic System Average Electric Rate Increases

Effective Date	10/1/2012[1]	10/1/2013[1]	11/1/2014	2/1/2018[2]	2/1/2019[2]	2/1/2020[2]
Rate Increase	3.75%	3.75%	7.00%	3.00%	3.00%	3.00%

(1) 10/1/2012 and 10/1/2013 increases were both approved in January 2011 as part of an advanced rate approval strategy to support the additional debt service requirements associated with the construction of the REO Town Cogeneration facility.
(2) 2/1/2018, 2/1/2019 and 2/1/2020 increases were approved in 2017 as part of an advanced rate approval strategy to support the additional debt service requirements associated with the construction of the Delta Energy Park.
Source: Lansing Board of Water and Light

Historic and existing rates and charges by customer classification are set forth in the table on the following page.

Lansing Board of Water and Light
Electric Utility
Historic, Existing, and Future Rates by Customer Classifications

Rate No. 1 – Residential service	**10/1/12**	**10/1/13**	**11/14/14**	**2/18/18**	**2/1/19**	**2/1/20**
Basic Service Charge/month	$7.79	$8.10	$10.00	$13.00	$16.00	$19.00
Commodity charge/kWh						
Summer Months (June-Oct)						
1st 500 kWh	$0.0879	$0.0912	$0.1197	$0.1230	$0.1235	$0.1242
over 500 kWh	$0.0929	$0.0964	$0.1252	$0.1285	$0.1290	$0.1297
Winter Months (Nov-May)						
1st 500 kWh	$0.0879	$0.0912	$0.1197	$0.1230	$0.1235	$0.1242
over 500 kWh	$0.0910	$0.0945	$0.1232	$0.1265	$0.1270	$0.1277
Electric Environmental charge/kWh	$0.0025	$0.0025	$0.0025	$0.00	$0.0006	$0.0006*
Energy Waste Reduction Surcharge/kWh	$0.001853	$0.001853	$0.001853	$0.002678	$0.002678	$0.002678*
Renewable Energy Plan Surcharge/Month	$2.50	$2.50	$0.75	$0.00	$0.00	$0.00*

Rate No. 3-General Secondary Voltage Service	**10/1/12**	**10/1/13**	**11/1/14**	**2/1/18**	**2/1/19**	**2/1/20**
Basic Service Charge/month	$18.66	$19.38	$24.00	$28.00	32.00	36.00
Commodity charge/kWh						
Summer Months (June-Oct)	$0.1010	$0.1048	$0.1342	$0.1410	$0.1443	$0.1478
Winter Months (Nov-May)	$0.0975	$0.1011	$0.1303	$0.1371	$0.1404	$0.1439
Electric Environmental charge/kWh	$0.0025	$0.0025	$0.0025	$0.00	$0.0006	$0.0006
Energy Waste Reduction Surcharge/month	$6.58	$6.58	$6.58	$9.51	$9.51	$9.51
Renewable Energy Plan Surcharge/Month						
per kWh	$0.0030	$0.0030	$0.0024	$0.00	$0.00	$0.00
Minimum charge/month	$3.50	$3.50	$2.80	$0.00	$0.00	$0.00
Maximum charge/month	$15.00	$15.00	$12.00	$0.00	$0.00	$0.00

Rate No. 4-Large General Secondary Voltage Service	**10/1/12**	**10/1/13**	**11/1/14**	**2/1/18**	**2/1/19**	**2/1/20**
Secondary voltage with billing demand of 15 kw or more						
Basic Service Charge/month	$39.80	$41.33	$50.00	$100.00	$150.00	$200.00
Capacity Charge / kW of max Demand	$10.58	$10.99	$11.76	$14.00	$17.25	$20.50
Commodity charge/kWh						
Summer Months (June-Oct)	$0.0592	$0.0613	$0.0877	$0.0861	$0.0789	$0.0717
Winter Months (Nov-May)	$0.0551	$0.0571	$0.0832	$0.0861	$0.0744	$0.0672
Reactive Power/kvar	$0.00095	$0.0099	$0.0106	$0.0106	$0.0106	$0.0106
Electric Environmental charge/kWh	$0.0025	$0.0025	$0.0025	$0.00	$0.0006	$0.0006
Energy Waste Reduction Surcharge/month	$65.78	$65.78	$65.78	$95.05	$95.05	$95.05
Renewable Energy Plan Surcharge per kWh	$0.003	$0.003	$0.0024	$0.00	$0.00	$0.00
Minimum charge/month	$3.50	$3.50	$2.80	$0.00	$0.00	$0.00
Maximum charge/month	$15.00	$15.00	$12.00	$0.00	$0.00	$0.00

Rate No. 5 Primary Service	**10/1/12**	**10/1/13**	**11/1/14**	**2/1/18**	**2/1/19**	**2/1/20**
With billing demand of 100kW or more						
Basic Service Charge/month	$99.53	$103.36	$125.00	$190.00	$255.00	$320.00
Capacity Charge						
Per kW on peak Billing Demand	$8.58	$8.91	$9.53	$11.50	$13.70	$16.25
Per kW on maximum Demand	$2.84	$2.95	$3.16	$4.50	$5.50	$6.20
Commodity charge/kWh						
Summer Months (June-Oct)						
On peak	$0.0534	$0.0553	$0.0813	$0.0782	$0.0730	$0.0678
Off-peak	$0.04.94	$0.0512	$0.0769	$0.0738	$0.0686	$0.0634
Winter Months (Nov-May)						
On peak	$0.0513	$0.0531	$0.0789	$0.0758	$0.0706	$0.0654
Off-peak	$0.0494	$0.0512	$0.0769	$0.0738	$0.0686	$0.0634
Reactive Power/kvar	$0.0095	$0.0099	$0.0106	$0.0106	$0.0106	$0.0106
Electric Environmental charge/kWh	$0.0025	$0.0025	$0.0025	$0.00	$0.0006	$0.0006
Energy Waste Reduction Surcharge/delivery point	$461.20	$461.20	$461.20	$666.43	$666.43	$666.43
Renewable Energy Plan Surcharge/delivery point	$160.00	$160.00	$160.00	$0.00	$0.00	$0.00

* Subject to change.

In addition to the above rates and charges, the Electric Utility has separate rate schedules for large capacity service, traffic lights, street lighting, security lighting and municipal water pumping.

Based on rates and charges currently in effect, the following table provides an estimate of the total monthly payments a residential customer of the Electric Utility would make at various usage levels.

Lansing Board of Water and Light
Electric Utility
Total Estimated Monthly Billing

kWh Usage Per Month	Basic Service Charge	Energy Charge	Total Estimated Monthly Billing
250	$16.00	$30.86	$46.86
500	$16.00	$61.75	$77.75
750	$16.00	$93.71	$109.71
1,000	$16.00	$125.67	$141.67

Source: Lansing Board of Water and Light

Electric Sales

The following table sets forth the sales and percent of sales by customer classification for the fiscal years ended June 30, 2014 through 2018. Sales are shown in MWh.

Lansing Board of Water and Light
Electric Utility
Amount in MWh and Percent of Sales by Customer Classification
Fiscal Years Ended June 30, 2014 Through 2018

	Fiscal Year Ended June 30				
Classification	2014	2015	2016	2017	2018
Residential	571,413	554,360	552,593	573,534	556,294
Commercial	1,151,058	1,140,878	1,131,488	1,156,655	1,133,090
Industrial	395,960	366,790	388,541	404,848	367,530
Wholesale [(1)]	664,545	710,848	601,474	758,182	554,654
Other	37,903	35,611	35,061	34,361	32,212
Total	2,820,879	2,808,487	2,709,157	2,927,580	2,643,780
Classification					
Residential	20.26%	19.74%	20.40%	19.59%	21.04%
Commercial	40.80	40.62	41.77	39.51	42.86
Industrial	14.04	13.06	14.34	13.83	13.90
Wholesale [(1)]	23.56	25.31	22.20	25.90	20.98
Other	1.34	1.27	1.29	1.17	1.22
Total	100.00%	100.00%	100.00%	100.00%	100.00%

[(1)] Includes sales to MPPA Power Pool participants.
Source: Lansing Board of Water and Light

Electric Revenues

Electric rates and charges have historically accounted for approximately 80% of gross System revenues. The following table sets forth amount and percent of electric revenues by customer classification for the fiscal years ended June 30, 2014 through 2018.

Lansing Board of Water and Light
Electric Utility
Amount and Percent of Revenues by Customer Classification
Fiscal Years Ended June 30, 2014 through 2018

	Fiscal Year Ended June 30				
Classification	2014	2015	2016	2017	2018
Residential	$75,342,990	$78,506,198	$81,756,039	$82,442,118	$80,819,134
Commercial	130,685,946	136,104,421	141,572,563	141,794,161	137,408,227
Industrial	37,528,235	37,755,775	40,501,600	41,338,384	37,908,882
Wholesale	31,821,390	28,169,851	24,756,062	31,969,934	21,846,410
Other	13,775,903	14,511,660	14,659,504	15,380,580	15,278,754
Total	$289,154,464	$295,047,904	$303,245,766	$312,925,177	$293,261,407

Classification					
Residential	26.06%	26.61%	26.96%	26.35%	27.56%
Commercial	45.20	46.13	46.69	45.31	46.85
Industrial	12.98	12.79	13.36	13.21	12.93
Wholesale	11.00	9.55	8.16	10.22	7.45
Other	4.76	4.92	4.83	4.91	5.21
Total	100.00%	100.00%	100.00%	100.00%	100.00%

Source: Lansing Board of Water and Light

THE WATER UTILITY

General

The Water Utility component of the System was established in 1885 and currently serves more than 56,000 customers. Water is obtained from 124 wells averaging 400 feet in depth with a total hydraulic capacity of approximately 68.3 million gallons per day ("MGD"). During the fiscal year ended June 30, 2018, the average and maximum daily flows were approximately 20.47 MGD and 28.9 MGD, respectively. The Water Utility has two water conditioning plants that soften water in a process that reduces hardness from about 450 parts per million to 85-100 parts per million. The two conditioning plants are interconnected and have a combined capacity of 50 MGD. Water is fluoridated and virtually all water is supplied through meters. The distribution system has 805 miles of mains, most of which are six inches or more in diameter. The Water Utility has four covered reservoirs with a combined capacity of 24 million gallons.

Lead Service Replacement & Regulation

The EPA's Lead and Copper Rule took effect in 1991 with the intent of reducing public exposure to lead in drinking water. In 2018, the State of Michigan promulgated a more stringent rule, effectively reducing the lead action level below the federal standard. The Water Utility has maintained compliance with the rule by maintaining corrosion control and systematically removing lead services lines.

The BWL's uses a corrosion control additive to inhibit lead found in the water distribution system and household plumbing from leaching into drinking water. Even though this additive has been effective in achieving compliance with the rule, the BWL began a project to remove all 13,500 lead service lines (approximate) from its distribution system in 2004. The BWL completed the removal of all active lead service lines in December of 2016.

In June of 2018, the State of Michigan promulgated a new Lead and Copper Rule. This rule reduces the acceptable level of lead in the State of Michigan from 15 ppb to 12 ppb by 2024. It further requires the replacement of all lead service lines within 20 years and changed requirements for lead sampling and reporting.

The BWL will continue to be in full compliance with the new rule. BWL conducts sampling for lead and copper every three (3) years as required by the state and federal rules. Results of the testing indicate that BWL water consistently exhibits lead and copper concentrations well below (and far safer than) the limits provided by all state and federal public health standards.

Service Area and Customer Base

The Water Utility provides water supply services to over 56,000 retail customers and 3 wholesale customers, which include Delta and Lansing Townships and the East Lansing-Meridian Water and Sewer Authority. The Water Utility's retail service area includes the City, Delhi and Watertown Townships and portions of the City of DeWitt and the Townships of Lansing, Windsor, Bath, Alaiedon, and DeWitt. A map of the service area of the Water Utility is attached in Appendix B. Retail customers that are not located in the City receive water supply services pursuant to various water supply contracts. The Water Utility has retail and wholesale water supply contracts with the authority and townships set forth in the table below.

Lansing Board of Water and Light
Water Utility
Water Supply Contracts

Municipality	Expiration Date
Delhi Township	06/30/43
Watertown Township	11/25/26
Lansing Township (Retail)	06/28/35
Lansing Township (Wholesale)	06/28/35
Windsor Township	06/22/28
Alaiedon Township	07/26/29
DeWitt Township	07/14/25
Delta Township (Wholesale)	05/01/34
East Lansing-Meridian Authority (Wholesale)	12/31/25
Bath Township	08/11/28
City of DeWitt	08/31/30

Source: Lansing Board of Water and Light

The following tables set forth the average number and percent of water customers by customer classification, meter size and location for the fiscal years ended June 30, 2014 through 2018.

Lansing Board of Water and Light
Water Utility
Average Number and Percent of Water Customers by Classification
Fiscal Years Ended June 30, 2014 through 2018

	Fiscal Year Ended June 30				
Classification	2014	2015	2016	2017	2018
Residential	48,574	48,696	49,044	49,368	49,699
Commercial	6,553	6,569	6,629	6,693	6,755
Industrial	100	98	98	98	95
Total	55,227	55,363	55,771	56,159	56,549
Classification					
Residential	87.95%	87.96%	87.93%	87.91%	87.88%
Commercial	11.87	11.87	11.89	11.92	11.95
Industrial	0.18	0.18	0.18	0.17	0.17
Total	100.00%	100.00%	100.00%	100.00%	100.00%

Source: Lansing Board of Water and Light

Lansing Board of Water and Light
Water Utility
Average Number and Percent of Water Customers by Location
Fiscal Years Ended June 30, 2014 through 2018

	Fiscal Year Ended June 30				
Location	2014	2015	2016	2017	2018
Inside of City ………	40,219	40,183	40,359	40,521	40,669
Outside of City …….	15,008	15,180	15,412	15,638	15,880
Total ……………	55,227	55,363	55,771	56,159	56,549
Location					
Inside of City ………	72.82%	72.58%	72.36%	72.15%	71.92%
Outside of City …….	27.18	27.42	27.64	27.85	28.08
Total ……………	100.00%	100.00%	100.00%	100.00%	100.00%

Source: Lansing Board of Water and Light

Ten Largest Customers

The following sets forth the principal product or service as well as the water revenues and volume as billed for the ten largest customers of the Water Utility for the fiscal year ended June 30, 2018.

Lansing Board of Water and Light
Water Utility
Ten Largest Water Customers
Fiscal Year Ended June 30, 2018

Name	Principal Product or Service	Revenue	% of Total Revenue [1]	100 CF	% of Total 100 CF [2]
State of Michigan	State Government	$689,874	1.66%	109,542	7.11%
Sparrow Hospital	Healthcare	602,276	1.45	138,927	1.58
City of Lansing	Municipal Government	593,642	1.43	151,210	1.72
General Motors	Automotive Manufacturing	479,595	1.15	122,998	1.40
DTN Management	Property Management	335,665	0.81	58,482	0.66
Lansing School District	Education	278,683	0.67	36,401	0.41
Emergent Bio Solutions	Pharmaceutical	271,419	0.65	78,587	0.89
McLaren-Greater Lansing	Healthcare	249,817	0.60	57,045	0.65
Sohn Linen Service	Textile Rental	181,909	0.44	49,729	0.56
Lansing Community College	Education	178,395	0.43	39,548	0.45
		$3,861,275	9.29%	842,469	15.43%

(1) Based on total water sales of $41,524,144 for the fiscal year ended June 30, 2018.
(2) Based on total water volume in 100 CF totaling 8,813,036 the fiscal year ended June 30, 2018.
Source: Lansing Board of Water and Light

Rates and Charges

The Charter provides that the BWL shall have full and exclusive management of the water supply, steam and electric services of the City and such other services as may be agreed upon by the BWL and the City. The Charter also provides that the BWL may, with proper notice and hearing, fix just and reasonable rates as it deems necessary for such services. The implementation of new rates takes approximately three months and does not require any local, state or federal regulatory approval. It is the policy of the BWL to review all rates annually and to set such rates so that each utility is self-supporting. Rates are set on a cost of service basis.

In 2017, the BWL Board of Commissioners approved a three-year rate strategy which took effect February 1, 2018. The three-year plan will implement gradual increases in customer charges annually on February 1 during the years 2018-2020. The goal of the revised rate strategy is to better align customer rates with BWL's expense projections. As with many other utilities, BWL's rates are providing more complete coverage of fixed costs. The minor, frequent rate adjustments are designed to minimize customer impact.

Retail customers of the Water Utility pay basic service and water commodity charges. Basic service charges are based on water meter size. Water commodity charges are based on metered water usage. Water usage is measured in cubic feet ("cf") and 100 CF ("ccf"). All retail customers are subject to a power and chemical cost adjustment ("Power and Chemical Adjustment"). The Power and Chemical Adjustment permits the monthly increase or decrease in the water commodity charge based on the cost of power and chemicals required to deliver treated water to customers. Customers are billed monthly. The following tables set forth a history of the Water Utility's basic service and water commodity charges as well as an estimate of the monthly bill for a residential customer at various usage levels.

Lansing Board of Water and Light
Water Utility
Monthly Basic Service Charge by Water Meter Size

	Effective Date					
Meter Size	3/1/2011	3/1/2012	11/1/2014	2/1/2018	2/1/2019	2/1/2020
5/8"	$10.27	$11.19	$12.20	$13.72	$14.75	$15.86
3/4"	14.38	15.67	17.08	13.72	14.75	15.86
1"	26.73	29.14	31.76	33.51	36.02	38.72
1 1/4"or 1 1/2"	59.61	64.97	70.82	74.72	80.32	86.35
2"	104.81	114.24	124.52	131.37	141.22	151.81
3"	236.34	257.61	280.79	296.23	318.45	342.33
4"	421.30	459.22	500.55	528.08	567.69	610.26
6"	947.34	1,032.6	1,125.53	1,187.43	1,276.49	1,372.22
8"	1,683.14	1,834.62	1,999.74	2,109.73	2,267.96	2,438.06
10"	2,630.56	2,867.31	3,125.37	3,297.27	3,544.57	3,810.41

Source: Lansing Board of Water and Light

Lansing Board of Water and Light
Water Utility
Monthly Water Commodity Charge per ccf of Metered Usage

Effective Date	Charge Per ccf
March 1, 2011 …………………….	$2.35
March 1, 2012 …………………….	$2.56
November 1, 2014…………………	$2.79
February 1, 2018…………………...	$2.94
February 1, 2019…………………...	$3.16
February 1, 2020…………………...	$3.40

Source: Lansing Board of Water and Light

Lansing Board of Water and Light
Water Utility
Estimated Monthly Residential Bill as of February 2019

Usage in CF Per Month	Basic Service Charge	Water Commodity Charge	Estimated Monthly Bill
500...	$14.75	$15.80	$30.55
750...	14.75	23.70	38.45
1,000..	14.75	31.60	46.35
1,250..	14.75	39.50	54.25

Source: Lansing Board of Water and Light

Water Volume

Water volume is measured in ccf. There are 748 gallons of water in 1 ccf. The following tables set forth information regarding total, average and peak water volume as pumped and/or billed by customer classification and location for the fiscal years ended June 30, 2014 through 2018.

Lansing Board of Water and Light
Water Utility
Total Water Volume in ccf as Billed
Fiscal Years Ended June 30, 2014 through 2018

Fiscal Year Ended June 30	Water Sales (ccf)	% Increase (Decrease)
2014	9,102,071	(3.96)
2015	8,438,229	(7.29)
2016	8,377,643	(0.72)
2017	9,060,254	8.15
2018	8,813,036	(2.73)

Source: Lansing Board of Water and Light

Lansing Board of Water and Light
Water Utility
Total Water Volume in ccf as Pumped and Billed
Fiscal Years Ended June 30, 2014 through 2018

	Fiscal Year Ended June 30				
Water Volume	2014	2015	2016	2017	2018
Pumped	10,035,841	9,298,557	9,380,554	9,790,315	9,988,297
Billed...............................	9,102,071	8,427,636	8,377,211	9,060,254	8,813,036
Unaccounted [1]	933,770	870,921	1,003,343	730,061	1,175,261
Unaccounted as a Percent of Pumped.....	9.30%	9.37%	10.70%	7.46%	11.77%

[1] Unaccounted water volume is due primarily to the flushing of lines, fire flows, pressure releases during routine maintenance, line loss and slow meters. As part of its quality control efforts, the Water Utility routinely flushes transmission lines.
Source: Lansing Board of Water and Light

Lansing Board of Water and Light
Water Utility
Average and Peak Daily Water Volume in MGD as Pumped
Fiscal Years Ended June 30, 2014 through 2018

	Fiscal Year Ended June 30				
Water Volume	2014	2015	2016	2017	2018
Average Daily	20.6	19.0	19.2	20.06	20.47
Peak Daily.......................	30.0	27.1	36.9	37.9	28.9
Peak as a Percent of Average	145.6%	142.6%	192.2%	188.9%	141.2%

Source: Lansing Board of Water and Light

Lansing Board of Water and Light
Water Utility
Amount and Percent of Water Volume in ccf as Billed by Customer Classification
Fiscal Years Ended June 30, 2014 through 2018

	Fiscal Year Ended June 30				
Classification:	2014	2015	2016	2017	2018
Residential	2,918,363	2,757,917	2,714,343	2,887,287	2,821,554
Commercial	2,926,068	2,793,407	2,798,491	3,027,357	3,009,526
Industrial	733,663	590,018	581,299	636,919	578,184
Sales for Resale	2,411,333	2,173,650	2,170,434	2,396,047	2,291,128
Other	112,644	112,644	112,644	112,644	112,644
Total	9,102,071	8,427,636	8,377,211	9,060,254	8,813,036
Classification:					
Residential	32.06%	32.72%	32.40%	31.87%	32.02%
Commercial	32.15	33.15	33.41	33.41%	34.15%
Industrial	8.06	7.00	6.94	7.03%	6.56%
Sales for Resale	26.49	25.79	25.91	26.45%	26.00%
Other	1.24	1.34	1.34	1.24%	1.28%
Total	100.00%	100.00%	100.00%	100.00%	100.00%

Source: Lansing Board of Water and Light

Lansing Board of Water and Light
Water Utility
Amount and Percent of Water Volume in ccf as Billed by Location
Fiscal Years Ended June 30, 2014 through 2018

	Fiscal Year Ended June 30				
Location	2014	2015	2016	2017	2018
Inside of City	4,916,492	4,567,326	4,504,080	4,744,776	4,658,836
Outside of City [1].........	4,185,579	3,860,310	3,873,131	4,315,478	4,154,200
Total	9,120,071	8,427,636	8,377,211	9,060,254	8,813,036
Location					
Inside of City	54.02%	54.19%	53.77%	52.37	52.86%
Outside of City [1].........	45.98	45.81	46.23	47.63	47.14
Total	100.00%	100.00%	100.00%	100.00%	100.00%

[1] Includes the wholesale sales to Delta Township, Lansing Township and the East Lansing-Meridian Water and Sewer Authority.
Source: Lansing Board of Water and Light

Water Revenues

Water sales have historically accounted for approximately 10% of gross System Revenues. The following tables set forth the amount and percent of water sales by customer classification and location for the fiscal years ended June 30, 2014 through 2018.

Lansing Board of Water and Light
Water Utility
Amount and Percent of Water Sales by Customer Classification
Fiscal Years Ended June 30, 2014 through 2018

	Fiscal Year Ended June 30				
Classification	2014	2015	2016	2017	2018
Residential ………	$14,586,522	$15,224,539	$15,114,364	$15,666,926	$16,493,502
Commercial……..	11,837,260	11,992,029	12,607,269	13,244,695	13,541,233
Industrial ………..	2,269,551	1,886,307	1,964,514	2,127,132	1,957,693
Sales for Resale [1].	3,277,407	3,151,972	3,199,681	3,514,857	3,397,051
Other …………….	5,276,200	5,655,258	5,844,775	6,184,445	6,134,665
Total ………..	$37,246,940	$37,910,105	$38,730,603	$40,738,055	$41,524,144
Classification					
Residential ………	39.16%	40.16%	39.03%	38.46%	39.72%
Commercial……..	31.78	31.63	32.55	32.51	32.61
Industrial ………..	6.09	4.98	5.07	5.22	4.71
Sales for Resale [1].	8.80	8.31	8.26	8.63	8.18
Other …………….	14.17	14.92	15.09	15.18	14.78
Total ………..	100.00%	100.00%	100.00%	100.00%	100.00%

[1] Represents the wholesale sales to Delta Township, Lansing Township and the East Lansing-Meridian Water and Sewer Authority.
Source: Lansing Board of Water and Light

Lansing Board of Water and Light
Water Utility
Amount and Percent of Water Revenues by Location
Fiscal Years Ended June 30, 2014 through 2018

	Fiscal Year Ended June 30				
Location	2014	2015	2016	2017	2018
Inside of City…….	$24,482,568	$24,862,453	$25,237,980	$26,130,876	26,950,279
Outside of City [1]..	12,764,371	13,047,653	13,492,622	14,607,178	14,573,864
Total…………	$37,246,939	$37,910,106	$38,730,602	$40,738,054	$41,524,143
Location					
Inside of City…….	65.73%	65.58%	65.16%	64.14%	64.90%
Outside of City [1]..	34.27	34.42	34.84	35.86	35.10
Total…………	100.00%	100.00%	100.00%	100.00%	100.00%

[1] Includes the wholesale sales to Delta Township, Lansing Township and the East Lansing-Meridian Water and Sewer Authority.
Source: Lansing Board of Water and Light

THE STEAM UTILITY

General

The Steam Utility component of the System was established in the early 1900's when the Michigan Heat and Power Company was purchased by the BWL. Steam is currently supplied to approximately 80 square blocks in the City's downtown business district as well as a GM plant in Lansing. In addition to heat, some downtown buildings use steam in absorption units to provide air conditioning and GM utilizes steam for processing.

During the fiscal year ended June 30, 2018, the Steam Utility served approximately 171 customers. The following table sets forth average number and percent of steam customers by classification for the fiscal years ended June 30, 2014 through 2018.

Lansing Board of Water and Light
Steam Utility
Average Number and Percent of Customers by Classification
Fiscal Years Ended June 30, 2014 through 2018

	Fiscal Year Ended June 30				
Classification	2014	2015	2016	2017	2018
Residential	5	5	5	6	5
Commercial	172	170	169	165	164
Industrial	1	1	1	1	1
Total	178	176	175	172	170
Classification					
Residential	2.81%	2.84%	2.86%	3.49%	2.94%
Commercial	96.63	96.59	96.57	95.93	96.47
Industrial	0.56	0.57	0.57	0.58	0.59
Total	100.00%	100.00%	100.00%	100.00%	100.00%

Source: Lansing Board of Water and Light

Steam Generation

BWL produces steam and electricity at its REO Town Plant through the combustion of natural gas. The simultaneous production of steam and electricity is known as cogeneration. To generate steam, the Plant utilizes two, once-through heat recovery generators and a single auxiliary boiler. Each generator can produce 175,000 pounds of steam per hour. Though the generators normally run simultaneously, the Plant can meet maximum demand capacity of 300,000 pounds per hour even if one generator fails. When steam production exceeds demand, the excess steam is routed to the electric generation cycle, where it results in increased efficiency.

Rates and Charges

The Charter provides that the BWL shall have full and exclusive management of the water supply, steam and electric services of the City and such other services as may be agreed upon by the BWL and the City. The Charter also provides that the BWL may, with proper notice and hearing, fix just and reasonable rates as it deems necessary for such services. The implementation of new rates takes approximately three months and does not require any local, state or federal regulatory approval. It is the policy of the BWL to review all rates annually and to set such rates so that each utility is self-supporting. Rates are set on a cost of service basis.

In 2017, the BWL Board of Commissioners approved a three-year rate strategy which took effect February 1, 2018. The three-year plan will implement gradual increases in customer charges annually on February 1 during the years 2018-2020. The goal of the revised rate strategy is to better align customer rates with BWL's expense projections. As with many other utilities, BWL's rates are providing more complete coverage of fixed costs. The minor, frequent rate adjustments are designed to minimize customer impact.

Customers of the Steam Utility pay a steam commodity charge as well as a basic service charge or a demand charge. The steam commodity charge is based on metered steam usage that is measured in thousand pounds. The basic service charge is based on a maximum gauge pressure of 15 pounds per square inch ("psi"). The demand charge replaces the customer charge for large industrial users. The demand charge is based on contracted hours of use. All customers are subject to a Fuel Cost Adjustment. The Fuel Cost Adjustment permits the monthly increase or decrease in steam commodity charges for the cost of fuel used in supplying steam. In addition customers are subject to a monthly environmental charge. Customers are billed monthly. The table on the following page sets forth a history of the Steam Utility's customer, demand and commodity charges.

Lansing Board of Water and Light
Steam Utility
Historic and Existing Rates by Customer Classification

Rate No. 1-General Steam Service

Effective Date	3/1/12	10/1/12	11/1/14	2/1/18	2/1/19	2/1/20
Basic Service charge……..…………......	$12.20	$12.44	$13.56	$14.31	$15.38	$16.54
Commodity Charge per Mlbs						
Summer Months (June-Nov.)						
First 200,000 lbs ……………..............	$13.91	$14.19	$15.47	$16.32	$17.54	$18.86
Over 200,000 lbs.……….....................	$14.61	$14.90	$16.24	$17.13	$18.41	$19.80
Winter Months (Dec.-May)						
First 200,000 lbs……………………..	$14.08	$14.36	$15.65	$16.51	$17.75	$19.08
Over 200,000 lbs …………………….	$14.78	$15.08	$16.44	$17.34	$18.64	$20.04
Environmental Charge (Per Mlb)	$0.30	$0.30	$0.30	$0.30	$0.30	$0.30

Rate No. 2-Industrial Steam Service

Effective Date	3/1/12	10/1/12	11/1/14	2/1/18		
Monthly Rate:						
Demand Charge per lb per hour						
Lbs per hour of Contract Demand……	$1.40	$1.43	$1.56	$1.65	$1.77	$1.91
Lbs per hour over Contract Demand…	$1.22	$1.24	$1.35	$1.42	$1.53	$1.64
Commodity Charge per Mlbs…………….	$8.56	$8.73	$9.52	$10.04	$10.79	$11.60
Environmental Charge (Per Mlb)	$0.30	$0.30	$0.30	$0.30	$0.30	$0.30

Rate No. 5-Residential Steam Service

Effective Date	3/1/12	10/1/12	11/1/14	2/1/18		
Basic Service charge……..…………......	$9.04	$9.22	$10.05	$10.60	$11.40	$12.25
Commodity Charge per Mlbs						
Summer Months (June-Nov.)						
First 200,000 lbs ……………..............	$10.77	$10.99	$11.98	$12.64	$13.59	$14.61
Over 200,000 lbs.……….....................	$11.27	$11.50	$12.54	$13.23	$14.22	$15.29
Winter Months (Dec.-May)						
First 200,000 lbs……………………..	$10.90	$11.12	$12.12	$12.79	$13.75	$14.78
Over 200,000 lbs …………………….	$11.41	$11.64	$12.69	$13.39	$14.39	$15.47
Environmental Charge (Per Mlb)	$0.30	$0.30	$0.30	$0.30	$0.30	$0.30

Source: Lansing Board of Water and Light

Steam Volume

Steam volume is measured in Mlbs. The following table sets forth amount and percent of Steam as billed by customer classification for the fiscal years ended June 30, 2014 through 2018.

Lansing Board of Water and Light
Steam Utility
Amount and Percent of Steam as Billed in Mlbs by Customer Classification
Fiscal Years Ended June 30, 2014 through 2018

	Fiscal Year Ended June 30				
Classification	2014	2015	2016	2017	2018
Residential	1,064	1,651	962	921	1,153
Commercial	464,171	464,651	385,699	396,265	441,647
Industrial	263,451	210,013	226,495	261,160	187,925
Other	80,084	58,918	68,857	68,839	74,132
Total	808,770	735,233	682,013	727,185	704,857
Classification					
Residential	0.13%	0.22%	0.14%	0.13%	0.16%
Commercial	57.39	63.20	56.55	54.49	62.66
Industrial	32.57	28.56	33.21	35.91	26.66
Other	9.90	8.01	10.10	9.47	10.52
Total	100.00%	100.00%	100.00%	100.00%	100.00%

Source: Lansing Board of Water and Light

Steam Revenues

The following table sets forth amount and percent of Steam revenue as billed by customer classification for the fiscal years ended June 30, 2014 through 2018.

Lansing Board of Water and Light
Steam Utility
Amount and Percent of Steam Revenues as Billed by Customer Classification
Fiscal Years Ended June 30, 2014 through 2018

	Fiscal Year Ended June 30				
Classification	2014	2015	2016	2017	2018
Residential	$ 19,376	$ 27,304	$13,136	$12,568	15,750
Commercial	9,071,313	8,851,858	6,843,529	6,665,713	7,803,043
Industrial	5,488,362	4,744,825	4,433,915	3,526,152	2,901,334
Other	1,745,077	1,335,225	1,392,882	1,199,742	1,351,891
Total	$16,324,128	$14,959,212	$12,683,463	$11,404,175	$12,072,018
Classification					
Residential	0.12%	0.18%	0.10%	0.11%	0.13%
Commercial	55.57	59.17	53.96	58.45	64.64
Industrial	33.62	31.72	34.96	30.92	24.03
Other	10.69	8.93	10.98	10.52	11.20
Total	100.00%	100.00%	100.00%	100.00%	100.00%

Source: Lansing Board of Water and Light

Ten Largest Customers

The following sets forth the principal product or service as well as the steam revenues and volume as billed for the ten largest customers of the Steam Utility for the fiscal year ended June 30, 2018.

Lansing Board of Water and Light
Steam Utility
Ten Largest Steam Customers
Fiscal Year Ended June 30, 2018

Name	Product /Service	Revenue	% of Revenues [1]	Mlbs	% of Mlbs [2]
State of Michigan	State Government	$3,730,612	30.90%	232,572	33.00%
General Motors	Automotive Manufacturing	2,745,299	22.74	187,925	26.66
Lansing Comm. College	Education	916,147	7.59	52,666	7.47
City of Lansing	Municipal Government	396,470	3.28	22,711	3.22
LEPFA	Entertainment	273,885	2.27	15,700	2.23
Blue Cross/Blue Shield	Insurance	176,962	1.47	9,600	1.36
Boji Group	Real Estate Management	174,535	1.45	9,488	1.34
Ingham County	Municipal Government	168,232	1.39	9,711	1.38
Bock 100 Limited Ptnr/Radisson	Property Management	151,205	1.25	8,160	1.16
Gentilozzi Real Estate Inc.	Real Estate Managers	94,450	0.78	5,149	0.73
Total		$8,827,797	73.12%	553,682	78.56%

(1) Based on total steam revenues of $12,072,018 for the fiscal year ended June 30, 2018.
(2) Based on total steam sales of 704,857 thousand pounds ("Mlbs") for the fiscal year ended June 30, 2018.
Source: Lansing Board of Water and Light

THE CHILLED WATER UTILITY

General

In June of 2001, the Chilled Water Utility component of the System commenced operations upon completion of its chilled water production and distribution facilities. Beginning with the fiscal year ended June 30, 2006, the Chilled Water Utility was separated from the Steam Utility.

A new 8,000 ton hour chilled water production facility was completed in September 2009. The facility was constructed at 625 West Allegan Street on land leased from the State of Michigan. The facility was completed on time and within budget resulting in no adverse financial impact on the BWL or its customers. The project was also completed without disruption of chilled water service. The decommissioning of the original chilled water facility was completed shortly thereafter and is no longer an asset of the BWL.

Service Area and Customer Base

During the fiscal year ended June 30, 2018, the Chilled Water Utility served 19 commercial accounts in the City's downtown business district. At this time the Utility does not serve any residential, industrial or other type of customer besides these 19 commercial accounts. The following table sets forth the number of service leads and chilled water volume for the fiscal years ended June 30, 2014 through 2018. Chilled water sales are measured in thousand ton hours ("Thrs").

Lansing Board of Water and Light
Chilled Water Utility
Number of Service Leads and Volume in Thrs by Classification
Fiscal Years Ended June 30, 2014 through 2018

	Fiscal Year Ended June 30				
	2014	2015	2016	2017	2018
Commercial Customers..	16	18	19	19	19
Sales……………….	10,117	10,153	11,970	12,062	10,321

Source: Lansing Board of Water and Light

Rates and Charges

The Charter provides that the BWL shall have full and exclusive management of the water supply, steam and electric services of the City and such other services as may be agreed upon by the BWL and the City, such as chilled water. The Charter also provides that the BWL may, with proper notice and hearing, fix just and reasonable rates as it deems necessary for such services. The implementation of new rates takes approximately three months and does not require any local, state or federal regulatory approval. It is the policy of the BWL to review all rates annually and to set such rates so that each utility is self-supporting. Rates are set on a cost of service basis.

Customers of the Chilled Water Utility pay capacity and commodity charges. Capacity charges are based on contracted hours of use. Chilled water commodity charges are based on metered usage measured in Thrs. Customers are billed monthly. The following table sets forth a history of the Chilled Water Utility's capacity and commodity charges.

Lansing Board of Water and Light
Chilled Water Utility
Historic and Existing Rates

Gen. Chilled Water Service	January 1 2001	May 1 2009	May 1 2011	November 1 2014*
Capacity Charge per Thrs Up to 105% of Contract Demand……………………………	$40.64	$41.66	$43.74	$45.05
Over 105% of Contract Demand….	$56.90	$58.32	$61.24	$63.08
Commodity Charge per Thrs...........	$0.115	$0.118	$0.124	$0.128

Source: Lansing Board of Water and Light

* Rates approved November 1, 2014 are still in effect. BWL anticipates no change to the chilled water rate prior to February 1, 2021.

Chilled Water Revenues

The following table sets forth amount and percent of chilled water revenue as billed by customer classification for the fiscal years ended June 30, 2014 through 2018.

Lansing Board of Water and Light
Chilled Water Utility
Chilled Water Revenues by Classification [1]
Fiscal Years Ended June 30, 2014 through 2018

	Fiscal Year Ended June 30				
Customer Classification	2014	2015	2016	2017	2018
Residential	$ 0	$ 0	$ 0	$ 0	$ 0
Commercial	5,397,411	5,568,287	6,275,583	6,361,721	6,225,356
Industrial	0	0	0	0	0
Other	0	0	0	587	0
Total	$5,397,411	$5,568,287	$6,275,583	$6,362,308	$6,225,356

[1] Includes billed and accrued, unbilled revenues.
Source: Lansing Board of Water and Light

Chilled Water Customers by Volume and Revenues

The following sets forth the principal product or service as well as the chilled water revenues and volume as billed for the customers of the Chilled Water Utility for the fiscal year ended June 30, 2018.

Lansing Board of Water and Light
Chilled Water Utility
Chilled Water Customers by Volume and Revenues
Fiscal Year Ended June 30, 2018

User	Principal Product or Service	Thrs	% Thrs[1]	Revenues	% Revenues[2]
State of Michigan [3]	State Government	7,543,300	72.96%	$4,772,988	76.67%
Accident Fund	Insurance	762,253	7.37	444,379	7.14
Grand Tower.	State Government	782,762	7.57	404,548	6.50
River St. Triangle (State Police)	Property Management	270,214	2.61	235,541	3.78
Ingham County	Municipal Government	537,881	5.20	157,067	2.52
Total		9,896,410	95.71%	$6,014,523	96.61%

[1] Based on total chilled water sales of 10,339 MThrs for the fiscal year ended June 30, 2018.
[2] Based on total chilled water revenues of $6,225,356 for the fiscal year ended June 30, 2018.
[3] The State of Michigan has multiple service leads.
Source: Lansing Board of Water and Light

SYSTEM FINANCIAL INFORMATION

Historic and Projected Operating Cash Flows and Debt Service Coverage

The following tables set forth the historic operating cash flow and debt service coverage for the fiscal years ended June 30, 2014 through 2018 as well as the projected operating cash flow and debt service coverage of the System, including the Bonds described herein, for the fiscal years ending June 30, 2019 through 2025. The projections and assumptions are subject in all respects to unforeseen forces and events beyond the control of the BWL. Such projections and assumptions, while believed by the BWL to be reasonable, may not be actually realized. Investors should form their own judgment as to the reasonableness of the assumptions and accuracy of the projections.

FINANCIAL INFORMATION
Lansing Board of Water and Light
Historic Operating Cash Flow and Debt Service Coverage
Fiscal Years Ended June 30, 2014 through 2018

	2014[(1)(3)]	2015[(1)(3)]	2016[(1)]	2017[(1)(4)]	2018[(1)]
Operating Revenues					
Water	$ 37,246,939	$ 37,910,106	$ 38,730,602	$ 40,738,054	$ 41,524,143
Electric	289,154,465	295,047,904	303,245,766	312,925,177	293,261,408
Steam	16,324,128	14,959,212	12,683,463	11,404,174	12,072,018
Chilled Water	5,397,411	5,568,287	6,275,583	6,362,308	6,225,356
Total Operating Revenues	**348,122,943**	**353,485,509**	**360,935,414**	**371,429,713**	**353,082,924**
Operating Expenses					
Production	182,244,198	187,752,343	178,958,141	180,513,276	159,154,089
Transmission and distribution	23,092,502	20,870,026	21,593,598	25,978,934	27,913,404
Administrative and general	66,583,248	61,297,460	64,007,040	71,417,820	73,638,904
Return on equity [(2)]				21,862,457	20,561,871
Depreciation	38,997,186	39,104,343	41,541,561	42,598,423	44,255,255
Total Operating Expenses	**310,917,134**	**309,024,172**	**306,100,340**	**342,370,910**	**325,523,523**
Operating Income (Loss)	**37,205,809**	**44,461,337**	**54,835,074**	**29,058,803**	**27,559,401**
Non-Operating Revenues (Expenses)					
Investment income	1,866,462	1,351,006	1,913,873	914,829	834,087
Other (Expense) Income	(5,974,385)	1,534,922	(4,588,160)	478,719	(833,318)
Impairment of Power Stations	--	--	(15,763,520)	(9,337,129)	--
System capacity fee	9,222,989	9,223,075	3,351,392	--	--
Bonded debt interest expense	(15,334,915)	(14,995,574)	(14,861,300)	(14,703,367)	(13,331,897)
Amortization-Central Utilities Complex	(7,642,715)	(8,057,715)	(2,902,715)	--	--
Payment in lieu of taxes[(2)]	(20,608,093)	(20,840,065)	(21,033,531)	--	--
Other interest expense	(41,555)	(49,691)	(51,049)	(51,446)	(62,210)
Net Income (Loss)	**(1,306,403)**	**$12,627,295**	**900,064**	**6,360,409**	**14,116,063**
Add:					
Depreciation and impairment	38,997,186	39,104,343	57,305,081	51,935,552	44,255,255
Interest on long-term debt-revenue bonds	15,334,915	14,995,574	14,861,300	14,703,367	13,331,897
Interest on long-term debt-notes	41,555	49,691	51,049	51,446	62,210
Total Additions/Deductions	**54,373,656**	**54,149,608**	**72,217,430**	**66,690,365**	**57,649,362**
NET INCOME AVAILABLE FOR DEBT SERVICE	**$53,067,253**	**$66,776,903**	**$73,117,494**	**$73,050,774**	**$71,765,425**
Debt Service Requirements					
2005A Bonds	5,796,000	--	--	--	--
2008A Bonds	1,947,262	2,762,100	2,978,400	2,967,800	1,814,800
2009A Bonds	8,783,799	8,783,881	3,191,802	--	--
2011A Bonds	12,809,200	12,814,200	12,814,050	12,813,900	12,813,750
2012A Bonds	1,428,500	1,425,350	6,146,750	5,583,750	5,575,500
2013A Bonds	1,199,750	2,319,650	2,323,250	2,320,500	2,321,900
2017A Bonds	--	--	--	573,561	1,518,250
Total Existing Revenue Bond Debt Service	**$31,964,511**	**$28,105,181**	**$27,454,252**	**$24,259,511**	**$24,044,200**
Total	**$31,964,511**	**$28,105,181**	**$27,454,252**	**$24,259,511**	**$24,044,200**
Total Debt Service Coverage	**1.66x**	**2.38x**	**2.66x**	**3.01x**	**2.98x**

(1) Actual
(2) Payment in lieu of taxes is now reflected in Return on equity.
(3) Due to GASB 68, Fiscal Years 2014-2015 have been modified.
(4) Due to GASB 75, Fiscal Year 2017 has been modified.
Source: Lansing Board of Water and Light

Lansing Board of Water & Light

Projected Operating Cash Flow and Debt Service Coverage

Fiscal Years Ending June 30, 2019 Through 2025

	2019 [1]	2020 [2]	2021 [2]	2022 [2]	2023 [2]	2024 [2]	2025 [2]
Operating Revenues							
Water	$ 43,963,398	$ 46,374,332	$ 49,927,738	$ 54,150,683	$ 58,667,873	$ 63,572,882	$ 66,642,366
Electric	304,904,991	334,372,495	333,721,668	356,074,112	362,520,374	370,333,306	373,239,334
Steam	11,535,789	13,071,557	13,626,027	14,413,793	15,128,049	16,122,261	16,707,980
Chilled Water	6,008,148	6,295,907	6,402,699	6,683,175	6,938,292	7,201,091	7,358,790
Total Operating Revenues	$ 366,412,325	$ 400,114,291	$ 403,678,132	$ 431,321,763	$ 443,254,588	$ 457,229,540	$ 463,948,469
Operating Expenses							
Production	155,713,542	173,807,455	167,436,249	186,609,678	191,525,407	194,517,278	195,246,039
Transmission and distribution	30,374,073	30,106,239	30,975,841	31,398,824	31,898,152	32,363,611	32,308,111
Administrative and general	80,130,443	79,423,864	81,717,979	82,833,858	84,151,146	85,379,082	85,232,666
Depreciation and impairment	47,433,868	48,461,630	58,069,667	68,659,156	70,072,214	66,542,685	68,607,604
Total Operating Expenses	$ 313,651,927	$ 331,799,187	$ 338,199,736	$ 369,501,516	$ 377,646,919	$ 378,802,655	$ 381,394,419
Operating Income (Loss)	$ 52,760,399	$ 68,315,103	$ 65,478,396	$ 61,820,247	$ 65,607,668	$ 78,426,885	$ 82,554,050
Non-Operating Revenues (Expenses)							
Investment income	$ 3,740,066	$ 5,318,475	$ 2,986,514	$ 2,510,406	$ 2,524,256	$ 2,538,106	$ 2,551,956
Other income	118,147	(11,613)	305,460	305,460	305,460	305,460	305,460
System capacity fee	-	-		-	-	-	-
Bonded debt interest expense	(14,796,247)	(31,517,521)	(33,198,493)	(33,183,840)	(32,698,061)	(32,075,982)	(31,350,663)
Amortization-Central Utilities Complex							
Return on Equity	(21,709,074)	(23,709,620)	(24,038,679)	(25,661,733)	(26,377,852)	(27,212,859)	(27,606,515)
Other interest expense	(12,252)	(12,252)	(12,252)	(12,252)	(12,252)	(12,252)	(12,252)
Net Income (Loss)	$ 20,101,039	$ 18,382,572	$ 11,520,945	$ 5,778,287	$ 9,349,219	$ 21,969,357	$ 26,442,036
Add:							
Depreciation	$ 47,433,868	$ 48,461,630	$ 58,069,667	$ 68,659,156	$ 70,072,214	$ 66,542,685	$ 68,607,604
Interest on long-term debt--revenue bonds [3]	14,796,247	15,034,046	21,191,767	33,183,840	32,698,061	32,075,982	31,350,663
Interest on long-term debt--notes	12,252	12,252	12,252	12,252	12,252	12,252	12,252
Total Additons/ Deductions	$ 62,242,367	$ 63,507,928	$ 79,273,686	$ 101,855,248	$ 102,782,527	$ 98,630,919	$ 99,970,519
NET INCOME AVAILABLE FOR DEBT SERVICE	$ 82,343,406	$ 81,890,500	$ 90,794,631	$ 107,633,535	$ 112,131,746	$ 120,600,276	$ 126,412,554
Bonded Debt Service Requirements							
2011A Bonds	$ 16,438,600	$ 16,442,100	$ 16,458,575	$ 16,470,325	$ 16,481,575	$ 16,491,825	$ 16,495,975
2013A Bonds	2,320,900	2,327,500	2,324,750	2,323,000	2,322,000	2,316,500	2,321,500
2017A Bonds	3,123,250	3,113,000	3,094,250	3,087,250	3,076,250	3,071,250	3,061,750
2019A and 2019B Bonds [3, 4]	-	-	8,115,181	18,618,500	18,623,500	18,626,250	18,631,500
2020A Bonds [3]	-	-	1,045,957	3,061,338	3,061,338	3,061,338	3,061,338
Total Bonded Debt Service	$ 21,882,750	$ 21,882,600	$ 31,038,713	$ 43,560,413	$ 43,564,663	$ 43,567,163	$ 43,572,062
Total Debt Coverage [5, 6]	**3.81x**	**3.69x**	**2.91x**	**2.46x**	**2.56x**	**2.75x**	**2.90x**
Unrestricted Cash Balance [7]	$ 126,239,004	$ 149,877,402	$ 164,209,219	$ 169,170,062	$ 183,357,833	$ 180,786,895	$ 206,054,931
Days Cash on Hand	160	178	197	189	200	194	221

[1] For the fiscal year ending June 30, 2019, revenues, operating expenses, and non-operating revenues (expenses) are based upon the LBWL 2019-2024 budget and forecast.

[2] For the fiscal years ending June 30, 2020 through 2025, revenues, operating expenses, and non-operating revenues (expenses) are based upon the LBWL 2020-2025 budget and forecast.

[3] Excludes estimated capitalized interest.

[4] The Bonds described herein.

[5] The current Debt Service Coverage requirement is 1.25x Coverage. See Appendix E, Section 16, "Rate Covenant" herein.

[6] Total Debt Coverage includes Bonded Debt Service and other Long-Term Debt Service Obligations.

[7] Unrestricted Cash includes the Operating Fund and Unrestricted Cash Investments. It excludes some dollars set aside per Board policy requirements.

PENSION AND RETIREMENT SYSTEMS

The BWL has three retirement plans. The BWL administers a tax-qualified, single-employer, noncontributory, defined benefit public employee retirement pension plan (the "Defined Benefit Plan"), and the BWL has a tax-qualified, single-employer, noncontributory, defined contribution public employee retirement pension plan (the "Defined Contribution Plan"). The BWL also has a tax-qualified, single-employer, defined benefit plan to administer and fund retiree healthcare benefits ("Retiree Benefit Plan and Trust").

Defined Benefit Plan

The Defined Benefit Plan was established by the BWL in 1939 under Section 5-203 of the City Charter and has been revised several times. The latest revision took effect on July 1, 2010.

The Defined Benefit Plan was closed to employees hired after December 31, 1996. At this time participants were required to make an irrevocable choice to either remain in this plan or move to the newly established defined contribution plan. 602 of the 760 employees required to make this choice elected to convert their retirement benefits and received a lump-sum distribution that was rolled into the newly established defined contribution plan. As a result of this action, effective December 1, 1997, the Board of Commissioners transferred $75,116,470 to the newly established defined contribution plan.

The Defined Benefit Plan provides retirement, early retirement, disability, termination, and death benefits. The Plan provides for an annual benefit upon normal retirement age equal to the product of the total number of years of credited service multiplied by a percentage equal to 1.80 percent of the highest annual pay during the last 10 years of service, paid in equal monthly installments.

Payments will be non-increasing or increasing only as follows: (i) By an annual percentage increase that does not exceed the annual percentage increase in a cost-of-living index that is based on prices of all items and issued by the Bureau of Labor Statistics; (ii) To the extent of the reduction in the amount of the employee's payments to provide for a survivor benefit upon death, but only if the beneficiary dies or is no longer the employee's beneficiary; (iii) To provide cash refunds of employee contributions upon the employee's death; or (iv) To pay increased benefits that result from a plan amendment.

Article 9, Section 24 of the State of Michigan constitution requires that financial benefits arising on account of employee service rendered in each year be funded during that year. Accordingly, the BWL Pension Board retains an independent actuary to determine the annual contribution. The actuarially determined rate is the estimated amount necessary to finance the costs of benefits earned by plan members during the year, with an additional amount to finance any unfunded accrued liability. There was no contribution needed for the years ended June 30, 2017 and 2018.

Net Pension Liability – The components of the net pension liability of the BWL at June 30, 2017 and June 30, 2018 were as follows (in thousands):

	2018	2017
Total pension liability	$55,750,503	$56,894,658
Plan fiduciary net position	$62,366,985	$65,923,813
Plan's net pension liability	$(6,616,482)	$(9,029,155)
Funded Status	111.87%	115.87%

Actuarial Assumptions – The total pension liability in the June 30, 2018 actuarial valuation was determined using the following actuarial assumptions applied to all periods included in the measurement: inflation, 3%; salary increases, salary increases 2018 – 3.50%; investment rate of return 7.00%; discount rate 7.00%. Mortality rates were based on the Pre and Post retirement - RP-2014 Total Dataset Mortality Table, Male and Female, adjusted to 2006 and projected generationally using the MP-2017 projection scale.

Defined Contribution Plan

The Defined Contribution Plan was established by the BWL in 1997 under Section 5-203 of the City Charter. The Defined Contribution Plan covers substantially all full-time employees hired after December 31, 1996. In addition, 602 employees hired before January 1, 1997 elected to convert their retirement benefits from the Defined Benefit Plan effective December 1, 1997.

The Defined Contribution Plan operates as a money purchase pension plan and meets the requirements of Section 401(a) and 501(a) of the IRC of 1986, as amended from time to time.

For employees hired before January 1, 1997, the BWL is required to contribute 15.0 percent of the employees' compensation. For employees hired after January 1, 1997, the BWL is required to contribute 8.1 percent or 9.5 percent (depending on classification as bargaining or nonbargaining) of the employees' compensation. In addition, the BWL is required to contribute 3.0 percent of the employees' compensation for all employees who are not eligible to receive overtime pay and 0.5 percent of the employees' compensation for all nonbargaining employees.

During the years ended June 30, 2018 and 2017, the BWL contributed $6,534,888 and $6,052,720, respectively.

Retiree Benefit Plan and Trust

The Retiree Benefit Plan and Trust (the "Plan") is a single-employer defined benefit healthcare plan. The Plan provides medical, dental, and life insurance benefits in accordance with Section 5-203 of the City Charter. Substantially all of the BWL's employees may become eligible for healthcare benefits and life insurance benefits if they reach normal retirement age while working for the BWL. There were 728 participants eligible to receive benefits at June 30, 2018.

In October 1999, the BWL formed a Voluntary Employee Benefit Administration (VEBA) trust for the purpose of accumulating assets sufficient to fund retiree healthcare insurance costs in future years. During the years ended June 30, 2018 and 2017, the cost to the BWL of maintaining the Retiree Benefit Plan was $10,395,327 and $9,573,671, of which respectively, was incurred as direct costs of benefits.

The required VEBA contribution is based on a projected pay-as-you-go financing requirement with an additional amount to prefund benefits. The pay-as-you-go retiree benefits paid was more than the actuarial determined contribution (ADC) in 2018 and therefore, expensed on the statement of changes in trust net position.

Funding status and funding progress trend information is as follows (in thousands):

Valuation Date	Market Value Of Assets	Total OPEB Liability	Net OPEB Liability	Funded Status	Covered Payroll	Net OPEB Liability as a % of Covered Payroll
6/30/18	$184,039,624	$203,487,065	$19,447,441	90.44%	$55,650,345	34.95%

Actuarial Assumptions – The accrued actuarial liability in the June 30, 2018 actuarial valuation was determined using the following actuarial assumptions applied to all periods included in the measurement: projected healthcare trend rates ranging from 5-9%; amortization method level dollar over a 30-year period; investment rate of return 7.50%; discount rate 7.50%. Mortality rates were based on the Pre and Post retirement - RPH-2014 Total Dataset Mortality Table, Male and Female, adjusted to 2006 and projected generationally using the MP-2017 projection scale.

RETURN ON CITY EQUITY

Effective July 1, 2013 the BWL began a five-year agreement with the City to provide annual payments to the City as a return on the City's equity in accordance with a formula based on 6.1% of wholesale and retail sales from its water supply, steam, chilled water and electric utilities. Effective July 1, 2018 the agreement was extended for two years to expire June 30, 2020.

Fiscal Year Ended June 30,	Payment to City
2014	$20,608,093
2015	20,840,065
2016	21,033,531
2017	21,862,457
2018	20,561,871

CERTAIN RISK FACTORS AFFECTING THE ELECTRIC UTILITY INDUSTRY

The Electric Utility Industry Generally

The electric utility industry has been, and in the future may be, affected by a number of factors which could affect the financial condition of electric utilities, such as the Electric Utility. Such factors include, among others, (i) effects of compliance with rapidly changing environmental, safety, licensing, regulatory and legislative requirements, (ii) changes resulting from energy efficiency and demand-side management programs on the timing and use of electric energy, (iii) other federal and state legislative changes particularly with respect to renewable energy requirements, (iv) "self-generation" and distributed generation by customers, (v) issues relating to the ability to issue tax-exempt obligations, (vi) restrictions on the ability to sell electricity from generation projects financed with outstanding tax-exempt obligations to non-governmental entities, (vii) changes from projected future load requirements, (viii) increases in costs, (ix) shifts in the availability and relative costs of different fuels, and (x) restructuring of the electric industry. Some of these factors are discussed in greater detail below.

Regional Transmission Organization, Midwest Market, and Wholesale Competition

General. The electric utility industry in the United States has undergone fundamental change prompted by (i) the Energy Policy Act of 2005 (the "Energy Policy Act"), (ii) policies of the FERC regarding transmission access and pricing, (iii) increased consolidation and mergers of electric utilities, (iv) the rise of RTOs as market entities, (v) the proliferation of merchant or self-generators, (vi) substantial changes in pricing and structures for electric services by RTOs, and (vii) many regulatory commissions and legislative bodies promoting increased competition in the electric utility industry.

To promote wholesale competition, four regional transmission organizations (RTOs), ISO New England, PJM Interconnection, the MISO, and the southwest Power Pool span the Northeast, Mid-Atlantic, Great Lakes and mid-continent states. These RTOs together with Independent System Operators ("ISOs") in New York, Texas and California assure non-discriminatory open access transmission and transparent, liquid energy and ancillary services markets. These organizations have changed the way many electric generating and transmission systems have been operated in the past. RTOs and ISOs have been created by FERC or the states to promote and assure vibrant wholesale electricity competition. However large sections of the country, predominately in the Southeast and West, are not served by an RTO or ISO, but, instead, maintain traditional wholesale and retail markets.

Exposure to Dealings with Third Parties. The BWL manages all trading with 3rd parties in accordance with its Risk Management Program. All forward trading is limited to hedging exposure of physical assets. Forward trading involves fuel purchasing for power plant use, power purchases as necessary for retail load requirements and power sales when excess generation is available and economic. The BWL does have several long-term power purchase agreements for its renewable portfolio. The BWL believes that its exposure to these agreements is negligible.

FERC Initiatives. On July 20, 2006, FERC issued Order No. 679, which adopted incentive based rate treatment for transmission of electricity in interstate commerce by public utilities. This final rule is intended to encourage transmission infrastructure investment. The ITC has approval to automatically adjust transmission rates based on a forward looking test year, which will make it more likely transmission rates will increase. It has also received approval to collect incentive rates for transmission service. This could increase transmission costs for the Electric Utility. However, BWL currently has point to point customers and only buys transmission when resources are not available.

The FERC has approved a MISO tariff request to create a new category of transmission projects referred to as Multi Value Projects ("MVP"). MISO's rate request results in the cost of these projects being charged to all transmission customers regardless of where the project occurs in the MISO footprint or to whom the benefits may accrue. In the future, MVP transmission related rate increases could be significant to most transmission customers. Because of its GFA carve-out and generation connected to its system, the BWL does not anticipate that the MVP rate treatment will have a significant impact on its electric transmission costs or its financial condition.

The Midcontinent Independent System Operator. MISO, which was originally created under FERC's jurisdiction to assure open and non-discriminatory access to the bulk transmission system, has substantially expanded its activities. MISO has effectively implemented a version of FERC's Standard Market Design which is known as the "Midwest Market Initiative" (Midwest Market) and "MISO Day 2". Under the Midwest Market arrangements, MISO has significantly changed wholesale electric purchases, sales, and operations within its footprint. The Electric Utility is a market participant of and is affected by the Midwest Market.

MISO performs the following services for the Midwest Market:

1. MISO performs scheduling and dispatching of most of the electric generating units in the MISO footprint. The goal of this is to achieve lower cost energy through a more efficient dispatch of resources than can be obtained by utilities making separate generation scheduling and dispatching decisions.

2. MISO has replaced traditional transmission congestion management where transmission transactions were interrupted to relieve congestion with an arrangement that uses generation re-dispatch and energy pricing signals to encourage transmission users to avoid transactions that cause transmission congestion. Under this arrangement, MISO will use generation re-dispatch as much as possible to relieve transmission congestion, and only interrupt transactions as a last resort

3. MISO operates day-ahead and real time energy and ancillary services markets based on the Locational Marginal Price ("LMP") at the various injection and withdrawal points on the transmission grid. LMP is calculated by MISO as the cost to supply the next increment of load using the bids that have been made by market participants to either supply additional energy or reduce energy usage.

4. MISO implemented its ancillary services and operating reserves market in January, 2009. Ancillary services include regulation and operating reserves that market participants can self-supply or purchase from the MISO. Suppliers can sell these services to other market participants.

Beginning in January 2011, the BWL became a market participant with a load and a generation asset in the Midwest Market. The BWL has placed the remaining three operational Eckert units, Erickson plant, and REO Town plant "behind the meter" and uses its GFA from Belle River to serve retail customers. This configuration allows the Electric Utility to minimize transmission costs, participate in the Midwest Market, and maintain reliability.

In the future, the BWL may consider placing part or all of its generation "in front of the meter" should that configuration produce economic benefits or improved reliability.

Participation in the Midwest Market has had a net positive impact on the BWL's electric operations. The BWL sells excess generation into wholesales markets on an hourly basis at LMP prices and to third parties for durations ranging from one day up to three years. In addition, the BWL sells excess capacity used by third parties for compliance with MISO's Planning Reserve Margin requirements on an annual basis consistent with MISO's planning year.

The BWL's wholesale portfolio consists of seasonal and opportunity sales. Aside from day-ahead sales into the Midwest Market, all of the Electric Utility's sales are system firm, and the Electric Utility is not obligated to provide electric energy in the event units are unavailable. The Electric Utility has used the system firm sale structure for the past twelve years.

Retail Wheeling. The State of Michigan enacted the "Customer Choice and Electric Reliability Act" ("PA 141") in 2000 as a means to promote electric competition in Michigan. The Electric Utility was subject to PA 141 until October of 2008. Between 2000 and 2008, the Electric Utility did not lose any customers to alternate electric suppliers. In October, 2008, the Michigan Legislature adopted major changes to the electric utility industry in Michigan through PA 295 of 2008 and PA 141 as amended by PA 286 of 2008. Most of the changes affected utilities under the jurisdiction of the Michigan

Public Service Committee ("MPSC"), which are investor owned utilities and certain electric cooperative utilities. Since municipal utilities are not under the jurisdiction of the MPSC, many of the changes did not affect the Electric Utility. However two provisions in the legislation were applicable to the Electric Utility. The first required all electric utilities to meet certain renewable energy and energy efficiency standards. The second changed the scope of Michigan's retail customer choice program, relieving municipal utilities of any obligation to offer retail customer choice in their service territories. With this change, the Electric Utility is no longer subject to retail electric competition within its service territory. It remains subject to competition with neighboring utilities for new customers that locate in areas served by both the neighboring utilities and the Electric Utility, except within the Lansing city boundaries within which only the Electric Utility can serve.

Renewable Energy and Energy Efficiency Standards

In October 2008, the Michigan Legislature adopted Public Act (PA) 295 ("PA 295"), which required all Michigan electric utilities to meet certain renewable energy and energy efficiency targets. Starting in 2012, the renewable energy standards were phased-in over 4 years and required each utility to purchase or generate a growing percentage of the power used to serve its retail customers from a qualifying renewable energy facility. The percentage of renewable energy required starting in 2015 and thereafter is 10%.

Each megawatt hour (MWh) produced by a qualifying renewable energy facility creates one renewable energy credit ("REC") that can be used to meet the renewable energy standard. Bonus credits are provided for Michigan- made sources that meet certain characteristics. Utilities comply with the requirements by either generating electric energy from qualifying facilities, or by purchasing RECs.

The legislation also adopted rate impact limits on compliance costs, which legislation defines as the incremental costs incurred in procuring the energy and RECs necessary to meet the renewable energy standards. The rate limits are $3.00 per residential customer per month, $16.58 per commercial secondary customer meter per month, and $187.50 per commercial primary customer per meter month.

The Electric Utility has already secured multiple sources of qualifying energy, consisting of two landfill gas generation facilities, one hydro unit, multiple solar installations and a wind project. Collectively, these sources provide approximately 7% of the Electric Utility's retail load. The legislation permits the Electric Utility to carry forward unused renewable energy credits for three years. Based on current generation levels and contracted projects, the Electric Utility exceeded the State standard in 2018, and is projected to exceed the State standard each year thereafter.

The Board approved a Strategic Plan update on September 27, 2016 that adopts a goal of 30% clean energy by 2020. The BWL projects that its renewable energy will constitute approximately 20% of its retail sales by 2020. The balance of the 30% goal is expected to be met with energy savings from the Board's energy efficiency program.

PA 295 also required each Michigan electric utility to meet energy efficiency targets, for the reduction of energy consumption by retail customers, limits on rate impacts of energy efficiency programs, and cost-benefit tests. Like the renewable energy program, the energy efficiency goals are increased each year for four years. Load management programs that only shift energy use from peak periods to off-peak periods generally cannot be used to comply with the energy efficiency targets. The goal of the energy efficiency standard is to reduce electric energy consumption through deployment of energy efficient appliances and devices. The goals have been structured as energy savings as a percentage of total retail sales, and are incremental each year. Each year after 2012, PA 295 requires electric utilities to save 1% of retail energy sales through energy efficiency programs.

A second requirement of the energy efficiency legislation constrains each electric utility to spend no more than 2.0% of the retail revenue from the second year proceeding the program year.

In December 2016, the Michigan Legislature passed Public Act 342 (PA 342), also known as the "Clean and Renewable Energy and Energy Waste Reduction Act", and the Governor signed into law, two energy reform bills. Among other things, the bills modified PA 295's renewable energy and energy efficiency standards. The bills adopt a renewable energy standard of 15% by 2021 and no longer mandate energy efficiency goals for municipal utilities after 2020. The BWL's resource plans call for 20% renewable energy by 2020 and a continuation and growth in the energy efficiency program after 2020. As a result, the BWL does not anticipate any changes to its plans based on the new laws.

The Electric Utility has successfully complied with the savings and spending standards required by PA 295 and its replacement, PA 342, in each year from 2009 until 2018 and programs are currently active.

Collectively, the renewable energy and energy efficiency programs have provided environmental compliance and generation planning benefits to the Electric Utility and have been popular with BWL customers. These programs will remain important components of the Electric Utility's resource portfolio in future years.

LITIGATION

There is no litigation pending or, to the knowledge of the BWL, threatened in any court (either state or federal) restraining or enjoining the issuance or delivery of the Bonds, or questioning (i) the proceedings under which the Bonds are to be issued, (ii) the validity of the Bonds, (iii) the pledge by the BWL of the moneys and other property pledged under the Bond Resolution, or (iv) the legal existence of the BWL or the City or the title to office of the present officials of the BWL or the City.

BOND RATINGS

Moody's Investors Service and S&P Global Ratings, a Standard & Poor's Financial Services LLC business, have assigned their ratings of "Aa3" and "AA-," respectively, to the Bonds. No application was made to any other rating agency for the purpose of obtaining an additional rating on the Bonds. The BWL has furnished to the rating agencies certain information to be considered in evaluating the Bonds. The above ratings reflect the independent judgments of the rating agencies and there is no assurance that such ratings will prevail for any given period of time or that they will not be revised or withdrawn entirely by such rating agency, if, in the judgment of such rating agency, circumstances so warrant. Any such revision or withdrawal of such ratings may have an effect on the market price of the Bonds. A securities rating is not a recommendation to buy, sell or hold securities and may be subject to revision or withdrawal at any time.

MUNICIPAL FINANCE QUALIFYING STATEMENT

The BWL has filed a Qualifying Statement for the fiscal year ended June 30, 2018. The Michigan Department of Treasury has determined that the BWL is in material compliance with the criteria identified in Act 34 of the Public Acts of Michigan 2001, as amended.

TAX MATTERS

In the opinion of Miller, Canfield, Paddock and Stone, P.L.C., ("Bond Counsel"), under existing law, the interest on the Bonds is excludable from gross income for federal income tax purposes and is not an item of tax preference for purposes of the federal alternative minimum tax. Bond Counsel is also of the opinion that, under existing law, the Bonds and the interest thereon are exempt from all taxation by the State of Michigan or by any taxing authority within the State of Michigan, except inheritance and estate taxes and taxes on gains realized from the sale, payment or other disposition thereof. Bond Counsel will express no opinion regarding any other federal or state tax consequences arising with respect to the Bonds and the interest thereon.

The opinion on federal tax matters is based on the accuracy of certain representations and certifications, and continuing compliance with certain covenants, of the BWL contained in the transcript of proceedings and which are intended to evidence and assure the foregoing, including that the Bonds are and will remain obligations the interest on which is excludable from gross income for federal income tax purposes. The BWL has covenanted to take the actions required of it for the interest on the Bonds to be and to remain excludable from gross income for federal income tax purposes, and not to take any actions that would adversely affect that exclusion. Bond Counsel's opinion assumes the accuracy of the BWL's certifications and representations and the continuing compliance with the BWL's covenants. Noncompliance with these covenants by the BWL may cause the interest on the Bonds to be included in gross income for federal income tax purposes retroactively to the date of issuance of the Bonds. After the date of issuance of the Bonds, Bond Counsel will not undertake to determine (or to so inform any person) whether any actions taken or not taken, or any events occurring or not occurring, or any other matters coming to Bond Counsel's attention, may adversely affect the exclusion from gross income for federal income tax purposes of interest on the Bonds or the market prices of the Bonds.

The opinion of Bond Counsel is based on current legal authority and covers certain matters not directly addressed by such authority. It represents Bond Counsel's legal judgment as to the excludability of interest on the Bonds from gross income for federal income tax purposes but is not a guarantee of that conclusion. The federal income tax opinion is not binding on the Internal Revenue Service ("IRS") or any court. Bond Counsel cannot give and has not given any opinion or assurance about the effect of future changes in the Internal Revenue Code of 1986, as amended (the "Code"), the applicable regulations, the interpretations thereof or the enforcement thereof by the IRS.

Ownership of the Bonds may result in collateral federal income tax consequences to certain taxpayers, including, without limitation, corporations subject to the branch profits tax, financial institutions, certain insurance companies, certain S corporations, individual recipients of Social Security or Railroad Retirement benefits and taxpayers who may be deemed to have incurred (or continued) indebtedness to purchase or carry the Bonds. Bond Counsel will express no opinion regarding any such consequences.

Amortizable Bond Premium

For federal income tax purposes, the excess of the initial offering price to the public (excluding bond houses and brokers) at which a Bond is sold over the amount payable at maturity thereof constitutes for the original purchasers of such Bonds (collectively, the "Original Premium Bonds") an amortizable bond premium. Bonds other than Original Premium Bonds may also be subject to an amortizable bond premium determined generally with regard to the taxpayer's basis (for purposes of determining loss on a sale or exchange) and the amount payable on maturity or, in certain cases, on an earlier call date (such bonds being referred to herein collectively with the Original Premium Bonds as the "Premium Bonds"). Such amortizable bond premium is not deductible from gross income. The amount of amortizable bond premium allocable to each taxable year is generally determined on the basis of the taxpayer's yield to maturity determined by using the taxpayer's basis (for purposes of determining loss on sale or exchange) of such Premium Bonds and compounding at the close of each six-month accrual period. The amount of amortizable bond premium allocable to each taxable year is deducted from the taxpayer's adjusted basis of such Premium Bonds to determine taxable gain upon disposition (including sale, redemption or payment at maturity) of such Premium Bonds.

All holders of the Premium Bonds should consult with their own tax advisors as to the amount and effect of the amortizable bond premium.

Market Discount

The "market discount rules" of the Code apply to the Bonds. Accordingly, holders acquiring their Bonds subsequent to the initial issuance of the Bonds will generally be required to treat market discount recognized under the provisions of the Code as ordinary taxable income (as opposed to capital gain income). Holders should consult their own tax advisors regarding the application of the market discount provisions of the Code and the advisability of making any of the elections relating to market discount allowed by the Code.

Information Reporting and Backup Withholding

Information reporting requirements apply to interest paid after March 31, 2007 on tax-exempt obligations, including the Bonds. In general, such requirements are satisfied if the interest recipient completes, and provides the payor with, a Form W-9, "Request for Taxpayer Identification Number and Certification," or unless the recipient is one of a limited class of exempt recipients, including corporations. A recipient not otherwise exempt from information reporting who fails to satisfy the information reporting requirements will be subject to "backup withholding," which means that the payor is required to deduct and withhold a tax from the interest payment, calculated in the manner set forth in the Code. For the foregoing purpose, a "payor" generally refers to the person or entity from whom a recipient receives its payments of interest or who collects such payments on behalf of the recipient.

If an owner purchasing the Bonds through a brokerage account has executed a Form W-9 in connection with the establishment of such account no backup withholding should occur. In any event, backup withholding does not affect the excludability of the interest on the Bonds from gross income for federal income tax purposes. Any amounts withheld pursuant to backup withholding would be allowed as a refund or a credit against the owner's federal income tax once the required information is furnished to the IRS.

Future Developments

Bond Counsel's engagement with respect to the Bonds ends with the issuance of the Bonds and, unless separately engaged, bond counsel is not obligated to defend the BWL in the event of an audit examination by the IRS. The IRS has a program to audit tax-exempt obligations to determine whether the interest thereon is includible in gross income for federal income tax purposes. If the IRS does audit the Bonds, under current IRS procedures, the IRS will treat the BWL as the taxpayer and the beneficial owners of the Bonds will have only limited rights, if any, to obtain and participate in judicial review of such audit.

NO ASSURANCE CAN BE GIVEN THAT ANY FUTURE LEGISLATION OR CLARIFICATIONS OR AMENDMENTS TO THE CODE, IF ENACTED INTO LAW, WILL NOT CONTAIN PROPOSALS WHICH COULD CAUSE THE INTEREST ON THE BONDS TO BE SUBJECT DIRECTLY OR INDIRECTLY TO FEDERAL OR STATE OF MICHIGAN INCOME TAXATION, ADVERSELY AFFECT THE MARKET PRICE OR MARKETABILITY OF THE BONDS, OR OTHERWISE PREVENT THE HOLDERS FROM REALIZING THE FULL CURRENT BENEFIT OF THE STATUS OF THE INTEREST THEREON. BOND COUNSEL EXPRESSES NO OPINION REGARDING ANY PENDING OR PROPOSED FEDERAL OR STATE OF MICHIGAN TAX LEGISLATION.

FURTHER, NO ASSURANCE CAN BE GIVEN THAT ANY ACTIONS OF THE INTERNAL REVENUE SERVICE, INCLUDING, BUT NOT LIMITED TO, SELECTION OF THE BONDS FOR AUDIT EXAMINATION, OR THE COURSE OR RESULT OF ANY EXAMINATION OF THE BONDS, OR OTHER BONDS WHICH PRESENT SIMILAR TAX ISSUES, WILL NOT AFFECT THE MARKET PRICE OF THE BONDS.

INVESTORS SHOULD CONSULT WITH THEIR TAX ADVISORS AS TO THE TAX CONSEQUENCES OF THEIR ACQUISITION, HOLDING OR DISPOSITION OF THE BONDS, INCLUDING THE IMPACT OF ANY PENDING OR PROPOSED FEDERAL OR STATE OF MICHIGAN TAX LEGISLATION.

LEGAL MATTERS

Legal matters incident to the authorization, issuance and sale of the Bonds are subject to the approval of Miller, Canfield, Paddock and Stone, P.L.C., Lansing and Detroit, Michigan, Bond Counsel. A copy of the opinion of Bond Counsel will be delivered with the Bonds, which opinion will be substantially in the form as set forth in Appendix F. The fees of Miller, Canfield, Paddock and Stone, P.L.C. for services rendered in connection with their approving opinion are expected to be paid from the proceeds of the Bonds. Certain matters will be passed on for the Underwriters by their counsel, Dickinson Wright PLLC, Lansing, Michigan.

Miller, Canfield, Paddock and Stone, P.L.C. is presently representing J.P. Morgan Securities LLC, the representative of the Underwriters, in connection with matters unrelated to the issuance of the Bonds. Miller, Canfield, Paddock and Stone, P.L.C. has not, and will not, represent the Underwriters with respect to any matters relating to the issuance or sale of the Bonds.

UNDERWRITING

The Bonds are being purchased from the BWL, subject to certain conditions, by J.P. Morgan Securities LLC, on behalf of itself and the other Underwriters for the Bonds listed on the cover page of this Official Statement comprising a syndicate for the purchase of the Bonds (collectively, the "Underwriters"). The Bond Purchase Agreement provides for the Underwriters to purchase all of the Bonds, if any are purchased, at a purchase price of $383,990,253.25, representing the $319,875,000.00 principal amount of the Bonds, plus an original issue premium of $65,458,509.35, and less an underwriters' discount of $1,343,256.10.

The Bond Purchase Agreement provides that the obligations of the Underwriters are subject to certain conditions, including, among other things, that the market price of the Bonds or their marketability shall not have been materially adversely affected by the occurrence of certain events.

The Underwriters and their respective affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, principal investment, hedging, financing and brokerage activities. The Underwriters and their respective affiliates have, from time to time, performed, and may in the future perform, various investment banking services for the BWL for which they received and will receive customary fees and expenses.

In the ordinary course of their various business activities, the Underwriters and their respective affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (which may include bank loans and/or credit default swaps) for their own account and for the accounts of their customers and may at any time hold long and short positions in such securities and instruments. Such investment and securities activities may involve securities and instruments of the BWL.

J.P. Morgan Securities LLC ("JPMS"), one of the Underwriters of the Bonds, has entered into negotiated dealer agreements (each, a "Dealer Agreement") with each of Charles Schwab & Co., Inc. ("CS&Co.") and LPL Financial LLC ("LPL") for the retail distribution of certain securities offerings at the original issue prices. Pursuant to each Dealer

Agreement, each of CS&Co. and LPL may purchase Bonds from JPMS at the original issue price less a negotiated portion of the selling concession applicable to any Bonds that such firm sells.

JPMorgan Chase Bank, N.A., an affiliate of J.P. Morgan Securities LLC, one of the Underwriters of the Bonds, currently is the holder of the BWL's outstanding Notes. As part of the plan of finance described herein, the outstanding Notes will be refinanced. Additional Notes may be issued by the BWL and purchased by JPMorgan Chase Bank, N.A.

Citigroup Global Markets Inc., an Underwriter of the Bonds, has entered into a retail distribution agreement with Fidelity Capital Markets, a division of National Financial Services LLC (together with its affiliates, "Fidelity"). Under this distribution agreement, Citigroup Global Markets Inc. may distribute municipal securities to retail investors at the original issue price through Fidelity. As part of this arrangement, Citigroup Global Markets Inc. will compensate Fidelity for its selling efforts.

BofA Securities, Inc., an Underwriter of the Bonds, has entered into a distribution agreement with its affiliate Merrill Lynch, Pierce, Fenner & Smith Incorporated ("MLPF&S"). As part of this arrangement, BofA Securities, Inc. may distribute securities to MLPF&S, which may in turn distribute such securities to investors through the financial advisor network of MLPF&S. As part of this arrangement, BofA Securities, Inc. may compensate MLPF&S as a dealer for their selling efforts with respect to the Bonds.

FINANCIAL ADVISOR TO THE BWL

PFM Financial Advisors LLC, has served as financial advisor (the "Financial Advisor") to the BWL with respect to the issuance of the Bonds. BWL has retained PFM Financial Advisors LLC as Financial Advisor in connection with various matters relating to the delivery of the Bonds. The Financial Advisor assumes no responsibility for the accuracy, completeness or fairness of the information contained in this Official Statement. The Financial Advisor is an independent advisory firm and is not engaged in the underwriting or distribution of securities.

CONTINUING DISCLOSURE UNDERTAKING

Prior to delivery of the Bonds, the BWL will execute a Continuing Disclosure Undertaking (the "Undertaking") for the benefit of Beneficial Owners (as defined in the Undertaking) of the Bonds to cause certain annually updated information and notice of certain events to be filed with the Municipal Securities Rulemaking Board ("MSRB") by electronic transmission through the Electronic Municipal Market Access Dataport of the MSRB, pursuant to the requirements of Section (b)(5) of Rule 15c2-12 (the "Rule") adopted by the Securities and Exchange Commission under the Securities Exchange Act of 1934, as amended. The information to be provided on an annual basis, the events which will be noticed on an occurrence basis and the other terms of the Undertaking are as set forth in "Appendix G – FORM OF CONTINUING DISCLOSURE UNDERTAKING" to this Official Statement.

A failure by the BWL to comply with the Undertaking will not constitute an event of default under the Bond Resolution and Beneficial Owners of the Bonds are limited to the remedies described in the Undertaking.

The BWL has not failed to comply with the requirements as described in Section(b)(5) of the Rule of any undertaking made by the BWL for the previous five years.

A failure by the BWL to comply with the undertaking must be reported by the BWL in accordance with the Rule and must be considered by any broker, dealer or municipal securities dealer before recommending the purchase or sale of the Bonds in the secondary market. Consequently, such failure may adversely affect the transferability and liquidity of the Bonds and their market price.

MISCELLANEOUS

All information contained in this Official Statement is subject, in all respects, to the complete body of information contained in the original source thereof and no guaranty, warranty or other representation is made concerning the accuracy or completeness of such information. In particular, no opinion or representation is rendered as to whether any projection will approximate actual results, and all opinions, estimates and assumptions, whether or not expressly identified as such, should not be considered statements of fact.

The execution and delivery of this Official Statement by the BWL's Chief Financial Officer have been duly authorized by the BWL.

Lansing Board of Water and Light

By: /s/ Heather Shawa
Its: Chief Financial Officer

Appendix A

GENERAL INFORMATION
REGARDING THE CITY OF LANSING

The following information on the City of Lansing is provided for informational purposes only. The Bonds are payable solely from the Net Revenues of the System. See "THE BONDS." The Bonds are not a general obligation of the City, and neither the full faith and credit nor the taxing power of the City is pledged to the payment of the principal of and interest on the Bonds. The Bonds do not constitute an indebtedness of the City within any constitutional, statutory or charter limitation.

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CITY OF LANSING
GENERAL FINANCIAL, ECONOMIC & STATISTICAL INFORMATION

LOCATION AND DESCRIPTION

The City of Lansing (the "City") covers an area of approximately 36 square miles and is located in Ingham and Eaton Counties.

The City is located the following distances from these commercial and industrial areas:

63	miles northwest of Ann Arbor
65	miles southeast of Grand Rapids
73	miles northeast of Kalamazoo
85	miles northwest of Detroit

POPULATION

The U.S. Census Bureau estimated and reported population for the City is as follows:

	City of Lansing	% Change
2017 Estimate	115,222	0.81%
2010 U.S. Census	114,297	-4.06
2000 U.S. Census	119,128	-6.43
1990 U.S. Census	127,321	--

PROPERTY VALUATIONS

Article IX, Section 3, of the Michigan Constitution provides that the proportion of true cash value at which property shall be assessed shall not exceed 50% of true cash value. The Michigan Legislature by statute has provided that property shall be assessed at 50% of its true cash value. The Michigan Legislature or the electorate may at some future time reduce the percentage below 50% of true cash value.

On March 15, 1994, the electors of the State approved an amendment to the Michigan Constitution permitting the Legislature to authorize ad valorem taxes on a non-uniform basis. The legislation implementing this constitution amendment added a new measure of property value known as "Taxable Value." Since 1995, taxable property has had two valuations—State Equalized Value ("SEV") and Taxable Value. Property taxes are levied on Taxable Value. Generally, the Taxable Value of property is the lesser of: (a) the Taxable Value of property in the immediately preceding year, adjusted for losses, multiplied by the lesser of 1.05 or the inflation rate, plus additions, or (b) the property's current SEV. Under certain circumstances, therefore, the Taxable Value of property may be different from the same property's SEV.

When property is sold or transferred, Taxable Value is adjusted to the SEV, which under existing law is 50% of the current true cash value. The Taxable Value and SEV of new construction are equal to current SEV. The Taxable Value and SEV of existing property are also adjusted annually for additions and losses.

Responsibility for assessing taxable property rests with the local assessing officer of each township and city. Any property owner may appeal the assessment to the local assessor, the local Board of Review and ultimately to the Michigan Tax Tribunal.

In addition to limiting the annual increase in Taxable Value, the Michigan Constitution mandates a system of equalization for assessments. Although the assessor for each local unit of government within a county is responsible for actually assessing at 50% of true cash value, adjusted for taxable value purposes, the final SEV and taxable value are arrived at through several steps. Assessments are established initially by the municipal assessor.

Municipal assessments are then equalized to the 50% levels as determined by the County Department of Equalization. Thereafter, the State equalizes the various counties in relation to each other. SEV is important, aside from its use in determining Taxable Value for the purpose of levying ad valorem property taxes, because of its role in spreading of taxes between overlapping jurisdictions, the distribution of various State aid programs, State revenue sharing and in the calculation of debt limits.

Property that is exempt from property taxes (churches, governmental property, public schools) is not included in the SEV or Taxable Value in this Official Statement. Property granted tax abatements under Act 198, Public Acts of Michigan, 1974, as amended, is recorded on a separate tax roll which is subject to tax abatement. The valuation of tax abated property is based upon SEV but is not included in either the SEV or Taxable Value in the Official Statement except as noted.

History of Valuations

A history of the property valuations in the City is shown below:

Tax Year	Fiscal Year Ending June 30,	Total Taxable Value[1]	Real Property State Equalized Value	Personal Property State Equalized Value	Total State Equalized Value
2018	2019	$2,070,402,796	$2,212,133,600	$129,636,200	$2,341,769,800
2017	2018	2,015,500,918	2,117,667,600	142,382,300	2,260,049,900
2016	2017	1,970,349,034	1,990,349,485	149,660,200	2,140,009,685
2015	2016	1,979,666,121	1,888,633,400	188,054,391	2,076,687,791
2014	2015	1,968,646,518	1,840,746,200	187,459,300	2,028,205,500

[1]The City has a 425 agreement with Clinton County and the 2018 Taxable Value of that property is $8,103,619.
Source: Ingham and Eaton Counties Equalization Departments

A summary of the 2018 valuation subject to taxation is as follows:

2018 Taxable Value	$2,070,402,796
Plus: 2018 Equivalent IFT Taxable Value[1]	22,619,846
Total 2018 Equivalent Taxable Value	$2,093,022,642

[1]See “INDUSTRIAL FACILITY TAX ABATEMENTS” herein.
Source: Ingham and Eaton Counties Equalization Departments

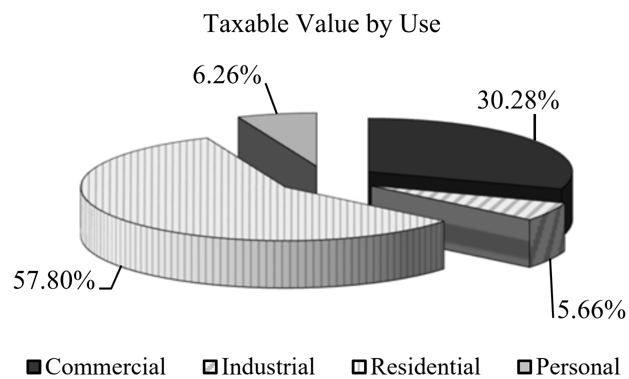
Per Capita Valuation

Per Capita 2018 Taxable Value	$17,968.81
Per Capita 2018 State Equalized Value	$20,323.98
Per Capita 2018 True Cash Value	$40,647.96

Valuation Composition[1]

A breakdown of the City's 2018 Taxable Value by class and use is as follows:

	2018 Taxable Value	Percent of Total
By Class:		
Real Property	$1,940,766,596	93.74%
Personal Property	129,636,200	6.26
TOTAL	$2,070,402,796	100.00%
By Use:		
Commercial	$626,947,397	30.28%
Industrial	117,209,683	5.66
Residential	1,196,609,516	57.80
Personal	129,636,200	6.26
TOTAL	$2,070,402,796	100.00%



[1]The City has a 425 agreement with Clinton County and the 2018 Taxable Value of that property is $8,103,619.
Source: Ingham and Eaton Counties Equalization Departments

INDUSTRIAL FACILITY TAX ABATEMENTS

Under the provisions of Act 198 of the Public Acts of Michigan, 1978, as amended ("Act 198"), plant rehabilitation districts and/or industrial development districts may be established. Businesses in these districts are offered certain property tax incentives to encourage restoration or replacement of obsolete facilities and to attract new facilities in the area. The industrial facilities tax ("IFT") is paid, at a lesser effective rate and in lieu of ad valorem property taxes, in such facilities for a period of up to 12 years. Qualifying facilities are issued abatement certificates for this period.

After expiration of the abatement certificate, the then-current SEV of the facility is returned to the ad valorem tax roll. The owner of such facility may obtain a new certificate, provided it has complied with the provisions of Act 198.

The City has several IFT abatements outstanding with a total 2018 IFT Taxable Value of $45,239,692, all of which is taxed at half rate. For purposes of computing "Equivalent" Taxable Value, it has been shown in the "History of Valuations" table above as 50% of the IFT Taxable Value.

Source: Ingham and Eaton Counties Equalization Departments

TAX INCREMENT AUTHORITIES

The Recodified Tax Increment Financing Act, Act 57 of the Public Acts of Michigan, 2018 (the "RTIFA Act") authorizes the designation of specific districts known as Tax Increment Finance Authority ("TIFA") Districts, Downtown Development Authority ("DDA") Districts, Local Development Finance Authority ("LDFA") Districts and Act 381 of the Public Act of Michigan, 1996, as amended (the "Brownfield Act") authorizes the designation of specific districts known as Brownfield Redevelopment Authority ("BRDA") Districts (each a "TIF District"). These two acts authorize the formulation of tax increment financing plans for public improvements, economic development, neighborhood revitalization, historic preservation and environmental cleanup within the TIF Districts.

Tax increment financing permits the TIFA, DDA, LDFA or BRA to capture tax revenues attributable to increases in value ("TIF Captured Value") of real and personal property located within an approved development area while any tax increment financing plans by an established district are in place. These captured revenues are used by the District and are not passed on to the local taxing jurisdictions.

The City has a TIFA with a 2018 captured taxable value of $89,799,916.

Source: City of Lansing

MICHIGAN PROPERTY TAX REFORM

The voters of the State approved enactment of Michigan Public Acts 153 and 154 of 2013 and Acts 80 and 86 through 93 of 2014 by referendum on August 5, 2014 (collectively, the "PPT Reform Acts"), which significantly reformed Personal Property tax in Michigan.

Under the PPT Reform Acts, owners of industrial and commercial Personal Property with a total true cash value of $80,000 or less may file an affidavit claiming a Personal Property tax exemption. To be eligible for the exemption, all of the commercial or industrial Personal Property within a city or township that is owned by, leased to, or controlled by the claimant has to have an accumulated true cash value of $80,000 or less. Beginning in calendar year 2016, owners of certain manufacturing Personal Property that was either purchased after December 31, 2012, or that is at least 10 years old may claim an exemption from Personal Property tax. By 2022, all eligible manufacturing Personal Property will be at least 10 years old or purchased after December 31, 2012, so that it could be exempted from Personal Property tax.

To replace personal property tax revenues lost by local governments, including cities, the PPT Reform Acts divided the existing state use tax into two components, a "state share tax" and a "local community stabilization share tax," and established the Local Community Stabilization Authority (the "LCSA") to administer distribution of the local community stabilization share. The Michigan Department of Treasury collects the local community stabilization share tax on behalf of the LCSA. The local community stabilization share tax revenues are not subject to the annual appropriations process and are provided to the LCSA for distribution pursuant to a statutory formula. The statutory formula is anticipated to provide 100% reimbursement to local governments for losses due to the new personal property tax exemptions. The LCSA began distributions of the local community stabilization share tax to local governments, including cities, on November 21, 2016. The City received $1,054,324.85 from the LCSA to replace personal property tax revenues lost during fiscal year 2018.

The ultimate nature, extent and impact of any other future amendments to Michigan's property tax laws on the City's finances cannot be predicted. Purchasers of the Bonds should consult with their legal counsel and financial advisors as to the consequences of any such legislation on the market price or marketability of the Bonds, the security therefor and the operations of the City.

MAJOR TAXPAYERS

The City's top ten taxpayers and their 2018 Taxable Values are as follows:

Taxpayer	Product/Service	Taxable Value	"Equivalent" IFT Value[1]	2018 Total Valuation
General Motors	Automotive	$38,202,559	$16,560,645	$54,763,204
Jackson National Life	Insurance	36,011,494	0	36,011,494
Consumers Energy	Utility	23,858,650	0	23,858,650
Phoenix Development Partners	Office (Accident Fund)	17,589,448	0	17,589,448
Lansing Properties LLC	Apartments (SkyVue)	16,789,600	0	16,789,600
Lansing Retail Center I LLC	Shopping Center (Frandor)	11,663,243	0	11,663,243
Emergent Biosolutions	Office/Research/Industrial	6,922,726	3,174,654	10,097,380
Phoenix Development Partners II	Parking Structure	8,403,393	0	8,403,393
Eyde Knapp Development	Developer	8,204,393	0	8,204,393
Edward Rose Realty	Apartments	7,145,955	0	7,145,955
TOTALS		$174,791,461	$19,735,299	$194,526,760
Total 2018 Taxable Value/Total Valuation		$2,070,402,796		$2,093,022,642
Top 10 Taxpayers as a % of 2018 Total Taxable Value/Total Valuation		8.44%		9.29%

[1]Represents 50% of the actual IFT Taxable Value. See "Industrial Facility Tax Abatements" herein.
Source: City of Lansing

MAJOR EMPLOYERS

Listed below are the largest employers that are located within the Lansing region:

Employer	Product or Service	Approx. No. of Employees
Within the Lansing Region (600 + employees)		
State of Michigan (Eaton & Ingham Co.)	Government	13,700
Michigan State University	Education	10,725
Liberty National Life Insurance	Insurance	10,000
Sparrow Health System	Health Care	6,000
General Motors Corporation	Automotive	5,027
Auto Owners Insurance	Insurance	3,400
Meijer, Inc. (5 stores)	Department Store	3,000
McLaren Greater Lansing	Health Care	2,500
Lansing Community College	Education	2,143
John Henry Company	Plastic & Paper Printed Floral	2,100
Peckham Vocational Industries, Inc.	Rehabilitation Services	1,540
Southern-Owners Insurance	Insurance	1,500
Jackson National Life Insurance	Insurance	1,500
Lansing Mall	Retail Shopping Center	1,450
Lansing School District	Education	1,337
Leona Group LLC	Consulting Services	1,200
U.S. Post Office	Postal Service	1,200
Ingham, County of	Government	1,139
Wal-Mart (5 stores)	Department Store	1,000
Lansing, City of	Government	879
Dart Container Corp.	Containers Mfg.	760
Consumers Energy Company	Utility	750
Grand Ledge Public Schools	Education	744
Lansing Board of Water & Light	Utility	712
Bridgewater Interiors	Automobile Seating	600

Source: 2018 Michigan Manufacturers Directory, Manta via www.manta.com and individual employers.

EMPLOYMENT BREAKDOWN

The U.S. Census Bureau, 2013-2017 American Community Survey reports the occupational breakdown of persons 16 years and over for the City and the County of Ingham are as follows:

	City of Lansing		County of Ingham	
	Number	Percent	Number	Percent
PERSONS BY OCCUPATION	54,267	100.00%	137,687	100.00%
Management, Business, Science & Arts	16,894	31.14	56,110	40.76
Service	12,062	22.23	26,493	19.24
Sales & Office	12,697	23.39	31,411	22.81
Natural Resources, Construction & Maintenance	3,392	6.25	7,366	5.35
Production, Transportation & Material Moving	9,222	16.99	16,307	11.84

The U.S. Census Bureau, 2013-2017 American Community Survey reports the breakdown by industry for persons 16 years and over for the City and the County of Ingham are as follows:

	City of Lansing		County of Ingham	
	Number	Percent	Number	Percent
PERSONS BY INDUSTRY	54,267	100.00%	137,687	100.00%
Agriculture, Forestry, Fishing, Hunting & Mining	128	0.24	847	0.62
Construction	2,044	3.77	4,743	3.44
Manufacturing	6,355	11.71	13,620	9.89
Wholesale Trade	791	1.46	2,300	1.67
Retail Trade	6,966	12.84	14,025	10.19
Transportation	2,846	5.24	5,261	3.82
Information	794	1.46	2,221	1.61
Finance, Insurance & Real Estate	3,284	6.05	9,852	7.16
Professional & Management Services	5,458	10.06	13,433	9.76
Educational, Health & Social Services	12,894	23.76	40,312	29.27
Arts, Entertainment, Recreation & Food Services	6,094	11.23	15,324	11.13
Other Professional & Related Services	3,284	6.05	6,691	4.86
`Public Administration	3,329	6.13	9,058	6.58

UNEMPLOYMENT RATES

The U.S. Department of Labor, Bureau of Labor Statistics reports unemployment averages for the City and the County of Ingham as compared to the State of Michigan as follows:

Annual Average	City of Lansing	County of Ingham	State of Michigan
February, 2019	4.8%	3.4%	4.1%
December, 2018	4.6	3.2	4.1
2017	6.3	4.4	4.6
2016	6.1	4.3	5.0
2015	6.6	4.7	5.4

POPULATION BY AGE

The 2010 U.S. Census estimate of population by age for the City and the County of Ingham are as follows:

	City of Lansing		County of Ingham	
	Number	Percent	Number	Percent
Total Population	114,297	100.00%	280,895	100.00%
0 through 19 years	30,906	27.04	75,256	26.79%
20 through 64 years	72,346	63.30	176,226	62.74%
65 years and over	11,045	9.66	29,413	10.47%
Median Age	32.3 years*		31.4 years	

*Represents the median age within the portion of the City of Lansing located in the County of Ingham.

INCOME

The U.S. Census Bureau, 2013-2017 American Community Survey estimate of household income for the City and the County of Ingham are as follows:

	City of Lansing		County of Ingham	
	Number	Percent	Number	Percent
HOUSEHOLDS BY INCOME	48,726	100.00%	111,894	100.00%
Less than $ 10,000	5,265	10.81	10,278	9.19
$ 10,000 to $ 14,999	3,451	7.08	5,673	5.07
$ 15,000 to $ 24,999	6,925	14.21	12,696	11.35
$ 25,000 to $ 34,999	6,230	12.79	11,674	10.43
$ 35,000 to $ 49,999	8,590	17.63	16,540	14.78
$ 50,000 to $ 74,999	9,280	19.03	20,464	18.29
$ 75,000 to $ 99,999	4,569	9.38	12,210	10.91
$100,000 to $149,999	3,389	6.96	13,540	12.10
$150,000 to $199,999	736	1.51	4,638	4.14
$200,000 or MORE	291	0.60	4,181	3.74
Median Income	$38,929*		$49,109	

*Represents the median income within the portion of the City of Lansing located in the County of Ingham.

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Appendix B

SERVICE AREA MAPS FOR THE ELECTRIC UTILITY AND THE WATER UTILITY

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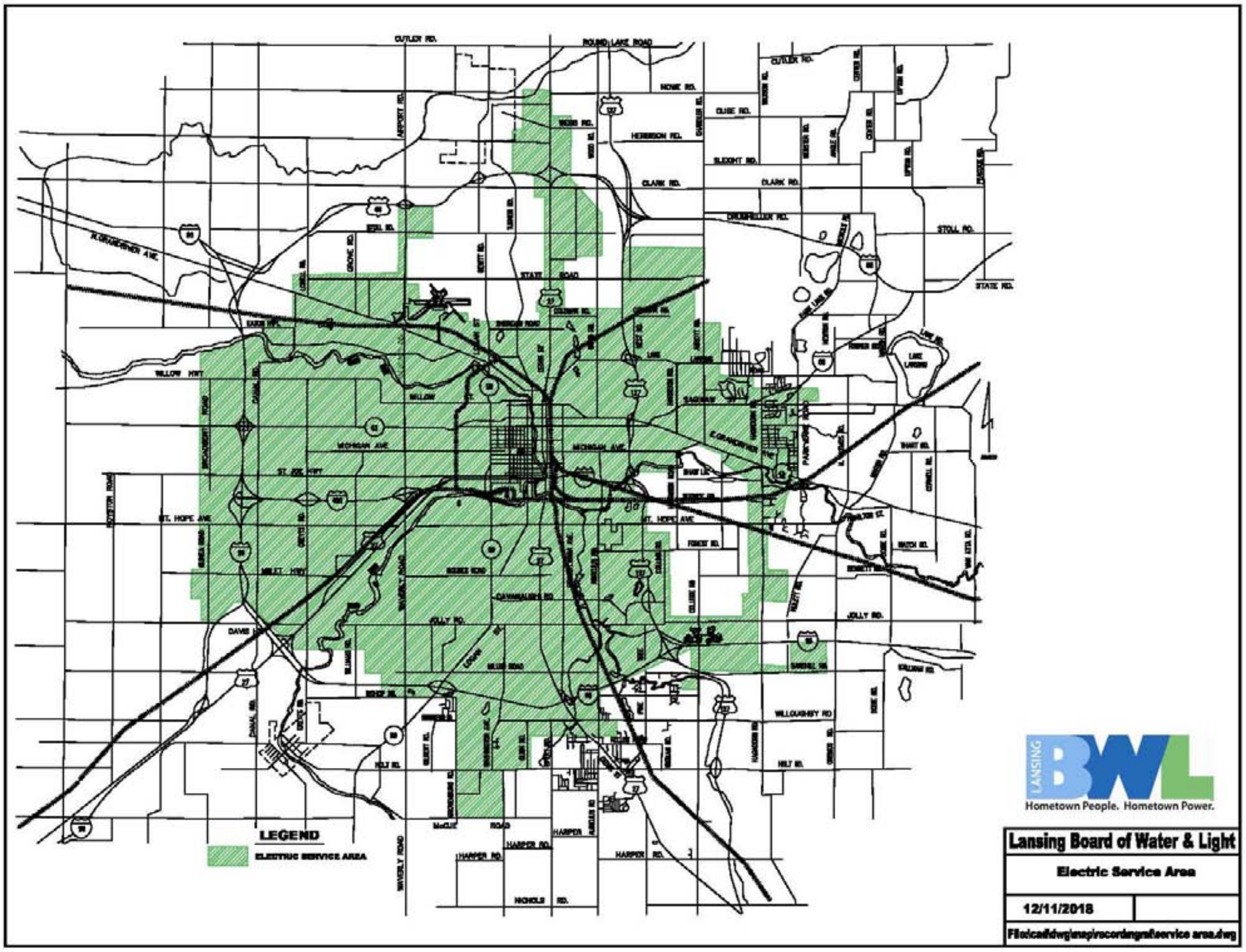
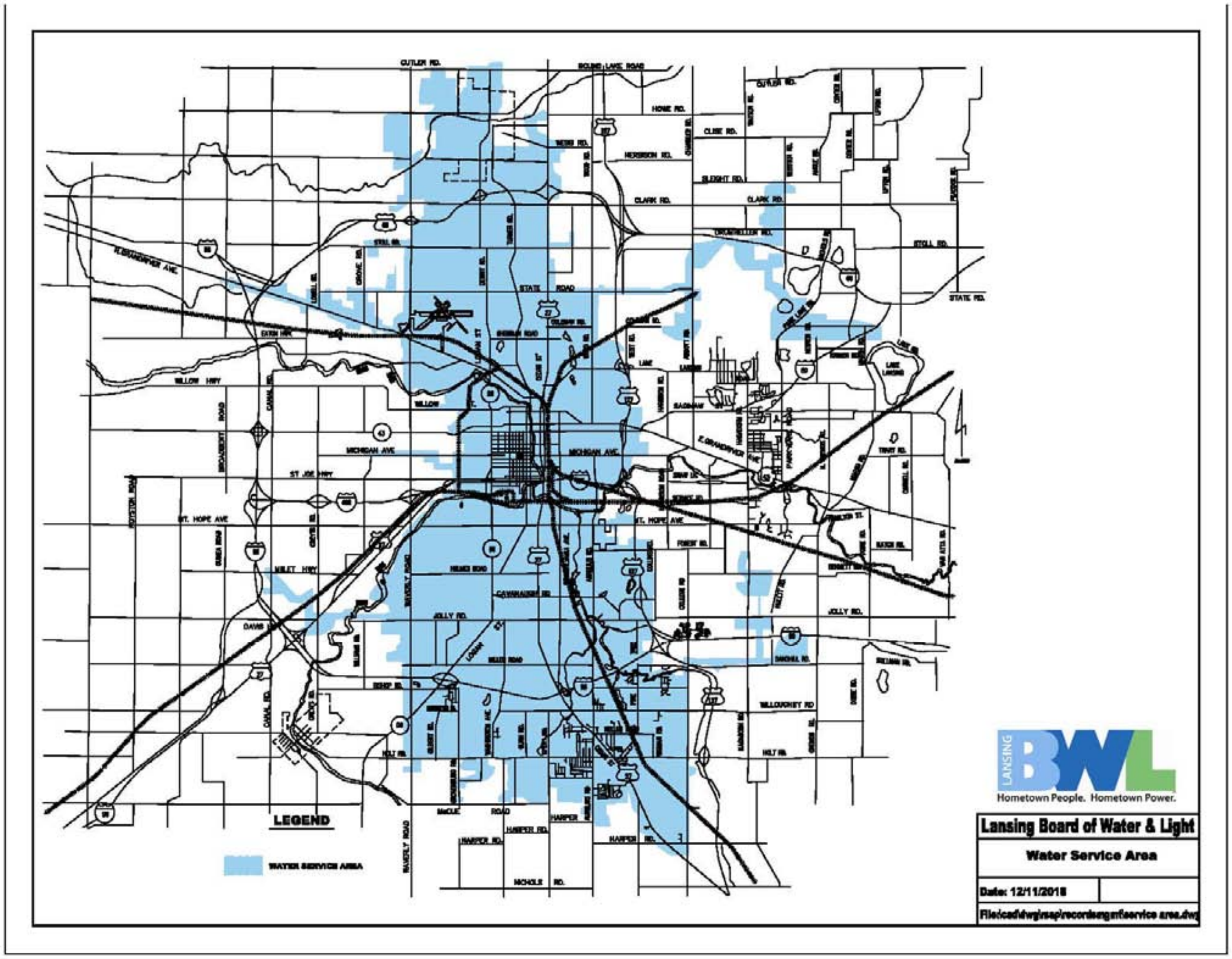
ELECTRIC SERVICE AREA



WATER SERVICE AREA



Appendix C

FINANCIAL STATEMENTS AND RELATED NOTES

This Appendix contains the financial statements of the BWL for the fiscal years ended June 30, 2018 and 2017.

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LANSING BWL

Hometown People. Hometown Power.

Board of Water and Light – City of Lansing, Michigan

Financial Report

with Additional Information

As of and for the Years Ended June 30, 2018 and 2017

Contents

INDEPENDENT AUDITORS' REPORT

To the Honorable Mayor, Members of
the City Council, and Commissioners
Lansing Board of Water and Light
City of Lansing, Michigan

We have audited the accompanying financial statements of Lansing Board of Water and Light enterprise fund and its fiduciary funds, as of and for the years ended June 30, 2018 and 2017, and the related notes to the financial statements, which collectively comprise the Lansing Board of Water and Light's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

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.

Auditors' 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. Those standards require that we plan and perform the audits 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 auditors' 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 Lansing Board of Water and Light's 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 Lansing Board of Water and Light'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 Lansing Board of Water and Light as of June 30, 2018 and 2017, and the respective changes in financial position and cash flows thereof 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 to the financial statements, Lansing Board of Water and Light has adopted the provisions of GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*, effective July 1, 2016. Net position as of June 30, 2016 has been restated due to the implementation. Our opinions are not modified with respect to this matter.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the required supplementary information as 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 audit 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.

Additional Information

Our audits were conducted for the purpose of forming opinions on the financial statements as a whole. The supplemental information, listed in the table of contents as additional information, is presented for purposes of additional analysis and is not a required part of the basic financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. The information has been subjected to the auditing procedures applied in the audit 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, the additional information is fairly stated in all material respects in relation to the basic financial statements as a whole.

Baker Tilly Virchow Krause, LLP

Madison, Wisconsin
September 11, 2018

This section explains the general financial condition and results of operations for the Lansing Board of Water and Light ("BWL"). The BWL includes the consolidated operations of the electric, water, steam, and chilled water utilities. The notes to financial statements following this section are essential reading for a complete understanding of the financial and operational results for the years ended June 30, 2018 and 2017.

Overview of Business

The BWL owns and operates an electric system which generates, purchases, and distributes electric energy to over 97,000 retail customers in the greater Lansing area, and wholesale customers through participation in the Midcontinent Independent System Operator, Inc. (MISO), which is BWL's regional electric grid. The BWL generated 67 percent of its retail and wholesale sales from existing generation assets. Additional electric generation was supplied through BWL's membership in the Michigan Public Power Agency, which includes BWL's partial ownership of Detroit Edison's Belle River Plant, and through MISO. The BWL maintains a diversified renewable energy portfolio which includes wind, solar, landfill gas, and hydro-electric generation. The combination of renewable energy generation and energy efficiency programs support BWL's adopted plan to provide 30% clean energy in 2020 and 40% in 2030.

The BWL owns and operates water wells, a raw water transmission system, water conditioning facilities, and an extensive water distribution system serving potable water to over 56,000 residential, commercial, and industrial customers in the greater Lansing area.

The BWL owns and operates steam generation boilers, a steam transmission and distribution system serving over 170 customers, and a chilled water facility and distribution piping system serving 19 customers in the City of Lansing.

Capital Expenditures

Capital expenditures are driven by the need to replace, expand, or maintain the generation, transmission, and distribution systems of the BWL to meet customer utility needs and to maintain a high level of service reliability. The BWL invests essentially all revenues not paid out for operations and maintenance expense, nonoperating expenses, or debt service back into capital improvements. Gross capital expenditures were $92.3 and $51.9 million in fiscal years 2018 and 2017, respectively.

The BWL generally pays the cost of its capital improvements from internally generated funds however revenue bonds are issued from time to time to support large projects or special needs such as construction of generation facilities.

Management's Discussion and Analysis (Continued)

Detailed financial information for the separate utilities of water, electric, steam, and chilled water can be found in the Additional Information section of this financial report.

Condensed Financial Information (dollars in millions)

	As of June 30			% Change
	2018	Restated 2017	2016	2017 to 2018
Assets				
Utility plant	$ 719.3	$ 680.4	$ 690.7	% 5.7
Other assets	296.8	332.8	342.1	(10.8)
Total assets	1,016.1	1,013.2	1,032.8	0.3
Deferred Outflow of Resources	7.4	6.6	3.8	12.1
Liabilities				
Long-term liabilities	355.6	380.0	357.4	(6.4)
Other liabilities	61.3	56.6	57.1	8.3
Total liabilities	416.9	436.6	414.5	(4.5)
Deferred Inflow of Resources	36.2	26.9	26.0	34.6
Net Position				
Net investment in capital assets	418.1	369.5	367.1	13.2
Restricted for debt service	42.8	38.7	38.3	10.6
Unrestricted	109.6	148.2	190.7	(26.0)
Net position	**$ 570.5**	**$ 556.4**	**$ 596.1**	**% 2.5**

Capital expenditures in FY2018 exceeded depreciation, impairments and retirements thereby increasing utility plant by $38.9 million. Fiscal year 2017 balances were restated due to the implementation of GASB No. 75. Fiscal year 2016 balances are shown as originally reported. The changes in the Deferred Outflow/Inflow of Resources is attributable to GASB No. 75 net OPEB liability. These deferrals reflect differences between projected and actual experience, changes in actuarial assumptions, and differences between projected and actual investment earnings on plan investments. They are amortized through expense as described in Note 8.

Condensed Financial Information (dollars in millions) (Continued)

	For the Year Ended June 30						% Change	
	2018		Restated 2017		2016		2017 to 2018	
Result of Operations								
Operating Revenue	$	353.1	$	371.4	$	360.9	%	(4.9)
Operating Expense		325.5		342.4		327.1		(4.9)
Nonoperating expense - Net		-13.4		-22.7		-32.9		(41.0)
Changes in Net Position	**$**	**14.1**	**$**	**6.4**	**$**	**0.9**	**%**	**120.3**

Operating revenue decreased by $18.3 million primarily due to a decrease in wholesale sales with the remaining attributed to a decrease in retail demand. Net Income increased by $7.7 million because of reduced impairments and reduced operating expense. FY2018 Nonoperating expense includes more than $13.3 million in bonded debt interest expense. In FY2017 and FY2016 impairments of the Eckert and Erickson Power Stations, and Customer Care Initiative drove Nonoperating expense to uncharacteristically high levels.

Budget – The BWL Commissioners approved a $267.3 million operating expense budget (excluding depreciation) for fiscal year 2018. Actual expenses (excluding depreciation) were $261.5 million. The capital improvement budget, net of customer contributions in aid of construction, was $139.5 million for FY2018, and actual net capital expenditures were $88.9 million. The difference between the capital budget and actual spend is due to a change in the project timeline for a new combined cycle natural gas power plant.

Financing Activities – In June of 2018, Revenue Bond Anticipation Notes Series 2018 were issued to fund project start-up costs for a new combined cycle natural gas power plant. The 2018 Note Series will provide funding for up to $100 million in project costs for a period of up to 18 months. Prior to the end of the 18-month period, Revenue Bonds will be issued to extinguish the outstanding notes and provide additional project funding for the plant and other system improvements. The new 250 MW plant is currently budgeted at $450 million and is scheduled to begin operation in FY 2021.

Board of Water and Light - City of Lansing, Michigan

Statements of Net Position

	As of June 30	
	2018	Restated 2017
Assets		
Current Assets		
Restricted cash and investments (Notes 2 and 3)	$ 50,550,600	$ 47,380,541
Cash and investments (Notes 1 and 2)	48,127,904	57,522,888
Designated cash and investments (Notes 1 and 2)	88,774,893	108,059,622
Accounts receivable - Net (Note 1)	24,560,286	24,571,987
Estimated unbilled accounts receivable (Note 1)	19,748,294	17,334,540
Inventories (Note 1)	23,921,728	25,421,903
Other	4,742,077	4,400,379
Total current assets	260,425,782	284,691,860
Other Assets		
Recoverable environmental remediation (Note 6)	2,983,786	6,321,595
Special deposit (Note 1)	41,165	5,690,000
Net pension asset (Note 8)	6,616,482	9,029,155
Other (Note 1)	2,593,739	2,723,987
Total other assets	12,235,172	23,764,737
Noncurrent Restricted Assets (Investments) (Notes 2 and 3)	24,151,912	24,384,188
Utility Plant (Notes 1 and 4)		
Water	316,440,019	309,243,104
Electric	730,148,451	687,921,365
Steam	78,115,677	71,614,976
Chilled water	34,078,066	34,023,916
Common facilities	92,072,756	92,329,375
Total	1,250,854,969	1,195,132,736
Less accumulated depreciation	570,038,862	534,316,387
Net	680,816,107	660,816,349
Construction in progress (Note 10)	38,518,401	19,591,830
Total utility plant	719,334,508	680,408,179
Total assets	1,016,147,374	1,013,248,964
Deferred Outflows of Resources -		
Bond refunding loss being amortized	1,859,964	2,116,754
Net pension deferred outflows (Note 8)	1,932,329	-
Net OPEB deferred outflows (Note 8)	3,655,764	4,468,156
Total deferred outflows of resources	7,448,057	6,584,910

See Notes to Financial Statements.

Statements of Net Position (Continued)

	As of June 30	
	2018	Restated 2017
Liabilities and Net Position		
Current Liabilities		
Accounts payable	$ 34,829,022	$ 29,923,625
Current portion of long-term debt (Note 5)	9,360,459	9,614,677
Accrued payroll and related taxes	2,311,346	2,182,199
Customer deposits	2,202,779	2,072,804
Accrued compensated absences (Note 1)	4,810,006	4,874,356
Accrued interest	89,998	227,323
Accrued interest (payable from restricted assets)	7,729,600	7,733,536
Total current liabilities	61,333,210	56,628,520
Compensated Absences - Less current portion (Note 1)	7,313,587	7,305,531
Other Long-term Liabilities		
Workers' compensation	2,200,000	2,200,000
Environmental remediation liability (Note 9)	7,321,928	7,608,844
Net OPEB liability (Note 8)	19,447,441	31,989,335
Other	1,375,055	2,073,349
Total other long-term liabilities	30,344,424	43,871,528
Long-term Debt - Less current portion (Note 5)	317,880,899	328,752,913
Total liabilities	416,872,120	436,558,492
Deferred Inflows of Resources		
Revenue intended to cover future costs (Note 6)	17,921,615	18,879,619
Recoverable energy asset (Note 6)	4,908,441	1,237,957
Net pension deferred inflows (Note 8)	-	31,205
Net OPEB deferred inflows (Note 8)	13,395,378	6,744,787
Total deferred inflows of resources	36,225,434	26,893,568
Net Position		
Net investment in capital assets	418,105,026	369,476,728
Restricted for debt service (Note 3)	42,821,000	38,711,808
Unrestricted	109,571,851	148,193,278
Total net position	**$ 570,497,877**	**$ 556,381,814**

Board of Water and Light - City of Lansing, Michigan

Statements of Revenues, Expenses, and Changes in Net Position

	For the Year Ended June 30	
	2018	Restated 2017
Operating Revenues (Note 1)		
Water	$ 41,524,143	$ 40,738,054
Electric	293,261,408	312,925,177
Steam	12,072,017	11,404,174
Chilled water	6,225,356	6,362,308
Total operating revenues	353,082,924	371,429,713
Operating Expenses		
Production:		
Fuel, purchased power, and other operating expenses	142,679,119	161,787,983
Maintenance	16,474,970	18,725,293
Transmission and distribution:		
Operating expenses	7,929,917	10,139,726
Maintenance	19,983,487	15,839,208
Administrative and general	73,638,904	71,417,820
Return on equity (Note 7)	20,561,871	21,862,457
Depreciation (Note 1)	44,255,255	42,598,423
Total operating expenses	325,523,523	342,370,910
Operating Income	27,559,401	29,058,803
Nonoperating Income (Expenses)		
Investment income	834,087	914,829
Other (expense) income	(883,318)	478,719
Impairment on Power Stations (Note 4)	-	(9,337,129)
Bonded debt interest expense	(13,331,897)	(14,703,367)
Other interest expense	(62,210)	(51,446)
Total nonoperating expenses - Net	(13,443,338)	(22,698,394)
Net Income (Changes in Net Position)	14,116,063	6,360,409
Net Position - Beginning of year as restated	556,381,814	550,021,405
Net Position - End of year	**$ 570,497,877**	**$ 556,381,814**

See Notes to Financial Statements.

Statements of Cash Flows

	For the Year Ended June 30	
	2018	2017
Cash Flows from Operating Activities		
Cash received from customers	358,158,868	377,684,831
Cash paid to suppliers	(202,605,345)	(214,663,814)
Cash paid to employees	(58,221,626)	(61,976,765)
Return on equity (Note 7)	(20,561,871)	(21,862,457)
Cash from customer deposits	129,975	(231,622)
Interest on customer deposits	(62,210)	(51,446)
Net cash provided by operating activities	76,837,791	78,898,727
Cash Flows from Capital and Related Financing Activities		
Proceeds from new borrowings	50,001	2,201,662
Planned, bonded, and annual construction	(77,627,731)	(50,209,767)
Principal payments on debt	(9,883,645)	(11,024,805)
Interest on debt	(15,952,433)	(16,846,591)
Net cash used in capital and related financing activities	(103,413,808)	(75,879,501)
Cash Flows from Investing Activities		
Proceeds from the sale and maturity of investments	76,471,402	62,633,076
Interest received	639,673	863,383
Purchase of investments	(75,237,572)	(61,836,299)
Net cash provided by investing activities	1,873,503	1,660,160
Net Increase in Cash and Cash Equivalents	(24,702,514)	4,679,386
Cash and Cash Equivalents - Beginning of year	104,903,429	100,224,043
Cash and Cash Equivalents - End of year	**$ 80,200,915**	**$ 104,903,429**

	For the Year Ended June 30	
	2018	2017
Balance Sheet Classifications		
Restricted cash and investments	$ 50,550,600	$ 47,380,541
Cash and investments	48,127,904	57,522,888
Designated cash and investments	88,774,893	108,059,622
Noncurrent restricted assets	24,151,912	24,384,188
Total cash and investments	$ 211,605,309	$ 237,347,239
Less noncash investments	(131,404,394)	(132,443,810)
Cash and Cash Equivalents - End of year	**$ 80,200,915**	**$ 104,903,429**

Reconciliation of Operating Income to Net Cash from Operating Activities	For the Year Ended June 30	
	2018	2017
Operating income	$ 27,559,401	$ 29,058,803
Adjustments to reconcile operating income to net cash from operating activities:		
Other nonoperating	(1,846,895)	970,484
Depreciation	44,255,255	42,598,423
Sewerage collection fees	963,577	988,652
Interest on customer deposits	(62,210)	(51,446)
Decrease (increase) in assets:		
Accounts receivable (Note 1)	11,701	(1,403,328)
Unbilled accounts receivable (Note 1)	(2,413,754)	2,191,935
Inventories	1,500,175	(354,167)
Special deposit	5,648,835	2,845,000
Net pension asset	2,412,673	(4,765,165)
Other	3,126,359	4,831,671
(Decrease) increase in liabilities and deferred outflows/inflows of resources:		
Accounts payable and other accrued expenses	472,056	1,287,691
Customer deposits	129,975	(231,622)
Net pension asset deferrals	(1,963,534)	2,961,423
Other postemployment benefits liability and deferrals	(5,078,911)	(2,031,269)
Other	2,123,088	1,642
Total adjustments	49,278,390	49,839,924
Net cash provided by operating activities	**$ 76,837,791**	**$ 78,898,727**

Noncash Capital and Financing Activities		
Impairment on Power Station	$ -	$ 9,337,129
Refunding bonds issued	-	33,591,885

Pension Trust Funds - Statements of Net Position

	As of June 30	
	2018	2017
Assets		
Receivable - investment interest receivable	$ 553,132	$ 578,207
Trade receivable - due from broker	11,853	134,461
Investments at fair value:		
Cash and money market trust fund	3,876,413	4,016,370
U.S. government obligations	34,494,449	38,104,494
Fixed income securities	47,121,007	45,862,887
Mutual funds	252,188,400	220,413,178
Stable value	35,135,911	35,270,975
Partnership	-	1,117,790
Common stock	62,052,966	74,379,228
Self-directed brokerage account	2,144,556	1,826,494
Participant notes receivable	3,649,872	3,899,938
Total investments	440,663,574	424,891,354
Liabilities		
Trade payable - due to broker	154,385	105,260
Net Position - Held in trust for pension and other employee benefits	**$ 441,074,174**	**$ 425,498,762**

Board of Water and Light - City of Lansing, Michigan

Pension Trust Funds - Statements of Changes in Net Position

	For the Year Ended June 30	
	2018	2017
Increases		
Investment income (loss):		
Net appreciation (depreciation) in fair value of investments	$ 17,115,698	$ 35,624,583
Interest and dividend income	14,665,987	10,178,156
Net investment income (loss)	31,781,685	45,802,739
Employer contributions	16,930,215	15,626,391
Participant rollover contributions	1,648,509	1,051,032
Interest from participant notes receivable	156,090	156,466
Total increases	50,516,499	62,636,628
Decreases		
Retiree benefits paid	33,737,868	28,924,101
Loan defaults	209,514	72,325
Participants' note and administrative fees	993,705	1,114,932
Total decreases	34,941,087	30,111,358
Change in Net Position Held in Trust	15,575,412	32,525,270
Net Position Held in Trust for Pension and Other Employee Benefits		
Beginning of year	425,498,762	392,973,492
End of year	**$ 441,074,174**	**$ 425,498,762**

See Notes to Financial Statements.

Note 1 – Significant Accounting Policies

The following is a summary of the significant accounting policies used by the Board of Water and Light ("BWL"):

Reporting Entity – The BWL, a related organization of the City of Lansing, Michigan ("City"), is an administrative board established by the City Charter. The City Charter grants the BWL full and exclusive management of the electric, water, steam, and chilled water services of the City. The commissioners of the governing board are appointed by the mayor with approval of the City Council. The BWL provides water, steam, chilled water, and electric services to the City and surrounding townships. The governing board (Board of Commissioners) has the exclusive authority to set rates for the services provided. The financial statements include the financial activities of the electric, water, steam, and chilled water operations of the BWL. The financial statements also include the financial activities of the BWL Pension Trust Funds. The BWL is exempt from taxes on income because it is a municipal entity.

Fund Accounting – The BWL accounts for its activities in two different fund types. In order to demonstrate accountability for how it has spent certain resources, separate funds allow the BWL to show the particular expenditures that specific revenues were used for. The funds are aggregated into two fund types:

Enterprise funds provide goods or services to users in exchange for charges or fees.

Fiduciary funds

1. The Defined Contribution Plan and Defined Benefit Plan, which accumulate resources for benefit payments to retirees

2. The Voluntary Employees' Beneficiaries Associates ("VEBA"), which accumulates resources for future retiree health care payments to retirees

Basis of Accounting – Enterprise funds and fiduciary funds use the economic resources measurement focus and the full accrual basis of accounting. Revenue is recorded when earned and expenses are recorded when a liability is incurred, regardless of the timing of related cash flows. In addition, the utilities meet the criteria and, accordingly, on July 1, 2012, the BWL adopted the accounting and reporting requirements of GASB 62, paragraphs 476–500.

Note 1 – Significant Accounting Policies (Continued)

The BWL follows the accounting and reporting requirements of GASB 62, paragraphs 476-500, which require that the effects of the ratemaking process be recorded in the financial statements. Such effects primarily concern the time at which various items enter into the determination of net income in order to follow the principle of matching costs and revenues. Accordingly, the BWL records various regulatory assets and liabilities to reflect the regulator's actions (see Note 6). Management believes that the BWL meets the criteria for continued application of GASB 62 paragraphs 476-500, but will continue to evaluate its applicability based on changes in the regulatory and competitive environment.

In June 2015, the GASB issued statement No. 75 - Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions. The objective of this Statement is to improve accounting and financial reporting by state and local governments for postemployment benefits other than pensions (other postemployment benefits or OPEB). It also improves information provided by state and local governmental employers about financial support for OPEB that is provided by other entities. This standard was implemented effective July 1, 2016 for the enterprise fund.

System of Accounts - The BWL’s accounts are maintained substantially in accordance with the Uniform Systems of Accounts of the Federal Energy Regulatory Commission for its electric and steam systems and in accordance with the Uniform Systems of Accounts of the National Association of Regulatory Utility Commissioners for the water and chilled water systems. The chart of accounts dictates how the BWL classifies revenue and expense items in the statement of revenues, expenses, and changes in net position as operating and nonoperating.

Rate Matters - Rates charged to customers are established solely by the governing board. The BWL has agreed to set rates sufficient to meet certain requirements of the bond resolutions for the outstanding revenue bonds.

Note 1 – Significant Accounting Policies (Continued)

Operating Classification – Operating revenues and expenses generally result from providing services and producing and delivering goods in connection with the principal ongoing operations. The principal operating revenues are charges to customers for sales and services. Operating expenses include the cost of sales and services, administrative expenses, return on equity, and depreciation on capital assets. All revenues and expenses not meeting this definition are reported as nonoperating revenues and expenses.

Report Presentation – This report includes the fund-based statements of the BWL. In accordance with government accounting principles, a government-wide presentation with program and general revenues is not applicable to special purpose governments engaged only in business-type activities.

Specific Balances and Transactions

Cash and Cash Equivalents – The BWL considers demand deposits and current restricted funds, which consist of cash and highly liquid investments with an original maturity of 90 days or less, as cash and cash equivalents for financial statement purposes.

Investments are stated at fair value, which is the amount at which an investment could be exchanged in a current transaction between two willing parties. Fair values are based on methods and inputs as discussed in Note 2. Adjustments necessary to record investments at fair value are recorded in the operating statement as increases or decreases in investment income. Market values may have changed significantly after year end.

Note 1 – Significant Accounting Policies (Continued)

Investments – The BWL has established special purpose funds designated to meet anticipated operating requirements. In addition, BWL management has established a future construction fund designated to meet future construction requirements. These funds consist principally of commercial paper and United States government securities and are segregated as follows:

	Carrying Value	
	2018	2017
Designated purpose:		
Coal inventory fluctuation	$ 4,667,114	$ 4,684,100
Litigation, environmental, and uninsured losses	18,867,177	18,936,117
Future water facilities	3,802,319	3,816,307
Subtotal	27,336,610	27,436,524
Special purpose – Future construction	61,438,283	80,623,098
Total	$ 88,774,893	$ 108,059,622

Accounts Receivable – Accounts receivable are stated at net invoice amounts. A general valuation allowance is established based on an analysis of the aged receivables and historical loss experience. All amounts deemed to be uncollectible are charged to expense in the period that determination is made. Accounts receivable are not deemed uncollectible until they are approximately 270 days past due and have remained completely unpaid throughout the BWL's collection policy. The components of accounts receivable for 2018 and 2017 are as follows:

	2018	2017
Customer receivables	$ 20,118,859	$ 18,680,026
Sewerage collections	2,367,863	2,282,599
Miscellaneous	3,573,564	5,109,362
Less allowance for doubtful accounts	(1,500,000)	(1,500,000)
Net	$ 24,560,286	$ 24,571,987

Note 1 – Significant Accounting Policies (Continued)

Special Deposit – The BWL contracted with Consumer's Energy to install a new gas pipeline in 2011 and at that time funded construction of this pipeline and incurred $15,900,000 in costs. The BWL will subsequently be reimbursed for all but $1,675,000 of those costs provided minimum consumption requirements are met over the initial 5 year period. The remaining deposit was returned to the BWL during fiscal year 2018. The long-term other asset for the Consumer's Energy deposit recorded was $0 and $5,690,000 in 2018 and 2017, respectively. The BWL has $41,165 of miscellaneous other deposits at year end.

Inventories – Inventories are stated at weighted average cost and consist of the following at June 30:

	2018	2017
Coal	$ 10,207,127	$ 10,692,936
Gas	478,312	631,759
Materials and supplies	13,236,289	14,097,208
Total	$ 23,921,728	$ 25,421,903

Utility Plant – The utility plant is stated on the basis of cost, which includes expenditures for new facilities and those which extend the useful lives of existing facilities and equipment. Expenditures for normal repairs and maintenance are charged to maintenance expense as incurred. Interest incurred during the construction phase is reflected in the capitalized value of the capital assets constructed. Capital assets are generally defined as assets with an initial, individual cost of more than $5,000 and an estimated life in excess of one year.

Note 1 – Significant Accounting Policies (Continued)

Depreciation – Depreciation of the utility plant is computed using the straight-line method based on estimated useful lives. The resulting provisions for depreciation in 2018 and 2017, expressed as a percentage of the average depreciable cost of the related assets, are as follows:

	Life (Years)	Average Rate (Percent) 2018	2017
Classification of utility plant			
Water	4-100	2.1	1.8
Electric	4-50	4.3	4.0
Steam	5-50	3.2	3.4
Chilled water	5-50	3.5	3.5
Common facilities	4-50	5.2	4.6

When units of property are retired, their costs are removed from the utility plant and charged to accumulated depreciation.

Accrued Compensated Absences – The BWL records a liability for estimated compensated absences that are attributable to services already rendered and that are not contingent on a specific event that is outside the control of the BWL and its employees. This liability is accrued as employees earn the rights to such benefits. The BWL estimates the total current and noncurrent portions of the liability to be $12,123,593 and $12,179,887 as of June 30, 2018 and 2017, respectively.

Capital Contributions – Capital contributions represent nonrefundable amounts received for the purpose of construction for the utility plant. These contributions are from third parties, including amounts from customers, grant programs, and insurance proceeds from damage. Electric, water, and steam contributions are credited against the related assets or recorded as a separate regulatory liability and will offset the depreciation of the related assets over the estimated useful lives. This treatment is consistent with the BWL's ratemaking policy and is thus permitted under GASB 62 paragraphs 476-500.

Note 1 – Significant Accounting Policies (Continued)

Deferred Outflows/Inflows of Resources – In addition to assets, the statement of net position reports a separate section for deferred outflows of resources. This separate financial statement element, deferred outflows of resources, represents a consumption of net position that applies to a future period and so will not be recognized as an outflow of resources (expense/expenditure) until then. The BWL has three items that qualify for reporting in this category. The deferred outflows of resources relate to deferred losses on refunding, pension related deferrals under GASB 68, and OPEB related deferrals under GASB 75.

In addition to liabilities, the statement of net position reports' a separate section for deferred inflows of resources. This separate financial statement element, deferred inflows of resources, represents an acquisition of net position that applies to a future period and so will not be recognized as an inflow of resources (revenue) until that time. The BWL has the following items that qualify for reporting in this category: the deferred inflows of resources related to costs that have been incurred and will be billed to customers in the future related to the renewable energy plan and energy optimization, chiller plant, and Wise Road items described in Note 6, pension related deferrals under GASB 68, and OPEB related deferrals under GASB 75.

Net Position – Equity is classified as net position and displayed in three components:

- **Net Investment in Capital Assets** – Consists of capital assets, net of accumulated depreciation, and reduced by the outstanding balances of any bonds that are attributable to the acquisition, construction, or improvement of those assets.

- **Restricted for Debt Service** – Consists of net position with constraints placed on their use by revenue bond resolution.

- **Unrestricted** – All other net position that does not meet the definition of "restricted" or "net investment in capital assets."

Net Position Flow Assumption – Sometimes the BWL will fund outlays for a particular purpose from both restricted (e.g., restricted bond) and unrestricted resources. In order to calculate the amounts to report as restricted net position and unrestricted net position in the enterprise fund financial statements, a flow assumption must be made about the order in which the resources are considered to be applied. It is the BWL's policy to consider restricted net position to have been depleted before unrestricted net position is applied.

Note 1 – Significant Accounting Policies (Continued)

Net Pension Asset – A net pension asset is recorded in accordance with GASB Statement No. 68. The asset is the difference between the actuarial total pension liability and the Plan's fiduciary net position as of the measurement date. See Note 8 for additional information.

Other Assets – Other assets consists of a deposit held with the Michigan Public Power Agency (MPPA) related to the Belle River project.

Long-Term Obligations – Long-term debt and other obligations are reported as liabilities. Bond premiums and discounts are amortized over the life of the bonds using the straight-line method. Gains or losses on prior refundings are amortized over the remaining life of the old debt or the life of the new debt, whichever is shorter. The balance at year end for premiums and discounts is shown as an increase or decrease in the liability section of the statement of net position. The balance at year end for the loss on refunding is shown as a deferred outflow in the balance sheet.

Unbilled Accounts Receivable and Revenue – Unbilled accounts receivable at June 30, 2018 and 2017 represents the estimated amount of accounts receivable for services that have not been billed as of the balance sheet date. The amounts are a result of a timing difference between the end of the financial statement cycle (month end) and the billing cycle (various dates within the month for each billing period). Accordingly, the current year revenue from customers whose billing period ends after June 30 for services rendered prior to July 1 will be recognized in the current period.

Postemployment Benefits Other Than Pensions (OPEB) – For purposes of measuring the net OPEB liability, deferred outflows of resources and deferred inflows of resources related to OPEB, and OPEB expense, information about the fiduciary net position of the Lansing Board of Water and Light Retiree Benefit Plan and Trust (the "Plan"), a trust fund of the BWL, and additions to/deductions from the Plan fiduciary net position have been determined on the same basis as they are reported by the Plan. For this purpose, the Plan recognizes benefit payments when due and payable in accordance with the benefit terms. Investments are reported at fair value, except for money market investments and participating interest-earning investment contracts that have a maturity at the time of purchase of one year or less, which are reported at cost.

Note 1 – Significant Accounting Policies (Continued)

Interutility Transactions – The water, electric, steam, and chilled water operations of the BWL bill each other for services provided and these services are reported as revenue to the generating operation and expense to the consuming operation. Such internal billings aggregated $8,448,086 and $8,693,989 in 2018 and 2017, respectively, and are not eliminated in the statement of revenues, expenses, and changes in net assets.

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 and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reporting period. Actual results could differ from those estimates.

Reclassifications – Certain amounts presented in the prior year data may have been reclassified in order to be consistent with the current year's presentation.

Note 2 – Cash, Investments, and Fair Value Disclosure

Michigan Compiled Laws Section 129.91 (Public Act 20 of 1943, as amended) authorizes local governmental units to make deposits and invest in the accounts of federally insured banks, credit unions, and savings and loan associations that have offices in Michigan. A local unit is allowed to invest in bonds, securities, and other direct obligations of the United States or any agency or instrumentality of the United States; certificates of deposit, savings accounts, deposit accounts, or depository receipts of an eligible financial institution; repurchase agreements; bankers' acceptances of United States banks; commercial paper rated within the two highest classifications, which matures not more than 270 days after the date of purchase; obligations of the State of Michigan or its political subdivisions, which are rated as investment grade; and mutual funds composed of investment vehicles that are legal for direct investment by local units of government in Michigan.

Note 2 - Cash, Investments, and Fair Value Disclosure (Continued)

The operating cash investment policy adopted by the BWL in accordance with Public Act 20, as amended, and the Lansing City Charter has authorized investment in bonds and securities of the United States government, certificates of deposit, time deposits, and bankers' acceptances of qualified financial institutions, commercial paper rated A1 by Standard & Poor's and P1 by Moody's, repurchase agreements using bonds, securities, and other obligations of the United States or an agency or instrumentality of the United States, and liquid asset accounts managed by a qualified financial institution using any of these securities. The BWL's deposits and investment policies are in accordance with statutory authority.

Michigan Cooperative Liquid Assets Securities System (MI CLASS) reports the fair value of its underlying assets annually. Participants in the MI CLASS have the right to withdraw their funds in total on one day's notice. At June 30, 2018 and 2017, the fair value of the MI CLASS' assets were substantially equal to the utility's share. Michigan CLASS is rated AAAm by Standard and Poor's. The BWL also has cash and investments with Governments of Michigan Investing Cooperatively (GovMIC). The GovMIC cash and investments are recorded at amortized cost which approximates fair value.

The BWL's cash and investments are subject to several types of risk, which are examined in more detail below:

<u>BWL's Cash and Investments (exclusive of fiduciary funds)</u>

Custodial Credit Risk of Bank Deposits - Custodial credit risk is the risk that in the event of a bank failure, the BWL's deposits may not be returned to it. The BWL requires that financial institutions must meet minimum criteria to offer adequate safety to the BWL. At June 30, 2018 and 2017, the BWL had $19,701,949 and $1,650,050, respectively, of bank deposits that were uninsured and uncollateralized. The BWL evaluates each financial institution with which it deposits funds and only those institutions meeting minimum established criteria are used as depositories.

Custodial Credit Risk of Investments - Custodial credit risk is the risk that, in the event of the failure of the counterparty, the BWL will not be able to recover the value of its investments or collateral securities that are in the possession of an outside party. The BWL does not have a policy for custodial credit risk.

Note 2 - Cash, Investments, and Fair Value Disclosure (Continued)

At June 30, 2018, the following investment securities were uninsured and unregistered, with securities held by the counterparty or by its trust department or agent, but not in the BWL's name:

Type of Investment	Cost Basis	How Held
U.S. government or agency bond or notes	$132,387,636	Counterparty

At June 30, 2017, the following investment securities were uninsured and unregistered, with securities held by the counterparty or by its trust department or agent, but not in the BWL's name:

Type of Investment	Cost Basis	How Held
U.S. government or agency bond or notes	$ 134,304,527	Counterparty

Interest Rate Risk - Interest rate risk is the risk that the value of investments will decrease as a result of a rise in interest rates. The BWL's investment policy restricts investments to a maximum weighted average life of five years unless matched to a specific cash flow.

At June 30, 2018, the average maturities of investments are as follows:

Investment	Fair Value	Less than 1 year	1-5 years	6-10 years
Pooled investment funds	$ 20,793,790	$20,793,790	$ –	$ –
U.S. treasury bonds	88,550,287	26,479,857	62,070,430	–
U.S. agency bonds/notes	32,474,931	12,706,097	14,832,980	4,935,854
Commercial paper	4,177,853	4,177,853	–	–
Supra national agency bonds	7,184,565	380,005	6,804,560	–
Mutual funds	22,671,252	22,671,252	–	–
Total	$ 175,852,678	$87,208,854	$ 83,707,970	$ 4,935,854

Note 2 - Cash, Investments, and Fair Value Disclosure (Continued)

At June 30, 2017, the average maturities of investments are as follows:

Investment	Fair Value	Less than 1 year	1-5 years	6-10 years
Pooled investment funds	$ 41,448,433	$41,448,433	$ -	$ -
U.S. treasury bonds	91,325,108	16,239,430	75,085,678	-
U.S. agency bonds/notes	44,379,571	17,462,537	25,794,936	1,122,098
Commercial paper	17,854,457	17,854,457	-	-
Supra national agency bonds	1,974,548	-	1,974,548	-
Mutual funds	3,155,031	3,155,031	-	-
Total	$ 200,137,148	$96,159,888	$ 102,855,162	$ 1,122,098

Credit Risk - State law limits investments in commercial paper to the top two ratings issued by nationally recognized statistical rating organizations.

As of June 30, 2018, the credit quality ratings of debt securities are as follows:

Investment	Fair Value	Rating	Rating Organization
Pooled investment funds	$20,793,790	AAA	S&P
U.S. treasury bonds	88,550,287	AA+ (Aaa)	S&P (Moody's)
U.S. agency bonds/notes	32,474,931	AA+	S&P
Commercial paper	4,177,853	A1	S&P
Supra national agency bonds	7,184,565	AAA	S&P
Mutual funds	22,671,252	AAAM	S&P

Note 2 - Cash, Investments, and Fair Value Disclosure (Continued)

As of June 30, 2017, the credit quality ratings of debt securities are as follows:

Investment	Fair Value	Rating	Rating Organization
Pooled investment funds	$47,145,988	AAA	S&P
U.S. treasury bonds	38,056,849	AA+	S&P
U.S. agency bonds/notes	45,283,538	AA+	S&P
Commercial paper	7,447,318	A1/A1+	S&P
Supra national agency bonds	2,008,658	AAA	S&P
Mutual funds	124,840	AAAM	S&P

Concentration of Credit Risk - Concentration of credit risk is the risk of loss attributable to the magnitude of a government's investment in a single issuer. As of June 30, 2018 and 2017, the BWL's investment portfolio was concentrated as follows:

Investment	2018	2017
Fannie Mae	9%	11%
Freddie Mac	8%	9%
GovMIC	13%	2%

Fair Value

The BWL 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; Level 3 inputs are significant unobservable inputs.

Note 2 - Cash, Investments, and Fair Value Disclosure (Continued)

The following investments are recorded at fair value using the Matrix Pricing Technique.

	June 30, 2018			
Investment	Level 1	Level 2	Level 3	Total
U.S. Treasury Bonds	$ –	$ 88,550,287	$ –	$ 88,550,287
Supra National Agency Bonds	–	7,184,565	–	7,184,565
Federal Agency Mortgage-Backed Security	–	2,812,408	–	2,812,408
Federal Agency Collateralized Mortgage Obligation	–	4,058,966	–	4,058,966
Federal Agency Bond/Note	–	25,603,557	–	25,603,557
Commercial Paper	–	4,177,853	–	4,177,853
Total investments at fair value level	$ –	$132,387,636	$ –	$132,387,636

	June 30, 2017			
Investment	Level 1	Level 2	Level 3	Total
U.S. Treasury Bonds	$ –	$ 91,325,108	$ –	$ 91,325,108
Supra National Agency Bonds	–	1,974,548	–	1,974,548
Federal Agency Mortgage-Backed Security	–	877,870	–	877,870
Federal Agency Collateralized Mortgage Obligation	–	1,589,459	–	1,589,459
Federal Agency Bond/Note	–	41,912,242	–	41,912,242
Commercial Paper	–	17,854,457	–	17,854,457
Total investments at fair value level	$ –	$155,533,684	$ –	$155,533,684

Note 2 - Cash, Investments, and Fair Value Disclosure (Continued)

Fiduciary Fund Investments

Interest Rate Risk - Pension Trust Funds

At June 30, 2018, the average maturities of investments are as follows:

Investment	Fair Value	Weighted Average Maturity (in years)
U.S. government or agency bond	$ 34,494,449	13.65
Fixed income securities	47,121,007	13.19
Mutual Fund - Bond Funds	18,870,972	4.8
Money market trust funds	3,876,413	Less than 1 year

At June 30, 2017, the average maturities of investments are as follows:

Investment	Fair Value	Weighted Average Maturity (in years)
U.S. government or agency bond	$ 38,104,494	13.64
Fixed income securities	45,862,887	13.19
Mutual Fund - Bond Funds	19,198,075	5.5
Money market trust funds	4,016,366	Less than 1 year

Note 2 - Cash, Investments, and Fair Value Disclosure (Continued)

Credit Risk - Pension Trust Funds

As of June 30, 2018, the credit quality ratings of debt securities (other than the U.S. government) are as follows:

Investment	Fair Value	Rating	Rating Organization
Mutual funds	$ 145,098,563	Not rated	Not rated
U.S. government - implicitly guaranteed	13,481,910	AA+	S&P
U.S. government - implicitly guaranteed	416,305	AA-	S&P
Stable value	35,135,911	AA	S&P
Fixed income securities	4,234,231	AAA	S&P
Fixed income securities	18,869,605	AA+	S&P
Fixed income securities	2,573,800	AA	S&P
Fixed income securities	576,738	AA-	S&P
Fixed income securities	1,070,268	A+	S&P
Fixed income securities	4,502,135	A	S&P
Fixed income securities	3,680,285	A-	S&P
Fixed income securities	5,862,108	BBB+	S&P
Fixed income securities	3,983,612	BBB	S&P
Fixed income securities	1,663,516	BBB-	S&P
Fixed income securities	8,030	BB+	S&P
Fixed income securities	6,540	B+	S&P
Fixed income securities	90,140	B-	S&P
Money market trust funds	3,876,410	Not rated	Not rated

Note 2 – Cash, Investments, and Fair Value Disclosure (Continued)

As of June 30, 2017, the credit quality ratings of debt securities (other than the U.S. government) are as follows:

Investment	Fair Value	Rating	Rating Organization
Mutual funds	$ 136,451,476	Not rated	Not rated
U.S. government – implicitly guaranteed	15,099,899	AA+	S&P
U.S. government – implicitly guaranteed	412,491	AA+	S&P
Stable value	35,270,975	AA-	S&P
Fixed income securities	2,907,825	AAA	S&P
Fixed income securities	16,843,409	AA+	S&P
Fixed income securities	1,530,029	AA	S&P
Fixed income securities	1,609,659	AA-	S&P
Fixed income securities	971,866	A+	S&P
Fixed income securities	5,118,520	A	S&P
Fixed income securities	3,700,024	A-	S&P
Fixed income securities	7,879,776	BBB+	S&P
Fixed income securities	3,494,473	BBB	S&P
Fixed income securities	1,704,316	BBB-	S&P
Fixed income securities	8,170	BB+	S&P
Fixed income securities	94,820	CCC	S&P
Money market trust funds	4,016,366	Not rated	Not rated

Fair Value – Pension Trust Funds

The framework for measuring fair value provides a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1) and the lowest priority to unobservable inputs (Level 3). The three levels of the fair value hierarchy under authoritative guidance are described as follows:

Level 1 – Inputs to the valuation methodology are unadjusted quoted market prices for identical assets in active markets that the Plan has the ability to access.

Note 2 - Cash, Investments, and Fair Value Disclosure (Continued)

Level 2 - Inputs to the valuation methodology include:

> quoted prices for similar assets or liabilities in active markets;
> quoted prices for identical or similar assets or liabilities in inactive markets;
> inputs other than quoted prices that are observable for the asset or liability;
> inputs that are derived principally from or corroborated by observable market data by correlation or other means.
> If the asset or liability has a specified (contractual) term, the level 2 input must be observable for substantially the full term of the asset or liability

Level 3 - Inputs to the valuation methodology are unobservable and significant to the fair value measurement.

The asset's or liability's fair value measurement level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. Valuation techniques maximize the use of relevant observables and minimize the use of unobservable inputs.

The following is a description of the valuation methodologies used for assets measured at fair value. There have been no changes in the methodologies used at June 30, 2018 and 2017:

Money market fund, growth funds, and international funds: Valued at the quoted net asset value ("NAV") of shares held by the Plan at year end.

Partnership: Valued using either NAV, valuations provided by management reflecting the partnership's share of capital account balance, or the income and market approach.

Common stock, corporate bonds and notes, U.S. government obligations, and fixed income securities: Valued at the most recent closing price reported on the market on which individual securities are traded.

Mutual funds: Valued at the daily closing price as reported by the fund. Mutual funds held by the Plan are open-end mutual funds that are registered with the Securities and Exchange Commission. These funds are required to publish their daily NAV and to transact at that price. The mutual funds held by the Plan are deemed to be actively traded.

Note 2 - Cash, Investments, and Fair Value Disclosure (Continued)

Stable value fund: The Plus Fund is a collective fund that seeks to maintain a stable net asset value. It invests primarily in a diversified portfolio of stable-value investments, including traditional guaranteed investment contracts (traditional GICs), separate account GICs, synthetic GICs backed by fixed income securities or investments, and short-term investment funds, including money market mutual funds.

Guaranteed Lifetime Income fund: The Retirement Income Advantage Fund seeks both moderate capital growth and current income. It invests in a separate account under a group variable annuity. The separate account, in turn, invests in a mix of registered funds and a collective trust fund with an allocation of approximately 60% domestic and foreign equities and 40% fixed income.

Self-directed brokerage account: The self-directed brokerage account allows participants of the Plan the option of selecting a more personalized and broad range of investment choices. The investments within the account consist of corporate stocks, which are valued at the most recent closing price reported on the market on which individual securities are traded.

The preceding methods may produce a fair value calculation that may not be indicative of net realizable value or reflective of future fair values. Furthermore, while the Plan believes its valuation methods are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different fair value measurement at the reporting date.

Note 2 - Cash, Investments, and Fair Value Disclosure (Continued)

The following table sets forth by level, within the fair value hierarchy, the Plan's assets at fair value as of June 30, 2018 and 2017:

	June 30, 2018			
Investment Type	Level 1	Level 2	Level 3	Total
Cash and money market trust fund	$ 3	$ 3,876,410	$ –	$ 3,876,413
U.S. government obligations	–	34,494,449	–	34,494,449
Fixed income securities	–	47,121,007	–	47,121,007
Mutual funds	145,098,563	98,451,175	–	243,549,738
Common stocks	62,052,966	–	–	62,052,966
Self-directed brokerage account	2,144,556	–	–	2,144,556
Total investments by fair value level	$ 209,296,088	$ 183,943,041	$ –	393,239,129
Investments measured at the net asset value (NAV)				
Stable value				35,135,911
Guaranteed lifetime income				8,638,662
Total investments measured at fair value				$ 437,013,702

	June 30, 2017			
Investment Type	Level 1	Level 2	Level 3	Total
Cash and money market trust fund	$ 4	$ 4,016,366	$ –	$ 4,016,370
U.S. government obligations	–	38,104,494	–	38,104,494
Fixed income securities	–	45,862,887	–	45,862,887
Mutual funds	136,451,476	75,470,692	–	211,922,168
Partnership	–	–	1,117,790	1,117,790
Common stocks	74,379,228	–	–	74,379,228
Self-directed brokerage account	1,826,494	–	–	1,826,494
Total investments by fair value level	$ 212,657,202	$ 163,454,439	$ 1,117,790	377,229,431
Investments measured at the net asset value (NAV)				
Stable value				35,270,975
Guaranteed lifetime income				8,491,010
Total investments measured at fair value				$ 420,991,416

Note 2 - Cash, Investments, and Fair Value Disclosure (Continued)

Investments Measured Using NAV per Share Practical Expedient: The stable value fund and guaranteed lifetime income fund use NAV per share as a practical expedient to measuring fair value. The stable value fund had a fair value of $35,135,911 and $35,270,975 as of June 30, 2018 and 2017, respectively and the guaranteed lifetime income fund had a fair value of $8,638,662 and $8,491,010, respectively. These funds have no unfunded commitments, the redemption frequency is daily, and there is no redemption notice period.

Note 3 - Restricted Assets

Restricted assets are required under the 2008A, 2011A, 2012A, 2013A, and 2017A Revenue Bond resolutions and the related Nonarbitrage and Tax Compliance Certificates. These assets, which consist of cash, commercial paper, and United States government securities, are segregated into the following funds:

		Carrying Value	
	Required at June 30, 2018	2018	2017
Current			
Operations and Maintenance Fund	$ 34,236,000	$ 82,175,293	$ 88,852,839
Bond and Interest Redemption Fund	16,314,600	16,503,211	16,050,590
Total current	50,550,600	98,678,504	104,903,429
Noncurrent			
Bond Reserve Fund	24,044,200	24,151,912	24,384,188
Total noncurrent	24,044,200	24,151,912	24,384,188
Total	$ 74,594,800	$ 122,830,416	$ 129,287,617

The carrying value in excess of the required value for the current portion is reported as cash and cash equivalents or investments for the years ended 2018 and 2017.

Note 3 – Restricted Assets (Continued)

The restrictions of the various funds are as follows:

- **Operations and Maintenance Fund** – By the end of each month, this fund shall include sufficient funds to provide for payment of the succeeding month's expenses.
- **Bond and Interest Redemption Fund** – Restricted for payment of the current portion of bond principal and interest on the 2008A, 2009A, 2011A, 2012A, 2013A, and 2017A Revenue Bonds.
- **Bond Reserve Fund** – Shall include sufficient funds to cover the maximum annual principal and interest requirements of the 2008A, 2011A, 2012A, 2013A, and 2017A Revenue Bonds. The Nonarbitrage and Tax Compliance Certification stipulates that the amount in the fund shall be valued at amortized cost to meet this requirement. As of June 30, 2018, the cost basis in the fund was $24,475,928.

Note 4 – Utility Plant

The tables below reflect the capital asset activity of the utility plant categories for the years ended June 30, 2018 and 2017:

Capital Asset Activity for Year Ended June 30, 2018

	Capital Assets FY Start	Transfers	Acquisition	Retirement	Capital Assets FY End
Water	$ 309,243,104	$ 2,446,138	$ 5,369,363	$ (618,586)	$ 316,440,019
Electric	687,921,365	7,822,325	39,936,364	(5,531,603)	730,148,451
Steam	71,614,976	917,849	6,343,874	(761,022)	78,115,677
Chilled	34,023,916	–	54,150	–	34,078,066
Common	92,329,375	869,060	4,103,668	(5,229,347)	92,072,756
AUC	19,591,830	(67,862,791)	86,789,362	–	38,518,401
Total	$ 1,214,724,566	$ (55,807,419)	$142,596,781	$ (12,140,558)	$ 1,289,373,370

Note 4 – Utility Plant (Continued)

Accumulated Depreciation for Year Ended June 30, 2018

	Accum. Depr. FY Start	Depreciation Transfer	Depr. / Amort. and Impairment for Year	Depreciation Retirement	Accum. Depr. FY End
Water	$ (101,610,740)	$ 60,509	$ (6,517,356)	$ 402,202	$ (107,665,385)
Electric	(355,112,374)	41,362	(30,373,332)	4,276,603	(381,167,741)
Steam	(18,877,713)	–	(2,410,469)	205,104	(21,083,078)
Chilled	(11,409,281)	–	(1,179,524)	–	(12,588,805)
Common	(47,306,279)	(101,871)	(4,757,200)	4,631,497	(47,533,853)
Total	$ (534,316,387)	$ –	$ (45,237,881)	$ 9,515,406	$ (570,038,862)

Non-depreciable assets – Included in the table above are non-depreciable assets of $1,210,196 for water, $14,760,199 for electric, $124,224 for steam, and $412,339 for common facilities.

Erickson Power Station Impairment - In 2017, the BWL agreed to close the Erickson Power Station by 2025 as a result of a settlement with the Sierra Club in support of BWL's strategic plan. As a result, BWL recorded an impairment of $9,337,129 in 2017 using the service units approach to measure the impairment.

Note 4 – Utility Plant (Continued)

Capital Asset Activity for Year Ended June 30, 2017

	Capital Assets FY Start	Transfers	Acquisition	Retirement	Capital Assets FY End
Water	$ 302,165,777	$ (17,127)	$ 7,454,989	$ (360,535)	$ 309,243,104
Electric	774,429,214	2,307	29,073,790	(115,583,946)	687,921,365
Steam	68,557,331	–	3,569,514	(511,869)	71,614,976
Chilled	33,998,140	–	25,776	–	34,023,916
Common	88,752,432	14,820	5,328,467	(1,766,344)	92,329,375
AUC	15,583,201	(45,452,536)	49,461,165	–	19,591,830
CUC	76,079,000	–	–	(76,079,000)	–
Total	$ 1,359,565,095	$ (45,452,536)	$ 94,913,701	$ (194,301,694)	$ 1,214,724,566

Accumulated Depreciation for Year Ended June 30, 2017

	Accum. Depr. FY Start	Depreciation Transfer	Depr. / Amort. and Impairment for Year	Depreciation Retirement	Accum. Depr. FY End
Water	$ (95,504,108)	$ 12,935	$ (6,394,657)	$ 275,090	$ (101,610,740)
Electric	(430,593,001)	1,885	(29,510,774)	104,989,516	(355,112,374)
Steam	(16,612,421)	–	(2,368,154)	102,862	(18,877,713)
Chilled	(10,231,244)	–	(1,178,037)	–	(11,409,281)
Common	(44,920,836)	(14,820)	(4,129,425)	1,758,802	(47,306,279)
CUC	(71,007,065)	–	(2,113,306)	73,120,371	–
Total	$ (668,868,675)	$ –	$ (45,694,353)	$ 180,246,641	$ (534,316,387)

Non-depreciable assets - Included in the table above are non-depreciable assets of $1,203,638 for water, $13,588,273 for electric, $124,224 for steam, and $412,339 for common facilities.

Note 5 - Long-term Debt

Long-term debt as of June 30 consists of the following:

	2018	2017
Water Supply, Steam, Chilled Water and Electric Utility System Revenue Refunding Bonds, Series 2017A, due in annual principal installments beginning July 1, 2019 and continuing through July 1, 2032, plus interest at a rate of 5.00%. Original amount of issue $30,365,000.	$ 30,365,000	$ 30,365,000
Water Supply, Steam, Chilled Water, and Electric Utility System Revenue Refunding Bonds, Series 2013A, due in annual principal installments beginning July 1, 2014 through July 1, 2026, plus interest at rates ranging from 2.00% to 5.00%. Original amount of issue $21,085,000.	16,560,000	18,025,000
Water Supply, Steam, Chilled Water, and Electric Utility System Revenue Refunding Bonds, Series 2012A, due in annual principal installments beginning July 1, 2013 through July 1, 2018, plus interest at rates ranging from 2.00% to 5.00%. Original amount of issue $17,370,000.	5,310,000	10,375,000
Water Supply, Steam, Chilled Water, and Electric Utility System Revenue Bonds, Series 2011A, due in annual principal installments beginning July 1, 2015 through July 1, 2041, plus interest at rates ranging from 3.00% to 5.50%. Original amount of issue $250,000,000.	249,985,000	249,990,000
Water Supply, Steam, Chilled Water, and Electric Utility System Revenue Bonds, Series 2008A, due serially beginning July 1, 2012 and continuing through July 1, 2032, plus interest at rates ranging from 3.00% to 5.00%. Original amount of issue $40,000,000.	1,745,000	3,420,000

Note 5 - Long-term Debt (Continued)

	2018	2017
Promissory note, due to the City of Lansing in semi-annual installments through October 1, 2024, plus interest at a rate of 2.50%. Original amount of issue $13,225,385.	$ 7,389,778	$ 8,932,605
Lansing Economic Development Corp due in monthly installments of $4,500 through 2022.	18,000	22,500
Charter Township of Lansing Special Assessment pertaining to the Groesbeck II Park Drain. Due in annual installments ranging from $132,000 to $291,000 with final payment in 2044.	3,410,245	3,536,560
Bond anticipation note for a future issuance of revenue bonds pertaining to a natural gas combined cycle facility and other system improvements.	50,001	-
Total	314,833,024	324,666,665
Less current portion	(9,360,459)	(9,614,677)
Plus unamortized premium	12,408,334	13,700,925
Total long-term portion	$ 317,880,899	$ 328,752,913

The unamortized premium and deferral on refunded bonds is being amortized over the life of the bonds, using the straight-line method.

Note 5 - Long-term Debt (Continued)

Aggregate principal and interest payments applicable to long-term debt are as follows:

	Principal	Interest	Total
2019	$ 9,360,459	$ 15,598,174	$ 24,958,633
2020	7,658,795	15,183,315	22,842,110
2021	7,942,341	14,851,321	22,793,662
2022	8,247,081	14,495,683	22,742,764
2023	8,623,538	14,094,419	22,717,957
2024-2028	49,498,683	63,842,850	113,341,533
2029-2033	62,226,465	50,244,683	112,471,148
2034-2038	80,391,527	32,642,713	113,034,240
2039-2043	80,631,527	14,536,231	95,167,758
2044-2045	252,608	17,039	269,647
Total	$ 314,833,024	$ 235,506,428	$ 550,339,452

The 2008A, 2011A, 2012A, 2013A, and 2017A Bonds require the BWL to establish a reserve account equal to the highest annual principal and interest requirements of such issues. As of June 30, 2018, the balance of this reserve account was $24,151,912 (see Note 3).

All Water Supply and Electric Utility System Revenue Bonds were issued by authority of the BWL. Except for the Series 2009A Subordinate Lien Revenue Refunding Bond, all bonds were issued on a parity basis and are payable solely from the net revenue of the combined water, electric, chilled water, and steam operations of the BWL.

The 2017A Bonds are payable in annual installments in the years 2019 through 2027, inclusive, and shall not be subject to optional redemption prior to maturity. The bonds, or portions of the bonds in multiples of $5,000 maturing or subject to mandatory redemption in the years 2028 and thereafter, shall be subject to redemption at the option of the BWL in such order of maturity as the BWL shall determine, and within a single maturity by lot, on any date on or after July 1, 2027 at par plus accrued interest to the fixed date for redemption.

Note 5 - Long-term Debt (Continued)

The 2013A Bonds are payable in annual installments in the years 2014 to 2024, inclusive, and shall not be subject to optional redemption prior to maturity. The bonds maturing on or after July 1, 2024 shall be subject to redemption at the option of the BWL on or after July 1, 2023 as a whole or in part at any time and by lot within a maturity at par plus accrued interest to the redemption date.

The 2012A Bonds are payable in annual installments in the years 2013 to 2018, inclusive, and shall not be subject to optional redemption prior to maturity.

The Series 2011A Bonds are payable in annual installments in the years 2015 to 2022, inclusive, and shall not be subject to optional redemption prior to maturity. The bonds maturing on or after July 1, 2022 shall be subject to redemption at the option of the BWL on or after July 1, 2021 as a whole or in part at any time and by lot within a maturity at par plus interest accrued to the redemption date.

The Series 2008A Bonds maturing in the years 2012 to 2018, inclusive, shall not be subject to optional redemption prior to maturity. The bonds, or portions of bonds in multiples of $5,000 maturing in the years 2019 to 2032, inclusive, shall be subject to redemption at the option of the BWL in such order of maturity as the BWL shall determine and within a single maturity by lot on any date on or after July 1, 2018, at par plus accrued interest to the date fixed for redemption.

The long-term debt activity for the year ended June 30, 2018 is as follows:

	Revenue Bonds	Other Notes	Total
Beginning balance	$ 325,875,924	$ 12,491,666	$ 338,367,590
Additions	-	50,001	50,001
Reductions	(9,502,588)	(1,673,645)	(11,176,233)
Ending balance	$ 316,373,336	$ 10,868,022	$ 327,241,358
Due within one year	$ 8,585,000	$ 775,459	$ 9,360,459

Note 5 - Long-term Debt (Continued)

The BWL has pledged substantially all revenue, net of operating expenses, to repay the revenue bonds. Proceeds from the bonds provided financing for the construction of the utility plant. The bonds are payable solely from the net revenues of the BWL. The remaining principal and interest to be paid on the bonds total $550,339,452. During the current year, net revenues of the BWL were $71,765,425 compared to the annual debt requirements of $24,044,200.

The long-term debt activity for the year ended June 30, 2017 is as follows:

	Revenue Bonds	Other Notes	Total
Beginning balance	$ 337,152,291	$ 12,595,471	$ 349,747,762
Additions	35,757,547	36,000	35,793,547
Reductions	(47,033,914)	(139,805)	(47,173,719)
Ending balance	$ 325,875,924	$ 12,491,666	$ 338,367,590
Due within one year	$ 8,210,000	$ 1,404,677	$ 9,614,677

Advance Refunding

On February 15, 2017, Series 2017A Revenue Refunding Bonds in the amount of $30,365,000 were issued with an average yield rate of 2.58% to advance refund $34,680,000 of the outstanding Series 2008A Revenue Bonds with an average yield rate of 4.77%. The net proceeds, along with approximately $1.3 million of restricted funds on hand, were used to purchase U.S. government securities. Those securities were deposited in an irrevocable trust with an escrow agent to provide for all future debt service payments on the old bonds. As a result, that portion of the old bonds are considered defeased and the liability for that portion of the old bonds has been removed from the statement of net position.

The cash flow requirements on the old bonds prior to the advance refunding was $51,558,250 from 2017 through 2032. The cash flow requirements on the new bonds are $44,947,061 from 2017 through 2032. The advance refunding resulted in an economic gain of $4,020,830. The bonds are callable on July 1, 2018. At June 30, 2018, $34,680,000 of the bonds outstanding are considered defeased.

Note 6 - Costs/Credits Recoverable in Future Years

Central Utilities Complex

The BWL accounts for amortization of its Central Utilities Complex (CUC), which is a separate operating unit of the BWL, under the regulatory basis of accounting as per GASB 62. The BWL has recorded recoverable (revenue) amortization of $0 and $0 at June 30, 2018 and 2017, respectively. Under an agreement with a BWL customer, the bonded debt related to the construction of the CUC was reimbursed through payments received from this customer through 2017. The recoverable (revenue) amortization balance represented the difference between calculated straight-line amortization expense and the reimbursement payments received from the customer at year end. The CUC was sold to the customer in fiscal 2017 under the terms of the agreement.

Environmental Remediation

During the year ended June 30, 2006, the GASB 49 environmental remediation liability related to a second landfill was approved for regulated entity accounting under GASB 62. The balance of the regulatory asset at June 30, 2018 and 2017 was $620,768 and $1,858,705, respectively. The BWL reviews the adequacy of its rates to recover its cost of service on an annual basis. During the year ended June 30, 2009, regulatory accounting as per GASB 62 was authorized by the Board of Commissioners to collect rates for all environmental remediation sites. The balance as of June 30, 2018 and 2017 for additional sites was $2,363,018 and $4,462,890, respectively. The BWL reviews the adequacy of its rates to recover its cost of service on an annual basis.

Recoverable Cost Adjustments

During the year ended June 30, 2005, the Board of Commissioners approved the use of regulatory accounting as per GASB 62 in accounting for the BWL's power supply cost recovery (PSCR) adjustment, power chemical adjustment (PCA), and fuel cost adjustment (FCA). These affect the amount to be billed to retail electric, water, and steam customers to reflect the difference between the BWL's actual material costs and the amounts incorporated into rates. This resulted in recoverable assets of $(4,908,441) and $(1,237,957) at June 30, 2018 and 2017, respectively. This amount represents costs to be billed (credited) to customers in future years because actual costs of providing utilities were higher (lower) than the costs incorporated into the BWL's rates.

Note 6 – Costs/Credits Recoverable in Future Years (Continued)

Renewable Energy Plan (REP) and Energy Optimization (EO)

During the year ended June 30, 2010, the Board of Commissioners approved the implementation of regulatory accounting as per GASB 62 to account for Public Act 295 of 2008 (PA. 295). PA. 295 set forth requirements for all Michigan utilities to meet the new renewable energy standards and undertake energy optimization programs. As a municipally owned electric utility, the BWL was required to file a proposed energy plan with the Michigan Public Service Commission (MPSC) and this plan was approved on July 1, 2009. These changes will affect the amount to be billed to electric customers. This resulted in deferred inflow of resources of $5,652,720 and $5,407,828 as of June 30, 2018 and 2017, respectively.

Chiller Plant

During the year ended June 30, 2010, the BWL chose to use regulatory accounting as per GASB 62 to recognize the contribution in aid of construction (CIAC) for the development of a new chilled water plant. The remaining recoverable inflow of resources of $1,541,901 and $1,762,172 as of June 30, 2018 and 2017, respectively. The BWL will recognize this as revenue monthly over the life of the new chilled water plant to offset depreciation expense.

Wise Road

During the year ended June 30, 2012, the BWL chose to use regulatory accounting as per GASB 62 to recognize the insurance proceeds for the damaged equipment at the Wise Road Water Conditioning Plant (see Note 13). The remaining recoverable inflow of resources as of June 30, 2018 and 2017 was $10,726,994 and $11,709,619, respectively.

Note 7 - Transactions with the City of Lansing, Michigan

Operations - The BWL recognized revenue of $8,492,561 and $8,154,863 in 2018 and 2017, respectively, for water, electric, and steam services provided to the City. The BWL incurred expenses for sewerage services purchased from the City of $839,024 and $913,190 in 2018 and 2017, respectively.

Additionally, the BWL bills and collects sewerage fees for the City. In connection with these services, the BWL received sewerage collection fees of $963,577 and $988,652 in 2018 and 2017, respectively, included in other income.

Return on Equity - Effective July 1, 1992, the BWL entered into an agreement with the City to provide payment of a return on equity in accordance with a formula based on net billed retail sales from its water, steam heat, and electric utilities for the preceding 12-month period ending May 31 of each year. The return on equity represents compensation to the City for a permanent easement granted to the BWL. Effective March 1, 2002, the formula to calculate the amount owed to the City for return on equity will also include wholesale revenue generated from the BWL's electric, water, steam, and chilled water utilities for the preceding 12-month period ending May 31 of each year. Subject to the provisions of Act 94 Public Acts of 1933, as amended, and the BWL's various bond covenants, this amount is payable to the City in semi-annual installments. Under terms of this agreement, the BWL paid to the City $20,561,871 in 2018 and $21,862,457 in 2017 of operational cash flow in excess of debt service requirements.

Note 8 - Retirement Plans

The BWL has three retirement plans. The BWL administers a tax-qualified, single-employer, noncontributory, defined benefit public employee retirement pension plan ("Defined Benefit Plan"), and the BWL has a tax-qualified, single-employer, noncontributory, defined contribution public employee retirement pension plan ("Defined Contribution Plan"). The BWL also has a tax-qualified, single-employer, defined benefit plan to administer and fund retiree healthcare benefits ("Retiree Benefit Plan and Trust").

Note 8 – Retirement Plans (Continued)

Defined Benefit Plan

Plan Description – The BWL administers the Lansing Board of Water and Light Defined Benefit Plan and Trust for Employees' Pensions ("Defined Benefit Plan") – a noncontributory single-employer defined benefit pension plan for employees of the BWL. The benefit terms were established by the BWL and may be amended by future BWL actions.

The Defined Benefit Plan issues a publicly available financial report that includes financial statements and required supplementary information. That report may be obtained by writing to the Board of Water and Light, Chief Financial Officer, P.O. Box 13007, Lansing, Michigan 48901-3007.

Effective July 1, 1999, the Defined Benefit Plan was amended to include a medical benefit component, in addition to the normal retirement benefits, to fund a portion of the postretirement obligations for certain retirees and their beneficiaries. The funding of the medical benefit component is limited to the amount of excess pension plan assets available for transfer, as determined by the actuary. No medical benefits were paid by the Defined Benefit Plan during the years ended June 30, 2018 and 2017.

Employees Covered by Benefit Terms – At February 28, 2018 and 2017 (the most recent actuarial valuation for funding purposes), Defined Benefit Plan membership consisted of the following:

	2018	2017
Inactive plan members or beneficiaries currently receiving benefits	352	368
Inactive plan members entitled to but not yet receiving benefits	4	6
Active plan members	8	8
Total	364	382

Note 8 - Retirement Plans (Continued)

The Defined Benefit Plan, by resolution of the Board of Commissioners, was closed to employees hired subsequent to December 31, 1996, and a defined contribution plan was established for employees hired after December 31, 1996. Effective December 1, 1997, all active participants in this plan were required to make an irrevocable choice to either remain in this plan (defined benefit) or move to the newly established defined contribution plan. Those participants who elected to move to the defined contribution plan received lump-sum distributions from this plan that were rolled into their accounts in the newly established defined contribution plan. Of the 760 employees who were required to make this election, 602 elected to convert their retirement benefits to the newly established defined contribution plan. As a result of this action, effective December 1, 1997, the Board of Commissioners transferred $75,116,470 to the newly established defined contribution plan, reflecting the plan participants' accumulated benefits as of said date.

Benefits Provided - The Defined Benefit Plan provides retirement, early retirement, disability, termination, and death benefits. The Plan provides for an annual benefit upon normal retirement age equal to the product of the total number of years of credited service multiplied by a percentage equal to 1.80 percent of the highest annual pay during the last 10 years of service, paid in equal monthly installments.

Payments will either be non-increasing or increase only as follows: (a) By an annual percentage increase that does not exceed the annual percentage increase in a cost-of-living index that is based on prices of all items and issued by the Bureau of Labor Statistics; (b) To the extent of the reduction in the amount of the employee's payments to provide for a survivor benefit upon death, but only if the beneficiary whose life was being used to determine the distribution period described in Subsection 8 dies or is no longer the employee's beneficiary pursuant to a qualified domestic relations order within the meaning of Internal Revenue Code Section 414(p); (c) To provide cash refunds of employee contributions upon the employee's death; or (d) To pay increased benefits that result from a plan amendment.

Contributions - Article 9, Section 24 of the State of Michigan constitution requires that financial benefits arising on account of employee service rendered in each year be funded during that year. Accordingly, the BWL retains an independent actuary to determine the annual contribution. The actuarially determined contribution is the estimated amount necessary to finance the costs of benefits earned by plan members during the year, with an additional amount to finance any unfunded accrued liability. There was no contribution required for the years ended June 30, 2017 and 2018. Plan documents do not require participant contributions.

Note 8 – Retirement Plans (Continued)

Net Pension Asset – The components of the net pension asset of the BWL at June 30, 2018 and June 30, 2017 were as follows (in thousands):

	2018	2017
Total pension liability	$ 55,751	$ 56,895
Plan fiduciary net pension	62,367	65,924
Plan's net pension asset	$ (6,616)	$ (9,029)
Plan fiduciary net position, as a percentage of the total pension liability	111.87%	115.87%

The BWL has chosen to use June 30, 2018 as its measurement date for fiscal year 2018. The June 30, 2018 reported net pension asset was determined using a measure of the total pension liability and the pension net position as of June 30, 2018. The June 30, 2018 total pension liability was determined by an actuarial valuation as of February 28, 2018, which used update procedures to roll forward the estimated liability to June 30, 2018.

The BWL has chosen to use June 30, 2017 as its measurement date for fiscal year 2017. The June 30, 2017 reported net pension asset was determined using a measure of the total pension liability and the pension net position as of June 30, 2017. The June 30, 2017 total pension liability was determined by an actuarial valuation as of February 28, 2017, which used update procedures to roll forward the estimated liability to June 30, 2017.

Note 8 - Retirement Plans (Continued)

Changes in the net pension asset during the measurement years were as follows:

	(in thousands)		
	Total Pension Liability	Plan Net Position	Net Pension Asset
Balance at June 30, 2016	$ 61,178	$ 65,442	$ (4,264)
Changes for the year:			
Service cost	112	–	112
Interest	4,317	–	4,317
Differences between expected	–	–	–
and actual experience	(383)	–	(383)
Changes in assumptions	(857)	–	(857)
Net investment income	–	8,271	(8,271)
Benefit payments, including refunds	(7,472)	(7,472)	–
Administrative expenses	–	(317)	317
Miscellaneous other charges	–	–	–
Net changes	(4,283)	482	(4,765)
Balances at June 30, 2017	$ 56,895	$ 65,924	$ (9,029)
Changes for the year:			
Service cost	$ 50	$ –	$ 50
Interest	4,031	–	4,031
Differences between expected			
and actual experience	(230)	–	(230)
Changes in assumptions	1,419	–	1,419
Net investment income	–	3,112	(3,112)
Benefit payments, including refunds	(6,414)	(6,414)	–
Administrative expenses	–	(255)	255
Miscellaneous other charges	–	–	–
Net changes	(1,144)	(3,557)	2,413
Balance at June 30, 2018	$ 55,751	$ 62,367	$ (6,616)

Note 8 – Retirement Plans (Continued)

Pension Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions – For the year ended June 30, 2018, the BWL recognized pension expense of $811,903. At June 30, 2018, the BWL reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Net difference between projected and actual earnings on pension plan investments	$ 1,932,329	$ –

For the year ended June 30, 2017, the BWL recognized pension expense of $(1,934,026). At June 30, 2017, the BWL reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Net difference between projected and actual earnings on pension plan investments	$ –	$ 31,205

Note 8 - Retirement Plans (Continued)

Amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows:

Years Ending June 30		
2019	$	1,408,903
2020		619,901
2021		(413,803)
2022		317,328
Total	$	1,932,329

Actuarial Assumptions - The total pension liability in the June 30, 2018 and June 30, 2017 actuarial valuation was determined using the following actuarial assumptions, applied to all periods included in the measurement:

	2018	2017
Inflation	3.00%	3.00%
Salary increases	3.50%	3.50%
Investment rate of return	7.00%	7.50%

Mortality rates were based on the Healthy and Disabled, RP-2014 Mortality Table with MP-2017 Improvement Scale.

The most recent experience review was completed in 2014. Since the Defined Benefit Plan covered 8 active participants in fiscal year 2018 and 8 active participants in fiscal year 2017, assumptions like termination, retirement, and disability have an immaterial impact on the results and have not been changed.

Note 8 – Retirement Plans (Continued)

Discount Rate – The discount rate used to measure the total pension liability was 7 percent and 7.5 percent in 2018 and 2017, respectively. The projection of cash flows used to determine the discount rate assumed that BWL contributions will be made at rates equal to the actuarially determined contribution rates.

Projected Cash Flows

Based on those assumptions, the Defined Benefit Plan's fiduciary net position was projected to be available to make all projected future benefit payments of current active and inactive employees. Therefore, the long-term expected rate of return on the Defined Benefit Plan investments was applied to all periods of projected benefit payments to determine the total pension asset.

The long-term expected rate of return on Defined Benefit 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. Best estimates of arithmetic real rates of return as of June 30, 2018 and 2017 for each major asset class included in the Defined Benefit Plan's target asset allocation, as disclosed in the Defined Benefit Plan's financial statements, are summarized in the following table:

Asset Class	2018 Long-term Expected Real Rate of Return	2017 Long-term Expected Real Rate of Return
Fixed income	2.74%	2.54%
Domestic equity	8.16%	7.94%
International equity	8.73%	8.66%
Real estate	5.91%	5.88%
Multi-sector	3.60%	-
Absolute return	3.82%	-

Note 8 - Retirement Plans (Continued)

Sensitivity of the Net Pension Asset to Changes in the Discount Rate - The following presents the net pension asset of the BWL at June 30, 2018, calculated using the discount rate of 7.0 percent, as well as what the BWL's net pension asset would be if it were calculated using a discount rate that is 1 percentage-point lower (6.0 percent) or 1 percentage-point higher (8.0 percent) than the current rate:

	1% Decrease (6.00%)	Current Discount Rate (7.00%)	1% Increase (8.00%)
Net pension liability (asset) of the BWL	$ (1,539,264)	$ (6,616,482)	$ (9,466,780)

The following presents the net pension asset of the BWL at June 30, 2017, calculated using the discount rate of 7.5 percent, as well as what the BWL's net pension asset would be if it were calculated using a discount rate that is 1 percentage-point lower (6.5 percent) or 1 percentage-point higher (8.5 percent) than the current rate:

	1% Decrease (6.50%)	Current Discount Rate (7.50%)	1% Increase (8.50%)
Net pension liability (asset) of the BWL	$ (4,900,393)	$ (9,029,155)	$ (12,878,570)

Defined Benefit Plan Fiduciary Net Position - Detailed information about the Defined Benefit Plan's fiduciary net position is available in the separately issued financial report. For the purpose of measuring the net pension asset, deferred outflows of resources, and deferred inflows or resources related to pension and pension expense, information about the Defined Benefit Plan's fiduciary net position and addition to/deduction from fiduciary net position have been determined on the same basis as they are reported by the Defined Benefit Plan. The Defined Benefit Plan uses the economic resources measurement focus and the full accrual basis of accounting. Investments are stated at fair value. Contribution revenue is recorded as contributions are due, pursuant to legal requirements. Benefit payments and refunds of employee contributions are recognized as expense when due and payable in accordance with the benefit terms.

Note 8 – Retirement Plans (Continued)

Defined Contribution Plan

The Lansing Board of Water and Light Employees' Defined Contribution Pension Plan and Trust ("Defined Contribution Plan") was established by the BWL in 1997 under Section 5-203 of the City Charter. The Defined Contribution Plan covers substantially all full-time employees hired after December 31, 1996. In addition, 602 employees hired before January 1, 1997 elected to convert their retirement benefits from the Defined Benefit Plan effective December 1, 1997.

The Defined Contribution Plan issues a publicly available financial report. That report may be obtained by writing to the Board of Water and Light, Chief Financial Officer, P.O. Box 13007, Lansing, Michigan 48901-3007.

The Defined Contribution Plan operates as a money purchase pension plan and meets the requirements of Sections 401(a) and 501(a) of the IRC of 1986, as amended from time to time.

For employees hired before January 1, 1997, the BWL is required to contribute 15.0 percent of the employees' compensation. For employees hired after January 1, 1997, the BWL is required to contribute 9.5 percent of the employees' compensation. In addition, the BWL is required to contribute 3.0 percent of the employees' compensation for all employees who are not eligible to receive overtime pay and 0.5 percent of the employees' compensation for all nonbargaining employees. No participant contributions are required.

During the years ended June 30, 2018 and 2017, the BWL contributed $6,534,888 and $6,052,720, respectively. The BWL's contributions are recognized in the period that the contributions are due.

Basis of Accounting – The Defined Contribution Plan's financial statements are prepared using the accrual method of accounting in accordance with Governmental Accounting Standards Board (GASB) Statement No. 67, *Financial Reporting for Pension Plans.*

Note 8 - Retirement Plans (Continued)

Valuation of Investments and Income Recognition - The Defined Contribution Plan investments are stated at market value based on closing sales prices reported on recognized securities exchanges on the last business day of the year, or, for listed securities having no sales reported and for unlisted securities, upon the last reported bid prices on that date. The mutual funds are valued at quoted market prices, which represent the net asset values of shares held by the Defined Contribution Plan at year end.

Purchases and sales of investments are recorded on a trade-date basis. Interest income is accrued when earned. Dividend income is recorded on the ex-dividend date.

Regulatory Status - The Defined Contribution Plan is not subject to the reporting requirements of the Employee Retirement Income Security Act of 1974 (ERISA) as it has been established for the benefit of a governmental unit.

Retiree Benefit Plan and Trust (OPEB)

Plan Description - The Post-Retirement Benefit Plan and Trust for Eligible Employees of Lansing Board of Water and Light ("Retiree Benefit Plan and Trust") is a single-employer defined benefit healthcare plan. The Plan provides medical, dental, and life insurance benefits in accordance with Section 5-203 of the City Charter. Substantially all of the BWL's employees may become eligible for healthcare benefits and life insurance benefits if they reach normal retirement age while working for the BWL. There were 728 participants eligible to receive benefits at June 30, 2018 and 658 participants eligible at June 30, 2017.

In October 1999, the BWL formed a Voluntary Employee Benefit Administration (VEBA) trust for the purpose of accumulating assets sufficient to fund retiree healthcare insurance costs in future years. During the years ended June 30, 2018 and 2017, the cost to BWL of maintaining the Retiree Benefit Plan was $10,395,327 and $9,573,671, of which respectively, was incurred as direct costs of benefits.

The Retiree Benefit Plan and Trust issues a publicly available financial report. That report may be obtained by writing to the Board of Water and Light, Chief Financial Officer, P.O. Box 13007, Lansing, Michigan 48901-3007.

Note 8 - Retirement Plans (Continued)

Benefits Provided - The Plan provides medical, dental, and life insurance benefits in accordance with Section 5-203 of the City Charter. Benefits are provided through third-party insurers, and the full cost of the benefits is covered by the plan.

Employees covered by benefit terms. At June 30, 2018, the following employees were covered by the benefit terms:

Active plan members (not eligible to receive benefits)	703
Disabled participants	77
Retired participants	506
Surviving spouses	145
Total	1,431

At June 30, 2017, the following employees were covered by the benefit terms:

Active plan members (not eligible to receive benefits)	713
Disabled participants	76
Retired participants	453
Surviving spouses	129
Total	1,371

Contributions - Section 5-203 of the City Charter grants the authority to establish and amend the contribution requirement to the BWL. The BWL establishes its minimum contribution based on an actuarially determined rate. For the years ended June 30, 2018 and 2017, the actual contribution rates of the BWL were 18.7 percent and 17.6 percent of covered-employee payroll, respectively.

Net OPEB Liability - The BWL has chosen to use June 30, 2018 as its measurement date for fiscal year 2018. The June 30, 2018 reported net pension liability was determined using a measure of the total OPEB liability and the OPEB net position as of June 30, 2018. The June 30, 2018 total OPEB liability was determined by an actuarial valuation as of February 28, 2018, which used update procedures to roll forward the estimated liability to June 30, 2018.

Note 8 - Retirement Plans (Continued)

The BWL has chosen to use June 30, 2017 as its measurement date for fiscal year 2017. The June 30, 2017 reported net OPEB liability was determined using a measure of the total OPEB liability and the OPEB net position as of June 30, 2017. The June 30, 2017 total OPEB liability was determined by an actuarial valuation as of February 28, 2018.

Actuarial Assumptions - The total OPEB liability in the June 30, 2018 and June 30, 2017 actuarial valuations were determined using the following actuarial assumptions, applied to all periods included in the measurements, unless otherwise specified:

Inflation	3.0 percent
Payroll Growth	9.3% growth at age 25 and decreases to 6.4% for ages 60+. This percentage includes general wage inflation and merit/productivity increases.
Investment rate of return	7.5 percent, net of OPEB plan investment expense, including inflation
Healthcare cost trend rates	

FYE	Medical / RX	Part B	Dental
2019	9.00%	3.00%	5.00%
2020	8.50%	3.25%	4.75%
2021	8.00%	3.50%	4.50%
2022	7.50%	3.75%	4.25%
2023	7.00%	4.00%	4.00%
2024	6.50%	4.25%	4.00%
2025	6.00%	4.50%	4.00%
2026	5.50%	4.75%	4.00%
2027	5.00%	5.00%	4.00%

Mortality rates were based on the RPH-2016 Total Dataset Mortality Table fully generational using Scale MP-2016 (RPH-2016 table is created based on RPH-2014 Total Dataset Mortality Table with 8 years of MP-2014 mortality improvement backed out, adjusted to 2010 using MP-2017 projection scale).

Best actuarial practices call for a periodic assumption review and BWL completed an experience study in 2017.

Note 8 - Retirement Plans (Continued)

BWL's policy in regard to the allocation of invested assets is established and may be amended by the BWL by a majority vote of the Board of Commissioners. It is the policy of the BWL to pursue an investment strategy that reduces risk through the prudent diversification of the portfolio across a broad selection of distinct asset classes. The following was the adopted asset allocation policy as of June 30, 2018 and 2017:

Asset Class	Target Allocation
U.S. Equities	40%
Non-U.S. Equities	20%
Global Fixed Income	25%
Commercial Real Estate	15%

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 real rates of return (expected returns, net of OPEB 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. The best estimates of arithmetic real rates of return for each major asset class as of June 30, 2018 are summarized in the following table:

Asset Class	Long-Term Expected Real Rate of Return
Core bonds	2.7%
Multi-Sector	3.6
Absolute return	3.8
U.S. large cap equity	7.5
U.S. small cap equity	8.8
Non-U.S. equity	8.7
Core real estate	5.9

Note 8 - Retirement Plans (Continued)

For the June 30, 2017 valuation, the long-term expected rate of return was 7.50%. The discount rate used when the OPEB plan investments are insufficient to pay for future benefit payments was selected from the range of indices as shown in the table below, where the range is given as the spread between the lowest and highest rate shown. The final equivalent single discount rate used for the June 30, 2017 valuation was 7.50% with the expectation that BWL will continue contributing the actuarially determined contribution and/or paying for the pay-go cost.

Asset Class	Long-Term Expected Real Rate of Return
S&P Municipal Bond 20-year High Grade Rate Index	2.71%
Fidelity 20-year Go Municipal Bond Index	2.92%
Actual Discount Rate Used	7.50%

Discount rate - The discount rate used to measure the total OPEB liability as of June 30, 2018 and 2017 was 7.5 percent. The projection of cash flows used to determine the discount rate assumed that BWL contributions will be made at rates equal to the actuarially determined contribution rates. Based on those assumptions, the OPEB plan's fiduciary net position was projected to be available to make all projected OPEB payments for current active and inactive employees. Therefore, the long-term expected rate of return on OPEB plan investments was applied to all periods of projected benefit payments to determine the total OPEB liability.

Note 8 - Retirement Plans (Continued)

	Increase (Decrease)		
	Total OPEB Liability (a)	Plan Fiduciary Net Position (b)	Net OPEB Liability (a)-(b)
Balances at 6/30/2017	$ 205,624,392	$ 173,635,057	$ 31,989,335
Changes for the year:			
Service cost	4,826,401	-	4,826,401
Interest	15,039,052	-	15,039,052
Differences between expected and actual experience	(9,879,514)	-	(9,879,514)
Changes in assumptions	(1,727,939)	-	(1,727,939)
Contributions-employer	-	10,395,327	(10,395,327)
Contributions-employee	-	-	-
Net investment income	-	11,038,903	(11,038,903)
Benefit payments	(10,395,327)	(10,395,327)	-
Administrative expense	-	(634,336)	634,336
Net changes	(2,137,327)	10,404,567	(12,541,894)
Balances at 6/30/2018	$ 203,487,065	$ 184,039,624	$ 19,447,441

Note 8 – Retirement Plans (Continued)

	Increase (Decrease)		
	Total OPEB Liability (a)	Plan Fiduciary Net Position (b)	Net OPEB Liability (a)-(b)
Balances at 6/30/2016	$ 194,588,307	$ 156,300,342	$ 38,287,965
Changes for the year:			
Service cost	3,130,487	–	3,130,487
Interest	14,226,364	–	14,226,364
Differences between expected and actual experience	5,280,548	–	5,280,548
Changes in assumptions	(2,027,643)	–	(2,027,643)
Contributions-employer	–	9,573,671	(9,573,671)
Contributions-employee	–	–	–
Net investment income	–	18,039,508	(18,039,508)
Benefit payments	(9,573,671)	(9,573,671)	–
Administrative expense	–	(704,793)	704,793
Net changes	11,036,085	17,334,715	(6,298,630)
Balances at 6/30/2017	**$ 205,624,392**	**$ 173,635,057**	**$ 31,989,335**

Sensitivity of the net OPEB liability (asset) to changes in the discount rate – The following presents the net OPEB liability (asset) of BWL, as well as what BWL's net OPEB liability (asset) would be if it were calculated using a discount rate that is 1-percentage point lower (6.5 percent) or 1 percentage point higher (8.5 percent) than the current discount rate (7.5 percent) as of June 30, 2018 and 2017:

Note 8 - Retirement Plans (Continued)

	June 30, 2018		
	1% Decrease	Current Discount Rate	1% Increase
Net OPEB Liability (asset)	$43,845,533	$19,447,441	$(991,597)

	June 30, 2017		
	1% Decrease	Current Discount Rate	1% Increase
Net OPEB Liability	$57,428,880	$31,989,336	$10,788,919

Sensitivity of the net OPEB liability (asset) to changes in the healthcare cost trend rates - The following presents the net OPEB liability (asset) of BWL, as well as what BWL's net OPEB liability (asset) would be if it were calculated using healthcare cost trend rates that are 1-percentage-point lower (8.0 percent decreasing to 4.0 percent) or 1-percentage-point higher (10.0 percent decreasing to 6.0 percent) than the current healthcare cost trend rates as of June 30, 2018 and 2017:

	June 30, 2018		
	1% Decrease	Healthcare Cost Trend Rates	1% Increase
Net OPEB Liability (asset)	$(2,824,476)	$19,447,441	$46,517,181

	June 30, 2017		
	1% Decrease	Healthcare Cost Trend Rates	1% Increase
Net OPEB Liability	$9,860,495	$31,989,336	$58,978,628

OPEB plan fiduciary net position - Detailed information about the OPEB plan's fiduciary net position is available in the separately issued Post-Retirement Benefit Plan and Trust for Eligible Employees of Lansing Board of Water and Light June 30, 2018 GASB 74/75 Report, issued July 25, 2018.

Note 8 - Retirement Plans (Continued)

For the year ended June 30, 2018, the Plan recognized OPEB expense of $5,316,416. At June 30, 2018, the Plan reported deferred outflows of resources and deferred inflows of resources related to OPEB from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ 3,655,674	$ 8,331,001
Changes of assumptions	-	2,860,855
Net difference between projected and actual earnings on OPEB plan investments	-	2,203,522
Total	**$ 3,655,674**	**$ 13,395,378**

Amounts reported as deferred outflows of resources and deferred inflows of resources related to OPEB will be recognized in OPEB expense as follows:

Year Ended June 30:	
2019	$ (2,184,101)
2020	(2,184,101)
2021	(2,184,101)
2022	(926,831)
2023	(1,569,127)
Thereafter	(691,443)

For the year ended June 30, 2017, the Plan recognized OPEB expense of $5,551,672. At June 30, 2017, the Plan reported deferred outflows of resources and deferred inflows of resources related to OPEB from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ 4,468,156	$ -
Changes of assumptions	-	1,715,698
Net difference between projected and actual earnings on OPEB plan investments	-	5,029,089
Total	**$ 4,468,156**	**$ 6,744,787**

Note 8 – Retirement Plans (Continued)

Other Postretirement Benefits

The BWL offers its employees a deferred compensation plan, created in accordance with IRC 457. The BWL makes contributions of $1,000 annually for the employees as of January 1 of each year, during the month of January. The BWL also will match employee contributions at one dollar for every one dollar up to $1,500 in a calendar year.

Note 9 – Commitments and Contingencies

At June 30, 2018 and 2017, the BWL has two letters of credit in the amounts of $817,000 and $1,000,000 issued to the Michigan Department of Natural Resources. The letters of credit were issued to satisfy requirements of the Michigan Department of Natural Resources to provide financial assurance to the State of Michigan for the cost of closure and postclosure monitoring and maintenance of a landfill site operated by the BWL.

Through monitoring tests performed on the landfill sites operated by the BWL, it has been discovered that the sites are contaminating the groundwater. The contamination does not pose a significant health risk, but does lower the quality of the groundwater. The BWL received landfill closure approval as well as interim remediation approval. The BWL has estimated the total cost for remediation, including closure and postclosure cost of the landfills, and has recorded a liability of $7,321,928 and $7,608,844 for the years ended June 30, 2018 and 2017, respectively. Certain remediation activities have commenced and are in progress. The landfill sites are no longer receiving waste products. Landfill closure and postclosure requirements are associated with the Michigan Department of Environmental Quality. Annual postclosure costs of these landfill sites are not expected to exceed $380,000 annually and are included in the liability above. Estimates will be revised as approvals are received from the State. In accordance with the regulatory basis of accounting as per GASB 62 (see Note 1), the BWL recorded a corresponding regulatory asset (see Note 6).

Note 9 – Commitments and Contingencies (Continued)

The BWL is subject to various laws and regulations with respect to environmental matters such as air and water quality, soil contamination, solid waste disposal, handling of hazardous materials, and other similar matters. Compliance with these various laws and regulations could result in substantial expenditures. The BWL has established a Designated Purpose Fund (see Note 1), of which one of the purposes of the fund is to meet extraordinary expenditures resulting from responsibilities under environmental laws and regulations. Management believes that all known or expected responsibilities to these various laws and regulations by the BWL will be sufficiently covered by the Designated Purpose Fund and the environmental remediation liability.

The BWL is involved in various other legal actions which have arisen in the normal course of business. Such actions are usually brought for claims in excess of possible settlement or awards, if any, that may result. After taking into consideration legal counsel's evaluation of pending actions, management has recorded an adequate reserve as of June 30, 2018 and 2017 in regard to specific pending legal cases.

The BWL has entered into contracts to purchase coal totaling $9,792,000 through December 31, 2020. In addition, the BWL has entered into contracts for the rail services related to shipping the coal. Commitments for future rail services to be purchased are approximately $18,066,000 through December 2019.

Construction in progress consists of projects for expansion or additions to the utility plant. The estimated additional cost to complete various projects is approximately $492,873,000 and $120,767,000 at June 30, 2018 and 2017, respectively, including commitments on existing construction contracts approximating $122,664,000 and $12,676,000 at June 30, 2018 and 2017, respectively. These projects will be funded through revenue bonds and operational cash flow, including the project funds reported as other assets. There are additional commitments on projects in the process of being constructed that are not included above.

<u>Environmental Protection Agency (EPA) Notice of Finding of Violation</u>

On March 19, 2015, the EPA served the BWL with a Notice of Finding of Violation specifically focused on BWL's Erickson capital projects. As of the date of the financial statements the matter is still being negotiated. The BWL anticipates a settlement cost of $275,000 and mitigation costs of $400,000. The mitigation costs will be incurred over 3 years once the matter is settled and the entire cost is included in the financial statements as presented.

Note 10 – Power Supply Purchase

In 1983, the BWL entered into power supply and project support contracts with MPPA, of which the BWL is a member. Under the agreement, the BWL has the ability to purchase power from MPPA, will sell power to MPPA at an agreed-upon rate, and will purchase 64.29 percent of the energy generated by MPPA's 37.22 percent ownership in Detroit Edison's Belle River Plant (Belle River), which became operational in August 1984.

Under the terms of its contract, the BWL must make minimum annual payments equal to its share of debt service and its share of the fixed operating costs of Belle River. The estimated required payments presented below assume no early calls or refinancing of existing revenue bonds and a 3.0 percent annual inflation of fixed operating costs, which include expected major maintenance projects.

Year	Debt Service and Capital	Estimated Fixed Operating Costs	Total Required
2019	$ –	$ 13,737,534	$ 13,737,534
Total	$ –	$ 13,737,534	$ 13,737,534

In addition to the above required payments, the BWL must pay for fuel, other operating costs, and transmission costs related to any kilowatt hours (KWHs) purchased under these contracts.

The BWL recognized expenses for 2018 and 2017 of $36,653,466 and $53,418,377, respectively, to purchase power under the terms of this contract. The price of this power was calculated on a basis, as specified in the contracts, to enable MPPA to recover its production, transmission, and debt service costs.

In connection with the Belle River purchase, in December 2002, MPPA issued $280,180,000, principal amount, of its Belle River Project Refunding Revenue Bonds, 2002 Series A, with rates ranging from 2.125 percent to 5.25 percent to advance refund $330,850,000 of outstanding 1993A and B bonds.

Note 10 - Power Supply Purchase (Continued)

The BWL has entered into agreements with Energy Developments Limited, formerly Granger Electric Company, to purchase power generated from landfill gases. The agreements will expire as of June 30, 2028 and September 30, 2028. The power to be purchased in the contract is 11.2 megawatts. The estimated total cost of electricity expected to be purchased for the remainder of these contracts is $80,058,000.

Note 11 - Estimated Liability for Excess Earnings on Water Supply and Electric Utility System Revenue Bonds

In accordance with Section 148(f)(2) of the IRC of 1986, as amended, the BWL is required on each anniversary date (July 1) of the Water Supply, Electric Utility, and Steam Utility System Revenue Bonds, Series 2008A, 2011A, 2012A, 2013A, and 2017A to compute amounts representing the cumulative excess earnings on such bonds. That amount essentially represents a defined portion of any excess of interest earned on funds borrowed over the interest cost of the tax-exempt borrowings. Expense is charged (credited) annually in an amount equal to the estimated increase (decrease) in the cumulative excess earnings for the year. On every fifth anniversary date and upon final maturity of the bonds, the BWL is required to remit to the Internal Revenue Service the amount of any cumulative excess earnings computed on the date of such maturity plus an amount equal to estimated interest earned on previous years' segregated funds.

The estimated liability for excess earnings was $0 at June 30, 2018 and 2017. In accordance with the requirements of the bond indenture, the BWL is required to set aside any current year additions to this estimated liability in a rebate fund within 60 days of the anniversary date of the bonds.

Note 12 - Risk Management and Insurance

The BWL is exposed to various risks of loss related to property loss, torts, errors and omissions, and employee injuries (workers' compensation), as well as medical benefits provided to employees. The BWL has purchased commercial insurance for certain general liability, business auto, excess liability, property and boiler and machinery, public officials and employee liability claims, specific excess health insurance claims, and specific excess workers' compensation claims, subject to policy terms, limits, limitations, and deductibles. The BWL is self-insured for most workers' compensation and health insurance claims. Settled claims relating to the commercial insurance have not exceeded the amount of insurance coverage in any of the past three fiscal years.

The BWL estimates the liability for self-insured workers' compensation and health insurance claims that have been incurred through the end of the fiscal year, including claims that have been reported as well as those that have not yet been reported. Changes in the estimated liability for the past two fiscal years were as follows:

	Workers' Compensation			Health Insurance		
	2018	2017	2016	2018	2017	2016
Unpaid claims - Beginning of year	$ 2,200,000	$ 2,200,000	$ 2,200,000	$ 1,167,466	$ 1,167,466	$ 1,188,172
Incurred claims, including claims incurred but not reported	128,524	86,951	348,038	14,494,539	13,838,436	13,797,887
Claim payments	(128,524)	(86,951)	(348,038)	(14,494,539)	(13,838,436)	(13,818,593)
Unpaid claims - End of year	$ 2,200,000	$ 2,200,000	$ 2,200,000	$ 1,167,466	$ 1,167,466	$ 1,167,466

The liability for health insurance is included with accounts payable on the statement of net position.

Note 13 - Upcoming Pronouncements

GASB has approved GASB Statement No. 83, *Certain Asset Retirement Obligations*, Statement No. 84, *Fiduciary Activities*, Statement No. 85, *Omnibus*, Statement No. 86, *Certain Debt Extinguishment Issues*, and Statement No. 87, *Leases*. When they become effective, application of these standards may restate portions of these financial statements.

Note 14 – Restatement of Net Position

The BWL adopted GASB Statement No. 75 effective July 1, 2016. Net position as of June 30, 2016 has been restated as follows:

Net Position – June 30, 2016 (as reported)	$596,090,470
Reverse GASB No. 45 OPEB asset	(7,781,100)
Record GASB No. 75 net OPEB liability	(38,287,965)
Net Position – June 30, 2016 (as restated)	$550,021,405

Net income of the prior year was increased by $2,031,269.

Required Supplemental Information

Lansing Board of Water and Light
Defined Benefit Plan and Trust for Employees' Pensions

Required Supplemental Information (Unaudited)
Schedule of Changes in the Net Pension Asset
Last Ten Fiscal Years
(in thousands)

	2018	2017	2016	2015	2014	2013	2012*	2011*	2010*	2009*
Total Pension Liability										
Service cost	$ 50	$ 113	$ 223	$ 274	$ 349	$ 407	$ -	$ -	$ -	$ -
Interest	4,031	4,317	4,625	4,919	4,751	5,085	-	-	-	-
Changes in benefit terms	-	-	-	-	-	-	-	-	-	-
Differences between expected and actual experience	(230)	(383)	299	(1,093)	964	(1,716)	-	-	-	-
Changes in assumptions	1,419	(857)	(1,468)	-	4,538	-	-	-	-	-
Benefit payments, including refunds	(6,414)	(7,473)	(7,896)	(8,046)	(8,541)	(7,777)	-	-	-	-
Net Change in Total Pension Liability	(1,144)	(4,283)	(4,217)	(3,946)	2,061	(4,001)	-	-	-	-
Total Pension Liability - Beginning of year	56,895	61,178	65,395	69,341	67,280	71,281	-	-	-	-
Total Pension Liability - End of year	55,751	56,895	61,178	65,395	69,341	67,280	-	-	-	-
Plan Net Position										
Contributions - Employer	-	-	-	-	-	-	-	-	-	-
Contributions - Member	-	-	-	-	-	-	-	-	-	-
Net investment income	3,112	8,272	47	1,771	14,243	10,170	-	-	-	-
Administrative expenses	(255)	(317)	(388)	(576)	(596)	(536)	-	-	-	-
Benefit payments, including refunds	(6,414)	(7,473)	(7,896)	(8,045)	(8,541)	(7,777)	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-
Net change in Net Position Held in Trust	(3,557)	482	(8,237)	(6,850)	5,106	1,857	-	-	-	-
Net Position Restricted for Pensions - Beginning of year	65,924	65,442	73,679	80,529	75,424	73,567	-	-	-	-
Net Position Restricted for Pensions - End of year	62,367	65,924	65,442	73,679	80,530	75,424	-	-	-	-
BWL Net Pension Asset - Ending	**$ (6,616)**	**$ (9,029)**	**$ (4,264)**	**$ (8,284)**	**$ (11,189)**	**$ (8,144)**	**$ -**	**$ -**	**$ -**	**$ -**
Plan Net Position as a % of Total Pension Liability	111.87%	115.87%	106.97%	112.67%	116.14%	112.10%	- %	- %	- %	- %
Covered Employee Payroll	$ 603	$ 586	$ 772	$ 1,018	$ 1,225	$ 1,684	$ -	$ -	$ -	$ -
BWL's Net Pension Asset as a % of Covered Employee Payroll	(1,097%)	(1,541%)	(552%)	(814%)	(913%)	(484%)	- %	- %	- %	- %

*GASB Statement No. 67 was implemented as of June 30, 2014. Information from 2009 - 2012 is not available and this schedule will be presented on a prospective basis.

Lansing Board of Water and Light
Defined Benefit Plan and Trust for Employees' Pensions

Required Supplemental Information (Unaudited)
Schedule of Employer Contributions to the Net Pension Asset
Last Ten Fiscal Years
(in thousands)

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Actuarially determined contribution	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 86	$ 2,109	$ -
Contributions in relation to the actuarially determined contribution	-	-	-	-	-	-	-	86	2,109	-
Contribution Deficiency (Excess)	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Covered Employee Payroll	$ 603	$ 586	$ 772	$ 1,018	$ 1,225	$ 1,684	$ 2,101	$ 2,398	$ 2,660	$ 3,089
Contributions as a Percentage of Covered Employee Payroll	- %	- %	- %	- %	- %	- %	- %	3.59%	79.29%	- %

Post-Retirement Benefit Plan and Trust for Eligible Employees of Lansing Board of Water and Light

Required Supplemental Information (Unaudited)
Schedule of Changes in the Net OPEB Liability
Last Ten Fiscal Years
(in thousands)

	2018	2017	2016*	2015*	2014*	2013*	2012*	2011*	2010*	2009*
Total OPEB Liability										
Service cost	$ 4,827	$ 3,130	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Interest	15,039	14,226	-	-	-	-	-	-	-	-
Changes in benefit terms	-	-	-	-	-	-	-	-	-	-
Differences between expected and actual experience	(9,880)	5,281	-	-	-	-	-	-	-	-
Changes in assumptions	(1,728)	(2,027)	-	-	-	-	-	-	-	-
Benefit payments, including refunds	(10,395)	(9,574)	-	-	-	-	-	-	-	-
Net Change in Total OPEB Liability	(2,137)	11,036	-	-	-	-	-	-	-	-
Total OPEB Liability - Beginning of year	205,624	194,588	-	-	-	-	-	-	-	-
Total OPEB Liability - End of year	203,487	205,624	-	-	-	-	-	-	-	-
Trust Net Position										
Contributions - Employer	10,395	9,574	-	-	-	-	-	-	-	-
Contributions - Member	-	-	-	-	-	-	-	-	-	-
Net investment income	11,039	18,040	-	-	-	-	-	-	-	-
Administrative expenses	(634)	(705)	-	-	-	-	-	-	-	-
Benefit payments, including refunds	(10,395)	(9,574)	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-
Net change in Net Position Held in Trust	10,405	17,335	-	-	-	-	-	-	-	-
Trust fiduciary net position - Beginning of year	173,635	156,300	-	-	-	-	-	-	-	-
Trust fiduciary net position - End of year	184,040	173,635	-	-	-	-	-	-	-	-
BWL Net OPEB Liability - Ending	**$ 19,447**	**$ 31,989**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Trust Fiduciary Net Position as a % of Total OPEB Liability	90.44%	84.44%	- %	- %	- %	- %	- %	- %	- %	- %
Covered Employee Payroll	$ 55,650	$ 54,383	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
BWL's Net OPEB Liability as a % of Covered Employee Payroll	34.95%	58.82%	- %	- %	- %	- %	- %	- %	- %	- %

*GASB Statement No. 75 was implemented as of June 30, 2016. Information from 2009 - 2016 is not available and this schedule will be presented on a prospective basis.

Post-Retirement Benefit Plan and Trust for Eligible Employees of Lansing Board of Water and Light

Required Supplemental Information (Unaudited)
Schedule of Employer Contributions to the Net OPEB Liability
Last Ten Fiscal Years
(in thousands)

Fiscal Year Ended	Employer Contributions Required	Employer Contributions Actual	Difference of Required to Actual Contributions	Covered Employee Payroll	Percentage of Actual Contributions to Covered Payroll
6/30/2009*	$ 18,132	$ 17,866	$ (266)	$ -	-
6/30/2010*	21,291	21,318	27	-	-
6/30/2011	17,300	17,236	(64)	47,213	37%
6/30/2012	15,744	15,854	110	46,885	34%
6/30/2013	13,994	14,045	51	47,468	30%
6/30/2014	9,200	9,268	68	46,971	20%
6/30/2015	5,762	9,671	3,909	50,885	19%
6/30/2016	5,788	9,423	3,635	53,893	17%
6/30/2017	7,508	9,574	2,066	54,383	18%
6/30/2018	7,535	10,395	2,860	55,650	19%

*GASB Statement No. 75 was implemented as of June 30, 2016. Information from 2009 - 2010 is not available and this schedule will be presented on a prospective basis.

Additional Information

Board of Water and Light - City of Lansing, Michigan

Income Available for Revenue Bond Debt Retirement

	For the Year Ended June 30	
	2018	2017
Income - Before capital contributions per statement of revenues, expenses, and changes in net position	$ 14,116,063	$ 6,360,409
Adjustments to Income		
Depreciation and impairment	44,255,255	51,935,552
Interest on long-term debt:		
Notes	62,210	51,446
Revenue bonds	13,331,897	14,703,367
Total additional income	57,649,362	66,690,365
Income Available for Revenue Bonds and Interest Redemption	**$ 71,765,425**	**$ 73,050,774**
Debt Retirement Pertaining to Revenue Bonds		
Principal	$ 8,585,000	$ 8,210,000
Interest	15,295,875	16,049,511
Total	**$ 23,880,875**	**$ 24,259,511**
Percent Coverage of Revenue Bonds and Interest Requirements	**301**	**301**

	Combined 2018	Combined 2017	Water 2018	Water 2017
Operating Revenues				
Water	$ 41,524,143	$ 40,738,054	$ 41,524,143	$ 40,738,054
Electric:				
Retail	271,414,998	280,955,243	-	-
Sales for resale	21,846,410	31,969,934	-	-
Steam	12,072,017	11,404,174	-	-
Chilled water	6,225,356	6,362,308	-	-
Total operating revenues	353,082,924	371,429,713	41,524,143	40,738,054
Operating Expenses				
Production:				
Fuel, purchased power, and other operating expenses	142,679,119	161,787,983	8,900,728	8,782,872
Maintenance	16,474,970	18,725,293	3,303,312	3,074,073
Transmission and distribution:				
Operating expenses	7,929,917	10,139,726	1,639,903	1,392,291
Maintenance	19,983,487	15,839,208	3,211,987	2,827,509
Administrative and general	73,638,904	71,417,820	12,964,161	10,966,026
Return on Equity	20,561,871	21,862,457	2,465,989	2,429,849
Depreciation	44,255,255	42,598,423	6,717,444	6,657,053
Total operating expenses	325,523,523	342,370,910	39,203,524	36,129,673
Operating Income	27,559,401	29,058,803	2,320,619	4,608,381
Nonoperating Income (Expenses)				
Investment income	834,087	914,829	(28,686)	98,653
Other (expense) income	(883,318)	478,719	733,527	923,068
Impairment on Eckert Plant	-	-	-	-
Impairment on Erickson Plant	-	(9,337,129)	-	-
Bonded debt interest expense	(13,331,897)	(14,703,367)	(1,391,610)	(1,758,663)
Amortization - Central Utilities Complex	-	-	-	-
Other interest expense	(62,210)	(51,446)	(7,070)	(4,419)
Total nonoperating expense	(13,443,338)	(22,698,394)	(693,839)	(741,361)
Net Income (Loss)	**$ 14,116,063**	**$ 6,360,409**	**$ 1,626,780**	**$ 3,867,020**

Detail of Statements of Revenues and Expenses
For the Years Ended June 30, 2018 and 2017

Electric		Steam		Chilled Water	
2018	2017	2018	2017	2018	2017
$ -	$ -	$ -	$ -	$ -	$ -
271,414,998	280,955,243	-	-	-	-
21,846,410	31,969,934	-	-	-	-
-	-	12,072,017	11,404,174	-	-
-	-	-	-	6,225,356	6,362,308
293,261,408	312,925,177	12,072,017	11,404,174	6,225,356	6,362,308
127,702,294	146,768,880	4,637,601	4,450,412	1,438,496	1,785,819
12,257,504	14,887,491	722,446	409,666	191,708	354,063
5,977,257	8,442,706	312,757	304,729	-	-
16,329,536	12,569,323	441,964	442,376	-	-
58,806,770	58,674,904	1,300,400	1,346,580	567,573	430,310
17,067,336	18,418,803	652,087	625,702	376,459	388,103
33,825,801	32,004,536	2,525,735	2,538,286	1,186,275	1,398,548
271,966,498	291,766,643	10,592,990	10,117,751	3,760,511	4,356,843
21,294,910	21,158,534	1,479,027	1,286,423	2,464,845	2,005,465
848,930	695,357	22,278	88,579	(8,435)	32,240
(1,289,108)	(270,184)	(549,009)	(397,548)	221,272	223,383
-	-	-	-	-	-
-	(9,337,129)				
(9,508,962)	(10,339,513)	(1,855,996)	(1,966,111)	(575,329)	(639,080)
-	-	-	-	-	-
(55,119)	(47,003)	(21)	(24)	-	-
(10,004,259)	(19,298,472)	(2,382,748)	(2,275,104)	(362,492)	(383,457)
$ 11,290,651	**$ 1,860,062**	**$ (903,721)**	**$ (988,681)**	**$ 2,102,353**	**$ 1,622,008**

Detail of Statements of Changes in Net Position

	Combined	Water	Electric	Steam	Chilled Water
Net Position - June 30, 2016, as restated	$ 550,021,405	$ 88,611,523	$ 461,923,972	$ (3,968,012)	$ 3,453,922
Income (loss) before contributions	6,360,409	3,867,020	1,860,062	(988,681)	1,622,008
Net Position - June 30, 2017	556,381,814	92,478,543	463,784,034	(4,956,693)	5,075,930
Income (loss) before contributions	14,116,063	1,626,780	11,290,651	(903,721)	2,102,353
Net Position - June 30, 2018	$ 570,497,877	$ 94,105,323	$ 475,074,685	$ (5,860,414)	$ 7,178,283

Board of Water and Light - City of Lansing, Michigan

Pension Trust Funds - Detail of Statements of Net Position

	As of June 30, 2018			
	Defined Contribution Plan	Defined Benefit Plan	VEBA	Total
Assets				
Receivable - investment interest receivable	$ -	$ 148,763	$ 404,369	$ 553,132
Trade receivable - due from broker	-	11,853	-	11,853
Investments at fair value:				
Cash and money market trust fund	-	1,890,701	1,985,712	3,876,413
U.S. government obligations	-	7,966,488	26,527,961	34,494,449
Fixed income securities	-	12,372,866	34,748,141	47,121,007
Mutual funds	153,737,225	26,341,508	72,109,667	252,188,400
Stable value	35,135,911	-	-	35,135,911
Partnership	-	-	-	-
Common stock	-	13,634,806	48,418,160	62,052,966
Self-directed brokerage account	2,144,556	-	-	2,144,556
Participant notes receivable	3,649,872	-	-	3,649,872
Total investments	194,667,564	62,206,369	183,789,641	440,663,574
Liabilities				
Trade payable - due to broker	-	-	154,385	154,385
Net Position - Held in trust for pension and other employee benefits	**$ 194,667,564**	**$ 62,366,985**	**$ 184,039,625**	**$ 441,074,174**

	As of June 30, 2017			
	Defined Contribution Plan	Defined Benefit Plan	VEBA	Total
Assets				
Receivable - investment interest receivable	$ -	$ 153,010	$ 425,197	$ 578,207
Trade receivable - due from broker	-	46,051	88,410	134,461
Investments at fair value:				
Cash and money market trust fund	-	1,088,909	2,927,461	4,016,370
U.S. government obligations	-	9,053,469	29,051,025	38,104,494
Fixed income securities	-	12,156,276	33,706,611	45,862,887
Mutual funds	144,942,486	22,381,599	53,089,093	220,413,178
Stable value	35,270,975	-	-	35,270,975
Partnership	-	1,117,790	-	1,117,790
Common stock	-	19,938,242	54,440,986	74,379,228
Self-directed brokerage account	1,826,494	-	-	1,826,494
Participant notes receivable	3,899,938	-	-	3,899,938
Total investments	185,939,893	65,736,285	173,215,176	424,891,354
Liabilities				
Trade payable - due to broker	-	11,533	93,727	105,260
Net Position - Held in trust for pension and other employee benefits	**$ 185,939,893**	**$ 65,923,813**	**$ 173,635,056**	**$ 425,498,762**

Board of Water and Light - City of Lansing, Michigan

Pension Trust Funds - Detail of Statement of Changes in Net Position
For the Year Ended June 30, 2018

	Defined Contribution Plan	Defined Benefit Plan	VEBA	Total
Increases				
Investment income (loss):				
Net appreciation (depreciation)				
in fair value of investments	$ 8,851,973	$ 1,521,207	$ 6,742,518	$ 17,115,698
Interest and dividend income	8,778,719	1,590,883	4,296,385	14,665,987
Net investment income (loss)	17,630,692	3,112,090	11,038,903	31,781,685
Employer contributions	6,534,888	-	10,395,327	16,930,215
Participant rollover contributions	1,648,509	-	-	1,648,509
Interest from participant notes receivable	156,090	-	-	156,090
Total increases	25,970,179	3,112,090	21,434,230	50,516,499
Decreases				
Retiree benefits paid	16,928,587	6,413,954	10,395,327	33,737,868
Loan defaults	209,514	-	-	209,514
Participants' note and administrative fees	104,407	254,964	634,334	993,705
Total decreases	17,242,508	6,668,918	11,029,661	34,941,087
Change in Net Position Held in Trust	8,727,671	(3,556,828)	10,404,569	15,575,412
Net Position Held in Trust for Pension and Other Employee Benefits				
Beginning of year	185,939,893	65,923,813	173,635,056	425,498,762
End of year	**$ 194,667,564**	**$ 62,366,985**	**$ 184,039,625**	**$ 441,074,174**

Board of Water and Light - City of Lansing, Michigan

Pension Trust Funds - Detail of Statement of Changes in Net Position
For the Year Ended June 30, 2017

	Defined Contribution Plan	Defined Benefit Plan	VEBA	Total
Increases				
Investment income (loss):				
Net appreciation (depreciation)				
in fair value of investments	$ 15,347,096	$ 6,553,152	$ 13,724,335	$ 35,624,583
Interest and dividend income	4,144,461	1,718,523	4,315,172	10,178,156
Net investment income (loss)	19,491,557	8,271,675	18,039,507	45,802,739
Employer contributions	6,052,720	-	9,573,671	15,626,391
Participant rollover contributions	1,051,032	-	-	1,051,032
Interest from participant notes receivable	156,466	-	-	156,466
Total increases	26,751,775	8,271,675	27,613,178	62,636,628
Decreases				
Retiree benefits paid	11,877,805	7,472,625	9,573,671	28,924,101
Loan defaults	72,325	-	-	72,325
Participants' note and administrative fees	93,067	317,072	704,793	1,114,932
Total decreases	12,043,197	7,789,697	10,278,464	30,111,358
Change in Net Position Held in Trust	14,708,578	481,978	17,334,714	32,525,270
Net Position Held in Trust for Pension and Other Employee Benefits				
Beginning of year	171,231,315	65,441,835	156,300,342	392,973,492
End of year	**$ 185,939,893**	**$ 65,923,813**	**$ 173,635,056**	**$ 425,498,762**

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Appendix D

SELECTED FINANCIAL INFORMATION

This Appendix contains excerpts from the BWL's annual financial reports for the fiscal years ended June 30, 2016, 2017 and 2018 and seven month interim financial information ended January 31, 2018 and 2019. The information contained in this Appendix does not include all of the financial information and disclosures required for a fair presentation of the BWL's financial position or the BWL's financial position in conformity with generally accepted accounting principles. The complete audited financial statements of the BWL for the same fiscal years are available at http://maint.lbwl.com/investorrelations/.

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City of Lansing Board of Water and Light
Statement of Net Assets
Fiscal Years Ended June 30, 2016, 2017 and 2018

	June 30			January 31	
ASSETS	2016	2017	2018	2018	2019
Current Assets:					
Restricted cash and cash equivalents	$46,586,326	$47,380,541	$50,550,600	$21,429,156	$43,824,780
Cash and cash equivalents	53,637,717	57,522,888	48,127,904	60,761,506	37,214,921
Investments	107,921,202	108,059,622	88,774,893	108,136,052	90,222,515
Accounts receivable	23,168,659	24,571,987	24,560,286	27,616,209	24,706,546
Estimated unbilled accounts receivable	19,526,475	17,334,540	19,748,294	17,334,540	19,748,294
Inventories	25,067,737	25,421,903	23,921,728	24,564,212	29,200,781
Other	3,997,490	4,400,379	4,742,077	6,279,279	6,553,955
Total Current Assets	$279,905,606	$284,691,860	$260,425,782	$266,120,953	$251,471,792
Other assets:					
Long-term receivable					
Recoverable energy asset	$2,302,845	-	-	-	-
Recoverable environmental remediation	11,483,569	$6,321,595	$2,983,786	$3,309,637	$2,908,614
Special deposit	8,535,000	5,690,000	41,165	2,886,883	17,201,165
Net pension asset	4,263,990	9,029,155	6,616,482	9,029,155	5,689,464
Other	10,265,098	2,723,987	2,593,739	2,735,466	2,626,423
Total Other Assets	36,850,502	23,764,737	12,235,172	17,961,141	28,425,666
Noncurrent restricted assets	$25,319,385	$24,384,188	$24,151,912	$24,206,814	$24,692,224
Utility Plant:					
Water	$302,165,777	$309,243,104	$316,440,019	$294,619,705	$301,810,980
Electric	774,429,214	687,921,365	730,148,451	815,156,454	856,137,181
Steam	68,557,331	71,614,976	78,115,677	71,614,976	78,117,328
Chilled Water	33,998,140	34,023,916	34,078,066	34,023,915	34,078,066
Common facilities	88,752,432	92,329,375	92,072,756	92,153,379	91,935,390
Central Utilities Complex	76,079,000	-	-	-	-
Total	$1,343,981,894	$1,195,132,736	$1,250,854,969	$1,307,568,429	$1,362,078,945
Less accumulated depreciation	668,868,675	534,316,387	570,038,862	682,923,135	719,054,517
Net	$675,113,219	$660,816,349	$680,816,107	$624,645,294	$643,024,429
Construction in progress	15,583,201	19,591,830	38,518,401	54,475,209	106,653,486
Total utility plant	690,696,420	680,408,179	719,334,508	679,120,504	749,677,915
Total assets	$1,032,771,913	$1,013,248,964	$1,016,147,374	$987,409,411	$1,054,267,596

BWL plans to early-adopt GASB Statement No. 89 for the fiscal year ending June 30, 2019. This statement establishes requirements for interest cost incurred before the end of a construction period.

City of Lansing Board of Water and Light
Statement of Net Assets (Cont.)
Fiscal Years Ended June 30, 2016, 2017 and 2018

	June 30			January 31	
Liabilities	2016	2017	2018	2018	2019
Current Liabilities:					
Accounts payable	$28,679,951	$29,923,625	$34,829,022	$24,542,087	$30,830,394
Current portion of long-term debt	11,642,389	9,614,677	9,360,459	9,989,677	6,950,805
Accrued payroll and related taxes	1,873,549	2,182,199	2,311,346	970,169	2,304,680
Customer deposits	2,304,426	2,072,804	2,202,779	2,062,100	2,249,381
Unearned revenue	-	-	-	-	-
Accrued compensated absences	4,310,921	4,874,356	4,810,006	4,874,356	4,810,006
Accrued interest	8,284,626	227,323	89,998	418,238	188,021
Accrued interest (payable from Rest Assets)	-	7,733,536	7,729,600	1,288,267	1,255,229
Total Current Liabilities	$57,095,862	$56,628,520	$61,333,210	$44,144,893	$48,588,517
Compensated absences—Less current portion	$7,112,200	$7,305,531	$7,313,587	$7,305,531	$7,313,587
Other Long-term liabilities:					
Workers' compensation	$2,200,000	$2,200,000	$2,200,000	$2,200,000	$2,200,000
Environmental remediation liabilities	7,853,780	7,608,844	7,321,928	7,471,227	7,112,482
Deferred Revenue	-	-	-	-	1,100,000
Net OPEB liability	-	31,989,335	19,447,441	29,917,106	16,377,397
Other	2,116,412	2,073,349	1,375,055	2,001,799	1,502,597
Total Other Long-term Liabilities	$12,170,192	$43,871,528	$30,344,424	$41,590,132	$28,292,476
Long-term Debt—Less current portion	338,105,373	328,752,913	317,880,899	319,409,403	355,407,263
Total Liabilities	$414,483,627	$436,558,492	$416,872,120	$412,449,959	$439,601,842
Deferred inflows and outflows:					
Bond Refund Loss being amortized	$(835,838)	$(2,116,754)	$(1,859,964)	$ (1,966,960)	$(1,766,388)
Net pension deferred outflows	(2,930,218)	-	(1,932,329)	-	(1,932,329)
Net OPEB deferred outflows	-	(4,468,156)	(3,655,764)	(4,468,156)	(3,655,764)
Recoverable revenue of Central Utilities Complex	5,071,934	-	-	-	-
Revenue intended to cover future costs	20,891,938	18,879,619	17,921,615	6,622,730	5,797,376
Recoverable energy asset	-	1,237,957	4,908,441	2,922,406	6,569,309
Net pension asset deferrals	-	31,205	-	31,205	-
Net OPEB deferred inflows	-	$6,744,787	$13,395,378	$6,744,787	$13,395,378
Total deferred inflows of resources	$22,197,816	$20,308,658	$ 28,777,377	$ 9,886,012	$ 18,407,582
Net Position					
Invested in capital assets	$367,103,881	$369,476,728	$418,105,026	-	-
Restricted for debt service	38,301,700	38,711,808	42,821,000	-	-
Unrestricted	190,684,889	148,193,278	109,571,851	-	-
Total Net Position	$596,090,470	$556,381,814	$570,497,877	$565,073,440	$596,258,172

Source: Lansing Board of Water and Light

City of Lansing Board of Water and Light
Statement of Revenues, Expenses and Changes in Net Assets
Fiscal Years Ended June 30, 2016, 2017 and 2018

	June 30			January 31	
Operating Revenues	2016	2017[1]	2018	2018	2019
Water	$ 38,730,602	$ 40,738,054	$ 41,524,143	$ 23,901,169	$ 25,388,881
Electric	303,245,767	312,925,177	293,261,408	174,664,887	179,851,898
Steam	12,683,463	11,404,174	12,072,017	6,194,323	7,161,232
Chilled Water	6,275,583	6,362,308	6,225,356	3,834,574	3,933,941
Total Operating Revenues	360,935,415	371,429,713	353,082,924	208,594,953	216,335,952
Operating Expenses					
Production:					
Fuel, purchased power and other operating expenses	159,118,149	161,787,983	$142,679,119	$90,114,445	$75,745,814
Maintenance	19,839,992	18,725,293	16,474,970	8,781,902	9,892,275
Transmission and distribution:					
Operating expenses	7,404,259	10,139,726	7,929,917	4,431,560	4,617,165
Maintenance	14,189,341	15,839,209	19,983,487	10,286,875	11,973,863
Administrative and general	64,007,041	71,417,820	73,638,904	41,707,952	45,619,353
Payment in lieu of taxes	21,033,531	21,862,457	20,561,871	12,189,737	12,721,169
Depreciation and impairment	41,541,560	42,598,423	44,255,255	25,406,619	26,437,918
Total Operating Expenses	$327,133,873	$342,370,911	$325,523,523	$192,919,090	$187,007,557
Operating Income (Loss)	33,801,542	29,058,802	27,559,401	15,675,863	29,328,395
Nonoperating Income (Expenses)					
Investment income	$1,913,873	$914,829	$834,087	$(106,658)	$3,035,560
Other income	(20,351,681)	478,719	(883,318)	1,128,967	756,747
System capacity fee	3,351,392	--	--	--	--
Bonded debt interest expense	(14,861,300)	(14,703,368)	(13,331,897)	(7,978,401)	(7,331,427)
Amortization—Central Utilities Complex	(2,902,714)	--	--	--	--
Impairment on Power Stations	--	(9,337,129)	--	--	--
Other interest expense	(51,049)	(51,446)	(62,210)	(28,150)	(28,983)
Total Nonoperating (expenses) income	$(32,901,479)	$(22,698,395)	$(13,443,338)	$(6,984,242)	$(3,568,103)
Net Income (Changes in Net Assets)	$900,063	$6,360,409	$14,116,063	$8,691,623	$25,760,291
Net Assets—Beginning of year	$595,190,406	$550,021,405	$556,381,814		
Net Assets—End of year	$596,090,469	$556,381,814	$570,497,877		

[1] Due to GASB 75, Fiscal Year 2017 has been modified.
Source: Lansing Board of Water and Light

Appendix E

BOND RESOLUTION
CONSOLIDATED VERSION

The Bonds are being issued by the Lansing Board of Water and Light under the provisions of an Amended and Restated Bond Resolution adopted by the BWL on March 27, 2018 (the "Bond Resolution"). In addition to authorizing the Bonds, the Bond Resolution amends and restates the Amended and Restated Bond Resolution, dated October 24, 1989, as amended and supplemented (the "1989 Bond Resolution").

The Bond Resolution will only become effective upon delivery of the Bonds in an amount sufficient to cause the Bondholders to equal not less than fifty-one percent (51%) in principal amount of the total Outstanding Bonds then outstanding ("Bondholder Consent"). **Upon delivery of the Bonds, Bondholder Consent will be achieved and the Bond Resolution will be effective.**

Copies of the Bond Resolution and the 1989 Bond Resolution and any supplements or amendments may be obtained from the Chief Financial Officer of the BWL.

The Bond Resolution is presented in this Appendix E in consolidated form, and certain details with respect to the Bonds have been omitted. *Notes on the provisions of the Bond Resolution which differ materially from the 1989 Bond Resolution appear in italic font.*

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LANSING BOARD OF WATER AND LIGHT

BOND RESOLUTION

A RESOLUTION TO AUTHORIZE UTILITY SYSTEM REVENUE BONDS FOR A NATURAL GAS COMBINED FACILITY AND SYSTEM IMPROVEMENTS AND REPLACEMENT OF 1989 BOND RESOLUTION AND SUPPLEMENTAL RESOLUTIONS BY THIS RESOLUTION.

Section 1. Definitions. Whenever used in this Bond Resolution, except when otherwise indicated by the context, the following terms shall have the following meanings:

(a) "Act 94" means Act 94, Public Acts of Michigan 1933, as amended.

(b) "Additional Bonds" means any additional bonds of equal standing with the Bonds issued pursuant to Section 24 of this Bond Resolution.

(c) "Aggregate Debt Service" for any period means, as of any date of calculation by the Board, the sum of the amounts of the debt service for such period with respect to all Outstanding Bonds. In the event that any of the Outstanding Bonds bear interest at a variable rate, such Bonds shall, for purposes of calculating Aggregate Debt Service, be assumed by the Board to bear interest at a fixed rate of interest equal to the greater of the actual rate of interest then borne by such variable rate Bonds or the Certified Interest Rate applicable thereto.

The definition of "Aggregate Debt Service" in the 1989 Bond Resolution was as follows: "Aggregate Debt Service" for any period means, as of any date of calculation by the Board, the sum of the amounts of the debt service for such period with respect to all Outstanding Bonds. In the event that any of the Outstanding Bonds bear interest at a variable rate, such Bonds shall, for purposes of calculating Aggregate Debt Service, be assumed by the Board to bear interest at a fixed rate of interest equal to the greater of (i) 10.00% or (ii) the rate published by The Bond Buyer or any successor publication as its "Index of 25 Revenue Bonds" applicable on a date not more than 20 days prior to the date of initial issuance of any such variable interest rate Bonds.

(d) "Aggregate Debt Service Requirement" means for any period, and as of any date of calculation, Aggregate Debt Service for such period, less any capitalized interest to be paid from the proceeds of the Bonds.

(e) "Board" means the Board of Water and Light established pursuant to Section 5-201 of Chapter 2 of the City Charter of the City.

(f) "Bond Reserve Account" means the Bond Reserve Account established pursuant to Section 18(B) of this Bond Resolution.

(g) "Bond Resolution" means this Amended and Restated Bond Resolution and any other resolution amendatory to or supplemental to this Amended and Restated Bond Resolution.

(h) "Bonds" or "Senior Lien Bonds" means the Outstanding portion of the Water Supply, Steam, Chilled Water and Electric Utility System Revenue Bonds, Series 2008A, the Utility System Revenue Bonds, Series 2011A, the Utility System Revenue Refunding Bonds, Series 2012A, the Utility System Revenue Refunding Bonds, Series 2013A, the 2017A Bonds, and the Series 2019 Bonds, and any Additional Bonds of equal standing hereafter issued.

(i) "Certified Interest Rate" shall mean the interest rate determined by a certificate of the Chief Financial Officer executed on or prior to the date of delivery of variable rate Bonds as the rate of interest the variable rate Bonds would bear if they were issued at a fixed rate of interest based on the Bond Buyer Revenue Bond Index and assuming the same maturity date, terms and provisions (other than interest rate) as the variable rate Bonds, and on the basis of the Board's credit ratings with respect to the Bonds (other than Bonds for which credit enhancement is provided by a third party). Determination of the Certified Interest Rate as described in the prior sentence shall be conclusive.

"Certified Interest Rate" was not a defined term in the 1989 Bond Resolution.

(j) "Chief Financial Officer" means the Board's Chief Financial Officer.

(k) "City" means the City of Lansing, Michigan.

(l) Consulting Engineer" means the engineer or engineering firm or firms appointed from time to time, and having a favorable reputation for skill and experience in the design and operation of municipal utility systems, at the time retained by the Board to perform the acts and carry out the duties provided for such Consulting Engineer in the Bond Resolution.

(m) "Event of Default" means an Event of Default specified in Section 25 of this Bond Resolution.

(n) "Government Obligations" means (i) direct obligations of (including obligations issued or held in book entry form on the books of) the United States of America, (ii) obligations the payment on which is guaranteed by the United States of America including, but not limited to, stripped interest components of obligations issued by the Resolution Funding Corporation (REFCORP) and non-callable, non-prepayable debt obligations of the United States Agency for International Development (US AID), which pay principal and interest at least three (3) business days prior to any respective escrow requirement dates, or (iii) non-callable, senior debt obligations of any government-sponsored enterprise or federal agency, corporation, or instrumentality of the United States of America created by an act of congress including, but not limited to, the Federal Home Loan Banks, Freddie Mac, Federal Farm Credit Banks Funding Corporation, and Fannie Mae.

The definition of "Government Obligations" in the 1989 Bond Resolution was as follows: "Government Obligations" means direct obligations of (including obligations issued or held in book entry form on the books of the United States of America.

(o) "Internal Revenue Code" means the Internal Revenue Code of 1986, as amended.

(p) "Investment Obligations" means, to the extent authorized by law, (i) United States government obligations; (ii) obligations the principal and interest on which is fully guaranteed by the United States; (iii) repurchase agreements that are secured by United States government obligations or obligations fully guaranteed by the United States and that are held by an independent third party; (iv) certificates of deposit or other accounts of, or bankers acceptances of, 1 or more of the following: (a) banks that are members of the federal deposit insurance corporation; (b) savings and loan associations that are members of the federal savings and loan insurance corporation; (c) credit unions whose accounts are insured by the national credit union share insurance fund; (v) commercial paper that is rated in the highest category by a nationally recognized rating agency; (vi) obligations of a state of the United States or of a political subdivision of a state of the United States that are rated in 1 of the 3 highest categories by a nationally recognized rating agency; (vii) a collective investment fund that invests solely in 1 or more of the securities described above; and (viii) Government Obligations.

(q) "Junior Lien Bonds" and "Junior Lien Notes" means bonds, bond anticipation notes issued under Act 34, Public Acts of Michigan, 2001, as amended, or other obligations which may be issued or incurred by the Board to provide funds for any lawful purpose of the System which are of junior standing and priority of lien with respect to the Net Revenues to the claim of the Bonds.

The definition of "Junior Lien Bonds" in the 1989 Bond Resolution was as follows: "Junior Lien Bonds" means bonds or other obligations which may be issued or incurred by the Board to provide funds for any lawful purpose of the System which are of junior standing and priority of lien with respect to the Net Revenues to the claim of the Bonds.

(r) "Municipal Obligation" means any bonds or other obligations of any state of the United States of America or of any agency, instrumentality or local governmental unit of any such state (i) which are not callable at the option of the obligor prior to maturity or as to which irrevocable notice has been given by the obligor to call on the date specified in the notice, and (ii) which are fully secured as to principal and interest and redemption premium, if any, by a fund consisting only of cash or Government Obligations, which fund may be applied only to the payment of such principal of and interest and redemption premium, if any, on such bonds or other obligations on the maturity date or dates thereof or the specified redemption date or dates pursuant to such irrevocable instructions, as appropriate, and (iii) which fund is sufficient, as verified by an independent certified public accountant, to pay principal of and interest and redemption premium, if any, on the bonds or other obligations described in this definition of Municipal Obligation on the maturity date or dates thereof or on the redemption date or dates specified in the irrevocable instructions referred to in subclause (i) of this definition of Municipal Obligation, as appropriate, and (iv) which are rated, based on the escrow, in the highest rating category of Standard & Poor's Corporation, Fitch Ratings, Moody's Investors Service, Inc. or any successors thereto.

The definition of "Municipal Obligation" in the 1989 Bond Resolution was as follows: "Municipal Obligation" means any bonds or other obligations of any state of the United States of America or of any agency, instrumentality or local governmental unit of any such state (i) which are not callable at the option of the obligor prior to maturity or as to which irrevocable notice has been given by the obligor to call on the date specified in the notice, and (ii) which are fully secured as to principal and interest and redemption premium, if any, by a fund consisting only of cash or Government Obligations, which fund may be applied only to the payment of such principal of and interest and redemption premium, if any, on such bonds or other obligations on the maturity date or dates thereof or the specified redemption date or dates pursuant to such irrevocable instructions, as appropriate, and (iii) which fund is sufficient, as verified by an independent certified public accountant, to pay principal of and interest and redemption premium, if any, on the bonds or other obligations described in this definition of Municipal Obligation on the maturity date or dates thereof or on the redemption date or dates specified in the irrevocable instructions referred to in subclause (i) of this definition of

Municipal Obligation, as appropriate, and (iv) which are rated, based on the escrow, in the highest rating category of Standard & Poor's Corporation and Moody's Investor Services, Inc. or any successors thereto.

(s) "Net Revenues" means the Revenues remaining after deducting the reasonable expenses of administration, operation, and maintenance of the System.

(t) "Operation and Maintenance Fund" means the Operation and Maintenance Fund established pursuant to Section 18(A) of this Bond Resolution.

(u) "Outstanding Bonds" means Bonds issued under this Bond Resolution except:

(i) Bonds cancelled by the Transfer Agent at or prior to such date;

(ii) Bonds (or portions of Bonds) for the payment or redemption of which moneys or Government Obligations, equal to the principal amount or redemption price thereof, as the case may be, with interest to the date of maturity or redemption date, shall be held in trust under this Bond Resolution and set aside for such payment or redemption (whether at or prior to the maturity or redemption date), provided that if such Bonds (or portions of Bonds) are to be redeemed, notice of such redemption shall have been given as provided in this Bond Resolution or provision satisfactory to the Transfer Agent shall have been made for the giving of such notice;

(iii) Bonds in lieu of or in substitution for which other Bonds shall have been authenticated and delivered hereunder; and

(iv) Bonds no longer deemed to be Outstanding Bonds as provided in Section 5 of this Bond Resolution.

(v) "Rebate Fund" means the Rebate Fund established pursuant to Section 19 of this Bond Resolution.

(w) "Receiving Fund" means the Receiving Fund established pursuant to Section 18 of this Bond Resolution.

(x) "Redemption Fund" means the Bond and Interest Redemption Fund established pursuant to Section 18(B) of this Bond Resolution.

(y) "Registered Owner" means the owner of a Bond as shown by the registration records kept by the Transfer Agent.

[1](z) "Reserve Requirement" shall mean the following: (i) if the long-term unenhanced credit ratings of the Outstanding Bonds are in at least the "A/A2" category without regard to notching factors (or an equivalent rating in at least the third highest category of nationally recognized bond rating agencies), $0, only upon the written direction of the Chief Financial Officer; or (ii) if the long-term unenhanced credit ratings of the Outstanding Bonds are reduced below the "A/A2" category without regard to notching factors (or an equivalent rating in at least the third highest category of nationally recognized bond rating agencies), the lesser of (1) 50% of the maximum annual debt service requirements on the Outstanding Bonds, (2) 62.5% of the average annual debt service requirements on the Outstanding Bonds, or (3) the total of 5% of the original aggregate face amount of each series of the Outstanding Bonds, reduced by the net original issue discount, if any; provided, however, that the Reserve Requirement shall not at any time exceed the amount allowed to be invested at an unrestricted yield pursuant to Treas. Reg. §1.148-2(f)(2) or any successor provision thereto applicable to the Bonds. For purposes of determining the Reserve Requirement, the long-term unenhanced credit ratings of the Outstanding Bonds shall be determined with regard only to the highest two long-term unenhanced ratings of such Bonds. Therefore, subsection (z)(ii) applies only if both such ratings are reduced below the "A/A2" category without regard to notching factors (or an equivalent rating as described above). The Board may rely on the advice of its financial advisor as to which rating category or categories its ratings are within.

The definition of "Reserve Requirement" in the 1989 Bond Resolution was as follows: "Reserve Requirement" shall mean the lesser of (i) the maximum annual debt service requirements on the Outstanding Bonds, (ii) 125% of the average annual debt service requirements on the Outstanding Bonds, or (iii) the total of 10% of the original aggregate face amount of each series of the Outstanding Bonds, reduced by the net original issue discount, if any; provided, however, that the Reserve Requirement shall not at any time exceed the amount allowed to be invested at an unrestricted yield pursuant to Treas. Reg. Section 1.148-2(f)(2) or any successor provision thereto as applicable to the Bonds.

(aa) "Revenues" means the income derived from the rates charged for the services, facilities, and commodities furnished by the System, earnings on investment of funds and accounts of the System required to be deposited in the

1 This amendment to the definition of "Reserve Requirement" in the Bond Resolution adopted March 26, 2019 is effective upon rating agency confirmation that the amendment of "Reserve Requirement" in the Amending Resolution will not result in a reduction or withdrawal of any rating on the Bonds or Outstanding Bonds, as described in "The Bonds – Bond Reserve Account" section of the Official Statement.

Receiving Fund pursuant to this Bond Resolution and other revenues derived from or pledged to the operation of the System.

(bb) "Senior Lien Bonds" means the Bonds and does not include the Junior Lien Bonds and Junior Lien Notes.

(cc) "Series 2018 Notes" means the Utility System Revenue Bond Anticipation Notes, Series 2018.

(dd) "Series 2019 Bonds" means the Utility System Revenue Bonds, Series 2019 issued pursuant to this Amended and Restated Utility System Revenue Bond Resolution.

(ee) "Series 2019 Project" means the project described in the Notice of Intent published in the Lansing State Journal on January 27, 2018, comprised of (a) the acquisition and construction of a natural gas combined cycle facility to produce electricity, including all equipment and any appurtenances and attachments thereto and any related site acquisition or improvements, and the construction, improvement, and renovation of transmission and distribution infrastructure (the "Power Plant Project"), and (b) construction, improvement, and renovation of transmission and distribution lines and related utility system facilities for the water supply, steam, and chilled water systems and electric transmission and distribution lines and related electric utility system facilities, together with any appurtenances and attachments thereto and any related site acquisition or improvements (the "System Improvements Project").

(ff) "Sufficient" means with respect to (i) cash or (ii) Government Obligations or (iii) Municipal Obligations, or any combination thereof, not redeemable at the option of the issuer thereof, the principal and interest payments upon which, without reinvestment of the interest, come due at such times and in such amounts, as to be fully sufficient to pay the interest as it comes due on the Bonds or any portion thereof and the principal and redemption premium, if any, on the Bonds or any portion thereof as they come due whether on the stated maturity date or upon earlier redemption. Securities representing such obligations or cash shall be placed in trust with a bank or trust company, and if any of the Bonds are to be called for redemption prior to maturity, irrevocable instructions to call the Bonds for redemption shall be given to the Transfer Agent.

(gg) "System" means the complete facilities of the Board for the supply and distribution of water and the generation and distribution of electricity, steam, chilled water, and heat, including all plants, works, instrumentalities and properties used or useful in connection with the supply and distribution of water and the generation and distribution of electricity, steam, chilled water, and heat, and all additions, extensions and improvements thereto existing or hereafter acquired by the Board.

(hh) "Transfer Agent" means U.S. Bank National Association, or such other bank selected by the Board for payment of the Bonds.

Section 2. Necessity and Statement of Purpose. It is hereby determined to be a necessary public purpose of the Board to acquire and construct the Series 2019 Project.

Section 3. Costs; Useful Life. The total cost of the Series 2019 Project is estimated to be not-to-exceed $500,000,000 including the payment of capitalized interest and all legal, engineering, financial and other expenses incident thereto, which estimate of cost is hereby approved and confirmed, and the period of usefulness of the Series 2019 Project is estimated to be not less than thirty (30) years.

Section 4. Conditions Permitting Issuance of Additional Bonds. The Bond Resolution establishes requirements for the issuance of Additional Bonds of equal standing and priority of lien with the Outstanding Bonds. The Series 2019 Bonds can be issued as Additional Bonds pursuant to the requirements of the Bond Resolution if the Board determines that the actual or augmented Net Revenues of the System for the fiscal year of the System ending not more than 15 months prior to the sale of Additional Bonds shall be equal to at least one hundred twenty-five (125%) percent of the maximum Aggregate Debt Service Requirement in any current or future fiscal year on the Outstanding Bonds and on the Series 2019 Bonds.

The Board hereby determines that the Series 2019 Bonds shall be issued only if the Chief Financial Officer determines (a) that the Board is not in default in making its required payments to the Operation and Maintenance Fund or the Redemption Fund, and (b) that the actual or augmented Net Revenues of the System for the fiscal year of the System ending not more than 15 months prior to the sale of Additional Bonds shall be equal to at least one hundred twenty-five (125%) percent of the maximum Aggregate Debt Service Requirement in any current or future fiscal year on the Outstanding Bonds and on the Series 2019 Bonds. It is anticipated that at the time the Series 2019 Bonds are issued, the Outstanding Bonds will be the Utility System Revenue Bonds, Series 2011A, Utility System Revenue Refunding Bonds, Series 2013A, and Utility System Revenue Refunding Bonds, Series 2017A.

Section 5. Series 2019 Bonds Authorized. To pay part of the cost of acquiring and constructing all or a portion of the Series 2019 Project, including payment of all legal, engineering, financial and other expenses incident thereto and incident to the issuance and sale of the Series 2019 Bonds and capitalized interest in the amount to be determined at the time of sale of the Series 2019 Bonds, the City, acting by and through the Board, shall borrow the sum of not-to-exceed Five Hundred Million Dollars ($500,000,000) and shall issue the Series 2019 Bonds therefor pursuant to the provisions of Act 94. The remaining cost of the Series 2019 Project in excess of $500,000,000, if any, shall be defrayed from funds on hand and legally available for such use or from an additional series of Bonds to be issued upon approval of a future resolution. The Series 2019 Bonds shall be sold and the proceeds applied in accordance with the provisions of Act 94. The Series 2019 Bonds shall be payable solely out of the Net Revenues of the System and City Council shall not be requested to pledge the full faith and credit of the City for payment of the Series 2019 Bonds.

The capitalized interest, if any, to be paid from proceeds of the Series 2019 Bonds shall not exceed the amount necessary to pay interest for three years, as finally determined at the time of sale of the Series 2019 Bonds by the Chief Financial Officer.

Section 6. Series 2019 Bond Details. The Series 2019 Bonds shall be designated as the "UTILITY SYSTEM REVENUE BONDS, SERIES 2019" or such other series designation as determined at the time of sale by the Chief Financial Officer to reflect the sequence and the year of sale or delivery of the Series 2019 Bonds.

The Series 2019 Bonds shall be issued as fully registered bonds registered in the denomination of $1,000 or integral multiples thereof and shall be numbered in consecutive order of registration or authentication from 1 upwards. The Series 2019 Bonds shall be dated as of the date of delivery thereof or such other date as determined at the time of sale of the Series 2019 Bonds, shall mature as serial bonds or term bonds on such dates as shall be determined at the time of sale of the Series 2019 Bonds but not-to-exceed thirty (30) annual maturities.

The Series 2019 Bonds shall be subject to optional or mandatory redemption prior to maturity at the times and prices finally determined at the time of sale of the Series 2019 Bonds.

The Series 2019 Bonds shall bear interest at a rate or rates to be determined on sale thereof, payable semi-annually on January 1st and July 1st of each year beginning on such date as determined at the time of sale of the Series 2019 Bonds provided that the first interest payment date shall be not later than ten months following the delivery date of the Series 2019 Bonds.

The Series 2019 Bonds shall be executed by the manual or facsimile signature of the Chairperson and the Corporate Secretary of the Board. No Series 2019 Bond shall be valid until authenticated by an authorized representative of the Transfer Agent. The Series 2019 Bonds shall be delivered to the Transfer Agent for authentication and be delivered by the Transfer Agent to the purchaser in accordance with instructions from the Chief Financial Officer upon payment of the purchase price for the Series 2019 Bonds.

Section 7. Registration and Transfer. *[Series 2019 Bond registration and transfer details omitted]*

Section 8. Creation of Series 2019 Bonds Construction Fund. There shall be established and maintained a separate depositary fund designated as the SERIES 2019 BONDS CONSTRUCTION FUND which shall be established by the Chief Financial Officer in a bank or banks qualified to act as depository of the proceeds of sale under the provisions of Section 15 of Act 94. At the discretion of the Chief Financial Officer, separate accounts may be established within the Series 2019 Bonds Construction Fund for proceeds of the Series 2019 Bonds issued to pay the costs of the Power Plant and costs of the System Improvements Project. Monies deposited in the Series 2019 Bonds Construction Fund shall be applied solely in payment of the cost of the Series 2019 Project and any costs of engineering, legal, issuance and other expenses incident thereto. Any unexpended balance remaining in the Series 2019 Bonds Construction Fund after completion of the Series 2019 Project may, in the discretion of the Board, be used for meeting requirements, if any, of the Bond Reserve Account, or for further improvements, enlargements and extension to the System. Any balance remaining after such expenditure shall be paid into the Redemption Fund.

Section 9. Series 2019 Bond Proceeds. From the proceeds of sale of the Series 2019 Bonds there first shall be immediately deposited in the Redemption Fund an amount equal to the accrued interest, if any, received on delivery of the Series 2019 Bonds, and the Board may take credit for the amount so deposited against the amount required to be deposited in the Redemption Fund for payment of the next maturing interest. All or a portion of any premium received upon delivery of the Series 2019 Bonds may be deposited in either the Redemption Fund or the Construction Fund, as determined by the Chief Financial Officer.

The capitalized interest shall next be deposited in the Redemption Fund, and the Board may take credit for the amount so deposited against the amount required to be deposited in the Redemption Fund for payment of interest on the Series 2019 Bonds.

Next the Board shall provide for payment or defeasance of principal of and interest on the Series 2018 Notes, either by calling the Series 2018 Notes for redemption on the date of delivery of the Series 2018 Bonds and paying off the Series 2018 Notes upon receipt of bond proceeds, or by defeasing the Series 2018 Notes through deposit to an escrow fund.

There shall next be deposited from the proceeds of sale of the Series 2019 Bonds to the Bond Reserve Account an amount, if any, designated by the Chief Financial Officer at the time of sale as necessary to meet the requirements of the bond purchasers.

The remaining proceeds of sale of the Series 2019 Bonds shall be deposited to the Construction Fund.

There shall next be deposited in the Bond Reserve Account an amount, if any, designated at the time of sale of the Series 2019 Bonds as necessary to cause the amount on deposit in the Bond Reserve Account to be equal to the Reserve Requirement.

Section 10. Covenants Regarding Series 2019 Bonds. The Board covenants and agrees as follows with the holders of the Series 2019 Bonds as long as any of the Series 2019 Bonds remain outstanding and unpaid as to either principal or interest:

(a) The Board will cause the portion of the Series 2019 Project being financed with proceeds of the Series 2019 Bonds to be acquired and constructed promptly and in accordance with the plans and specification therefor.

(b) The Board covenants and agrees with the Registered Owners of the Series 2019 Bonds that as long as any of the Series 2019 Bonds remain outstanding and unpaid as to either principal or interest, the Board shall not invest, reinvest or accumulate any moneys deemed to be proceeds of the Series 2019 Bonds pursuant to the Internal Revenue Code in such a manner as to cause the Series 2019 Bonds to be "arbitrage bonds" within the meaning of the Internal Revenue Code. The Board hereby covenants that, to the extent permitted by law, it will take all actions within its control and that it shall not fail to take any action as may be necessary to maintain the exemption of interest on the Series 2019 Bonds from gross income for federal income tax purposes, including but not limited to, actions relating to the rebate of arbitrage earnings, if applicable, and the expenditure and investment of Bond proceeds and moneys deemed to be Bond proceeds, all as more fully set forth in the Tax Compliance Certificate to be delivered by the Board with the Series 2019 Bonds.

Section 11. Series 2019 Bond Form. [*Series 2019 Bond form omitted*]

Section 12. Payment of Bonds; Defeasance. The Bonds and the interest thereon shall be payable solely from the Net Revenues, and to secure such payment, there is hereby created a statutory lien upon the whole of the Net Revenues. Pursuant to provisions of Act 94, the City, by and through its Board, hereby pledges to the repayment of principal of, redemption premium, if any, and interest on the Bonds, the funds and accounts established by this Bond Resolution, and a statutory lien is hereby created on such funds and accounts. The liens and pledge provided by this Bond Resolution shall continue until payment in full of the principal of and interest on all Bonds payable from Net Revenues, or, until Sufficient cash, Sufficient Government Obligations, Sufficient Municipal Obligations or any combination thereof shall have been deposited in trust for payment in full of the principal of and the interest on all Bonds to be paid to their maturity, or, if called or if irrevocable instructions have been given to call Bonds for redemption, to the date fixed for redemption together with the amount of the redemption premium, if any. Upon deposit of Sufficient cash, Sufficient Government Obligations, Sufficient Municipal Obligations or any combination thereof, the statutory lien created by this Bond Resolution shall be terminated with respect to the Bonds to be paid from the cash, Government Obligations or Municipal Obligations, or combination thereof, the Registered Owners of such Bonds shall have no further rights under this Bond Resolution except for payment from the deposited funds and for the rights of replacement, registration and transfer provided by this Bond Resolution, and such Bonds shall no longer be considered to be Outstanding Bonds under this Bond Resolution.

Section 13. Management. The operation, repair and management of the System shall be under the supervision and control of the Board.

Section 14. Charges. The rates to be charged for service furnished by the System and the methods of collection and enforcement of the collection of the rates shall be those permitted by law and established by the Board and in effect on the date of adoption of this Bond Resolution and thereafter as established by the Board.

Section 15. No Free Service. No free service shall be furnished by the System to any person, firm or corporation public or private, or to any public agency or instrumentality.

Section 16. Rate Covenant. The Board will at all times fix, establish, maintain and collect rates, fees and charges for the sale of the output, capacity, use or service of the System which, together with other income, are reasonably expected to yield Net Revenues equal to at least 125% of the Aggregate Debt Service Requirement for the forthcoming twelve month period plus such amount as is necessary to comply with all covenants in the Bond Resolution and to pay all charges and liens whatsoever payable out of Net Revenues in such period.

Section 17. Operating Year. The System shall continue to be operated on the basis of an operating year commencing on July 1st and ending on the 30th day of the following June. For purposes of determining the annual Aggregate Debt Service Requirement on the Bonds for any operating year, payments of principal and interest due on July 1st shall be considered to be part of the Aggregate Debt Service Requirement for the preceding operating year.

Section 18. Funds and Accounts: Flow of Funds. All Revenues of the System shall be set aside as collected and credited to a fund established with the Depository to be designated UTILITY SYSTEM RECEIVING FUND. The Revenues so credited are pledged for the purpose of the following funds and shall be transferred from the. Receiving Fund periodically in the manner and at the times hereinafter specified:

A. OPERATION AND MAINTENANCE FUND: Periodically, out of the Revenues credited to the Receiving Fund there shall be first set aside in, or credited to, a fund designated OPERATION AND MAINTENANCE FUND, a sum sufficient to provide for the payment during the succeeding period of the next month's expenses of administration and operation of the System, including such current expenses for the maintenance thereof as may be necessary to preserve the same in good repair and working order.

[2]B. BOND AND INTEREST REDEMPTION FUND: There shall be established and maintained a fund designated BOND AND INTEREST REDEMPTION FUND, the moneys on deposit therein from time to time to be used solely, except for required deposits to the Rebate Fund, for the purpose of paying the principal of, redemption premium, if any, and interest on the Bonds.

Out of the Revenues remaining in the Receiving Fund, after provision for the credit or deposit to the Operation and Maintenance Fund, there shall next be set aside, monthly, in the Redemption Fund a sum proportionately sufficient to provide for the payment of the principal of, mandatory redemption requirements, if any, and interest on the Bonds as and when the same shall become due and payable, subject to any credit therefor as provided in this Section 18(B). If there is any deficiency in the amount previously set aside, that deficiency shall be added to the requirements for the next succeeding month.

There shall be established a separate account in the Redemption Fund to be known as the BOND RESERVE ACCOUNT. If, as a result of a reduction in the long-term unenhanced credit ratings of the Outstanding Bonds to a category below "A/A2" without regard to notching factors (or an equivalent rating in at least the third highest category of nationally recognized bond rating agencies) as described in Section 1(z)(ii) (a "Ratings Downgrade Event"), the Reserve Requirement is increased from $0, and amounts then held in the Bond Reserve Account are insufficient to meet the Reserve Requirement, then the Board must satisfy the Reserve Requirement either by:

(i) transferring moneys to the Bond Reserve Account from an available source of funds (other than proceeds of Additional Bonds) in an amount equal to the Reserve Requirement in six (6) semi-annual installments beginning on the date which is 180 days following the Ratings Downgrade Event; or

(ii) purchasing a letter of credit, a surety bond, or an insurance policy within 180 days of the Ratings Downgrade Event; provided, however, the provider or issuer thereof shall be rated by any nationally recognized bond rating agency as high or higher than the Bonds at the time of purchase of the letter of credit, surety bond, or insurance policy; or

(iii) transferring moneys to the Bond Reserve Account from proceeds of Additional Bonds within 180 days of the Ratings Downgrade Event.

The Board must adopt a plan to satisfy the Reserve Requirement pursuant to either Subsection (i), (ii) or (iii) above within ninety (90) days of the Ratings Downgrade Event.

Except as otherwise provided in this Bond Resolution, the moneys credited to the Bond Reserve Account shall be used solely for the payment of the principal of, redemption premium, if any, and interest on the Bonds as to which there would otherwise be a default. If, at any time, it shall be necessary to use moneys credited to the Bond Reserve Account for such payment, then the moneys so used shall be replaced from the Net Revenues first received thereafter which are not

2 This amendment to the "Bond and Interest Redemption Fund" Section in the Bond Resolution adopted on March 26, 2019 is effective upon rating agency confirmation that the change in "Reserve Requirement" will not result in a reduction or withdrawal of any rating on the Bonds or Outstanding Bonds, as described in "The Bonds – Bond Reserve Account" section of the Official Statement.

required for expenses of administration, operation, and maintenance of the System or for current principal and interest requirements on any of the Bonds.

If at any time the amount in the Bond Reserve Account exceeds the Reserve Requirement, the excess may be transferred to such fund or account as the Board may direct; provided, however, if the excess is allocable to proceeds of tax-exempt Outstanding Bonds (or proceeds of tax-exempt Bonds refunded by the Outstanding Bonds) then such excess shall be transferred to a segregated account to pay the costs of the Power Plant Project or the System Improvements Project, unless it is determined by nationally recognized bond counsel that such transfer is not required to maintain the tax-exempt status of each series of the Outstanding Bonds.

The "Bond and Interest Redemption Fund" Section of the 1989 Bond Resolution was as follows:

B. <u>BOND AND INTEREST REDEMPTION FUND</u>: There shall be established and maintained a fund designated BOND AND INTEREST REDEMPTION FUND, the moneys on deposit therein from time to time to be used solely, except for required deposits to the Rebate Fund, for the purpose of paying the principal of, redemption premium, if any, and interest on the Bonds. The moneys in the Redemption Fund, including the Reserve Account, shall be kept on deposit with the bank or trust company which is the Transfer Agent.

After provision for the Operation and Maintenance Fund, there shall be set aside on or before the first day of each month, commencing December 1, 1989, in the Redemption Fund a sum proportionately sufficient to provide for the payment when due of the current principal of and interest on the Bonds, less any amount in the Redemption Fund representing accrued interest on the Bonds. Commencing December 1, 1989, The amount set aside each month for interest on the Bonds shall be 1/7 of the interest on the Bonds due July 1, 1990, and commencing July 1, 1990, and thereafter The amount set aside each month for interest on the Bonds shall be 1/6 of the interest on the Bonds next coming due.

The amount set aside each month for principal, commencing December 1, 1989, shall be 1/7 of the amount of principal due on the Bonds on July 1, 1990, and commencing July 1, 1990, and thereafter the amount set aside each month for principal of the Current Interest Bonds shall be 1/12 of the total amount of the principal of the Bonds due on the next July 1 and 1/12 of the maturing amount of Capital Appreciation Bonds due one year or less from the 1st day of such month. If there is any deficiency in the amount previously set aside, that deficiency shall be added to the requirements for the next succeeding month.

There shall be established a separate account in the Redemption Fund to be known as the BOND RESERVE ACCOUNT. On the date of delivery of any Additional Bonds issued pursuant to Section 18(a) or (c) of this Bond Resolution, the Board shall transfer to the Bond Reserve Account from the proceeds of the Additional Bonds or any other available source the lesser of (a) 10% of the proceeds of the Additional Bonds and (b) the maximum Aggregate Debt Service Requirement on the Additional Bonds for the then current and any subsequent operating year and commencing on the 1st day of the month following delivery of the Additional Bonds and on the 1st day of each month thereafter until the amount in the Bond Reserve Account equals the Reserve Requirement, 1/12 of the difference between the amount deposited on the delivery of the Additional Bonds and the Reserve Requirement.

Except as otherwise provided in this Bond Resolution, the moneys credited to the Bond Reserve Account shall be used solely for the payment of the principal of, redemption premium, if any, and interest on Bonds as to which there would otherwise be a default. If at any time it shall be necessary to use moneys credited to the Bond Reserve Account for such payment, then the moneys so used shall be replaced from the Net Revenues first received thereafter which are not required for expenses of administration, operation and maintenance of the system or for current principal and interest requirements on any of the Bonds.

The Board may satisfy the Reserve Requirement by a letter of credit, a surety bond, or an insurance policy if the provider or issuer thereof shall be rated Aaa by Moody's Investor Service and AAA by Standard and Poor's Corporation.

If at any time the amount in the Bond Reserve Account exceeds the Reserve Requirement, the excess may be transferred to such fund or account as the Board may direct.

C. <u>JUNIOR LIEN REDEMPTION FUND</u>: If the Board shall ever issue Junior Lien Bonds or Junior Lien Notes, there shall be established and maintained a separable depositary fund for the purpose of paying the principal of, redemption premium, if any, and interest on such Junior Lien Bonds or Junior Lien Notes as they come due (the "Junior Lien Redemption Fund"). Revenues remaining in the Receiving Fund, after provision has been made for the requirements of the Operation and Maintenance Fund and of the Redemption Fund, shall be set aside, but not more often than monthly, in a fund for the Junior Lien Bonds or Junior Lien Notes in accordance with the resolution authorizing the issuance thereof. A separate account may also be established within such fund as a bond reserve account to be funded on a junior lien basis in accordance with the resolution authorizing the issuance of the Junior Lien Bonds or Junior Lien Notes. The detail of the establishment and maintenance of such fund shall be provided in the resolution of the Board authorizing the issuance thereof.

D. SURPLUS MONEYS: Any Revenues in the Receiving Fund after satisfying all requirements of the Operation and Maintenance Fund, the Redemption Fund, the Rebate Fund and the Junior Lien Redemption Fund shall be deemed to be surplus moneys and may be used for such purposes as the Board deems to be for the best interests of the City.

If there should be any deficit in the Operation and Maintenance Fund, Redemption Fund or the Rebate Fund on account of defaults in setting aside required amounts therein, then transfers shall be made from the moneys remaining in the Receiving Fund at the end of any operating year to those funds in the priority and order specified herein, to the extent of any deficit, before any other disposition is made of the monies in the Receiving Fund at the end of any operating year.

Section 19. Rebate Fund. There shall be established and maintained a fund designated the REBATE FUND. Moneys representing investment earnings or profits shall be transferred annually from all funds and accounts established under this Bond Resolution and deposited in the Rebate Fund in an amount sufficient to enable the City to rebate investment earnings to the federal government, if necessary, in accordance with the requirements of the Code. Funds on deposit in the Rebate Fund are not pledged as security for the Bonds. Monies shall be deposited in the Rebate Fund and shall be rebated to the federal government unless the City has received an opinion of nationally recognized bond counsel that failure to take such actions will not adversely affect the exclusion from gross income for federal income tax purposes of the interest on such Bonds.

Section 20. Priority of Funds. In the event the moneys in the Receiving Fund are insufficient to provide for the current requirements of the Operation and Maintenance Fund or the Redemption Fund or the Rebate Fund or the Junior Lien Redemption Fund, any moneys or securities in other funds of the System, except the proceeds of sale of the Bonds, shall be credited or transferred, first, to the Operation and Maintenance Fund, second, to the Redemption Fund, to the extent of any deficit therein, third, to the Rebate Fund and fourth, to the Junior Lien Redemption Fund.

Section 21. Investments. Moneys in the funds and account established herein, and moneys derived from the proceeds of sale of the Bonds, may be invested by the Board on behalf of the City in Investment Obligations. Investment of moneys in the Redemption Fund being accumulated for payment of the next maturing principal or interest on the Bonds shall be limited to Government Obligations bearing maturity dates prior to the date of the next maturing principal or interest payment respectively on the Bonds. Investment of moneys in any other funds or account, including moneys derived from the proceeds of sale of the Bonds, shall be limited to obligations bearing maturity dates or subject to redemption, at the option of the holder thereof, not later than the time estimated by the City when the moneys from such investments will be required. Any securities representing investments shall be kept on deposit with the bank or trust company having on deposit the fund or funds or account from which such purchase was made. Earnings or profits on any investment of funds in any fund or account established in this Bond Resolution shall be deposited in or credited to the Rebate Fund to the extent necessary as required by Section 19 of this Bond Resolution and any earnings or profits remaining in the Receiving Fund, Operation and Maintenance Fund and Redemption Fund, shall be deposited in or credited to the Receiving Fund. Investments of moneys in the Bond Reserve Account shall be valued at amortized cost, including any amount paid as accrued interest at the time of purchase until the payment of such interest or the next interest payment date.

Section 22. Applicable Law. The Bonds shall be sold and the proceeds applied in accordance with the provisions of Act 94.

Section 23. Covenants. The City and the Board covenant and agree with the Registered Owners of the Bonds that so long as any of the Bonds remain as Outstanding Bonds and unpaid as to either principal or interest:

(a) The Board will maintain the System in good repair and working order and will operate the same efficiently and will faithfully and punctually perform all duties with reference to the System required by the Constitution and laws of the State of Michigan and this Bond Resolution.

(b) The City and the Board will not sell, lease, mortgage or otherwise dispose of any part of the System, except for sales or exchanges of property or facilities (1) which are not useful in the operation of the System, or (2) for which the proceeds received are, or the fair market value of the subject property is, less than 1% of the Revenues for the preceding fiscal year, or (3) which will not impair the ability of the Board to comply with the rate covenant described in Section 16 of this Bond Resolution.

(c) The City and the Board will not grant any franchise or other rights to any person, firm or corporation to operate an electric system that will compete with the System unless required or authorized by law and the City and the Board will not operate a system that will compete with the System.

(d) The Board will use their best efforts to enforce any contracts to which they are a party regarding providing of electrical service.

(e) The Board will not issue additional bonds of prior standing to the Bonds.

The Chief Financial Officer is authorized on behalf of the Board to make any additional covenants with the purchaser of a series of Bonds as may be deemed advisable and approved by bond counsel and the municipal advisor.

The foregoing subsections (c)-(e) and the authorization of the Chief Financial Officer were not included in the 1989 Bond Resolution.

Section 24. Additional Bonds. The right is reserved, in accordance with the provisions of Act 94, to issue additional bonds payable from the Net Revenues of the System which shall be of equal standing and priority of lien on the Net Revenues of the System with the Bonds, but only for the following purposes and under the following terms and conditions:

(a) For repairs, extensions, enlargements and improvements to the System or for the purpose of refunding a part of any Outstanding Bonds (unless such partial refunding is done in compliance with (b) below) and paying costs of issuing such Additional Bonds, including deposits which may be required to be made to a bond reserve account. Bonds for such purposes shall not be issued pursuant to this subparagraph (a) unless the actual or augmented Net Revenues of the System for the fiscal year of the System ending not more than 15 months prior to the sale of Additional Bonds shall be equal to at least one hundred twenty-five (125%) percent of the maximum Aggregate Debt Service Requirement in any current or future fiscal year on the Outstanding Bonds and on the Additional Bonds then being issued. If the Additional Bonds are to be issued in whole or in part for refunding Outstanding Bonds, the maximum Aggregate Debt Service shall be determined by deducting from the principal and interest requirements for each operating year the annual Aggregate Debt Service Requirement of any Bonds to be refunded from the proceeds of the Additional Bonds.

Net Revenues may be augmented as follows for the purposes of this subsection (a):

(1) If the System rates, fees or charges shall be increased at or prior to the time of authorizing the Additional Bonds, the Net Revenues may be augmented by an amount which in the opinion of the Board's financial advisor will reflect the effect of the increase had the System's billings during such time been at the increased rates.

(2) The actual Net Revenues may be augmented by the estimated increase in Net Revenues which in the opinion of the Board's financial advisor will accrue as a result of new customers which have not been serviced during the fiscal year described in paragraph (a) above or as a result of the acquisition of the repairs, extensions, enlargements and improvements to the System which have been made during or subsequent to the fiscal year described in paragraph (a) above or which will be acquired in whole or in part from the proceeds of the Additional Bonds to be issued.

No Additional Bonds of equal standing as to the Net Revenues of the System shall be issued pursuant to the authorization contained in subparagraphs (a) or (c) if the City shall then be in default in making its required payments to the Operation and Maintenance Fund or the Redemption Fund.

(b) For refunding all of the Outstanding Bonds and paying costs of issuing such Additional Bonds. For refunding a part of the Outstanding Bonds and paying costs of issuing such Additional Bonds, if after giving effect to the refunding the maximum amount of Aggregate Debt Service in each future fiscal year shall be less than the Aggregate Debt Service in each future fiscal year prior to giving effect to the refunding.

(c) Additional Bonds may be issued without meeting any of the conditions and tests set forth in subsection (a) above for any one or more of the following purposes: (i) to pay the cost of acquisition and construction of any repairs, replacements, betterments, improvements, major renewals or corrections of any damage or loss to the System necessary, in the opinion of the Consulting Engineer, to keep the System in good operating condition or to prevent a loss of Revenues therefrom or (ii) to pay the cost of decommissioning, disposal or termination of the System.

Determination by the Board as to existence of conditions permitting the issuance of Additional Bonds shall be conclusive.

Notwithstanding the foregoing requirements of Section 24, the Board reserves the right to issue Junior Lien Bonds and Junior Lien Notes payable as provided herein.

Section 25. Events of Default. Each of the following events, with respect to an issue of Bonds, is hereby declared an "Event of Default":

(a) default in the payment of the principal of, or interest, or redemption premium, if any, on any Bond after the same shall become due, whether at maturity or upon call for redemption; or

(b) default by the City or the Board in the performance or observance of any other of the covenants, agreements or conditions on their part in this Bond Resolution, or contained in the Bonds; provided no default shall constitute an Event of Default until written notice thereof shall have been given by the Registered Owners of not less than twenty percent (20%) in principal amount of the Outstanding Bonds to the City and the City shall have had sixty (60) days after receipt of such notice to correct such default or cause the same to be corrected and shall not have corrected such default or caused the same to be corrected within such period; and provided, further, that if the default be such that it cannot be corrected within such period, it shall not constitute an Event of Default if action to correct the same is instituted within such period and diligently pursued until the default is corrected.

Section 26. Appointment of Receiver and Statutory Rights. The Registered Owners of Bonds representing in the aggregate principal amount not less than twenty percent (20%) of all Outstanding Bonds, may protect and enforce the statutory lien and pledge of the funds and accounts and Net Revenues created by Act 94, and enforce and compel the performance of all duties of the officials of the City and the Board, including the fixing of sufficient rates, the collection of Revenues, the proper segregation of Revenues, and the proper application of Revenues. In addition to the rights conferred to Registered Owners by the Resolution, the Registered Owners shall have all the rights conferred by Act 94. The statutory lien upon the Net Revenues, however, shall not be construed to compel the sale of the System or any part thereof.

Section 27. Effect of Waiver and Other Circumstances. No delay or omission of any Registered Owner to exercise any right or power arising upon the happening or an Event of Default shall impair any right or power or shall be construed to be a waiver of any such Event of Default or be an acquiescence therein and every power and remedy given by this Bond Resolution to the Registered Owners may be exercised from time to time and as often as may be deemed expedient by the Registered Owners.

Section 28. Amendments: Consent of Registered Owners.

(a) *Amendments Without Consent of Registered Owners*. The City, from time to time and at any time, subject to the conditions and restrictions in this Bond Resolution, may by and through its Board, adopt one or more supplemental or amendatory resolutions which thereafter shall form a part hereof, for any one or more or all of the following purposes:

(i) To issue Additional Bonds or Junior Lien Bonds or Junior Lien Notes;

(ii) To add to the covenants and agreements of the City contained in this Bond Resolution, other covenants and agreements thereafter to be observed or to surrender, restrict or limit any right or power herein reserved to or conferred upon the City and the Board (including but not limited to the right to issue Additional Bonds);

(iii) To make such provisions for the purpose of curing any ambiguity, or of curing, correcting or supplementing any defective provisions contained in this Bond Resolution, or in regard to matters or questions arising under this Bond Resolution, as the City may deem necessary or desirable and not inconsistent with this Bond Resolution and which shall not have a material, adverse effect on the interests of the Registered Owners of the Bonds;

(iv) To increase the size or scope of the System; and

(v) To make such modifications in the provisions hereof as may be deemed advisable by the City provided that the Board has confirmed in writing with each rating agency rating Outstanding Bonds to which the provision will apply that the adoption of such provision with not result in the reduction or withdrawal of any rating on such Bonds.

Any amendment or supplemental resolution or resolution authorized by the provisions of this Section 28(a) may be adopted by the City, by and through its Board, without the consent of or notice to the Registered Owners of any of the Outstanding Bonds, notwithstanding any of the provisions of Section 28(b) below.

The "Amendments: Consent of Registered Owners" Section of the 1989 Bond Resolution was as follows:

(a) The City, from time to time and at any time, subject to the conditions and restrictions in this Bond Resolution, may by and through its Board, adopt one or more supplemental or amendatory resolutions which thereafter shall form a part hereof, for any one or more or all of the following purposes:

(i) To issue Additional Bonds or Junior Lien Bonds;

(ii) To add to the covenants and agreements of the City contained in this Bond Resolution, other covenants and agreements thereafter to be observed or to surrender, restrict or limit any right or power herein reserved to or conferred upon the City and the Board (including but not limited to the right to issue Additional Bonds);

(iii) To make such provisions for the purpose of curing any ambiguity, or of curing, correcting or supplementing any defective provisions contained in this Bond Resolution, or in regard to matters or questions arising under this Bond Resolution, as the City may deem necessary or desirable and not inconsistent with this Bond Resolution and which shall not have a material, adverse effect on the interests of the Registered Owners of the Bonds;

(iv) To increase the size or scope of the System; and

(v) To make such modifications in the provisions hereof as may be deemed necessary by the City to accommodate the issuance of Additional Bonds or Junior Lien Bonds which (a) are "Capital Appreciation Bonds" or "Zero Coupon Bonds" to the extent permitted by law or (b) are variable rate bonds, but only if such modifications, in the written opinion of nationally recognized bond counsel filed with the Board, do not result in materially diminishing the security hereby granted to the Registered Owners of any Outstanding Bonds.

Any amendment or supplemental resolution or resolution authorized by the provisions of this Section 23(a) may be adopted by the City, by and through its Board, without the consent of or notice to the Registered Owners of any of the Outstanding Bonds, notwithstanding any of the provisions of Section 23(b) below.

(b) *Amendments Requiring Consent of Registered Owners*. With the consent of the Registered Owners of not less than fifty one percent (51%) in principal amount of the Bonds then outstanding the City, by and through its Board, may from time to time and at any time adopt a resolution or resolutions supplemental hereto for the purpose of adding any provisions to or changing in any manner or eliminating any of the provisions of this Bond Resolution or of any supplemental resolution; provided, however, that no such supplemental resolution shall (i) extend the fixed maturity of any Bond, change a mandatory redemption requirement for any series of Bonds or reduce the rate of interest thereon or extend the time of payment of interest, or reduce the amount of the principal thereof, or reduce or extend the time for payment of any premium payable on the redemption thereof, without the consent of the Registered Owner of each Bond so affected, or (ii) reduce the aforesaid percentage of Registered Owners of the Bonds required to approve any such supplemental resolution, or (iii) deprive the Registered Owners of the Bonds, except as aforesaid, of the right to payment of the Bonds from the Net Revenues, without the consent of the Registered Owners of all the Outstanding Bonds or, (iv) cause any modification or reduction of the lien on or pledge of the Net Revenues or the funds or accounts established hereunder. No amendment may be made under this Section 28(b) which affects the rights or duties of the insurer of any of the Bonds without its consent.

It shall not be necessary for the consent of the Registered Owners under this Section 28(b) to approve the particular form of any proposed supplemental resolution, but it shall be sufficient if such consent shall approve the substance thereof.

Promptly after the adoption by the City of any supplemental resolution pursuant to the provisions of this Section 28(b), the City shall cause the Transfer Agent to mail a notice by registered or certified mail to the Registered Owners of all Outstanding Bonds at their addresses shown on the bond register or at such other address as is furnished in writing by such Registered Owner to the Transfer Agent setting forth in general terms the substance of such supplemental resolution.

Section 29. <u>Negotiated Sale of the Bonds; Appointment of Senior Managing Underwriter</u>. *[2019 Bond details omitted]*

Section 30. <u>Bond Ratings and Bond Insurance.</u> The Chief Financial Officer is hereby authorized to apply for bond ratings from such municipal bond rating agencies as deemed appropriate, in consultation with the Municipal Advisor. If the Municipal Advisor recommends that the Board consider purchase of municipal bond insurance, then the Chief Financial Officer is hereby authorized to negotiate with insurers regarding acquisition of municipal bond insurance, and, in consultation with the Municipal Advisor, to select an insurer and determine which bonds, if any, shall be insured, and the Chief Financial Officer is hereby authorized to execute an agreement with the insurer relating to procedures for paying debt service on the insured bonds and notifying the insurer of any need to draw on the insurance and other matters.

Section 31. <u>Official Statement</u>. *[2019 Bonds Official Statement details omitted]*

Section 32. <u>Continuing Disclosure</u>. *[2019 Bonds continuing disclosure details omitted]*

Section 33. <u>Sale of Series 2019 Bonds.</u> The Chief Financial Officer is authorized, in consultation with the Municipal Advisor, to accept an offer to purchase the Series 2019 Bonds without further resolution of this Board. This authorization includes, but is not limited to, determination of original principal amount of the Series 2019 Bonds; the prices at which the Series 2019 Bonds are sold; the date of the Series 2019 Bonds; the schedule of principal maturities and whether the Series 2019 Bonds shall mature serially or as term bonds; provisions for early redemption, if any, including mandatory redemption of term bonds, if any; the interest rates and payment dates of the Series 2019 Bonds; and application of the proceeds of the Series 2019 Bonds. Approval of the matters delegated to the Chief Financial Officer under this resolution may be evidenced by her execution of the Bond Purchase Agreement for the Series 2019 Bonds or other offer to purchase the Series 2019 Bonds, or a certificate of award of sale, or the Official Statement.

The maximum interest rate of the Series 2019 Bonds shall not exceed 5.50% per annum. The purchase price for the Series 2019 Bonds, exclusive of any original issue discount or premium, shall not be less than 97% of the principal amount of the Series 2019 Bonds, plus accrued interest, if any. In making such determinations the Chief Financial Officer is authorized to rely upon data and computer runs provided by the Municipal Advisor.

In making such determinations the Chief Financial Officer is authorized to rely upon data and computer runs provided by the Municipal Advisor.

Section 34. Other Actions. In the event that the Chief Financial Officer is not available at the time that it becomes necessary to take actions directed or authorized under this resolution, then a person designated by the Chief Financial Officer is authorized to take such actions. The officers, administrators, agents and attorneys of the Board are authorized and directed to take all other actions necessary and convenient to facilitate issuance, sale and delivery of the Series 2019 Bonds within the parameters of this resolution, and to execute and deliver all other agreements, documents and certificates and to take all other actions necessary or convenient in accordance with this resolution, and to pay costs of issuance including but not limited to rating agency fees, credit facility fees, insurance premiums, transfer agent fees, municipal advisor fees, bond counsel fees, and any other costs necessary to accomplish sale and delivery of the Series 2019 Bonds within the parameters of this resolution.

Section 35. Applicability of the Outstanding Bond Resolutions. Upon delivery of the Series 2019 Bonds in an amount sufficient to cause the Registered Owners of the Series 2019 Bonds to equal not less than fifty one percent (51%) in principal amount of the Bonds then outstanding the provisions and covenants provided in the prior Bond Resolution adopted by the Board and amended and restated on October 24, 1989 and further amended and supplemented from time to time shall no longer apply.

Section 36. Conflicting Resolutions. All resolutions and parts of resolutions insofar as they conflict with the provisions of this resolution are rescinded as of the effective date of this Resolution.

Section 37. Severability and Paragraph Headings. *[Omitted]*

Section 38 Publication and Recordation. [*Omitted*]

Section 39. Effective Date. *[Omitted]*

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Appendix F

FORM OF APPROVING OPINION

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June 25, 2019

Lansing Board of Water and Light
City of Lansing
State of Michigan

We have acted as bond counsel to the City of Lansing, State of Michigan, acting through the governing body of the Lansing Board of Water and Light (the "Issuer") in connection with the issuance by the Issuer of the following bonds: $319,875,000 UTILITY SYSTEM REVENUE BONDS, SERIES 2019A (the "Bonds"). In such capacity, we have examined such law and the transcript of proceedings relating to the issuance of the Bonds and such other proceedings, certifications and documents as we have deemed necessary to render this opinion.

The Bonds are issued pursuant to Act 94, Public Acts of Michigan, 1933, as amended ("Act 94"), and a bond resolution adopted by the Issuer as supplemented and amended from time to time (the "Bond Resolution"). Under the Bond Resolution, the Issuer has pledged certain revenues for the payment of the principal and interest on the Bonds when due.

The Bonds are in fully-registered form in the denomination of $5,000 each or multiples thereof, numbered in order of registration, bearing original issue date of June 25, 2019, payable as to principal and interest as provided in the Bonds, and are subject to redemption prior to maturity in the manner, at the times and at the prices specified in the Bonds.

As to questions of fact material to our opinion, we have relied on the representations of the Issuer contained in the Bond Resolution, and in the certified proceedings and other certifications of public officials and others furnished to us.

Based upon the foregoing, we are of the opinion that, under existing law:

1. The Bonds are valid and binding obligations of the Issuer, according to their tenor, payable solely and only from and secured by a statutory first lien on the revenues of the Issuer's facilities for the supply and distribution of water and the generation and distribution of electricity, steam, chilled water, and heat (collectively, the "System"), after payment of the expenses of administration, operation and maintenance thereof (the "Net Revenues"), and are entitled to the benefits of the Bond Resolution and Act 94.

2. The Bonds are of equal standing and priority of lien as to the Net Revenues of the System with the Issuer's outstanding Utility System Revenue Bonds, Series 2011A, Utility System Revenue Refunding Bonds, Series 2013A and Utility System Revenue Refunding Bonds, Series 2017A (together the "Outstanding Bonds"). The Issuer has reserved the right to issue additional bonds of equal standing with the Bonds and the Outstanding Bonds on conditions stated in the Bond Resolution.

3. The Issuer is obligated to charge and collect rates from every user of the service supplied by the System sufficient to provide adequate revenues for the payment of the expenses of administration, operation and maintenance of the System and for the payment of the principal of and interest on the Bonds, the Outstanding Bonds and all other bonds payable from the revenues of the System, and to provide for such other expenditures and funds for the Bonds and the Outstanding Bonds and the System as are required by the Bond Resolution.

4. The interest on the Bonds (a) is excludable from gross income for federal income tax purposes and (b) is not an item of tax preference for purposes of the federal alternative minimum tax. The opinion set forth in clause (a) above is subject to the condition that the Issuer comply with all requirements of the Internal Revenue Code of 1986, as amended, that must be satisfied subsequent to the issuance of the Bonds in order that interest thereon be (or continue to be) excludable from gross income for federal income tax purposes. The Issuer has covenanted to comply with all such requirements. Failure to comply with certain of such requirements could cause the interest on the Bonds to be included in gross income retroactively to the date of issuance of the Bonds.

5. The Bonds and the interest thereon are exempt from all taxation by the State of Michigan or by any taxing authority within the State of Michigan except inheritance and estate taxes and taxes on gains realized from the sale, payment or other disposition thereof.

Except as stated in paragraphs 4 and 5 above, we express no opinion regarding other federal or state tax consequences arising with respect to the Bonds and the interest thereon.

The rights or remedies of bondholders may be affected by bankruptcy, insolvency, fraudulent conveyance or other laws affecting creditors' rights generally, now existing or hereafter enacted, and by the application of general principles of equity, including those relating to equitable subordination.

This opinion is given as of the date hereof, and we assume no obligation to revise or supplement this opinion to reflect any facts or circumstances that may hereafter come to our attention, or any changes in law that may hereafter occur.

Very truly yours,

Miller, Canfield, Paddock and Stone, P.L.C.

By: ____
William J. Danhof

Appendix G

FORM OF CONTINUING DISCLOSURE UNDERTAKING

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LANSING BOARD OF WATER AND LIGHT
$319,875,000
UTILITY SYSTEM REVENUE BONDS, SERIES 2019A

Continuing Disclosure Undertaking

The Lansing Board of Water and Light (the "Issuer"), an administrative Board of the City of Lansing, Michigan existing under the City's Charter, hereby executes and delivers this Continuing Disclosure Undertaking (the "Undertaking") in connection with the issuance by the Issuer of the $319,875,000 Utility System Revenue Bonds, Series 2019A (the "Bonds"). The Issuer hereby covenants and agrees for the benefit of the Bondholders (as hereinafter defined), as follows:

(a) *Definitions*. The following terms used herein shall have the following meanings:

"Audited Financial Statements" means the annual audited financial statement pertaining to the Issuer prepared by an individual or firm of independent certified public accountants as required by Act 2, Public Acts of Michigan, 1968, as amended, which presently requires preparation in accordance with generally accepted accounting principles.

"Bondholders" shall mean the registered owner of any Bond or any person (a) with the power, directly or indirectly, to vote or consent with respect to, or to dispose of ownership of, any Bond (including any person holding a Bond through a nominee, depository or other intermediary) or (b) treated as the owner of any Bond for federal income tax purposes.

"EMMA" shall mean the MSRB's Electronic Municipal Market Access System, or such other system, Internet Web site, or repository hereafter prescribed by the MSRB for the submission of electronic filings pursuant to the Rule.

"Financial Obligation" means "financial obligation" as such term is defined in the Rule.

"MSRB" means the Municipal Securities Rulemaking Board.

"Rule" means Rule 15c2-12 promulgated by the SEC pursuant to the Securities Exchange Act of 1934, as amended, as in effect on the date of this Undertaking, including any official interpretations thereof issued either before or after the date of this Undertaking which are applicable to this Undertaking.

"SEC" means the United States Securities and Exchange Commission.

"Undertaking" means this Continuing Disclosure Undertaking.

(b) *Continuing Disclosure.* The Issuer shall, in accordance with the provisions of the Rule, provide or cause to be provided to the MSRB through EMMA, on or before the last day of the sixth month after the end of the fiscal year of the Issuer, the following annual financial information and operating data, commencing with the fiscal year ended June 30, 2019, in an electronic format as prescribed by the MSRB:

(1) Updates of the numerical financial information and operating data (excluding any pictorial representation) included in the official statement for the Bonds (the "Official Statement") appearing in the Tables or under the headings as described in Exhibit A.

(2) Audited Financial Statements, or in the event audited financial statements are not available, the Issuer shall provide unaudited financial statements, and then provide audited financial statements immediately after they become available.

(3) Such additional financial information or operating data as may be determined by the Issuer and its advisors as desirable or necessary to comply with the Rule.

Such annual financial information and operating data described above are expected to be provided directly by the Issuer or by specific reference to documents available to the public through EMMA or filed with the SEC.

If the fiscal year of the Issuer is changed, the Issuer shall send a notice of such change to the MSRB through EMMA, prior to the earlier of the ending date of the fiscal year prior to such change or the ending date of the fiscal year as changed.

(c) *Notice of Failure to Disclose*. The Issuer shall provide or cause to be provided, in a timely manner, to the MSRB through EMMA, in an electronic format as prescribed by the MSRB, notice of a failure by the Issuer to provide the annual financial information with respect to the Issuer described in subsection (b) above on or prior to the dates set forth in subsection (b) above.

(d) *Occurrence of Events.* The Issuer shall provide or cause to be provided to the MSRB through EMMA, in an electronic format as prescribed by the MSRB, in a timely manner not in excess of ten business days after the occurrence of the event, notice of the occurrence of any of the following events listed in (b)(5)(i)(C) of the Rule with respect to the 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 Bonds, or other material events affecting the tax status of the Bonds;
(7) modifications to rights of holders of the Bonds, if material;
(8) bond calls, if material, and tender offers;
(9) defeasances;
(10) release, substitution, or sale of property securing repayment of the Bonds, if material;
(11) rating changes;
(12) bankruptcy, insolvency, receivership or similar event of the Issuer, which is considered to occur when any of the following occur: the appointment of a receiver, fiscal agent or similar officer for the Issuer in a proceeding under the U.S. Bankruptcy Code or in any other proceeding under state or federal law in which a court or governmental authority has assumed jurisdiction over substantially all of the assets or business of the Issuer, or if such jurisdiction has been assumed by leaving the existing governing body and officials or officers in possession but subject to the supervision and orders of a court or governmental authority, or the entry of an order confirming a plan of reorganization, arrangement or liquidation by a court or governmental authority having supervision or jurisdiction over substantially all of the assets or business of the Issuer;
(13) the consummation of a merger, consolidation, or acquisition involving the Issuer or the sale of all or substantially all of the assets of the Issuer, 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;
(14) appointment of a successor or additional trustee or the change of name of a trustee, if material;
(15) incurrence of a Financial Obligation of the Issuer or obligated person, if material, or agreement to covenants, events of default, remedies, priority rights, or other similar terms of a Financial Obligation of the Issuer or obligated person, any of which affect security holders, if material; or
(16) default, event of acceleration, termination event, modification of terms, or other similar events under the terms of the Financial Obligation of the Issuer or obligated person, any of which reflect financial difficulties.

(e) *Materiality Determined Under Federal* Securities *Laws*. The Issuer agrees that its determination of whether any event listed in subsection (d) is material shall be made in accordance with federal securities laws.

(f) *Identifying Information*. All documents provided to the MSRB through EMMA shall be accompanied by the identifying information prescribed by the MSRB.

(g) *Termination of Reporting Obligation*. The Issuer reserves the right to terminate its obligation to provide annual financial information and notices of material events, as set forth above, if and when the Issuer is no longer an “obligated person” with respect to the Bonds within the meaning of the Rule, including upon legal defeasance of all Bonds.

(h) *Benefit of Bondholders*. The Issuer agrees that its undertaking pursuant to the Rule set forth in this Undertaking is intended to be for the benefit of the Bondholders and shall be enforceable by any Bondholder; provided that, the right to enforce the provisions of this Undertaking shall be limited to a right to obtain specific enforcement of the Issuer’s obligations hereunder and any failure by the Issuer to comply with the provisions of this Undertaking shall not constitute a default or an event of default with respect to the Bonds.

(i) *Amendments to the Undertaking*. Amendments may be made in the specific types of information provided or the format of the presentation of such information to the extent deemed necessary or appropriate in the judgment of the Issuer, provided that the Issuer agrees that any such amendment will be adopted procedurally and substantively in a manner consistent with the Rule, including any interpretations thereof by the SEC, which, to the extent applicable, are incorporated herein by reference. Such interpretations currently include the requirements that (a) the amendment may only be 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 Issuer or the type of activities conducted thereby, (b) the undertaking, as amended, would have complied with the requirements of the Rule at the time of the primary offering of the Bonds, after taking into account any amendments or interpretations of the Rule, as well as any change in circumstances, and (c) the amendment does not materially impair the interests of Bondholders, as determined by parties unaffiliated with the Issuer (such as independent legal counsel), but such interpretations may be changed in the future. If the accounting principles to be followed by the Issuer in the preparing of the Audited Financial Statements are modified, the annual financial information for the year in which the change is made shall present a comparison between the financial statements as prepared on the prior basis and the statements as prepared on the new basis, and otherwise shall comply with the requirements of the Rule, in order to provide information to investors to enable them to evaluate the ability of the Issuer to meet its obligations. A notice of the change in accounting principles shall be sent to the MSRB through EMMA.

IN WITNESS WHEREOF, the Issuer has caused this Undertaking to be executed by its authorized officer.

LANSING BOARD OF WATER AND LIGHT

By ______________________________________

Its: Chief Financial Officer

Dated: June 25, 2019

EXHIBIT A
CONTINUING DISCLOSURE UNDERTAKING
TABLES IN THE OFFICIAL STATEMENT TO BE UPDATED ANNUALLY

The Lansing Board of Water and Light will update the numerical financial information and operating data included in the following Official Statement Tables for the current year:

THE ELECTRIC UTILITY:

Power Requirements:
Electric Utility – Power Availability, Sales and Losses in MWh;

Customers:
Electric Utility – Average Number and Percent of Customers by Classification;

Ten Largest Customers:
Electric Utility – Ten Largest Customers;

Rates and Charges:
Electric Utility – Total Estimated Monthly Billing;

Electric Sales:
Electric Utility – Amount in MWh and Percent of Sales by Customer Classification; and

Electric Revenues:
Electric Utility – Amount and Percent of Revenues by Customer Classification.

THE WATER UTILITY:

Service Area and Customer Base:
Water Utility - Average Number and Percent of Water Customers by Classification;

Ten Largest Customers:
Water Utility - Ten Largest Water Customers;

Rates and Charges:
Water Utility - Monthly Basic Service Charge by Water Meter Size; and

Water Revenues:
Water Utility - Amount and Percent of Water Sales by Customer Classification.

THE STEAM UTILITY:

General:
Steam Utility - Average Number and Percent of Customers by Classification;

Rates and Charges:
Steam Utility - Historic and Existing Rates by Customer Classification;

Steam Revenues:
Steam Utility - Amount and Percent of Steam Revenues as Billed by Customer Classification; and

Ten Largest Customers:
Steam Utility - Ten Largest Steam Customers.

THE CHILLED WATER UTILITY:

Service Area and Customer Base:
Chilled Water Utility - Number of Service Leads and Volume in Thrs by Classification;

Rates and Charges:
Chilled Water Utility - Historic and Existing Rates;

Chilled Water Revenues:
Chilled Water Utility - Chilled Water Revenues by Classification; and

Chilled Water Customers by Volume and Revenues:
Chilled Water Utility - Chilled Water Customers by Volume and Revenues.

SYSTEM FINANCIAL INFORMATION:
Historic and Projected Operating Cash Flows and Debt Service Coverage.

Appendix H

BOOK-ENTRY ONLY SYSTEM

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The information in this appendix has been furnished by DTC. No representation is made by the BWL, Bond Counsel, the Transfer Agent, or the Underwriters as to the completeness or accuracy of such information or as to the absence of material adverse changes in such information subsequent to the date hereof. No attempt has been made by the BWL, Bond Counsel, the Transfer Agent, or the Underwriters to determine whether DTC is or will be financially or otherwise capable of fulfilling its obligations. Neither the BWL nor the Transfer Agent will have any responsibility or obligation to DTC Direct Participants, Indirect Participants or the persons for which they act as nominees with respect to the Bonds, or for any principal or interest payment thereof.

The 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, as registered owner of the Bonds. So long as Cede & Co., as nominee of DTC, is the registered holder of all of the Bonds, one bond certificate will be issued for the Bonds in the aggregate principal amount thereof and will be deposited with DTC. Purchasers of the Bonds (the "Beneficial Owners") will not receive physical delivery of bond certificates. By purchasing a Bond, a Beneficial Owner shall be deemed to have waived the right to receive a bond certificate, except under the circumstances described herein. For purposes of this Official Statement, so long as all Bonds are immobilized in the custody of DTC, references to Bondowners or holders means DTC or its nominee.

DTC, the world's largest securities depository, 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 over 3.5 million issues of U.S. and non-U.S. equity issues, corporate and municipal debt issues, and money market instruments (from over 100 countries) 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 Direct Participants' accounts. 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"). DTC has a Standard & Poor's rating of AA+. The DTC Rules applicable to its Participants are on file with the Securities and Exchange Commission. More information about DTC can be found at www.dtcc.com.

Purchases of Bonds under the DTC system must be made by or through Direct Participants, which will receive a credit for the Bonds on DTC's records. The ownership interest of each 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 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 Bonds, except in the event that use of the book-entry system for the Bonds is discontinued.

To facilitate subsequent transfers, all 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 Bonds with DTC and their registration in the name of Cede & Co. or such other nominee do not affect any change in beneficial ownership. DTC has no knowledge of the actual Beneficial Owners of the Bonds; DTC's records reflect only the identity of the Direct Participants to whose accounts such 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. Neither the BWL nor the Transfer Agent is responsible or liable for sending transaction statements or for maintaining, supervising or reviewing such records.

The BWL and the Transfer Agent will recognize DTC or its nominee as the Bondowner for all purposes, including notices and voting. 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 Bonds may wish to take certain steps to augment the transmission to them of notices of significant events with respect to the Bonds, such as redemptions, tenders, defaults, and proposed amendments to the Bond documents. For example, Beneficial Owners of Bonds may wish to ascertain that the nominee holding the Bonds for their benefit has agreed to obtain and transmit notices to Beneficial Owners.

Redemption notices shall be sent to DTC. If less than all of the Bonds within a maturity are being redeemed, DTC's practice is to determine by lot the amount of the interest of each Direct Participant in such maturity to be redeemed.

Neither DTC nor Cede & Co. (nor any other DTC nominee) will consent or vote with respect to the 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 BWL 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 the Bonds are credited on the record date (identified in a listing attached to the Omnibus Proxy).

Principal, redemption proceeds, distributions and dividend payments on the 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 BWL or Transfer Agent, on payable date in accordance with their respective holdings on DTC's records. Payments by Participants to Beneficial Owners will be governed by standing instructions and customary practices, as is the case with Bonds held for the accounts of customers in bearer form or registered in "street name," and will be the responsibility of such Participant and not of DTC, the Transfer Agent or the BWL, subject to any statutory or regulatory requires as may be in effect from time to time. Payments of principal, redemption proceeds, distributions and divided payments to Cede & Co. (or such other nominee as may be requested by an authorized representative of DTC) is the responsibility of the BWL or Transfer Agent, disbursement of such payments to Direct Participants shall be the responsibility of DTC, and disbursement of such payments to the Beneficial Owners shall be the responsibility of Direct and Indirect Participants.

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

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

The BWL, Bond Counsel, the Transfer Agent, and the Underwriters cannot and do not give any assurances that DTC, the Direct Participants or the Indirect Participants will distribute to the Beneficial Owners of the Bonds (i) payments of principal of or interest on the Bonds, (ii) any document representing or confirming beneficial ownership interests in the Bonds, or (iii) notices sent to DTC or Cede & Co. its nominee, as the registered owner of the Bonds, or that it will do so on a timely basis or that DTC, Direct Participants or Indirect Participants will serve and act in the manner described in this Official Statement. The current "rules" applicable to DTC are on file with the Securities and Exchange Commission, and the current "procedures" of DTC to be followed in dealing with the Participants are on file with DTC.

The information in this appendix concerning DTC and DTC's book-entry system has been obtained from sources that the BWL believes to be reliable, but the BWL takes no responsibility for the accuracy thereof.

Neither the BWL, Bond Counsel, the Transfer Agent nor the Underwriters will have any responsibility or obligation to any Direct Participant, Indirect Participant or any Beneficial Owner or any other person with respect to: (a) the Bonds; (b) the accuracy of any records maintained by DTC or any Direct Participant or Indirect Participant; (c) the payment by DTC to any Participant, or by any Direct Participant or Indirect Participant to any Beneficial Owner of any amount due with respect to the principal of or interest on the Bonds; (d) the delivery by DTC to any participant, or by and Direct Participant or Indirect Participant to any Beneficial Owner of any notice which is required or permitted under the terms of the authorizing resolution for each issue to be given to Bondholders; (e) the selection of the Beneficial Owners to receive payment in the event of any partial redemption of the Bonds; or (f) any consent given or other action taken by DTC as Bondholder.

$319,875,000
LANSING BOARD OF WATER AND LIGHT
CITY OF LANSING, MICHIGAN
UTILITY SYSTEM REVENUE BONDS, SERIES 2019A

Mixed Sources
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